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Handbook of Chemical Compound Data for Process Safety

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Handbook of Chemical Compound Data for Process Safety

Comprehensive Safety and Health-Related Data for Hydrocarbons and Organic Chemicals

Selected Data for Inorganic Chemicals

Carl L. Yaws

Gulf Publishing Company
Houston, Texas

Handbook of Chemical Compound Data for Process Safety

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DISCLAIMER

This handbook presents a variety of thermodynamic and physical property data. It is incumbent upon the user to exercise judgment in the use of the data. The author and publisher do not provide any guarantee, express or implied, with regard to the general or specific applicability of the data, the range of errors that may be associated with any of the data, or the appropriateness of using any of the data in any subsequent calculation, design, or decision process. The author and publisher accept no responsibility for damages, if any, suffered by any reader or user of this handbook as a result of decisions made or actions taken on information contained herein.

Chapter 1

PHYSICAL PROPERTIES

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ABSTRACT

Results for physical property data are presented for major hydrocarbons and organic chemicals. The physical properties include molecular weight, freezing point, boiling point, critical constants (temperature, pressure and volume), acentric factor and density. A wide range of compounds are covered including oxygen, nitrogen, chlorine, fluorine, bromine, sulfur, silicon and other chemical types.

PHYSICAL PROPERTIES

The results for physical properties are shown in Table 1-1. The results are presented in an easy-to-use tabular format which is especially applicable for rapid engineering usage with the personal computer or hand calculator. The tabulation is based on both experimental data and estimated values.

A comparison of estimates and data is shown in Figure 1-1 for critical temperature of normal alkanes. The graph discloses favorable agreement of estimates and data.

In the data collection, a literature search was conducted to identify data source publications (1-40). The publications were screened and copies of appropriate data were made. These data were then keyed into the computer to provide a data base of critical properties for compounds for which experimental data are available. The data base also served as a basis to check the accuracy of the estimation methods.

Upon completion of data collection, estimation of the critical properties for the remaining compounds was performed using the group contribution method of Joback as given by Reid, Prausnitz and Poling (24). A comparison of the estimates with experimental data was favorable with average absolute errors of only 0.9%, 6.3%, and 4.4% for critical temperature (465 compounds), pressure (453 compounds) and volume (345 compounds).

The normal boiling and freezing point temperatures in the table are based on experimental data for most of the compounds. For the compounds without data, the group contribution method of Joback (24) was used to estimate the boiling and freezing point temperatures. As discussed by Reid, Prausnitz and Poling (24), no reliable methods are available for precise estimation of freezing point temperature. Thus, the estimates for freezing point temperature should be considered as rough approximations.

COMPUTER PROGRAM

A computer program, containing the data for all compounds, is available for a nominal fee (Carl L. Yaws, Box 10053, Lamar University, Beaumont, TX 77710, phone/FAX 409-880-8787). The computer program (random data file) is in ASCII which can be accessed by other software.

Computer program results for a representative compound are shown in Table 1-2.

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Figure 1-1 CRITICAL TEMPERATURE OF NORMAL ALKANES

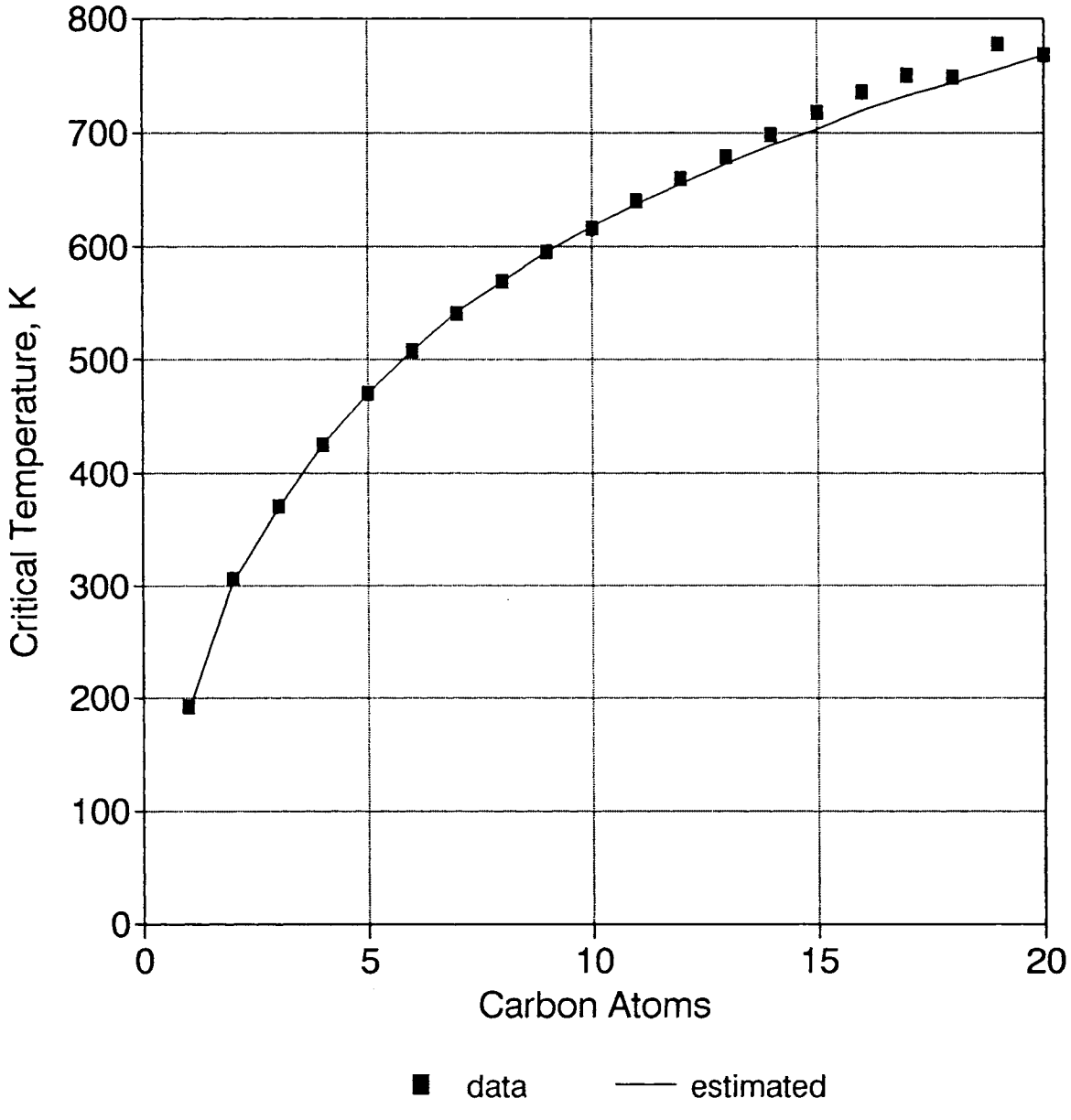

Table 1-1 PHYSICAL PROPERTIES

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ K	$T_{boiling}$ K	$T_{critical}$ K	$P_{critical}$ bar	$V_{critical}$ cm^3/mol	ω	ρ_{liq} @ 25 C g/cm^3
1	CBrClF2	BROMOCHLORODIFLUOROMETHANE	165.365	113.65	269.14	426.15	42.54	246.0	0.187	1.810
2	CBrCl3	BROMOTRICHLOROMETHANE	198.273	252.15	378.05	606.00	49.70	284.0	0.192	1.994
3	CBrF3	BROMOTRIFLUOROMETHANE	148.910	105.15	215.26	340.15	39.72	200.0	0.173	1.536
4	CBr2F2	DIBROMODIFLUOROMETHANE	209.816	163.05	295.94	478.00	53.30	249.0	0.200	2.274
5	CClF3	CHLOROTRIFLUOROMETHANE	104.459	92.15	191.74	301.96	39.46	180.3	0.180	0.841
6	CClN	CYANOGEN CHLORIDE	61.470	266.65	286.00	449.00	59.90	163.0	0.320	1.172
7	CCl2F2	DICHLORODIFLUOROMETHANE	120.913	115.15	243.36	384.95	41.25	217.0	0.180	1.307
8	CCl2O	PHOSGENE	98.916	145.37	280.71	455.00	56.74	190.2	0.201	1.363
9	CCl3F	TRICHLOROFLUOROMETHANE	137.368	162.04	296.97	471.20	44.08	248.0	0.184	1.477
10	CCl4	CARBON TETRACHLORIDE	153.822	250.33	349.79	556.35	45.60	276.0	0.193	1.583
11	CF2O	CARBONYL FLUORIDE	66.007	161.89	188.58	297.00	57.60	141.0	0.283	-----
12	CF4	CARBON TETRAFLUORIDE	88.005	89.56	145.09	227.50	37.39	140.0	0.186	-----
13	CHBr3	TRIBROMOMETHANE	252.731	281.20	422.35	696.00	60.90	286.0	0.156	2.876
14	CHClF2	CHLORODIFLUOROMETHANE	86.468	115.73	232.32	369.30	49.71	166.0	0.219	1.193
15	CHCl2F	DICHLOROFLUOROMETHANE	102.923	138.15	282.05	451.58	51.84	196.0	0.207	1.367
16	CHCl3	CHLOROFORM	119.377	209.63	334.33	536.40	54.72	239.0	0.213	1.480
17	CHF3	TRIFLUOROMETHANE	70.014	117.97	190.99	298.89	48.36	133.3	0.267	0.667
18	CHI3	TRIIODOMETHANE	393.732	396.16	491.16	794.55	53.12	349.5	0.193	-----
19	CHN	HYDROGEN CYANIDE	27.026	259.91	298.85	456.65	53.91	138.6	0.410	0.680
20	CHNS	ISOTHIOCYANIC-ACID	59.086	-----	-----	-----	-----	-----	-----	-----
21	CH2BrCl	BROMOCHLOROMETHANE	129.384	185.20	341.20	557.00	68.10	188.0	0.220	1.926
22	CH2Br2	DIBROMOMETHANE	173.835	220.60	370.10	611.00	71.70	223.0	0.210	2.482
23	CH2ClF	CHLOROFLUOROMETHANE	68.478	140.16	264.06	424.91	51.31	158.5	0.199	1.256
24	CH2Cl2	DICHLOROMETHANE	84.932	178.01	312.90	510.00	60.80	185.0	0.192	1.318
25	CH2F2	DIFLUOROMETHANE	52.024	137.00	221.50	351.60	58.30	121.0	0.276	0.957
26	CH2I2	DIIODOMETHANE	267.836	279.25	455.15	747.00	54.70	272.0	0.141	3.306
27	CH2O	FORMALDEHYDE	30.026	181.15	254.05	408.00	65.86	105.0	0.282	0.736
28	CH2O2	FORMIC ACID	46.026	281.55	373.71	580.00	73.90	125.0	0.473	1.214
29	CH3Br	METHYL BROMIDE	94.939	179.55	276.71	467.00	80.00	156.0	0.192	1.662
30	CH3Cl	METHYL CHLORIDE	50.488	175.45	248.93	416.25	66.79	139.0	0.153	0.913
31	CH3Cl3Si	METHYL TRICHLOROSILANE	149.478	195.35	339.55	517.00	35.30	340.0	0.263	1.266
32	CH3F	METHYL FLUORIDE	34.033	131.35	194.82	317.70	58.77	113.0	0.204	0.566
33	CH3I	METHYL IODIDE	141.939	206.70	315.58	528.00	73.70	185.0	0.193	2.265
34	CH3NO	FORMAMIDE	45.041	275.70	493.00	771.00	78.00	163.0	0.453	1.129
35	CH3NO2	NITROMETHANE	61.040	244.60	374.35	588.15	63.13	173.4	0.348	1.129
36	CH3NO2	METHYL-NITRITE	61.040	256.16	261.16	-----	-----	-----	-----	-----
37	CH3NO3	METHYL-NITRATE	77.040	190.86	339.16	-----	-----	-----	-----	-----
38	CH4	METHANE	16.043	90.67	111.66	190.58	46.04	99.3	0.011	-----
39	CH4Cl2Si	METHYL DICHLOROSILANE	115.034	182.55	314.70	483.00	39.50	289.0	0.276	1.103
40	CH4O	METHANOL	32.042	175.47	337.85	512.58	80.96	117.8	0.566	0.787
41	CH4O3S	METHANESULFONIC ACID	96.107	292.81	561.00	-----	-----	220.0	-----	1.477
42	CH4S	METHYL MERCAPTAN	48.109	150.18	279.11	469.95	72.35	145.0	0.146	0.862
43	CH5ClSi	METHYL CHLOROSILANE	80.589	139.05	281.85	442.00	41.70	246.0	0.225	0.884
44	CH5N	METHYLAMINE	31.057	179.69	266.82	430.05	74.58	154.0	0.281	0.655
45	CH6Si	METHYL SILANE	46.144	116.34	216.25	352.50	48.40	205.0	0.139	0.486
46	CN4O8	TETRANITROMETHANE	196.033	287.05	398.85	540.00	17.40	468.0	0.516	1.626
47	CO	CARBON MONOXIDE	28.010	68.15	81.70	132.92	34.99	93.1	0.066	-----
48	COS	CARBONYL SULFIDE	60.076	134.35	223.00	378.80	63.49	135.1	0.097	1.005
49	CO2	CARBON DIOXIDE	44.010	216.58	194.67	304.19	73.82	94.0	0.228	0.713
50	CS2	CARBON DISULFIDE	76.143	161.58	319.37	552.00	79.03	160.0	0.108	1.256
51	C2BrF3	BROMOTRIFLUOROETHYLENE	160.921	-----	270.65	432.00	44.80	239.0	0.175	1.830
52	C2Br2F4	1,2-DIBROMOTETRAFLUOROETHANE	259.824	162.65	320.41	487.80	33.93	341.0	0.250	2.162
53	C2ClF3	CHLOROTRIFLUOROETHYLENE	116.470	115.00	245.30	379.15	40.53	212.0	0.264	1.275
54	C2ClF5	CHLOROPENTAFLUOROETHANE	154.467	173.71	234.04	353.15	31.57	252.0	0.251	1.287
55	C2Cl2F4	1,2-DICHLOROTETRAFLUOROETHANE	170.921	179.15	276.92	418.85	32.63	293.7	0.252	1.455
56	C2Cl3F3	1,1,2-TRICHLOROTRIFLUOROETHANE	187.375	238.15	320.75	487.25	34.15	325.3	0.255	1.564
57	C2Cl4	TETRACHLOROETHYLENE	165.833	250.80	394.40	620.00	44.90	248.0	0.214	1.613
58	C2Cl4F2	1,1,2,2-TETRACHLORODIFLUOROETHANE	203.830	299.15	366.00	551.00	33.40	351.0	0.291	-----
59	C2Cl4O	TRICHLOROACETYL CHLORIDE	181.832	-----	391.15	590.00	41.00	332.0	0.348	1.613
60	C2Cl6	HEXACHLOROETHANE	236.738	459.95	460.00	698.00	33.40	412.0	0.221	-----
61	C2F4	TETRAFLUOROETHYLENE	100.016	142.00	197.51	306.45	39.44	172.0	0.226	0.920
62	C2F6	HEXAFLUOROETHANE	138.012	172.45	194.95	292.80	29.79	224.0	0.245	-----
63	C2HBrClF3	HALOTHANE	197.382	-----	323.35	521.00	39.20	296.0	0.091	1.869

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ K	$T_{boiling}$ K	$T_{critical}$ K	$P_{critcal}$ bar	$V_{critical}$ cm^3/mol	ω	ρ_{liq} @ 25 C g/cm^3
64	C2HClF2	2-CHLORO-1,1-DIFLUOROETHYLENE	98.479	134.65	254.55	400.55	44.58	197.0	0.219	1.217
65	C2HCl3	TRICHLOROETHYLENE	131.388	188.40	360.10	571.00	49.10	256.0	0.217	1.458
66	C2HCl3O	DICHLOROACETYL CHLORIDE	147.387	-----	382.15	579.00	46.10	288.0	0.371	1.519
67	C2HCl3O	TRICHLOROACETALDEHYDE	147.387	216.00	370.85	565.00	44.10	288.0	0.332	1.499
68	C2HCl5	PENTACHLOROETHANE	202.293	244.15	433.03	665.00	36.80	369.0	0.246	1.675
69	C2HF3	TRIFLUOROETHENE	82.025	94.53	221.01	347.22	45.16	182.5	0.238	0.919
70	C2HF3O2	TRIFLUOROACETIC ACID	114.024	257.90	344.95	491.25	32.58	204.0	0.524	1.480
71	C2HF5	PENTAFLUOROETHANE	120.022	170.15	225.15	342.00	34.40	216.0	0.259	1.174
72	C2H2	ACETYLENE	26.038	192.40	189.00	308.32	61.39	113.0	0.187	0.377
73	C2H2Br4	1,1,2,2-TETRABROMOETHANE	345.654	273.15	516.65	824.00	46.00	401.0	0.177	2.927
74	C2H2Cl2	1,1-DICHLOROETHYLENE	96.943	150.65	304.71	482.00	51.90	224.0	0.272	1.117
75	C2H2Cl2	cis-1,2-DICHLOROETHYLENE	96.943	193.15	333.65	527.00	51.90	224.0	0.264	1.265
76	C2H2Cl2	trans-1,2-DICHLOROETHYLENE	96.943	223.35	320.85	508.00	51.90	224.0	0.264	1.244
77	C2H2Cl2O	CHLOROACETYL CHLORIDE	112.943	251.15	379.15	581.00	51.10	245.0	0.358	1.434
78	C2H2Cl2O	DICHLOROACETALDEHYDE	112.943	223.00	362.00	555.00	49.50	245.0	0.344	1.433
79	C2H2Cl2O2	DICHLOROACETIC ACID	128.942	286.55	467.15	686.00	51.70	265.0	0.555	1.553
80	C2H2Cl3F	1,1,1-TRICHLOROFLUOROETHANE	151.394	-----	366.00	565.00	39.90	294.0	0.250	1.575
81	C2H2Cl4	1,1,1,2-TETRACHLOROETHANE	167.849	202.94	403.65	624.00	40.20	325.0	0.242	1.535
82	C2H2Cl4	1,1,2,2-TETRACHLOROETHANE	167.849	229.35	418.25	645.00	40.90	325.0	0.259	1.587
83	C2H2F2	1,1-DIFLUOROETHYLENE	64.035	129.15	187.50	302.80	44.58	154.0	0.139	0.594
84	C2H2F2	cis-1,2-DIFLUOROETHENE	64.035	107.90	247.86	394.67	47.69	163.5	0.210	1.023
85	C2H2F2	trans-1,2-DIFLUOROETHENE	64.035	107.90	247.86	394.67	47.69	163.5	0.210	1.023
86	C2H2F4	1,1,1,2-TETRAFLUOROETHANE	102.031	172.15	247.15	380.00	36.90	203.0	0.239	1.199
87	C2H2O	KETENE	42.037	122.00	223.34	370.00	58.10	144.0	0.126	0.660
88	C2H2O4	OXALIC ACID	90.036	462.65	569.00	804.00	70.20	205.0	0.918	-----
89	C2H3Br	VINYL BROMIDE	106.950	135.35	288.95	473.00	71.80	200.0	0.282	1.499
90	C2H3Cl	VINYL CHLORIDE	62.499	119.36	259.78	432.00	56.70	179.0	0.101	0.903
91	C2H3ClF2	1-CHLORO-1,1-DIFLUOROETHANE	100.495	142.35	263.14	410.20	41.24	231.0	0.237	1.107
92	C2H3ClO	ACETYL CHLORIDE	78.498	160.30	323.90	508.00	57.40	196.0	0.334	1.102
93	C2H3ClO	CHLOROACETALDEHYDE	78.498	-----	358.00	555.00	53.70	201.0	0.330	1.200
94	C2H3ClO2	CHLOROACETIC ACID	94.497	333.15	462.50	686.00	57.80	221.0	0.551	-----
95	C2H3ClO2	METHYL CHLOROFORMATE	94.497	-----	344.00	525.00	53.60	221.0	0.393	1.213
96	C2H3Cl3	1,1,1-TRICHLOROETHANE	133.404	242.75	347.23	545.00	42.96	281.0	0.216	1.330
97	C2H3Cl3	1,1,2-TRICHLOROETHANE	133.404	236.50	387.00	602.00	44.80	281.0	0.260	1.435
98	C2H3F	VINYL FLUORIDE	46.044	112.65	200.95	327.80	52.39	144.0	0.189	0.620
99	C2H3F3	1,1,1-TRIFLUOROETHANE	84.041	161.85	225.75	346.25	37.58	194.0	0.253	0.953
100	C2H3N	ACETONITRILE	41.053	229.32	354.75	545.50	48.33	173.0	0.338	0.779
101	C2H3NO	METHYL ISOCYANATE	57.052	256.15	312.00	505.00	51.90	190.0	0.175	0.926
102	C2H4	ETHYLENE	28.054	104.01	169.47	282.36	50.32	129.1	0.085	-----
103	C2H4Br2	1,1-DIBROMOETHANE	187.862	210.15	381.15	628.00	60.30	276.0	0.125	2.045
104	C2H4Br2	1,2-DIBROMOETHANE	187.862	282.94	404.51	650.15	54.77	261.6	0.207	2.169
105	C2H4Cl2	1,1-DICHLOROETHANE	98.959	176.19	330.45	523.00	50.66	240.0	0.244	1.168
106	C2H4Cl2	1,2-DICHLOROETHANE	98.959	237.49	356.59	561.00	53.70	220.0	0.288	1.246
107	C2H4Cl2O	BIS(CHLOROMETHYL)ETHER	114.959	231.65	378.00	579.00	45.80	258.0	0.324	1.312
108	C2H4F2	1,1-DIFLUOROETHANE	66.051	156.15	247.35	386.60	44.99	181.0	0.263	0.898
109	C2H4F2	1,2-DIFLUOROETHANE	66.051	-----	303.65	476.00	43.40	202.0	0.224	1.016
110	C2H4I2	1,2-DIIODOETHANE	281.863	356.16	473.16	749.91	47.30	323.5	0.223	-----
111	C2H4O	ACETALDEHYDE	44.053	150.15	293.55	461.00	55.50	157.0	0.317	0.774
112	C2H4O	ETHYLENE OXIDE	44.053	161.45	283.85	469.15	71.94	140.3	0.198	0.862
113	C2H4OS	THIOACETIC-ACID	76.113	150.16	360.16	577.34	69.21	219.5	0.304	1.059
114	C2H4O2	ACETIC ACID	60.053	289.81	391.05	592.71	57.86	171.0	0.462	1.043
115	C2H4O2	METHYL FORMATE	60.053	174.15	304.90	487.20	59.98	172.0	0.254	0.967
116	C2H4S	THIACYCLOPROPANE	60.114	165.37	328.07	555.00	73.80	151.5	0.154	1.007
117	C2H5Br	BROMOETHANE	108.966	154.55	311.50	503.80	62.32	214.9	0.183	1.450
118	C2H5Cl	ETHYL CHLORIDE	64.514	136.75	285.42	460.35	52.69	200.0	0.204	0.890
119	C2H5ClO	2-CHLOROETHANOL	80.514	205.65	401.75	585.00	59.20	212.0	0.637	1.196
120	C2H5F	ETHYL FLUORIDE	48.060	129.95	235.45	375.31	50.28	164.0	0.209	0.712
121	C2H5I	ETHYL IODIDE	155.966	162.05	345.45	561.00	59.90	238.0	1.137	1.920
122	C2H5N	ETHYLENEIMINE	43.068	195.20	329.00	537.00	68.50	173.0	0.089	0.831
123	C2H5NO	ACETAMIDE	59.068	354.15	494.30	761.00	66.00	215.0	0.189	-----
124	C2H5NO	N-METHYLFORMAMIDE	59.068	269.35	472.66	721.00	56.20	215.0	0.192	0.999
125	C2H5NO2	NITROETHANE	75.067	183.63	387.22	593.00	51.60	236.0	0.265	1.043
126	C2H5NO3	ETHYL-NITRATE	91.066	178.56	360.36	-----	-----	-----	-----	-----
127	C2H6	ETHANE	30.070	90.35	184.55	305.42	48.80	147.9	0.099	0.315
128	C2H6AlCl	DIMETHYLALUMINUM CHLORIDE	92.054	252.15	399.15	619.00	36.20	320.0	0.183	0.988
129	C2H6O	DIMETHYL ETHER	46.069	131.66	248.31	400.10	53.70	170.0	0.204	0.655

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ K	$T_{boiling}$ K	$T_{critical}$ K	$P_{critcal}$ bar	$V_{critical}$ cm^3/mol	ω	ρ_{liq} @ 25 C g/cm^3
130	C2H6O	ETHANOL	46.069	159.05	351.44	516.25	63.84	166.9	0.637	0.787
131	C2H6OS	DIMETHYL SULFOXIDE	78.135	291.67	462.15	726.00	56.50	227.0	0.209	1.095
132	C2H6O2	ETHYLENE GLYCOL	62.068	260.15	470.45	645.00	75.30	191.0	1.137	1.110
133	C2H6O4S	DIMETHYL SULFATE	126.133	241.35	461.95	758.00	51.60	293.0	0.089	1.322
134	C2H6S	DIMETHYL SULFIDE	62.136	174.88	310.48	503.04	55.30	200.9	0.189	0.850
135	C2H6S	ETHYL MERCAPTAN	62.136	125.26	308.15	499.15	54.90	207.0	0.192	0.833
136	C2H6S2	DIMETHYL DISULFIDE	94.202	188.44	382.90	606.00	53.60	252.0	0.265	1.057
137	C2H7N	DIMETHYLAMINE	45.084	180.96	280.03	437.65	53.09	187.0	0.294	0.650
138	C2H7N	ETHYLAMINE	45.084	192.15	289.73	456.15	56.24	182.0	0.285	0.677
139	C2H7NO	MONOETHANOLAMINE	61.084	283.65	444.15	638.00	68.70	225.0	0.797	1.014
140	C2H8N2	ETHYLENEDIAMINE	60.099	284.29	390.41	593.00	62.90	264.0	0.479	0.893
141	C2H8Si	DIMETHYL SILANE	60.171	122.93	253.55	402.00	35.60	258.0	0.132	0.578
142	C2N2	CYANOGEN	52.036	245.25	252.00	400.15	59.78	195.0	0.279	0.866
143	C3F6	HEXAFLUOROPROPYLENE	150.023	116.65	243.55	368.00	29.00	268.0	0.204	1.304
144	C3F6O	HEXAFLUOROACETONE	166.023	151.15	245.88	357.14	28.37	329.0	0.364	1.321
145	C3F8	OCTAFLUOROPROPANE	188.020	125.46	236.40	345.05	26.80	299.0	0.326	1.317
146	C3H2N2	MALONONITRILE	66.062	304.90	491.50	715.00	40.40	248.0	0.509	-----
147	C3H3Cl	PROPARGYL CHLORIDE	74.510	-----	331.00	541.00	53.00	211.0	0.152	1.024
148	C3H3N	ACRYLONITRILE	53.064	189.63	350.50	535.00	44.80	212.0	0.350	0.801
149	C3H3NO	OXAZOLE	69.063	-----	342.65	554.00	63.20	237.0	0.233	0.718
150	C3H4	METHYLACETYLENE	40.065	170.45	249.94	402.39	56.28	164.0	0.216	0.607
151	C3H4	PROPADIENE	40.065	136.87	238.65	393.15	54.70	162.0	0.160	0.579
152	C3H4Cl2	2,3-DICHLOROPROPENE	110.970	191.50	365.75	577.00	43.80	277.0	0.206	1.201
153	C3H4O	ACROLEIN	56.064	185.45	325.84	506.00	50.00	197.0	0.320	0.834
154	C3H4O	PROPARGYL ALCOHOL	56.064	221.35	386.75	580.00	65.30	176.0	0.555	0.945
155	C3H4O2	ACRYLIC ACID	72.064	286.65	414.15	615.00	56.60	208.0	0.518	1.046
156	C3H4O2	beta-PROPIOLACTONE	72.064	239.75	435.15	686.00	69.10	195.0	0.345	1.262
157	C3H4O2	VINYL FORMATE	72.064	-----	320.00	498.00	50.20	217.0	0.285	0.954
158	C3H4O3	ETHYLENE CARBONATE	88.063	309.55	511.15	790.00	67.70	193.0	0.416	-----
159	C3H4O3	PYRUVIC ACID	88.063	286.75	438.15	634.52	56.50	239.0	0.670	1.265
160	C3H5Br	3-BROMO-1-PROPENE	120.977	153.76	343.16	540.20	51.39	246.5	0.273	1.389
161	C3H5Cl	2-CHLOROPROPENE	76.525	135.75	295.80	478.00	47.10	234.0	0.153	0.895
162	C3H5Cl	3-CHLOROPROPENE	76.525	138.65	318.11	514.15	47.10	234.0	0.154	0.931
163	C3H5ClO	alpha-EPICHLOROHYDRIN	92.525	215.95	389.26	610.00	49.00	233.0	0.256	1.174
164	C3H5ClO2	METHYL CHLOROACETATE	108.524	241.03	402.97	600.00	45.00	270.0	0.434	1.229
165	C3H5ClO2	ETHYL CHLOROFORMATE	108.524	192.00	366.00	508.15	45.00	274.0	0.835	1.127
166	C3H5Cl3	1,2,3-TRICHLOROPROPANE	147.431	258.45	430.00	652.00	38.70	334.0	0.306	1.384
167	C3H5I	3-IODO-1-PROPENE	167.977	173.86	375.16	595.81	45.29	272.5	0.202	1.839
168	C3H5N	PROPIONITRILE	55.079	180.26	370.50	564.40	41.85	229.0	0.325	0.777
169	C3H5NO	ACRYLAMIDE	71.079	357.65	465.75	710.00	57.30	260.0	0.196	-----
170	C3H5NO	HYDRACRYLONITRILE	71.079	227.15	494.15	690.00	48.90	243.0	0.826	1.040
171	C3H5NO	LACTONITRILE	71.079	233.00	457.00	643.00	50.30	243.0	0.796	0.983
172	C3H5N3O9	NITROGLYCERINE	227.088	286.15	523.00	680.00	30.00	419.0	1.184	1.586
173	C3H6	CYCLOPROPANE	42.081	145.73	240.37	397.91	55.75	162.8	0.134	0.619
174	C3H6	PROPYLENE	42.081	87.90	225.43	364.76	46.13	181.0	0.142	0.504
175	C3H6Br2	1,2-DIBROMOPROPANE	201.888	217.96	413.16	634.11	54.07	321.5	0.384	1.925
176	C3H6Cl2	1,1-DICHLOROPROPANE	112.986	-----	361.25	560.00	42.40	291.0	0.253	1.126
177	C3H6Cl2	1,2-DICHLOROPROPANE	112.986	172.71	369.52	572.00	42.40	291.0	0.251	1.150
178	C3H6Cl2	1,3-DICHLOROPROPANE	112.987	173.65	393.55	603.00	41.50	291.0	0.292	1.181
179	C3H6Cl2	2,2-DICHLOROPROPANE	112.986	239.36	342.46	539.46	41.04	290.5	0.198	1.106
180	C3H6I2	1,2-DIIODOPROPANE	295.889	253.16	500.16	780.49	42.06	373.5	0.237	2.566
181	C3H6O	ACETONE	58.080	178.45	329.44	508.20	47.02	209.0	0.306	0.786
182	C3H6O	ALLYL ALCOHOL	58.080	144.15	370.23	545.05	56.20	208.0	0.572	0.845
183	C3H6O	METHYL VINYL ETHER	58.080	151.15	278.65	437.00	46.70	210.0	0.237	0.744
184	C3H6O	n-PROPIONALDEHYDE	58.080	193.15	321.15	496.00	46.60	210.0	0.302	0.796
185	C3H6O	1,2-PROPYLENE OXIDE	58.080	161.22	307.05	482.25	49.24	186.0	0.271	0.823
186	C3H6O	1,3-PROPYLENE OXIDE	58.080	-----	321.00	520.00	57.50	188.0	0.201	0.894
187	C3H6O2	ETHYL FORMATE	74.079	193.55	327.46	508.40	47.42	229.0	0.285	0.917
188	C3H6O2	METHYL ACETATE	74.079	175.15	330.09	506.80	46.90	228.0	0.325	0.927
189	C3H6O2	PROPIONIC ACID	74.079	252.45	414.32	604.00	45.30	230.0	0.536	0.988
190	C3H6O2S	3-MERCAPTOPROPIONIC ACID	106.145	290.65	501.00	729.00	50.20	281.0	0.587	1.213
191	C3H6O3	LACTIC ACID	90.079	291.15	447.00	616.00	59.65	216.9	1.035	1.201
192	C3H6O3	METHOXYACETIC ACID	90.079	281.00	478.26	691.00	49.80	251.0	0.630	1.170
193	C3H6O3	TRIOXANE	90.079	334.65	387.65	604.00	58.20	206.0	0.334	-----
194	C3H6S	THIACYCLOBUTANE	74.140	199.96	368.13	603.00	61.00	199.5	0.195	1.014
195	C3H7Br	1-BROMOPROPANE	122.993	163.15	344.15	544.00	53.90	266.0	0.285	1.345

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196	C3H7Br	2-BROMOPROPANE	122.993	184.15	332.56	532.00	55.10	266.0	0.243	1.282
197	C3H7Cl	ISOPROPYL CHLORIDE	78.541	155.97	308.85	489.00	45.40	247.0	0.224	0.855
198	C3H7Cl	n-PROPYL CHLORIDE	78.541	150.35	319.67	503.15	45.80	247.0	0.228	0.856
199	C3H7F	1-FLUOROPROPANE	62.087	114.16	269.95	422.00	41.57	221.5	0.227	0.787
200	C3H7F	2-FLUOROPROPANE	62.087	139.80	263.81	415.68	42.00	215.5	0.204	0.733
201	C3H7I	ISOPROPYL IODIDE	169.993	183.15	362.65	578.00	51.20	290.0	0.238	1.695
202	C3H7I	n-PROPYL IODIDE	169.993	171.85	375.60	593.00	50.30	290.0	0.258	1.739
203	C3H7N	ALLYLAMINE	57.095	184.95	326.45	505.00	51.70	247.0	0.327	0.757
204	C3H7N	PROPYLENEIMINE	57.095	229.00	334.00	529.00	54.20	208.0	0.257	0.802
205	C3H7NO	N,N-DIMETHYLFORMAMIDE	73.095	212.72	426.15	647.00	44.20	267.0	0.376	0.945
206	C3H7NO	N-METHYLACETAMIDE	73.095	301.15	478.15	718.00	49.80	267.0	0.435	-----
207	C3H7NO2	1-NITROPROPANE	89.094	169.16	404.33	605.00	43.50	288.0	0.412	0.996
208	C3H7NO2	2-NITROPROPANE	89.094	181.83	393.40	594.00	44.50	288.0	0.376	0.983
209	C3H7NO3	PROPYL-NITRATE	105.093	173.16	383.16	-----	-----	-----	-----	-----
210	C3H7NO3	ISOPROPYL-NITRATE	105.093	173.16	373.66	-----	-----	-----	-----	-----
211	C3H8	PROPANE	44.096	85.46	231.11	369.82	42.49	202.9	0.152	0.493
212	C3H8O	ISOPROPANOL	60.096	185.28	355.41	508.31	47.64	220.1	0.669	0.783
213	C3H8O	METHYL ETHYL ETHER	60.096	160.00	280.50	437.80	43.98	221.0	0.219	0.692
214	C3H8O	n-PROPANOL	60.096	146.95	370.35	536.71	51.70	218.5	0.628	0.802
215	C3H8O2	2-METHOXYETHANOL	76.095	188.05	397.55	564.00	50.10	242.0	0.731	0.960
216	C3H8O2	METHYLAL	76.095	168.35	315.00	480.60	39.52	213.0	0.290	0.854
217	C3H8O2	1,2-PROPYLENE GLYCOL	76.095	213.15	460.75	626.00	61.00	239.0	1.107	1.033
218	C3H8O2	1,3-PROPYLENE GLYCOL	76.095	246.45	487.55	658.00	59.20	217.0	1.152	1.052
219	C3H8O3	GLYCEROL	92.095	291.33	563.15	723.00	40.00	264.0	1.320	1.257
220	C3H8S	n-PROPYLMERCAPTAN	76.163	159.95	340.87	536.00	46.30	254.0	0.235	0.836
221	C3H8S	ISOPROPYL MERCAPTAN	76.163	142.61	325.71	517.00	47.50	254.0	0.212	0.809
222	C3H8S	ETHYL-METHYL-SULFIDE	76.156	167.20	340.15	532.80	42.50	257.5	0.216	0.832
223	C3H9N	n-PROPYLAMINE	59.111	190.15	321.65	496.95	47.42	260.0	0.296	0.714
224	C3H9N	ISOPROPYLAMINE	59.111	177.95	305.55	471.85	45.39	221.0	0.279	0.684
225	C3H9N	TRIMETHYLAMINE	59.111	156.08	276.02	433.25	40.73	254.0	0.209	0.629
226	C3H9NO	1-AMINO-2-PROPANOL	75.111	274.89	432.61	614.00	56.70	278.0	0.794	0.957
227	C3H9NO	3-AMINO-1-PROPANOL	75.111	284.15	460.65	649.00	55.00	278.0	0.830	0.972
228	C3H9NO	METHYLETHANOLAMINE	75.111	268.65	431.15	630.00	52.20	253.0	0.586	0.934
229	C3H9O4P	TRIMETHYL PHOSPHATE	140.076	227.00	465.85	764.00	85.00	229.4	-----	1.202
230	C3H10N2	1,2-PROPANEDIAMINE	74.126	236.53	392.45	587.00	52.70	316.0	0.474	0.856
231	C3H10Si	TRIMETHYL SILANE	74.198	137.26	279.85	432.00	31.90	311.0	0.175	0.614
232	C4Cl4S	TETRACHLOROTHIOPHENE	221.921	301.97	506.54	753.00	36.70	428.0	0.361	-----
233	C4Cl6	HEXACHLORO-1,3-BUTADIENE	260.760	252.15	488.15	741.00	28.40	491.0	0.155	1.556
234	C4F8	OCTAFLUORO-2-BUTENE	200.031	138.15	270.36	392.00	23.30	347.0	0.291	1.442
235	C4F8	OCTAFLUOROCYCLOBUTANE	200.031	232.96	267.17	388.37	27.78	324.8	0.356	1.495
236	C4F10	DECAFLUOROBUTANE	238.028	144.95	271.15	386.35	23.23	397.0	0.372	1.497
237	C4H2	BUTADIYNE(BIACETYLENE)	50.060	237.16	283.46	478.02	58.63	183.5	0.100	0.709
238	C4H2O3	MALEIC ANHYDRIDE	98.058	326.00	475.15	721.00	72.80	219.0	0.546	-----
239	C4H4	VINYLACETYLENE	52.076	-----	278.25	454.00	48.60	205.0	0.118	0.680
240	C4H4N2	SUCCINONITRILE	80.089	331.30	540.15	770.00	35.40	300.0	0.559	-----
241	C4H4O	FURAN	68.075	187.55	304.50	490.15	55.02	218.2	0.200	0.935
242	C4H4O2	DIKETENE	84.075	266.65	399.20	616.00	59.60	234.0	0.382	1.050
243	C4H4O3	SUCCINIC ANHYDRIDE	100.074	393.00	536.58	811.00	67.30	223.0	0.530	-----
244	C4H4O4	FUMARIC ACID	116.073	560.15	563.15	771.00	49.80	297.0	0.989	-----
245	C4H4O4	MALEIC ACID	116.073	403.45	565.00	773.00	49.90	297.0	0.998	-----
246	C4H4S	THIOPHENE	84.142	234.94	357.31	579.35	56.90	219.0	0.193	1.059
247	C4H5Cl	CHLOROPRENE	88.536	143.15	332.55	525.00	42.60	273.0	0.193	0.950
248	C4H5N	trans-CROTONITRILE	67.090	222.00	394.38	586.00	38.80	282.0	0.398	0.807
249	C4H5N	cis-CROTONITRILE	67.090	200.55	380.60	568.00	38.80	265.0	0.379	0.819
250	C4H5N	METHACRYLONITRILE	67.090	237.35	363.45	554.00	38.80	265.0	0.301	0.795
251	C4H5N	PYRROLE	67.090	249.74	403.00	639.75	62.10	230.0	0.288	0.965
252	C4H5N	VINYLACETONITRILE	67.090	186.15	391.67	584.00	38.80	259.0	0.378	0.829
253	C4H5NO2	METHYL CYANOACETATE	99.089	260.08	478.24	687.00	38.10	305.0	0.549	1.119
254	C4H6	CYCLOBUTENE	54.091	153.76	275.75	446.33	52.66	195.5	0.189	0.704
255	C4H6	1,2-BUTADIENE	54.092	136.95	284.00	444.00	45.00	219.0	0.251	0.646
256	C4H6	1,3-BUTADIENE	54.092	164.25	268.74	425.37	43.30	220.8	0.193	0.615
257	C4H6	DIMETHYLACETYLENE	54.092	240.91	300.13	488.15	50.80	221.0	0.130	0.686
258	C4H6	ETHYLACETYLENE	54.092	147.43	281.22	443.20	49.50	222.0	0.247	0.648
259	C4H6Cl2	1,3-DICHLORO-trans-2-BUTENE	124.997	-----	402.00	618.00	37.80	325.0	0.242	1.153
260	C4H6Cl2	1,4-DICHLORO-cis-2-BUTENE	124.997	225.15	425.65	640.00	37.80	343.0	0.331	1.188
261	C4H6Cl2	1,4-DICHLORO-trans-2-BUTENE	124.997	274.15	429.26	646.00	37.80	330.0	0.333	1.187

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ K	$T_{boiling}$ K	$T_{critical}$ K	$P_{critcal}$ bar	$V_{critical}$ cm^3/mol	ω	ρ_{liq} @ 25 C g/cm^3
262	C4H6Cl2	3,4-DICHLORO-1-BUTENE	124.997	212.00	388.00	589.00	38.50	330.0	0.300	1.148
263	C4H6O	trans-CROTONALDEHYDE	70.091	196.65	377.25	571.00	42.50	250.0	0.346	0.847
264	C4H6O	2,5-DIHYDROFURAN	70.091	-----	339.00	542.00	55.00	216.0	0.229	0.939
265	C4H6O	DIVINYL ETHER	70.091	172.05	301.45	463.00	42.50	250.0	0.291	0.731
266	C4H6O	METHACROLEIN	70.091	192.15	341.15	530.00	42.50	250.0	0.246	0.840
267	C4H6O2	2-BUTYNE-1,4-DIOL	86.090	331.00	511.15	695.00	58.60	256.0	1.134	-----
268	C4H6O2	gamma-BUTYROLACTONE	86.090	229.78	477.15	739.00	59.40	265.0	0.369	1.125
269	C4H6O2	cis-CROTONIC ACID	86.090	288.65	445.05	647.00	47.00	270.0	0.572	1.023
270	C4H6O2	trans-CROTONIC ACID	86.090	344.55	458.15	666.00	47.00	270.0	0.578	-----
271	C4H6O2	METHACRYLIC ACID	86.090	288.15	434.15	643.00	47.00	270.0	0.468	1.012
272	C4H6O2	METHYL ACRYLATE	86.090	196.32	353.35	536.00	42.50	270.0	0.348	0.949
273	C4H6O2	VINYL ACETATE	86.090	180.35	345.65	524.00	42.50	270.0	0.338	0.926
274	C4H6O3	ACETIC ANHYDRIDE	102.090	200.15	411.78	569.15	46.81	290.0	0.840	1.077
275	C4H6O4	SUCCINIC ACID	118.089	461.15	591.00	806.00	47.10	300.0	0.991	-----
276	C4H6O5	DIGLYCOLIC ACID	134.089	421.15	610.00	820.00	44.20	331.0	1.081	-----
277	C4H6O5	MALIC ACID	134.089	403.15	602.00	781.00	50.70	331.0	1.530	-----
278	C4H6O6	TARTARIC ACID	150.088	479.15	660.00	828.00	51.80	305.0	2.011	-----
279	C4H7N	n-BUTYRONITRILE	69.106	161.25	390.75	582.25	37.90	278.0	0.371	0.786
280	C4H7N	ISOBUTYRONITRILE	69.106	201.70	376.76	565.00	37.60	278.0	0.338	0.766
281	C4H7NO	ACETONE CYANOHYDRIN	85.106	253.15	463.00	647.00	42.50	296.0	0.733	0.928
282	C4H7NO	2-METHACRYLAMIDE	85.106	383.65	488.00	741.00	54.50	298.0	0.421	-----
283	C4H7NO	3-METHOXYPROPIONITRILE	85.106	210.12	439.00	638.00	36.30	324.0	0.465	0.924
284	C4H7NO	2-PYRROLIDONE	85.106	298.15	518.15	792.00	61.70	264.0	0.434	1.108
285	C4H8	1-BUTENE	56.107	87.80	266.90	419.59	40.20	239.9	0.187	0.588
286	C4H8	cis-2-BUTENE	56.107	134.26	276.87	435.58	42.06	234.0	0.203	0.617
287	C4H8	trans-2-BUTENE	56.107	167.62	274.03	428.63	41.02	238.2	0.218	0.599
288	C4H8	CYCLOBUTANE	56.107	182.48	285.66	459.93	49.85	210.2	0.187	0.689
289	C4H8	ISOBUTENE	56.107	132.81	266.25	417.90	39.99	238.9	0.189	0.589
290	C4H8Br2	1,2-DIBROMOBUTANE	215.915	207.76	439.46	659.28	47.17	377.5	0.429	1.785
291	C4H8Br2	2,3-DIBROMOBUTANE	215.915	238.66	434.16	656.96	47.69	371.5	0.397	1.774
292	C4H8Cl2	1,4-DICHLOROBUTANE	127.013	235.85	427.05	641.00	36.10	343.0	0.322	1.135
293	C4H8I2	1,2-DIIODOBUTANE	309.916	279.06	476.76	726.41	37.27	429.5	0.281	2.280
294	C4H8O	n-BUTYRALDEHYDE	72.107	176.75	347.95	525.00	40.00	263.0	0.345	0.797
295	C4H8O	ISOBUTYRALDEHYDE	72.107	208.15	337.25	507.00	41.00	263.0	0.370	0.784
296	C4H8O	1,2-EPOXYBUTANE	72.107	123.15	336.57	526.00	43.90	258.0	0.235	0.824
297	C4H8O	METHYL ETHYL KETONE	72.107	186.48	352.79	535.50	41.54	267.0	0.324	0.799
298	C4H8O	ETHYL VINYL ETHER	72.107	157.35	308.70	475.15	40.73	263.0	0.266	0.749
299	C4H8O	TETRAHYDROFURAN	72.107	164.65	338.00	540.15	51.88	223.9	0.226	0.880
300	C4H8O2	cis-2-BUTENE-1,4-DIOL	88.106	284.15	508.15	677.88	52.00	279.0	1.174	1.070
301	C4H8O2	trans-2-BUTENE-1,4-DIOL	88.106	300.45	510.00	681.00	52.00	279.0	1.174	-----
302	C4H8O2	ISOBUTYRIC ACID	88.106	227.15	427.85	609.15	40.53	292.0	0.618	0.946
303	C4H8O2	n-BUTYRIC ACID	88.106	267.95	436.42	628.00	44.20	283.0	0.604	0.953
304	C4H8O2	1,4-DIOXANE	88.106	284.95	374.47	587.00	52.08	238.0	0.280	1.029
305	C4H8O2	ETHYL ACETATE	88.106	189.60	350.21	523.30	38.80	286.0	0.366	0.894
306	C4H8O2	METHYL PROPIONATE	88.106	185.65	352.60	530.60	40.04	282.0	0.353	0.909
307	C4H8O2	n-PROPYL FORMATE	88.106	180.25	353.97	538.00	40.63	285.0	0.318	0.900
308	C4H8O2S	SULFOLANE	120.172	300.75	558.15	849.00	50.30	300.0	0.382	-----
309	C4H8S	TETRAHYDROTHIOPHENE	88.173	176.99	394.27	631.95	51.60	249.0	0.199	0.997
310	C4H9Br	1-BROMOBUTANE	137.019	160.75	374.75	577.00	45.40	319.0	0.323	1.269
311	C4H9Br	2-BROMOBUTANE	137.019	161.25	364.37	567.00	46.30	320.0	0.268	1.253
312	C4H9Cl	n-BUTYL CHLORIDE	92.568	150.05	351.58	537.00	38.20	300.0	0.274	0.880
313	C4H9Cl	sec-BUTYL CHLORIDE	92.568	141.85	341.25	520.60	39.00	300.0	0.291	0.868
314	C4H9Cl	tert-BUTYL CHLORIDE	92.568	247.75	323.75	507.00	39.00	300.0	0.194	0.836
315	C4H9I	2-IODO-2-METHYLPROPANE	184.020	234.96	373.16	587.90	38.82	336.5	0.179	1.536
316	C4H9N	PYRROLIDINE	71.122	215.31	359.72	568.55	56.13	248.7	0.275	0.860
317	C4H9NO	N,N-DIMETHYLACETAMIDE	87.122	253.15	439.25	658.00	40.30	321.0	0.364	0.937
318	C4H9NO	MORPHOLINE	87.122	270.05	401.15	618.00	53.40	276.0	0.358	0.996
319	C4H9NO2	1-NITROBUTANE	103.121	191.83	426.05	624.00	38.00	341.5	0.452	0.968
320	C4H9NO2	2-NITROBUTANE	103.121	141.16	412.85	615.00	36.00	335.5	0.357	0.978
321	C4H10	n-BUTANE	58.123	134.86	272.65	425.18	37.97	254.9	0.199	0.573
322	C4H10	ISOBUTANE	58.123	113.54	261.43	408.14	36.48	262.7	0.177	0.552
323	C4H10N2	PIPERAZINE	86.137	379.15	419.15	638.00	55.30	310.0	0.414	-----
324	C4H10O	n-BUTANOL	74.123	183.85	390.81	562.93	44.13	274.5	0.595	0.806
325	C4H10O	sec-BUTANOL	74.123	158.45	372.70	536.01	41.94	268.0	0.571	0.805
326	C4H10O	tert-BUTANOL	74.123	298.97	355.57	506.20	39.72	275.0	0.616	-----
327	C4H10O	DIETHYL ETHER	74.123	156.85	307.58	466.70	36.38	280.0	0.285	0.708

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328	C4H10O	METHYL-PROPYL-ETHER	74.122	156.87	311.72	476.20	38.00	274.0	0.271	0.723
329	C4H10O	METHYL ISOPROPYL ETHER	74.123	127.93	303.92	464.50	38.80	276.0	0.279	0.714
330	C4H10O	ISOBUTANOL	74.123	165.15	380.81	547.73	42.95	272.0	0.589	0.797
331	C4H10O2	1,3-BUTANEDIOL	90.122	196.15	480.15	643.00	50.00	292.0	1.146	1.002
332	C4H10O2	1,4-BUTANEDIOL	90.122	293.05	501.15	667.00	48.80	297.0	1.189	1.013
333	C4H10O2	2,3-BUTANEDIOL	90.122	280.75	453.85	611.00	51.30	267.0	1.106	0.994
334	C4H10O2	t-BUTYL HYDROPEROXIDE	90.122	277.45	405.50	576.00	43.40	290.0	0.668	0.886
335	C4H10O2	1,2-DIMETHOXYETHANE	90.122	215.15	357.20	536.15	38.70	270.6	0.346	0.865
336	C4H10O2	2-ETHOXYETHANOL	90.122	-----	408.15	569.00	42.40	294.0	0.759	0.925
337	C4H10O3	DIETHYLENE GLYCOL	106.122	262.70	518.15	744.60	46.00	312.0	0.621	1.114
338	C4H10O4S	DIETHYL SULFATE	154.187	248.00	483.00	792.00	68.90	398.0	0.162	1.172
339	C4H10S	n-BUTYL MERCAPTAN	90.189	157.46	371.61	569.00	39.70	307.0	0.278	0.837
340	C4H10S	ISOBUTYL MERCAPTAN	90.189	128.31	361.64	559.00	40.60	307.0	0.252	0.830
341	C4H10S	sec-BUTYL MERCAPTAN	90.189	133.02	358.13	554.00	40.60	307.0	0.248	0.825
342	C4H10S	tert-BUTYL MERCAPTAN	90.189	274.26	337.37	530.00	40.60	307.0	0.191	0.795
343	C4H10S	DIETHYL SULFIDE	90.189	169.20	365.25	557.15	39.62	318.0	0.294	0.832
344	C4H10S	ISOPROPYL-METHYL-SULFIDE	90.183	171.65	357.90	551.00	39.00	307.5	0.259	0.825
345	C4H10S	METHYL-PROPYL-SULFIDE	90.183	160.19	368.71	563.00	38.50	313.5	0.285	0.837
346	C4H10S2	DIETHYL DISULFIDE	122.255	171.63	427.13	642.00	38.70	358.0	0.346	0.988
347	C4H11N	n-BUTYLAMINE	73.138	224.05	350.55	531.90	42.00	313.0	0.330	0.741
348	C4H11N	ISOBUTYLAMINE	73.138	188.55	340.88	513.73	42.15	312.0	0.363	0.730
349	C4H11N	sec-BUTYLAMINE	73.138	168.65	336.15	514.30	40.00	310.0	0.282	0.720
350	C4H11N	tert-BUTYLAMINE	73.138	206.19	317.55	483.90	38.40	293.0	0.275	0.688
351	C4H11N	DIETHYLAMINE	73.138	223.35	328.60	496.60	37.09	301.0	0.304	0.702
352	C4H11NO	DIMETHYLETHANOLAMINE	89.137	214.15	407.15	571.82	41.40	300.0	0.711	0.882
353	C4H11NO2	DIETHANOLAMINE	105.137	301.15	542.04	715.00	32.70	349.0	1.046	-----
354	C4H11NO2	2-AMINOETHOXYETHANOL	105.137	-----	514.00	699.00	43.60	330.0	0.969	1.051
355	C4H12N2O	N-AMINOETHYL ETHANOLAMINE	104.152	-----	517.00	698.00	44.60	387.0	1.050	1.022
356	C4H12Si	TETRAMETHYLSILANE	88.225	174.07	299.80	450.40	28.14	357.0	0.224	0.641
357	C4H13N3	DIETHYLENE TRIAMINE	103.167	234.15	480.25	676.00	42.20	342.0	0.700	0.954
358	C5Cl6	HEXACHLOROCYCLOPENTADIENE	272.771	284.49	512.15	746.00	30.10	526.0	0.369	1.703
359	C5H4O2	FURFURAL	96.086	236.65	434.85	657.00	55.12	252.0	0.444	1.155
360	C5H5N	PYRIDINE	79.101	231.53	388.41	619.95	56.34	254.0	0.239	0.979
361	C5H6	CYCLOPENTADIENE	66.103	188.15	314.65	507.00	51.50	225.0	0.212	0.797
362	C5H6	2-METHYL-1-BUTENE-3-YNE	66.103	160.15	305.40	492.00	43.80	248.0	0.137	0.699
363	C5H6	1-PENTENE-3-YNE	66.103	-----	332.40	520.00	44.00	256.0	0.252	0.734
364	C5H6	1-PENTENE-4-YNE	66.103	-----	315.65	503.00	44.00	256.0	0.179	0.724
365	C5H6N2	GLUTARONITRILE	94.116	244.21	559.15	782.00	31.50	352.0	0.603	0.981
366	C5H6O2	FURFURYL ALCOHOL	98.101	258.52	443.15	632.00	53.50	263.0	0.736	1.127
367	C5H6O3	GLUTARIC ANHYDRIDE	114.101	328.00	562.69	838.00	58.00	275.0	0.537	-----
368	C5H6O4	CITRACONIC ACID	130.100	356.15	607.00	829.00	42.40	340.0	0.927	-----
369	C5H6O4	ITACONIC ACID	130.100	438.75	601.00	821.00	42.40	340.0	0.925	-----
370	C5H6S	2-METHYLTHIOPHENE	98.162	209.77	385.71	610.00	48.50	275.5	0.238	1.014
371	C5H6S	3-METHYLTHIOPHENE	98.162	204.18	388.60	615.00	49.50	275.5	0.242	1.016
372	C5H7N	N-METHYLPYRROLE	81.117	216.91	385.89	610.00	47.70	283.0	0.213	0.903
373	C5H7NO2	ETHYL CYANOACETATE	113.116	250.65	479.15	679.00	33.40	358.0	0.573	1.058
374	C5H8	CYCLOPENTENE	68.118	138.13	317.38	507.00	47.90	240.0	0.195	0.767
375	C5H8	ISOPRENE	68.118	127.27	307.21	484.00	38.50	276.0	0.158	0.676
376	C5H8	3-METHYL-1,2-BUTADIENE	68.118	159.53	314.00	490.00	38.30	291.0	0.187	0.681
377	C5H8	2-METHYL-1,3-BUTADIENE	68.118	127.20	307.22	483.30	37.40	266.0	0.164	0.675
378	C5H8	1,2-PENTADIENE	68.118	135.89	318.01	500.00	38.00	276.0	0.154	0.688
379	C5H8	cis-1,3-PENTADIENE	68.118	132.35	317.22	499.00	37.40	276.0	0.147	0.686
380	C5H8	trans-1,3-PENTADIENE	68.118	185.71	315.17	500.00	37.40	276.0	0.116	0.671
381	C5H8	1,4-PENTADIENE	68.118	124.86	299.11	479.00	37.40	303.0	0.084	0.653
382	C5H8	2,3-PENTADIENE	68.118	147.50	321.40	497.00	38.00	295.0	0.218	0.690
383	C5H8	1-PENTYNE	68.118	167.45	313.33	481.20	41.70	277.0	0.290	0.688
384	C5H8	2-PENTYNE	68.118	163.86	329.22	521.99	42.28	277.5	0.186	0.705
385	C5H8	3-METHYL-1-BUTYNE	68.118	183.45	302.15	463.20	42.00	275.0	0.308	0.660
386	C5H8	SPIROPENTANE	68.118	166.11	312.19	499.74	52.13	236.5	0.221	0.735
387	C5H8N4O12	PENTAERYTHRITOL TETRANITRATE	316.138	413.65	543.00	676.00	22.40	731.0	1.451	-----
388	C5H8O	CYCLOPENTANONE	84.118	221.85	403.80	626.00	58.50	258.0	0.388	0.945
389	C5H8O	METHYL ISOPROPENYL KETONE.	84.118	219.55	371.15	566.00	38.90	302.0	0.286	0.846
390	C5H8O2	ACETYLACETONE	100.117	249.65	413.55	602.00	39.60	323.0	0.496	0.971
391	C5H8O2	ALLYL ACETATE	100.117	138.00	377.15	559.00	36.80	323.0	0.388	0.922
392	C5H8O2	ETHYL ACRYLATE	100.117	201.95	372.65	553.00	36.80	323.0	0.378	0.918
393	C5H8O2	METHYL METHACRYLATE	100.117	224.95	373.45	564.00	36.80	323.0	0.317	0.937

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ K	$T_{boiling}$ K	$T_{critical}$ K	$P_{critical}$ bar	$V_{critical}$ cm^3/mol	ω	ρ_{liq} @ 25 C g/cm^3
394	C5H8O2	VINYL PROPIONATE	100.117	-----	364.35	546.00	36.80	323.0	0.336	-----
395	C5H8O3	2-HYDROXYETHYL ACRYLATE	116.117	213.00	484.00	662.00	39.80	359.0	0.864	1.008
396	C5H8O3	LEVULINIC ACID	116.117	308.15	518.95	723.00	40.20	343.0	0.787	-----
397	C5H8O3	METHYL ACETOACETATE	116.117	193.15	444.85	642.00	37.10	343.0	0.513	1.072
398	C5H8O4	GLUTARIC ACID	132.116	370.65	595.54	807.00	40.40	363.0	0.959	-----
399	C5H9N	VALERONITRILE	83.133	176.95	414.45	603.00	32.60	331.0	0.415	0.794
400	C5H9NO	n-BUTYL ISOCYANATE	99.133	-----	388.15	568.00	34.40	360.0	0.415	0.877
401	C5H9NO	N-METHYL-2-PYRROLIDONE	99.133	249.15	475.15	724.00	47.80	316.0	0.358	1.025
402	C5H9NO4	L-GLUTAMIC ACID	147.131	497.15	670.00	886.00	41.34	383.3	1.197	-----
403	C5H10	CYCLOPENTANE	70.134	179.31	322.40	511.76	45.02	258.3	0.194	0.750
404	C5H10	2-METHYL-1-BUTENE	70.134	135.58	304.30	465.00	34.00	292.0	0.229	0.645
405	C5H10	2-METHYL-2-BUTENE	70.134	139.39	311.71	471.00	34.00	292.0	0.277	0.657
406	C5H10	3-METHYL-1-BUTENE	70.134	104.66	293.21	450.37	35.16	302.1	0.229	0.622
407	C5H10	1-PENTENE	70.134	107.93	303.11	464.78	35.29	296.0	0.233	0.635
408	C5H10	cis-2-PENTENE	70.134	121.75	310.08	475.93	36.54	302.1	0.241	0.650
409	C5H10	trans-2-PENTENE	70.134	132.89	309.49	475.37	36.54	302.1	0.237	0.643
410	C5H10Br2	2,3-DIBROMO-2-METHYLBUTANE	229.942	288.00	444.01	668.37	42.55	422.5	0.377	1.410
411	C5H10Cl2	1,5-DICHLOROPENTANE	141.040	200.35	453.15	663.00	31.90	422.0	0.385	1.096
412	C5H10O	METHYL ISOPROPYL KETONE	86.134	181.15	367.55	553.00	38.50	310.0	0.350	0.805
413	C5H10O	2-PENTANONE	86.134	196.29	375.46	561.08	36.94	301.0	0.346	0.802
414	C5H10O	DIETHYL KETONE	86.134	234.18	375.14	560.95	37.39	336.0	0.350	0.810
415	C5H10O	VALERALDEHYDE	86.134	182.00	376.15	554.00	35.00	316.0	0.393	0.805
416	C5H10O2	n-BUTYL FORMATE	102.133	181.25	379.25	559.00	35.10	336.0	0.384	0.887
417	C5H10O2	ETHYL PROPIONATE	102.133	199.25	372.25	546.00	33.62	345.0	0.394	0.884
418	C5H10O2	ISOBUTYL FORMATE	102.133	177.35	371.22	551.35	38.81	352.0	0.390	0.875
419	C5H10O2	ISOPROPYL ACETATE	102.133	199.75	361.65	538.00	35.80	336.0	0.355	0.871
420	C5H10O2	n-PROPYL ACETATE	102.133	178.15	374.65	549.40	33.60	345.0	0.394	0.883
421	C5H10O2	METHYL n-BUTYRATE	102.133	187.35	375.90	554.50	34.73	340.0	0.381	0.893
422	C5H10O2	2-METHYLBUTYRIC ACID	102.133	-----	450.15	643.00	38.90	347.0	0.589	0.932
423	C5H10O2	ISOVALERIC ACID	102.133	243.85	448.25	634.00	38.90	336.0	0.648	0.926
424	C5H10O2	VALERIC ACID	102.133	239.15	458.65	651.00	38.10	336.0	0.627	0.934
425	C5H10O2	TETRAHYDROFURFURYL ALCOHOL	102.133	-----	451.15	639.00	46.60	290.0	0.703	1.048
426	C5H10O2S	3-METHYL SULFOLANE	134.199	273.65	549.15	817.00	42.40	353.0	0.419	1.188
427	C5H10O3	DIETHYL CARBONATE	118.133	230.15	399.95	576.00	33.90	356.0	0.485	0.970
428	C5H10O3	ETHYL LACTATE	118.133	247.15	427.65	588.00	38.60	354.0	0.793	1.027
429	C5H10S	THIACYCLOHEXANE	102.194	292.14	414.90	657.12	46.53	295.5	0.220	0.981
430	C5H10S	CYCLOPENTANETHIOL	102.194	155.39	405.33	629.00	42.70	310.5	0.262	0.961
431	C5H11Br	1-BROMOPENTANE	151.046	185.26	402.74	564.76	37.68	377.5	0.384	1.212
432	C5H11Cl	1-CHLOROPENTANE	106.595	174.15	381.54	568.00	33.50	352.0	0.334	0.878
433	C5H11Cl	1-CHLORO-3-METHYLBUTANE	106.595	168.76	371.66	558.87	33.53	358.5	0.293	0.865
434	C5H11Cl	2-CHLORO-2-METHYLBUTANE	106.595	199.66	358.76	548.97	33.96	353.5	0.233	0.860
435	C5H11N	N-METHYLPYRROLIDINE	85.149	183.15	352.30	550.00	42.00	298.0	0.227	0.806
436	C5H11N	PIPERIDINE	85.149	262.65	379.55	594.05	46.51	308.0	0.243	0.858
437	C5H11NO	tert-BUTYLFORMAMIDE	101.148	289.15	475.15	692.00	35.60	383.0	0.449	0.899
438	C5H12	ISOPENTANE	72.150	113.25	300.99	460.43	33.81	305.8	0.228	0.616
439	C5H12	NEOPENTANE	72.150	256.58	282.65	433.78	31.99	303.6	0.196	0.586
440	C5H12	n-PENTANE	72.150	143.42	309.22	469.65	33.69	312.3	0.249	0.621
441	C5H12O	2,2-DIMETHYL-1-PROPANOL	88.150	327.15	386.25	550.00	38.80	327.0	0.604	-----
442	C5H12O	tert-PENTYL-ALCOHOL	88.149	327.00	386.30	549.00	39.71	323.5	0.621	-----
443	C5H12O	2-METHYL-1-BUTANOL	88.150	-----	401.85	565.00	38.80	327.0	0.678	0.814
444	C5H12O	2-METHYL-2-BUTANOL	88.150	264.35	375.15	545.15	38.80	327.0	0.483	0.805
445	C5H12O	3-METHYL-1-BUTANOL	88.150	155.95	404.35	579.45	38.80	327.0	0.556	0.812
446	C5H12O	3-METHYL-2-BUTANOL	88.150	-----	384.65	574.00	39.60	327.0	0.351	0.814
447	C5H12O	1-PENTANOL	88.150	195.56	410.95	586.15	38.80	326.0	0.594	0.812
448	C5H12O	2-PENTANOL	88.150	200.00	392.15	552.00	38.80	327.0	0.675	0.805
449	C5H12O	3-PENTANOL	88.150	204.15	388.45	547.00	38.80	327.0	0.675	0.818
450	C5H12O	METHYL sec-BUTYL ETHER	88.150	-----	332.15	498.00	34.10	329.0	0.306	0.737
451	C5H12O	METHYL tert-BUTYL ETHER	88.150	164.55	328.35	497.10	34.30	329.0	0.267	0.735
452	C5H12O	METHYL ISOBUTYL ETHER	88.150	-----	331.70	497.00	34.10	329.0	0.310	0.725
453	C5H12O	ETHYL PROPYL ETHER	88.150	145.65	337.01	500.23	33.70	339.0	0.346	0.724
454	C5H12O2	ETHYLENE GLYCOL MONOPROPYL ETHER	104.149	183.15	424.50	582.00	36.70	347.0	0.783	0.906
455	C5H12O2	NEOPENTYL GLYCOL	104.149	400.00	483.00	643.00	42.40	345.0	1.143	-----
456	C5H12O2	1,5-PENTANEDIOL	104.149	257.15	512.15	673.00	41.50	345.0	1.220	0.994
457	C5H12O3	2-(2-METHOXYETHOXY)ETHANOL	120.148	197.15	466.75	630.00	35.40	367.0	0.870	1.017
458	C5H12O4	PENTAERYTHRITOL	136.148	534.15	631.00	780.00	47.80	381.0	2.120	-----
459	C5H12S	n-PENTYL MERCAPTAN	104.216	197.45	399.79	598.00	34.70	359.0	0.321	0.838

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ K	$T_{boiling}$ K	$T_{critical}$ K	$P_{critcal}$ bar	$V_{critical}$ cm^3/mol	ω	ρ_{liq} @ 25 C g/cm^3
460	C5H12S	BUTYL-METHYL-SULFIDE	104.210	175.33	396.58	591.00	33.80	369.5	0.332	0.838
461	C5H12S	ETHYL-PROPYL-SULFIDE	104.210	156.15	391.65	584.00	33.80	369.5	0.329	0.832
462	C5H12S	2-METHYL-2-BUTANETHIOL	104.210	169.38	372.28	566.00	32.70	358.5	0.243	0.821
463	C5H13N	n-PENTYLAMINE	87.165	218.15	377.65	555.00	35.80	365.0	0.407	0.751
464	C5H13NO2	METHYL DIETHANOLAMINE	119.164	252.15	520.15	678.00	38.80	401.0	1.302	1.029
465	C6Cl6	HEXACHLOROBENZENE	284.782	501.70	582.55	825.00	28.50	526.0	0.497	-----
466	C6F6	HEXAFLUOROBENZENE	186.056	278.25	353.41	516.73	32.73	335.0	0.395	1.606
467	C6H3ClN2O4	1-CHLORO-2,4-DINITROBENZENE	202.554	326.55	588.00	813.77	34.90	478.0	0.732	-----
468	C6H3Cl2NO2	1,2-DICHLORO-4-NITROBENZENE	192.001	315.65	529.00	758.00	36.00	436.0	0.539	-----
469	C6H3Cl3	1,2,4-TRICHLOROBENZENE	181.448	290.15	486.15	725.00	37.20	395.0	0.358	1.449
470	C6H3N3O6	1,3,5-TRINITROBENZENE	213.106	398.40	748.00	1005.00	33.90	520.0	0.808	-----
471	C6H4Br2	m-DIBROMOBENZENE	235.906	266.25	491.15	761.00	46.60	372.0	0.293	1.947
472	C6H4ClNO2	m-CHLORONITROBENZENE	157.556	317.65	508.75	742.00	39.80	432.0	0.489	-----
473	C6H4ClNO2	o-CHLORONITROBENZENE	157.556	306.15	519.00	757.00	39.80	432.0	0.483	-----
474	C6H4ClNO2	p-CHLORONITROBENZENE	157.556	356.65	515.15	751.00	39.80	432.0	0.491	-----
475	C6H4Cl2	m-DICHLOROBENZENE	147.003	248.39	446.23	683.95	40.70	351.0	0.279	1.283
476	C6H4Cl2	o-DICHLOROBENZENE	147.003	256.15	453.57	705.00	40.70	351.0	0.219	1.301
477	C6H4Cl2	p-DICHLOROBENZENE	147.003	326.14	447.21	684.75	40.70	351.0	0.285	-----
478	C6H4F2	m-DIFLUOROBENZENE	114.094	249.16	363.66	552.94	40.67	299.5	0.320	1.162
479	C6H4F2	o-DIFLUOROBENZENE	114.094	239.16	364.66	554.46	40.67	299.5	0.320	1.150
480	C6H4F2	p-DIFLUOROBENZENE	114.094	260.16	362.00	556.00	44.00	299.5	0.299	1.162
481	C6H4N2O4	m-DINITROBENZENE	168.109	364.00	573.00	805.00	38.50	434.0	0.682	-----
482	C6H4N2O4	o-DINITROBENZENE	168.109	390.08	592.00	831.00	38.50	434.0	0.687	-----
483	C6H4N2O4	p-DINITROBENZENE	168.109	446.60	572.00	803.00	38.50	434.0	0.686	-----
484	C6H5Br	BROMOBENZENE	157.010	242.43	429.24	670.15	45.19	324.0	0.251	1.487
485	C6H5Cl	MONOCHLOROBENZENE	112.558	227.95	404.87	632.35	45.19	308.0	0.251	1.101
486	C6H5ClO	m-CHLOROPHENOL	128.558	306.00	487.00	729.00	53.20	320.0	0.486	-----
487	C6H5ClO	o-CHLOROPHENOL	128.558	282.00	447.53	675.00	50.00	325.0	0.437	1.255
488	C6H5ClO	p-CHLOROPHENOL	128.558	316.00	493.11	738.00	53.20	325.0	0.485	-----
489	C6H5Cl2N	3,4-DICHLOROANILINE	162.018	344.65	545.00	800.00	41.10	409.0	0.468	-----
490	C6H5F	FLUOROBENZENE	96.104	230.94	357.88	560.09	45.51	269.0	0.247	1.019
491	C6H5I	IODOBENZENE	204.010	241.83	461.60	721.15	45.19	351.0	0.247	1.822
492	C6H5NO2	NITROBENZENE	123.111	278.91	483.95	719.00	44.00	349.0	0.448	1.199
493	C6H6	BENZENE	78.114	278.68	353.24	562.16	48.98	258.9	0.211	0.873
494	C6H6ClN	m-CHLOROANILINE	127.573	262.75	501.65	751.00	45.90	364.0	0.420	1.211
495	C6H6ClN	o-CHLOROANILINE	127.573	481.99	481.99	722.00	45.90	364.0	0.425	-----
496	C6H6ClN	p-CHLOROANILINE	127.573	343.05	503.65	754.00	45.90	364.0	0.421	-----
497	C6H6N2	cis-DICYANO-1-BUTENE	106.127	249.00	501.00	691.00	29.50	392.0	0.672	1.062
498	C6H6N2	trans-DICYANO-1-BUTENE	106.127	260.00	499.00	689.00	29.50	392.0	0.664	1.054
499	C6H6N2	1,4-DICYANO-2-BUTENE	106.127	349.00	547.00	755.00	29.50	426.0	0.667	-----
500	C6H6N2O2	m-NITROANILINE	138.126	387.15	579.00	815.00	44.20	406.0	0.740	-----
501	C6H6N2O2	o-NITROANILINE	138.126	344.65	558.00	784.00	44.20	406.0	0.741	-----
502	C6H6N2O2	p-NITROANILINE	138.126	420.65	609.15	851.00	44.20	406.0	0.782	-----
503	C6H6O	PHENOL	94.113	314.06	454.99	694.25	61.30	229.0	0.426	-----
504	C6H6O2	1,2-BENZENEDIOL	110.112	377.60	518.65	764.00	74.90	300.0	0.701	-----
505	C6H6O2	1,3-BENZENEDIOL	110.112	382.00	549.65	810.00	74.90	300.0	0.677	-----
506	C6H6O2	p-HYDROQUINONE	110.112	444.65	558.15	822.00	74.50	300.0	0.686	-----
507	C6H6O3	1,2,3-BENZENETRIOL	126.112	407.00	581.85	830.00	88.10	318.0	0.945	-----
508	C6H6S	PHENYL MERCAPTAN	110.180	258.26	442.29	689.00	47.40	315.0	0.263	1.073
509	C6H7N	ANILINE	93.128	267.13	457.60	699.00	53.09	270.0	0.404	1.018
510	C6H7N	2-METHYLPYRIDINE	93.128	206.44	402.55	621.00	43.80	320.0	0.278	0.940
511	C6H7N	3-METHYLPYRIDINE	93.128	255.01	417.29	645.00	43.80	320.0	0.271	0.952
512	C6H7N	4-METHYLPYRIDINE	93.128	276.73	418.50	646.15	46.61	325.6	0.302	0.950
513	C6H8	1,3-CYCLOHEXADIENE	80.130	161.00	353.49	558.00	47.30	277.0	0.231	0.837
514	C6H8	METHYLCYCLOPENTADIENE	80.130	-----	345.93	541.00	44.30	279.0	0.238	0.805
515	C6H8N2	ADIPONITRILE	108.143	275.64	568.15	781.00	28.30	406.0	0.672	0.960
516	C6H8N2	METHYLGLUTARONITRILE	108.143	228.15	536.15	742.00	28.80	404.0	0.638	0.950
517	C6H8N2	m-PHENYLENEDIAMINE	108.143	334.00	560.00	824.00	51.80	377.0	0.543	-----
518	C6H8N2	o-PHENYLENEDIAMINE	108.143	376.95	525.00	781.00	51.80	315.0	0.494	-----
519	C6H8N2	p-PHENYLENEDIAMINE	108.143	413.00	540.00	796.00	51.80	317.0	0.539	-----
520	C6H8N2	PHENYLHYDRAZINE	108.143	292.35	516.65	761.00	49.10	418.0	0.535	1.094
521	C6H8N2O	BIS(CYANOETHYL)ETHER	124.142	246.85	579.00	783.00	28.30	377.0	0.782	1.044
522	C6H8O4	DIMETHYL MALEATE	144.127	254.15	478.15	675.00	32.20	403.0	0.562	1.148
523	C6H8O6	ASCORBIC ACID	176.126	465.15	637.00	783.00	52.90	339.0	2.389	-----
524	C6H8O7	CITRIC ACID	192.125	426.15	659.00	822.00	37.98	419.7	1.857	-----
525	C6H10	1-METHYLCYCLOPENTENE	82.145	145.96	348.95	541.99	37.90	311.2	0.219	0.776

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ K	$T_{boiling}$ K	$T_{critical}$ K	$P_{critical}$ bar	$V_{critical}$ cm^3/mol	ω	ρ_{liq} @ 25 C g/cm^3
526	C6H10	3-METHYLCYCLOPENTENE	82.145	130.16	343.16	535.71	40.16	298.5	0.221	0.759
527	C6H10	4-METHYLCYCLOPENTENE	82.145	112.31	348.31	543.75	40.16	298.5	0.221	0.763
528	C6H10	CYCLOHEXENE	82.145	169.67	356.12	560.40	43.50	291.0	0.214	0.806
529	C6H10	2,3-DIMETHYL-1,3-BUTADIENE	82.145	197.15	341.93	526.00	35.20	315.0	0.214	0.723
530	C6H10	1,5-HEXADIENE	82.145	132.47	332.61	507.00	33.50	339.0	0.232	0.688
531	C6H10	cis,trans-2,4-HEXADIENE	82.145	177.05	356.65	538.00	33.50	331.0	0.275	0.719
532	C6H10	trans,trans-2,4-HEXADIENE	82.145	228.25	355.05	535.00	33.50	331.0	0.282	0.710
533	C6H10	1-HEXYNE	82.145	141.25	344.48	516.20	36.20	322.0	0.333	0.712
534	C6H10	2-HEXYNE	82.145	183.65	357.67	549.00	35.30	331.0	0.221	0.727
535	C6H10	3-HEXYNE	82.145	170.05	354.35	544.00	35.30	331.0	0.218	0.718
536	C6H10O	CYCLOHEXANONE	98.145	242.00	428.90	629.15	38.50	311.0	0.450	0.942
537	C6H10O	MESITYL OXIDE	98.145	220.15	402.95	600.00	34.10	355.0	0.327	0.852
538	C6H10O2	epsilon-CAPROLACTONE	114.144	271.85	514.00	771.00	46.30	352.0	0.442	1.067
539	C6H10O2	ETHYL METHACRYLATE	114.144	-----	390.15	577.00	32.50	375.0	0.344	0.908
540	C6H10O2	n-PROPYL ACRYLATE	114.144	-----	392.15	569.00	32.50	376.0	0.434	0.900
541	C6H10O3	ETHYLACETOACETATE	130.144	234.15	453.95	643.00	32.70	391.0	0.561	1.023
542	C6H10O3	PROPIONIC ANHYDRIDE	130.144	228.15	442.15	618.00	33.40	396.0	0.618	1.007
543	C6H10O4	ADIPIC ACID	146.143	425.50	611.00	809.00	35.30	400.0	1.054	-----
544	C6H10O4	DIETHYL OXALATE	146.143	232.55	458.85	646.00	30.90	416.0	0.568	1.073
545	C6H10O4	ETHYLENE GLYCOL DIACETATE	146.143	242.15	463.65	653.00	30.90	416.0	0.560	1.101
546	C6H10O4	ETHYLIDENE DIACETATE	146.143	292.00	442.15	635.00	32.60	406.0	0.478	1.069
547	C6H11N	HEXANENITRILE	97.160	192.85	436.75	622.05	29.20	384.0	0.474	0.801
548	C6H11NO	epsilon-CAPROLACTAM	113.159	342.36	543.15	806.00	47.70	356.0	0.477	-----
549	C6H11NO	CYCLOHEXANONE OXIME	113.159	363.15	481.15	715.00	46.90	369.0	0.462	-----
550	C6H12	CYCLOHEXANE	84.161	279.69	353.87	553.54	40.75	307.9	0.212	0.773
551	C6H12	2,3-DIMETHYL-1-BUTENE	84.161	115.89	328.76	500.00	32.20	349.0	0.227	0.673
552	C6H12	2,3-DIMETHYL-2-BUTENE	84.161	198.82	346.35	524.00	31.60	372.0	0.233	0.703
553	C6H12	3,3-DIMETHYL-1-BUTENE	84.161	157.95	314.40	480.00	32.90	333.0	0.226	0.648
554	C6H12	2-ETHYL-1-BUTENE	84.161	141.61	337.82	512.00	31.60	364.0	0.228	0.685
555	C6H12	trans-3-METHYL-2-PENTENE	84.161	134.70	343.60	521.00	32.90	350.0	0.207	0.693
556	C6H12	1-HEXENE	84.161	133.39	336.63	504.03	31.40	354.0	0.280	0.667
557	C6H12	cis-2-HEXENE	84.161	132.00	342.03	513.00	31.60	359.0	0.272	0.683
558	C6H12	trans-2-HEXENE	84.161	140.17	341.02	513.00	31.60	360.0	0.261	0.673
559	C6H12	cis-3-HEXENE	84.161	135.33	339.60	509.00	31.70	351.0	0.279	0.675
560	C6H12	trans-3-HEXENE	84.161	159.73	340.24	509.00	31.70	351.0	0.285	0.673
561	C6H12	METHYLCYCLOPENTANE	84.161	130.73	344.96	532.79	37.85	318.9	0.230	0.745
562	C6H12	2-METHYL-1-PENTENE	84.161	137.42	335.25	507.00	31.60	359.0	0.241	0.675
563	C6H12	2-METHYL-2-PENTENE	84.161	138.07	340.45	514.00	31.60	363.0	0.245	0.681
564	C6H12	3-METHYL-1-PENTENE	84.161	120.20	327.33	495.00	32.90	343.3	0.264	0.663
565	C6H12	3-METHYL-cis-2-PENTENE	84.161	138.31	340.85	515.00	32.90	343.0	0.259	0.689
566	C6H12	4-METHYL-1-PENTENE	84.161	119.51	327.01	496.00	32.20	345.0	0.239	0.659
567	C6H12	4-METHYL-cis-2-PENTENE	84.161	138.30	329.53	499.00	32.20	346.0	0.244	0.665
568	C6H12	4-METHYL-trans-2-PENTENE	84.161	132.35	331.75	501.00	32.20	346.0	0.255	0.664
569	C6H12N2	TRIETHYLENEDIAMINE	112.175	434.25	447.15	655.00	39.10	382.0	0.460	-----
570	C6H12O	BUTYL VINYL ETHER	100.161	181.25	366.97	536.00	31.20	364.0	0.380	0.774
571	C6H12O	CYCLOHEXANOL	100.161	296.60	434.00	625.15	37.49	322.0	0.514	0.960
572	C6H12O	1-HEXANAL	100.161	217.15	401.45	579.00	31.10	369.0	0.439	0.810
573	C6H12O	ETHYL ISOPROPYL KETONE	100.161	-----	386.55	567.00	33.20	369.0	0.391	0.806
574	C6H12O	2-HEXANONE	100.161	217.35	400.85	587.05	33.24	369.0	0.397	0.807
575	C6H12O	3-HEXANONE	100.161	217.50	396.65	582.82	33.20	364.0	0.376	0.810
576	C6H12O	METHYL ISOBUTYL KETONE	100.161	189.15	389.65	571.40	32.73	369.0	0.389	0.796
577	C6H12O2	n-PENTYL FORMATE	116.160	199.65	406.60	576.00	31.25	389.0	0.528	0.881
578	C6H12O2	n-BUTYL ACETATE	116.160	199.65	399.15	579.65	31.10	389.0	0.410	0.876
579	C6H12O2	sec-BUTYL ACETATE	116.160	174.15	385.15	561.00	31.70	389.0	0.406	0.868
580	C6H12O2	tert-BUTYL ACETATE	116.160	-----	369.15	545.00	31.70	389.0	0.343	0.861
581	C6H12O2	ETHYL n-BUTYRATE	116.160	175.15	394.65	571.00	30.60	421.0	0.419	0.874
582	C6H12O2	ETHYL ISOBUTYRATE	116.160	185.00	383.00	553.15	30.40	410.0	0.426	0.863
583	C6H12O2	ISOBUTYL ACETATE	116.160	174.30	389.80	561.00	31.60	389.0	0.454	0.869
584	C6H12O2	n-PROPYL PROPIONATE	116.160	197.25	395.65	578.00	31.10	389.0	0.376	0.877
585	C6H12O2	CYCLOHEXYL PEROXIDE	116.160	253.15	490.00	685.00	42.10	342.0	0.751	1.015
586	C6H12O2	DIACETONE ALCOHOL	116.160	229.15	441.00	606.00	36.00	387.0	0.757	0.934
587	C6H12O2	2-ETHYL BUTYRIC ACID	116.160	258.15	466.95	655.00	34.10	389.0	0.633	0.919
588	C6H12O2	n-HEXANOIC ACID	116.160	270.15	478.85	667.00	33.50	389.0	0.670	0.921
589	C6H12O3	2-ETHOXYETHYL ACETATE	132.159	211.45	429.45	597.00	24.62	409.0	0.534	0.970
590	C6H12O3	HYDROXYCAPROIC ACID	132.159	334.00	576.00	758.00	36.40	402.0	1.163	-----
591	C6H12O3	PARALDEHYDE	132.159	285.75	397.25	579.00	35.00	365.0	0.441	0.985

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ K	$T_{boiling}$ K	$T_{critical}$ K	$P_{critical}$ bar	$V_{critical}$ cm^3/mol	ω	ρ_{liq} @ 25 C g/cm^3
592	C6H12O3	sec-BUTYL GLYCOLATE	132.160	-----	450.65	-----	-----	-----	-----	-----
593	C6H12S	THIACYCLOHEPTANE	116.221	292.14	414.90	640.07	43.74	391.5	0.291	0.766
594	C6H13N	CYCLOHEXYLAMINE	99.176	255.45	407.65	615.00	42.00	360.0	0.360	0.863
595	C6H13N	HEXAMETHYLENEIMINE	99.176	236.15	404.85	615.00	42.70	361.0	0.330	0.875
596	C6H14	2,2-DIMETHYLBUTANE	86.177	174.28	322.88	488.78	30.81	358.8	0.234	0.644
597	C6H14	2,3-DIMETHYLBUTANE	86.177	145.19	331.13	499.98	31.27	357.8	0.248	0.658
598	C6H14	n-HEXANE	86.177	177.84	341.88	507.43	30.12	369.9	0.305	0.656
599	C6H14	2-METHYLPENTANE	86.177	119.55	333.41	497.50	30.10	366.4	0.278	0.648
600	C6H14	3-METHYLPENTANE	86.177	110.25	336.42	504.43	31.24	366.4	0.274	0.660
601	C6H14N2O2	LYSINE	146.189	483.00	615.00	821.00	35.30	502.0	1.012	-----
602	C6H14O	2-ETHYL-1-BUTANOL	102.177	158.75	419.65	580.00	34.00	380.0	0.714	0.829
603	C6H14O	1-HEXANOL	102.177	228.55	430.15	611.35	35.10	381.3	0.580	0.816
604	C6H14O	2-HEXANOL	102.177	223.00	413.04	586.20	34.00	380.0	0.566	0.810
605	C6H14O	2-METHYL-1-PENTANOL	102.177	-----	421.15	582.00	34.00	380.0	0.726	0.827
606	C6H14O	4-METHYL-2-PENTANOL	102.177	-----	404.85	574.40	34.70	380.0	0.572	0.805
607	C6H14O	n-BUTYL ETHYL ETHER	102.177	170.15	365.35	531.00	29.90	382.0	0.390	0.745
608	C6H14O	DIISOPROPYL ETHER	102.177	187.65	341.45	500.05	28.78	386.0	0.338	0.721
609	C6H14O	DI-n-PROPYL ETHER	102.177	149.95	362.79	530.60	30.28	382.0	0.370	0.741
610	C6H14O	METHYL tert-PENTYL ETHER	102.177	-----	359.45	534.00	30.40	382.0	0.301	0.766
611	C6H14O2	ACETAL	118.176	173.15	376.75	541.00	29.80	402.0	0.432	0.821
612	C6H14O2	2-BUTOXYETHANOL	118.176	203.15	444.47	600.00	32.40	400.0	0.817	0.896
613	C6H14O2	1,6-HEXANEDIOL	118.176	315.15	516.15	670.00	36.10	398.0	1.268	-----
614	C6H14O2	HEXYLENE GLYCOL	118.176	223.15	470.65	621.00	40.10	398.0	1.197	0.918
615	C6H14O2S	DI-n-PROPYL SULFONE	150.242	303.00	543.00	763.00	31.10	463.0	0.582	-----
616	C6H14O3	DIETHYLENE GLYCOL DIMETHYL ETHER	134.175	203.15	432.91	604.00	28.60	422.0	0.575	0.942
617	C6H14O3	DIPROPYLENE GLYCOL	134.175	233.00	504.95	654.00	35.80	415.0	1.198	1.018
618	C6H14O3	2-(2-ETHOXYETHOXY)ETHANOL	134.175	195.15	475.15	632.00	31.40	420.0	0.901	0.984
619	C6H14O3	TRIMETHYLOLPROPANE	134.175	331.15	562.04	709.00	39.10	416.0	1.543	-----
620	C6H14O4	TRIETHYLENE GLYCOL	150.175	265.79	551.00	700.00	33.20	443.0	1.386	1.122
621	C6H14O6	SORBITOL	182.174	370.85	777.00	959.00	46.40	483.0	2.199	-----
622	C6H14S	n-HEXYLMERCAPTAN	118.243	192.62	425.81	623.00	30.80	412.0	0.368	0.837
623	C6H14S	BUTYL-ETHYL-SULFIDE	118.237	178.03	417.41	609.00	30.00	425.5	0.374	0.833
624	C6H14S	ISOPROPYL-SULFIDE	118.237	170.45	393.19	585.71	32.25	413.5	0.316	0.822
625	C6H14S	METHYL-PENTYL-SULFIDE	118.237	179.16	401.16	587.98	31.67	425.5	0.376	0.839
626	C6H14S	PROPYL-SULFIDE	118.237	170.45	416.00	609.73	31.67	425.5	0.376	0.833
627	C6H14S2	PROPYL-DISULFIDE	150.297	187.68	464.65	673.00	27.50	479.5	0.370	0.955
628	C6H15Al	TRIETHYL ALUMINUN	114.167	220.65	458.15	720.15	13.58	230.0	-----	0.833
629	C6H15Al2Cl3	ETHYL ALUMINUM SESQUICHLORIDE	247.506	253.15	482.15	791.00	-----	-----	-----	1.092
630	C6H15N	DIISOPROPYLAMINE	101.192	176.85	357.05	523.10	32.00	418.0	0.388	0.713
631	C6H15N	DI-n-PROPYLAMINE	101.192	210.15	382.00	555.80	36.30	418.0	0.465	0.737
632	C6H15N	n-HEXYLAMINE	101.192	251.85	404.65	583.00	31.80	418.0	0.467	0.761
633	C6H15N	TRIETHYLAMINE	101.192	158.45	361.92	535.15	30.40	390.0	0.316	0.724
634	C6H15NO	6-AMINOHEXANOL	117.191	331.00	508.00	681.00	34.40	436.0	0.970	-----
635	C6H15NO2	DIISOPROPANOLAMINE	133.191	318.15	521.90	672.00	36.00	454.0	1.389	-----
636	C6H15NO3	TRIETHANOLAMINE	149.190	294.35	613.00	787.00	24.50	472.0	1.101	1.120
637	C6H15N3	N-AMINOETHYL PIPERAZINE	129.205	254.15	493.55	708.00	38.50	407.0	0.555	0.983
638	C6H15O4P	TRIETHYL PHOSPHATE	182.156	216.00	484.15	794.00	10.80	1010.0	-----	1.066
639	C6H16N2	HEXAMETHYLENEDIAMINE	116.207	313.95	475.04	663.00	32.90	475.0	0.650	-----
640	C6H18N3OP	HEXAMETHYL PHOSPHORAMIDE	179.202	280.15	506.15	-----	-----	-----	-----	1.020
641	C6H18N4	TRIETHYLENE TETRAMINE	146.236	285.15	539.65	718.00	31.70	482.0	0.974	0.978
642	C6H18OSi2	HEXAMETHYLDISILOXANE	162.379	204.93	373.67	518.70	19.14	601.0	0.418	0.760
643	C6H18O3Si3	HEXAMETHYLCYCLOTRISILOXANE	222.464	337.15	408.26	554.20	16.63	634.0	0.474	-----
644	C6H19NSi2	HEXAMETHYLDISILAZANE	161.395	-----	399.15	544.00	19.20	613.0	0.510	0.772
645	C7H3ClF3NO2	4-CHLORO-3-NITROBENZOTRIFLUORIDE	225.554	-----	495.15	686.00	27.40	490.0	0.607	1.506
646	C7H3Cl2F3	2,4-DICHLOROBENZOTRIFLUORIDE	215.001	247.55	450.65	646.00	28.10	443.0	0.434	1.492
647	C7H3Cl2NO	3,4-DICHLOROPHENYL ISOCYANATE	188.012	316.15	501.00	733.00	33.30	456.0	0.335	-----
648	C7H4ClF3	p-CHLOROBENZOTRIFLUORIDE	180.557	237.15	412.15	601.00	30.10	399.0	0.373	1.226
649	C7H4Cl2O	m-CHLOROBENZOYL CHLORIDE	175.014	280.00	498.00	724.00	36.80	406.0	0.454	1.430
650	C7H4F3NO2	3-NITROBENZOTRIFLUORIDE	191.110	272.00	475.93	667.00	28.00	441.0	0.536	1.426
651	C7H5ClO	BENZOYL CHLORIDE	140.569	272.65	470.15	697.00	40.60	367.0	0.421	1.206
652	C7H5ClO2	o-CHLOROBENZOIC ACID	156.568	415.15	560.15	792.00	40.30	383.0	0.664	-----
653	C7H5Cl3	BENZOTRICHLORIDE	195.475	268.40	486.65	737.00	33.40	447.0	0.260	1.369
654	C7H5F3	BENZOTRIFLUORIDE	146.112	244.14	375.20	565.00	33.90	356.0	0.282	1.178
655	C7H5N	BENZONITRILE	103.123	260.40	464.15	699.35	42.15	339.0	0.352	1.001
656	C7H5NO	PHENYL ISOCYANATE	119.123	243.15	438.75	648.00	40.60	341.0	0.438	1.093
657	C7H5N3O6	2,4,6-TRINITROTOLUENE	227.133	354.00	573.00	795.00	30.40	480.0	1.977	-----

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ K	$T_{boiling}$ K	$T_{critical}$ K	$P_{critical}$ bar	$V_{critical}$ cm^3/mol	ω	ρ_{liq} @ 25 C g/cm^3
658	C7H6Cl2	BENZYL DICHLORIDE	161.030	257.00	487.00	731.00	36.50	404.0	0.326	1.247
659	C7H6Cl2	2,4-DICHLOROTOLUENE	161.030	259.65	474.25	705.00	35.90	404.0	0.359	1.247
660	C7H6N2O4	2,4-DINITROTOLUENE	182.136	343.00	590.00	814.00	34.00	487.0	0.718	-----
661	C7H6N2O4	2,5-DINITROTOLUENE	182.136	325.65	590.00	814.00	34.00	472.0	0.740	-----
662	C7H6N2O4	2,6-DINITROTOLUENE	182.136	339.00	558.00	770.00	36.00	487.0	0.738	-----
663	C7H6N2O4	3,4-DINITROTOLUENE	182.136	332.00	610.00	842.00	34.00	487.0	0.737	-----
664	C7H6N2O4	3,5-DINITROTOLUENE	182.136	365.65	588.00	814.00	34.00	473.0	0.702	-----
665	C7H6O	BENZALDEHYDE	106.124	247.15	451.90	695.00	46.50	324.0	0.305	1.040
666	C7H6O2	BENZOIC ACID	122.123	395.52	522.40	751.00	44.70	339.1	0.604	-----
667	C7H6O2	p-HYDROXYBENZALDEHYDE	122.123	390.15	583.15	844.00	49.90	361.0	0.617	-----
668	C7H6O2	SALICYLALDEHYDE	122.123	266.15	469.65	680.00	49.90	342.0	0.626	1.162
669	C7H6O3	SALICYLIC ACID	138.123	431.75	529.00	739.00	51.80	364.0	0.832	-----
670	C7H7Br	p-BROMOTOLUENE	171.037	299.95	457.50	699.00	43.70	379.0	0.318	-----
671	C7H7Cl	BENZYL CHLORIDE	126.585	234.15	452.55	686.00	39.10	360.0	0.314	1.097
672	C7H7Cl	o-CHLOROTOLUENE	126.585	236.65	432.30	656.00	39.10	354.0	0.304	1.077
673	C7H7Cl	p-CHLOROTOLUENE	126.585	280.65	435.65	660.00	39.10	360.0	0.313	1.063
674	C7H7F	p-FLUOROTOLUENE	110.131	216.36	389.76	590.48	38.15	337.5	0.311	0.991
675	C7H7NO	FORMANILIDE	121.139	323.15	544.15	787.00	41.10	382.0	0.545	-----
676	C7H7NO2	m-NITROTOLUENE	137.138	289.20	505.00	734.00	38.00	441.0	0.490	1.152
677	C7H7NO2	o-NITROTOLUENE	137.138	269.98	495.64	720.00	38.00	441.0	0.482	1.158
678	C7H7NO2	p-NITROTOLUENE	137.138	324.75	511.65	736.00	38.00	441.0	0.541	-----
679	C7H7NO3	o-NITROANISOLE	153.138	283.60	546.15	782.00	37.60	422.0	0.561	1.244
680	C7H8	TOLUENE	92.141	178.18	383.78	591.79	41.09	315.8	0.264	0.865
681	C7H8	1,3,5-CYCLOHEPTATRIENE	92.140	193.66	388.65	593.90	43.34	311.5	0.324	0.882
682	C7H8O	ANISOLE	108.140	235.65	426.73	641.65	41.75	337.0	0.369	0.990
683	C7H8O	BENZYL ALCOHOL	108.140	257.85	477.85	677.00	45.50	335.0	0.691	1.041
684	C7H8O	m-CRESOL	108.140	285.39	475.43	705.85	45.60	312.0	0.449	1.030
685	C7H8O	o-CRESOL	108.140	304.19	464.15	697.55	50.06	282.0	0.434	-----
686	C7H8O	p-CRESOL	108.140	307.93	475.13	704.65	51.50	277.0	0.513	-----
687	C7H8O2	GUAIACOL	124.139	304.65	478.15	697.00	47.30	353.0	0.563	-----
688	C7H8O2	p-METHOXYPHENOL	124.139	329.00	516.00	758.00	49.70	342.0	0.541	-----
689	C7H9N	BENZYLAMINE	107.155	227.15	457.65	683.50	43.20	373.0	0.409	0.981
690	C7H9N	2,6-DIMETHYLPYRIDINE	107.155	267.00	417.20	623.75	37.80	316.0	0.350	0.918
691	C7H9N	N-METHYLANILINE	107.155	216.15	469.02	701.55	51.98	373.0	0.480	0.982
692	C7H9N	m-TOLUIDINE	107.155	242.75	476.55	709.15	41.54	373.0	0.413	0.985
693	C7H9N	o-TOLUIDINE	107.155	249.47	473.55	694.15	37.49	373.0	0.442	0.994
694	C7H9N	p-TOLUIDINE	107.155	316.90	473.40	693.15	40.00	373.0	0.476	-----
695	C7H10	2-NORBORNENE	94.156	319.40	368.65	583.00	39.30	337.0	0.159	-----
696	C7H10N2	TOLUENEDIAMINE	122.170	371.25	557.15	804.00	43.80	376.0	0.576	-----
697	C7H11NO	CYCLOHEXYL ISOCYANATE	125.170	-----	442.15	633.00	34.70	408.0	0.530	1.077
698	C7H12	1-HEPTYNE	96.172	192.26	372.86	559.69	32.95	389.5	0.293	0.728
699	C7H12O2	n-BUTYL ACRYLATE	128.171	208.55	421.00	598.00	26.30	428.0	0.438	0.894
700	C7H12O2	ISOBUTYL ACRYLATE	128.171	212.00	405.15	580.00	29.50	428.0	0.457	0.885
701	C7H12O2	n-PROPYL METHACRYLATE	128.171	-----	414.00	599.00	29.10	428.0	0.401	0.897
702	C7H12O4	DIETHYL MALONATE	160.170	224.25	472.05	653.00	27.80	469.0	0.611	1.050
703	C7H14	CYCLOHEPTANE	98.188	265.15	391.94	604.30	38.40	359.0	0.243	0.806
704	C7H14	1,1-DIMETYLCYCLOPENTANE	98.188	203.36	361.00	547.00	34.45	360.0	0.272	0.750
705	C7H14	cis-1,2-DIMETHYLCYCLOPENTANE	98.188	219.26	372.68	565.15	34.45	370.0	0.266	0.768
706	C7H14	trans-1,2-DIMETHYLCYCLOPENTANE	98.188	155.58	365.02	553.15	34.45	360.0	0.270	0.747
707	C7H14	cis-1,3-DIMETHYLCYCLOPENTANE	98.188	139.45	363.92	551.00	34.45	360.0	0.274	0.740
708	C7H14	trans-1,3-DIMETHYLCYCLOPENTANE	98.188	139.18	364.88	553.00	34.45	360.0	0.270	0.744
709	C7H14	ETHYLCYCLOPENTANE	98.188	134.71	376.62	569.52	33.98	374.5	0.272	0.763
710	C7H14	2-ETHYL-1-PENTENE	98.188	168.00	367.15	543.00	29.50	398.0	0.309	0.704
711	C7H14	3-ETHYL-1-PENTENE	98.188	145.67	357.26	530.00	30.30	398.0	0.302	0.692
712	C7H14	1-HEPTENE	98.188	154.27	366.79	537.29	28.30	413.0	0.331	0.693
713	C7H14	cis-2-HEPTENE	98.188	164.00	371.56	549.00	28.40	424.0	0.294	0.703
714	C7H14	trans-2-HEPTENE	98.188	163.67	371.10	543.00	28.50	406.0	0.337	0.697
715	C7H14	cis-3-HEPTENE	98.188	136.51	368.90	545.00	28.40	421.0	0.295	0.698
716	C7H14	trans-3-HEPTENE	98.188	136.52	368.82	540.00	28.50	406.0	0.334	0.694
717	C7H14	METHYLCYCLOHEXANE	98.188	146.58	374.08	572.19	34.71	368.0	0.235	0.766
718	C7H14	2-METHYL-1-HEXENE	98.188	170.28	364.99	538.00	28.70	398.0	0.309	0.698
719	C7H14	3-METHYL-1-HEXENE	98.188	145.00	357.05	528.00	29.50	398.0	0.306	0.687
720	C7H14	4-METHYL-1-HEXENE	98.188	131.70	359.88	534.00	30.40	398.0	0.302	0.694
721	C7H14	2,3,3-TRIMETHYL-1-BUTENE	98.188	163.30	351.04	531.00	31.40	381.0	0.241	0.701
722	C7H14O	DIISOPROPYL KETONE	114.188	204.81	397.55	576.00	30.20	416.0	0.405	0.912
723	C7H14O	2-HEPTANONE	114.188	238.15	424.05	611.55	29.20	421.0	0.413	0.811

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ K	$T_{boiling}$ K	$T_{critical}$ K	$P_{critical}$ bar	$V_{critical}$ cm^3/mol	ω	ρ_{liq} @ 25 C g/cm^3
724	C7H14O	1-HEPTANAL	114.188	230.15	425.95	603.00	28.00	421.0	0.487	0.813
725	C7H14O	1-METHYLCYCLOHEXANOL	114.188	299.15	430.15	603.00	37.90	414.0	0.683	-----
726	C7H14O	cis-2-METHYLCYCLOHEXANOL	114.188	280.15	438.15	614.00	37.90	414.0	0.679	0.932
727	C7H14O	trans-2-METHYLCYCLOHEXANOL	114.188	269.15	439.65	616.00	37.90	414.0	0.683	0.921
728	C7H14O	cis-3-METHYLCYCLOHEXANOL	114.188	267.65	441.15	618.00	37.90	414.0	0.704	0.911
729	C7H14O	trans-3-METHYLCYCLOHEXANOL	114.188	272.65	441.15	617.00	37.90	414.0	0.697	0.918
730	C7H14O	cis-4-METHYLCYCLOHEXANOL	114.188	-----	444.15	622.00	37.90	414.0	0.658	0.913
731	C7H14O	trans-4-METHYLCYCLOHEXANOL	114.188	-----	444.15	622.00	37.90	414.0	0.691	0.908
732	C7H14O	5-METHYL-2-HEXANONE	114.188	199.25	417.95	601.00	29.70	421.0	0.434	0.808
733	C7H14O2	n-BUTYL PROPIONATE	130.187	183.63	419.75	594.00	28.00	442.0	0.475	0.872
734	C7H14O2	ETHYL ISOVALERATE	130.187	173.85	407.45	587.95	28.40	442.0	0.407	0.865
735	C7H14O2	ISOPENTYL ACETATE	130.187	194.65	415.25	599.00	28.40	442.0	0.414	0.867
736	C7H14O2	n-PENTYL ACETATE	130.187	202.35	422.15	598.00	28.00	442.0	0.490	0.872
737	C7H14O2	n-PROPYL n-BUTYRATE	130.187	177.95	416.45	594.00	28.00	442.0	0.448	0.868
738	C7H14O2	n-HEPTANOIC ACID	130.187	265.83	496.15	680.00	29.90	442.0	0.717	0.913
739	C7H14O3	ETHYL-3-ETHOXYPROPIONATE	146.186	-----	438.15	609.00	27.20	462.0	0.578	0.945
740	C7H15Br	1-BROMOHEPTANE	179.100	217.05	452.05	651.00	30.80	447.0	0.444	1.135
741	C7H15N	N-METHYLCYCLOHEXYLAMINE	113.203	264.65	422.00	622.00	34.90	393.0	0.386	0.865
742	C7H16	2,2-DIMETHYLPENTANE	100.204	149.34	352.34	520.50	37.73	416.0	0.288	0.673
743	C7H16	2,3-DIMETHYLPENTANE	100.204	-----	362.93	537.35	29.08	393.0	0.292	0.691
744	C7H16	2,4-DIMETHYLPENTANE	100.204	153.91	353.64	519.79	27.37	418.0	0.302	0.668
745	C7H16	3,3-DIMETHYLPENTANE	100.204	138.70	359.21	536.40	29.46	414.0	0.267	0.687
746	C7H16	3-ETHYLPENTANE	100.204	154.55	366.62	540.64	28.91	416.0	0.309	0.695
747	C7H16	n-HEPTANE	100.204	182.57	371.58	540.26	27.36	431.9	0.351	0.682
748	C7H16	2-METHYLHEXANE	100.204	154.90	363.20	530.37	27.34	421.0	0.328	0.674
749	C7H16	3-METHYLHEXANE	100.204	153.75	365.00	535.25	28.14	404.0	0.322	0.684
750	C7H16	2,2,3-TRIMETHYLBUTANE	100.204	248.57	354.03	531.17	29.54	398.0	0.250	0.687
751	C7H16O	1-HEPTANOL	116.203	239.15	449.45	631.90	31.50	435.2	0.587	0.820
752	C7H16O	2-HEPTANOL	116.203	243.00	432.35	588.00	30.30	432.0	0.763	0.814
753	C7H16O	5-METHYL-1-HEXANOL	116.203	-----	445.15	605.00	30.30	432.0	0.781	0.812
754	C7H16O	ISOPROPYL-TERT-BUTYL-ETHER	116.203	177.80	378.66	558.21	28.29	428.5	0.307	0.750
755	C7H16S	n-HEPTYL MERCAPTAN	132.270	229.92	450.09	645.00	27.70	456.0	0.419	0.839
756	C7H16S	BUTYL-PROPYL-SULFIDE	132.263	206.66	444.16	653.50	28.51	481.5	0.318	0.839
757	C7H16S	ETHYL-PENTYL-SULFIDE	132.263	206.66	444.16	638.37	28.51	481.5	0.420	0.839
758	C7H16S	HEXYL-METHYL-SULFIDE	132.263	206.66	444.16	638.37	28.51	481.5	0.420	0.839
759	C7H17N	1-AMINOHEPTANE	115.219	254.15	430.05	607.00	28.50	471.0	0.511	0.772
760	C8H4Cl2O2	ISOPHTHALOYL CHLORIDE	203.024	317.00	549.00	768.00	33.30	471.0	0.646	-----
761	C8H4O3	PHTHALIC ANHYDRIDE	148.118	404.26	557.65	791.00	47.20	421.0	0.708	-----
762	C8H6	ETHYNYLBENZENE	102.135	242.53	418.36	655.43	44.03	337.5	0.239	0.901
763	C8H6O4	ISOPHTHALIC ACID	166.133	619.15	753.00	1007.00	39.50	424.0	1.062	-----
764	C8H6O4	PHTHALIC ACID	166.133	464.15	598.00	800.00	39.50	424.0	1.059	-----
765	C8H6O4	TEREPHTHALIC ACID	166.133	700.15	832.00	1113.00	39.50	424.0	1.059	-----
766	C8H6S	BENZOTHIOPHENE	134.202	304.50	493.05	754.00	41.40	349.0	0.296	-----
767	C8H7N	INDOLE	117.150	273.68	526.15	790.00	43.00	431.0	0.374	1.102
768	C8H8	STYRENE	104.152	242.54	418.31	648.00	40.00	352.0	0.236	0.900
769	C8H8	1,3,5,7-CYCLOOCTATETRAENE	104.151	266.16	413.16	642.55	41.41	345.5	0.244	0.907
770	C8H8O	ACETOPHENONE	120.151	293.65	475.15	701.00	38.40	376.0	0.429	1.024
771	C8H8O	p-TOLUALDEHYDE	120.151	-----	477.15	698.00	36.70	416.0	0.442	-----
772	C8H8O2	METHYL BENZOATE	136.150	260.75	472.65	693.00	35.90	436.0	0.415	1.085
773	C8H8O2	o-TOLUIC ACID	136.150	376.85	532.00	751.00	38.60	397.0	0.657	-----
774	C8H8O2	p-TOLUIC ACID	136.150	452.75	548.15	773.00	38.60	397.0	0.661	-----
775	C8H8O3	METHYL SALICYLATE	152.150	265.15	493.65	701.00	40.90	410.0	0.632	1.175
776	C8H8O3	VANILLIN	152.150	355.00	558.00	777.00	40.10	415.0	0.757	-----
777	C8H9NO	ACETANILIDE	135.166	386.65	576.95	825.00	37.30	430.0	0.564	-----
778	C8H10	ETHYLBENZENE	106.167	178.20	409.35	617.17	36.09	373.8	0.304	0.865
779	C8H10	m-XYLENE	106.167	225.30	412.27	617.05	35.41	375.8	0.326	0.861
780	C8H10	o-XYLENE	106.167	247.98	417.58	630.37	37.34	369.2	0.313	0.876
781	C8H10	p-XYLENE	106.167	286.41	411.51	616.26	35.11	379.1	0.326	0.858
782	C8H10O	m-ETHYLPHENOL	122.167	-----	477.66	-----	-----	-----	-----	-----
783	C8H10O	p-ETHYLPHENOL	122.167	318.23	491.14	716.45	42.90	387.0	0.524	-----
784	C8H10O	PHENETOLE	122.167	243.63	443.15	647.15	34.25	390.0	0.415	0.961
785	C8H10O	2-PHENYLETHANOL	122.167	247.00	492.05	684.00	39.20	387.0	0.743	1.016
786	C8H10O	2,3-XYLENOL	122.167	345.71	490.07	722.95	49.00	360.0	0.511	-----
787	C8H10O	2,4-XYLENOL	122.167	297.68	484.13	707.65	44.00	390.0	0.513	1.015
788	C8H10O	2,5-XYLENOL	122.167	347.99	484.33	707.05	49.00	350.0	0.563	-----
789	C8H10O	2,6-XYLENOL	122.167	318.76	474.22	701.05	43.00	390.0	0.455	-----

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ K	$T_{boiling}$ K	$T_{critical}$ K	$P_{critcal}$ bar	$V_{critical}$ cm^3/mol	ω	ρ_{liq} @ 25 C g/cm^3
790	C8H10O	3,4-XYLENOL	122.167	338.25	500.15	729.95	50.00	350.0	0.573	-----
791	C8H10O	3,5-XYLENOL	122.167	336.59	494.89	715.65	36.48	480.0	0.491	-----
792	C8H11N	N,N-DIMETHYLANILINE	121.182	275.60	466.69	687.15	36.27	465.0	0.403	0.949
793	C8H11N	o-ETHYLANILINE	121.182	226.55	482.65	704.00	37.40	399.0	0.463	0.977
794	C8H11N	2,4,6-TRIMETHYLPYRIDINE	121.182	229.00	444.00	653.00	33.30	417.0	0.376	0.913
795	C8H11NO	p-PHENETIDINE	137.181	277.00	528.00	754.00	35.70	446.0	0.553	1.057
796	C8H12	1,5-CYCLOOCTADIENE	108.183	203.98	423.27	645.00	39.00	366.0	0.286	0.878
797	C8H12	VINYLCYCLOHEXENE	108.183	164.00	401.00	599.00	34.30	379.0	0.329	0.826
798	C8H12O4	1,4-CYCLOHEXANEDICARBOXYLIC ACID	172.181	585.65	669.00	889.00	34.20	464.0	1.036	-----
799	C8H12O4	DIETHYL MALEATE	172.181	264.35	498.15	680.00	26.10	508.0	0.666	0.961
800	C8H14O2	n-BUTYL METHACRYLATE	142.198	-----	434.00	616.00	26.30	481.0	0.466	0.891
801	C8H14O3	BUTYRIC ANHYDRIDE	158.197	199.85	468.15	639.00	26.90	501.0	0.659	0.960
802	C8H14O4	DIETHYL SUCCINATE	174.197	252.35	489.65	660.00	25.30	522.0	0.737	1.036
803	C8H16	CYCLOOCTANE	112.214	287.60	424.30	647.20	35.50	410.0	0.236	0.830
804	C8H16	1,1-DIMETHYLCYCLOHEXANE	112.215	239.66	392.70	591.15	29.38	450.0	0.233	0.777
805	C8H16	cis-1,2-DIMETHYLCYCLOHEXANE	112.215	223.16	402.94	606.15	29.38	460.0	0.232	0.792
806	C8H16	trans-1,2-DIMETHYLCYCLOHEXANE	112.215	184.99	396.58	596.15	29.38	460.0	0.238	0.772
807	C8H16	cis-1,3-DIMETHYLCYCLOHEXANE	112.215	197.58	393.24	591.15	29.38	450.0	0.237	0.762
808	C8H16	trans-1,3-DIMETHYLCYCLOHEXANE	112.215	183.07	397.61	598.00	39.38	460.0	0.234	0.781
809	C8H16	cis-1,4-DIMETHYLCYCLOHEXANE	112.215	185.72	397.47	598.15	29.38	460.0	0.231	0.779
810	C8H16	trans-1,4-DIMETHYLCYCLOHEXANE	112.215	236.21	392.51	590.15	29.38	450.0	0.237	0.759
811	C8H16	ETHYLCYCLOHEXANE	112.215	161.84	404.95	609.15	30.40	450.0	0.246	0.784
812	C8H16	2-ETHYL-1-HEXENE	112.215	-----	393.15	574.00	30.70	399.0	0.380	0.723
813	C8H16	1-METHYL-1-ETHYLCYCLOPENTANE	112.215	129.35	394.67	582.00	30.20	428.0	0.330	0.777
814	C8H16	1-OCTENE	112.215	171.45	394.44	566.60	25.50	472.0	0.375	0.711
815	C8H16	trans-2-OCTENE	112.215	185.45	398.15	577.00	25.80	484.0	0.338	0.716
816	C8H16	trans-3-OCTENE	112.215	163.15	396.45	574.00	25.80	480.0	0.344	0.711
817	C8H16	trans-4-OCTENE	112.215	179.37	395.41	573.00	25.80	480.0	0.339	0.710
818	C8H16	n-PROPYLCYCLOPENTANE	112.215	155.82	404.11	603.00	30.00	425.0	0.272	0.773
819	C8H16	2,4,4-TRIMETHYL-1-PENTENE	112.215	179.70	374.59	553.00	26.30	465.0	0.270	0.711
820	C8H16	2,4,4-TRIMETHYL-2-PENTENE	112.215	166.84	378.06	558.00	26.30	470.0	0.265	0.717
821	C8H16O	2-ETHYLHEXANAL	128.214	-----	433.80	607.00	25.80	474.0	0.520	0.819
822	C8H16O	1-OCTANAL	128.214	246.00	447.15	621.00	25.50	474.0	0.547	0.816
823	C8H16O	2-OCTANONE	128.214	252.85	445.75	624.00	26.40	469.0	0.528	0.815
824	C8H16O2	n-BUTYL n-BUTYRATE	144.214	181.15	438.15	616.00	25.40	494.0	0.485	0.866
825	C8H16O2	n-HEXYL ACETATE	144.214	192.25	444.65	618.00	25.40	494.0	0.540	0.868
826	C8H16O2	ISOBUTYL ISOBUTYRATE	144.214	192.45	420.65	602.00	26.10	494.0	0.395	0.852
827	C8H16O2	n-OCTANOIC ACID	144.214	289.65	513.05	692.00	26.90	494.0	0.779	0.903
828	C8H16O4	DIETHYLENE GLYCOL ETHYL ETHER ACETATE	176.213	248.15	490.55	660.00	24.20	565.0	0.715	1.006
829	C8H18	2,2-DIMETHYLHEXANE	114.231	151.97	379.99	549.80	25.30	478.0	0.338	0.692
830	C8H18	2,3-DIMETHYLHEXANE	114.231	-----	388.76	563.40	26.30	468.2	0.347	0.708
831	C8H18	2,4-DIMETHYLHEXANE	114.231	-----	382.58	553.50	25.60	472.0	0.344	0.693
832	C8H18	2,5-DIMETHYLHEXANE	114.231	182.00	382.26	550.00	24.90	482.0	0.358	0.690
833	C8H18	3,3-DIMETHYLHEXANE	114.231	147.05	385.12	562.00	26.50	442.8	0.320	0.707
834	C8H18	3,4-DIMETHYLHEXANE	114.231	-----	390.88	568.80	26.90	466.2	0.338	0.716
835	C8H18	3-ETHYLHEXANE	114.231	-----	391.69	565.40	26.10	455.1	0.363	0.710
836	C8H18	3-ETHYL-2-METHYLPENTANE	114.230	158.20	388.81	567.00	27.10	445.3	0.361	0.711
837	C8H18	3-METHYL-3-ETHYLPENTANE	114.231	182.28	391.42	576.50	28.10	455.1	0.305	0.724
838	C8H18	2-METHYLHEPTANE	114.231	164.16	390.80	559.64	24.85	488.0	0.377	0.696
839	C8H18	3-METHYLHEPTANE	114.231	152.60	392.08	563.67	25.46	464.0	0.372	0.702
840	C8H18	4-METHYLHEPTANE	114.231	152.20	390.86	561.74	25.42	476.0	0.371	0.713
841	C8H18	n-OCTANE	114.231	216.38	398.83	568.83	24.86	492.1	0.396	0.699
842	C8H18	2,2,3-TRIMETHYLPENTANE	114.231	160.89	383.00	563.50	27.30	436.0	0.297	0.712
843	C8H18	2,2,4-TRIMETHYLPENTANE	114.231	165.78	372.39	543.96	25.68	468.0	0.303	0.690
844	C8H18	2,3,3-TRIMETHYLPENTANE	114.231	172.22	387.92	573.50	28.20	455.1	0.290	0.722
845	C8H18	2,3,4-TRIMETHYLPENTANE	114.231	163.95	386.62	566.30	27.30	460.6	0.316	0.716
846	C8H18	2,2,3,3-TETRAMETHYLBUTANE	114.230	172.47	379.60	567.80	28.70	461.8	0.251	0.692
847	C8H18O	DI-n-BUTYL ETHER	130.230	177.95	413.44	581.00	24.60	487.0	0.467	0.764
848	C8H18O	DI-sec-BUTYL ETHER	130.230	173.15	394.20	559.00	25.30	494.0	0.432	0.759
849	C8H18O	DI-tert-BUTYL ETHER	130.230	195.00	380.40	550.00	25.30	487.0	0.346	0.760
850	C8H18O	2-ETHYL-1-HEXANOL	130.230	203.15	457.75	640.25	27.30	485.0	0.549	0.830
851	C8H18O	1-OCTANOL	130.230	257.65	468.35	652.50	28.60	490.0	0.594	0.823
852	C8H18O	2-OCTANOL	130.230	241.55	452.95	637.15	27.30	469.0	0.506	0.817
853	C8H18O2	DI-t-BUTYL PEROXIDE	146.230	233.15	384.15	547.00	24.80	508.0	0.403	0.790
854	C8H18O2S	DI-n-BUTYL SULFONE	178.296	318.00	564.00	767.00	25.40	569.0	0.688	-----
855	C8H18O3	DIETHYLENE GLYCOL DIETHYL ETHER	162.229	228.85	462.15	624.00	23.70	558.0	0.681	0.904

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ K	$T_{boiling}$ K	$T_{critical}$ K	$P_{critical}$ bar	$V_{critical}$ cm^3/mol	ω	ρ_{liq} @ 25 C g/cm^3
856	C8H18O3	DIETHYLENE GLYCOL MONOBUTYL ENTER	162.229	205.15	504.15	654.00	25.60	526.0	0.937	0.952
857	C8H18O4	TRIETHYLENE GLYCOL DIMETHYL ETHER	178.229	229.35	489.15	651.00	23.10	548.0	0.792	0.980
858	C8H18O5	TETRAETHYLENE GLYCOL	194.228	268.15	581.00	722.00	25.90	564.0	1.578	1.122
859	C8H18S	n-OCTYL MERCAPTAN	146.297	223.95	472.19	664.00	25.20	518.0	0.473	0.840
860	C8H18S	tert-OCTYL MERCAPTAN	146.297	199.00	429.00	627.00	25.90	529.0	0.307	0.841
861	C8H18S	BUTYL-SULFIDE	146.290	209.86	455.15	650.00	25.00	537.5	0.394	0.840
862	C8H18S	ETHYL-HEXYL-SULFIDE	146.290	209.86	468.16	660.72	25.79	537.5	0.465	0.840
863	C8H18S	HEPTYL-METHYL-SULFIDE	146.290	209.86	468.16	660.72	25.79	537.5	0.465	0.840
864	C8H18S	PENTYL-PROPYL-SULFIDE	146.290	209.86	468.16	660.72	25.79	537.5	0.465	0.840
865	C8H18S2	BUTYL-DISULFIDE	178.350	202.16	504.36	704.16	26.24	591.5	0.529	0.934
866	C8H19N	DI-n-BUTYLAMINE	129.246	211.15	432.00	607.50	31.10	524.0	0.560	0.757
867	C8H19N	DIISOBUTYLAMINE	129.246	203.15	412.25	580.00	25.70	524.0	0.485	0.743
868	C8H19N	n-OCTYLAMINE	129.246	272.75	452.75	627.00	25.80	524.0	0.568	0.779
869	C8H23N5	TETRAETHYLENEPENTAMINE	189.304	243.00	606.15	774.00	25.30	636.0	1.237	0.994
870	C8H24O4Si4	OCTAMETHYLCYCLOTETRASILOXANE	296.618	290.80	448.15	586.50	13.32	970.0	0.589	0.949
871	C9H4O5	TRIMELLITIC ANHYDRIDE	192.128	438.15	663.00	890.00	40.80	462.0	1.050	-----
872	C9H6N2O2	TOLUENE DIISOCYANATE	174.159	287.04	523.15	737.00	30.40	525.0	0.553	1.220
873	C9H7N	ISOQUINOLINE	129.161	299.45	516.40	803.15	49.80	403.0	0.289	-----
874	C9H7N	QUINOLINE	129.161	258.25	510.75	782.15	46.60	469.0	0.329	1.090
875	C9H7NO	8-HYDROXYQUINOLINE	145.161	346.00	540.00	788.00	43.60	414.0	0.522	-----
876	C9H8	INDENE	116.163	271.70	455.77	687.00	38.20	368.0	0.335	0.994
877	C9H8O	2-METHYLBENZOFURAN	132.162	-----	470.65	698.00	36.40	405.0	0.374	1.051
878	C9H10	INDANE	118.178	221.74	451.12	684.90	39.50	381.0	0.309	0.960
879	C9H10	cis-PROPENYLBENZENE	118.178	211.47	443.16	664.60	34.64	411.5	0.316	0.904
880	C9H10	trans-PROPENYLBENZENE	118.178	243.82	443.16	664.60	34.64	411.5	0.316	0.902
881	C9H10	alpha-METHYLSTYRENE	118.178	249.95	438.65	654.00	33.60	423.0	0.327	0.905
882	C9H10	m-METHYLSTYRENE	118.178	186.81	444.75	657.00	32.90	407.0	0.349	0.908
883	C9H10	o-METHYLSTYRENE	118.178	204.58	442.96	659.00	34.70	407.0	0.341	0.908
884	C9H10	p-METHYLSTYRENE	118.178	239.02	445.93	665.00	33.60	431.0	0.318	0.916
885	C9H10O2	BENZYL ACETATE	150.177	221.65	486.65	699.00	31.80	449.0	0.470	1.045
886	C9H10O2	ETHYL BENZOATE	150.177	238.45	486.55	698.00	31.80	489.0	0.479	1.042
887	C9H10O3	ETHYL VANILLIN	166.177	350.65	567.00	748.00	32.70	467.0	1.073	-----
888	C9H11NO	p-DIMETHYLAMINOBENZALDEHYDE	149.192	348.00	588.00	832.00	30.70	471.0	0.527	-----
889	C9H12	CUMENE	120.194	177.14	425.56	631.15	32.09	427.7	0.338	0.860
890	C9H12	m-ETHYLTOLUENE	120.194	177.61	434.48	637.15	28.37	490.0	0.322	0.860
891	C9H12	o-ETHYLTOLUENE	120.194	192.35	438.33	651.15	30.40	460.0	0.293	0.877
892	C9H12	p-ETHYLTOLUENE	120.194	210.83	435.16	640.15	29.38	470.0	0.324	0.857
893	C9H12	MESITYLENE	120.194	228.46	437.89	637.36	31.27	433.0	0.398	0.861
894	C9H12	n-PROPYLBENZENE	120.194	173.67	432.39	638.38	32.00	440.0	0.346	0.860
895	C9H12	1,2,3-TRIMETHYLBENZENE	120.194	247.79	449.27	664.53	34.54	414.0	0.366	0.891
896	C9H12	1,2,4-TRIMETHYLBENZENE	120.194	229.38	442.53	649.13	32.32	430.0	0.379	0.872
897	C9H12O	BENZYL ETHYL ETHER	136.194	275.65	458.15	662.00	31.10	442.0	0.433	0.945
898	C9H12O	2-PHENYL-2-PROPANOL	136.194	309.15	475.15	660.00	34.90	440.0	0.698	-----
899	C9H12O2	CUMENE HYDROPEROXIDE	152.193	264.26	442.70	605.00	33.40	419.0	0.995	1.043
900	C9H14O	ISOPHORONE	138.210	265.05	488.35	715.00	33.30	456.0	0.400	0.920
901	C9H14O6	GLYCERYL TRIACETATE	218.207	277.25	532.15	704.00	23.10	625.0	0.839	1.158
902	C9H16	1-NONYNE	124.225	223.16	423.96	610.81	26.74	501.5	0.382	0.752
903	C9H16O4	AZELAIC ACID	188.224	379.65	633.36	811.00	25.60	610.0	1.172	-----
904	C9H18	BUTYLCYCLOPENTANE	126.241	165.18	429.76	625.05	27.64	480.5	0.354	0.781
905	C9H18	cis,cis-1,3,5-TRIMETHYLCYCLOHEXANE	126.241	223.46	411.66	607.86	26.49	470.5	0.274	0.767
906	C9H18	cis,trans-1,3,5-TRIMETHYLCYCLOHEXANE	126.241	188.76	413.70	602.20	26.49	470.5	0.333	0.718
907	C9H18	ISOPROPYLCYCLOHEXANE	126.242	183.76	427.91	627.00	28.50	464.0	0.330	0.798
908	C9H18	1-NONENE	126.242	191.78	420.02	593.25	23.30	528.0	0.417	0.725
909	C9H18	n-PROPYLCYCLOHEXANE	126.242	178.28	429.90	639.15	28.07	477.0	0.260	0.790
910	C9H18O	DIISOBUTYL KETONE	142.241	227.17	441.41	615.00	24.80	522.0	0.512	0.802
911	C9H18O	1-NONANAL	142.241	255.15	468.15	640.00	23.30	527.0	0.592	0.819
912	C9H18O2	n-BUTYL VALERATE	158.241	180.35	459.65	629.00	23.30	547.0	0.596	0.863
913	C9H18O2	n-NONANOIC ACID	158.241	285.55	528.75	703.00	24.50	547.0	0.831	0.902
914	C9H18O2	n-OCTYL FORMATE	158.241	234.05	471.95	645.00	23.30	547.0	0.587	0.870
915	C9H20	3,3-DIETHYLPENTANE	128.258	240.12	419.34	610.05	26.75	473.0	0.338	0.750
916	C9H20	2,2-DIMETHYL-3-ETHYLPENTANE	128.258	173.68	406.99	590.00	25.70	511.0	0.335	0.731
917	C9H20	3-ETHYL-2,3-DIMETHYLPENTANE	128.257	173.67	417.86	606.80	26.85	477.0	0.349	0.751
918	C9H20	2,4-DIMETHYL-3-ETHYLPENTANE	128.258	150.79	409.87	591.00	25.30	512.0	0.353	0.734
919	C9H20	2,2-DIMETHYLHEPTANE	128.258	160.15	405.84	576.80	23.50	519.0	0.390	0.707
920	C9H20	2,6-DIMETHYLHEPTANE	128.258	170.25	408.36	579.00	23.00	520.0	0.393	0.706
921	C9H20	3-ETHYLHEPTANE	128.258	158.25	416.35	590.00	23.90	528.0	0.408	0.723

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ K	$T_{boiling}$ K	$T_{critical}$ K	$P_{critcal}$ bar	$V_{critical}$ cm^3/mol	ω	ρ_{liq} @ 25 C g/cm^3
922	C9H20	4-ETHYLHEPTANE	128.257	159.96	414.36	584.95	23.25	533.5	0.416	0.724
923	C9H20	2,3-DIMETHYLHEPTANE	128.257	160.16	413.66	589.60	24.01	515.0	0.385	0.722
924	C9H20	2,4-DIMETHYLHEPTANE	128.257	160.16	406.05	576.80	23.41	517.0	0.390	0.711
925	C9H20	2,5-DIMETHYLHEPTANE	128.257	160.16	409.16	581.10	23.51	522.0	0.393	0.713
926	C9H20	3,4-DIMETHYLHEPTANE	128.257	170.26	413.76	591.90	24.62	503.0	0.379	0.727
927	C9H20	3,5-DIMETHYLHEPTANE	128.257	170.26	409.16	583.20	24.01	510.0	0.385	0.719
928	C9H20	4,4-DIMETHYLHEPTANE	128.257	170.26	408.36	585.40	24.32	501.0	0.364	0.721
929	C9H20	3-ETHYL-2-METHYLHEXANE	128.257	160.16	411.16	588.10	24.52	497.0	0.378	0.729
930	C9H20	4-ETHYL-2-METHYLHEXANE	128.257	160.16	406.96	580.00	24.01	504.0	0.386	0.719
931	C9H20	3-ETHYL-3-METHYLHEXANE	128.257	160.16	413.76	597.50	25.53	487.0	0.352	0.737
932	C9H20	3-ETHYL-4-METHYLHEXANE	128.257	160.16	413.56	593.70	25.13	490.0	0.372	0.736
933	C9H20	2,2,3-TRIMETHYLHEXANE	128.257	153.16	406.75	588.00	24.90	498.9	0.332	0.725
934	C9H20	2,2,4-TRIMETHYLHEXANE	128.257	153.00	399.69	573.50	23.80	506.6	0.321	0.713
935	C9H20	2,3,3-TRIMETHYLHEXANE	128.257	156.36	410.84	596.00	25.53	491.0	0.333	0.734
936	C9H20	2,3,4-TRIMETHYLHEXANE	128.257	156.36	412.20	594.50	25.23	494.0	0.353	0.735
937	C9H20	2,3,5-TRIMETHYLHEXANE	128.257	145.36	404.50	579.20	24.01	509.0	0.364	0.718
938	C9H20	2,4,4-TRIMETHYLHEXANE	128.257	159.78	403.81	581.50	24.32	500.0	0.344	0.720
939	C9H20	3,3,4-TRIMETHYLHEXANE	128.257	171.96	413.62	602.30	26.24	484.0	0.328	0.741
940	C9H20	2-METHYLOCTANE	128.258	192.78	416.43	586.75	22.90	541.0	0.422	0.710
941	C9H20	3-METHYLOCTANE	128.258	165.55	417.38	590.15	23.41	529.0	0.413	0.717
942	C9H20	4-METHYLOCTANE	128.258	159.95	415.59	587.65	23.41	523.0	0.413	0.716
943	C9H20	n-NONANE	128.258	219.63	423.97	595.65	23.06	547.7	0.438	0.715
944	C9H20	2,2,3,3-TETRAMETHYLPENTANE	128.258	263.26	413.44	610.85	27.36	478.0	0.280	0.753
945	C9H20	2,2,3,4-TETRAMETHYLPENTANE	128.258	152.06	406.18	592.15	25.64	490.0	0.311	0.735
946	C9H20	2,2,4,4-TETRAMETHYLPENTANE	128.258	206.95	395.44	571.35	23.61	504.0	0.316	0.716
947	C9H20	2,3,3,4-TETRAMETHYLPENTANE	128.257	171.10	414.72	607.50	27.20	516.5	0.313	0.735
948	C9H20	2,2,5-TRIMETHYLHEXANE	128.258	167.39	397.24	568.05	23.31	519.0	0.357	0.707
949	C9H20O	2,6-DIMETHYL-4-HEPTANOL	144.257	208.00	451.00	603.00	25.50	538.0	0.802	0.807
950	C9H20O	1-NONANOL	144.257	268.15	486.25	673.00	26.00	546.4	0.594	0.824
951	C9H20O	2-NONANOL	144.257	238.15	471.65	623.00	24.80	538.0	0.890	0.820
952	C9H20S	n-NONYL MERCAPTAN	160.324	253.05	492.95	681.00	23.10	571.0	0.531	0.841
953	C9H20S	BUTYL-PENTYL-SULFIDE	160.317	231.16	491.16	681.56	23.45	593.5	0.508	0.840
954	C9H20S	ETHYL-HEPTYL-SULFIDE	160.317	231.16	491.16	681.56	23.45	593.5	0.508	0.840
955	C9H20S	HEXYL-PROPYL-SULFIDE	160.317	231.16	491.16	681.56	23.45	593.5	0.508	0.840
956	C9H20S	METHYL-OCTYL-SULFIDE	160.317	231.16	491.16	681.56	23.45	593.5	0.508	0.840
957	C9H21N	n-NONYLAMINE	143.272	273.15	475.35	648.00	23.60	577.0	0.615	0.785
958	C9H21N	TRIPROPYLAMINE	143.272	179.65	429.65	577.50	22.30	576.0	0.699	0.754
959	C10H6O8	PYROMELLITIC ACID	254.153	554.00	722.00	893.00	31.40	584.0	1.830	-----
960	C10H7Br	1-BROMONAPHTHALENE	207.070	279.35	554.25	824.00	37.00	453.0	0.369	1.478
961	C10H7Cl	1-CHLORONAPHTHALENE	162.618	269.15	532.45	785.00	34.00	434.0	0.383	1.171
962	C10H8	NAPHTHALENE	128.174	353.43	491.14	748.35	40.51	413.0	0.302	-----
963	C10H8	AZULENE	128.173	173.66	515.16	773.48	38.97	409.5	0.355	1.053
964	C10H9N	QUINALDINE	143.188	272.15	519.75	773.00	29.60	490.0	0.280	1.055
965	C10H10	m-DIVINYLBENZENE	130.189	206.25	472.65	692.00	31.20	440.0	0.373	0.925
966	C10H10	1-METHYLINDENE	130.189	-----	471.65	703.00	34.60	440.0	0.336	-----
967	C10H10	2-METHYLINDENE	130.189	353.15	458.00	684.00	34.60	429.0	0.328	-----
968	C10H10O4	DIMETHYL PHTHALATE	194.187	272.15	556.85	766.00	27.80	530.0	0.647	1.189
969	C10H10O4	DIMETHYL TEREPHTHALATE	194.187	413.80	561.15	772.00	27.80	529.0	0.637	-----
970	C10H12	DICYCLOPENTADIENE	132.205	307.00	443.00	660.00	30.60	445.0	0.285	-----
971	C10H12	1,2,3,4-TETRAHYDRONAPHTHALENE	132.205	237.40	480.77	720.15	36.20	441.0	0.328	0.967
972	C10H12O	ANETHOLE	148.205	294.50	508.45	723.00	29.00	482.0	0.485	0.984
973	C10H12O4	DIALLYL MALEATE	196.203	226.15	520.00	693.00	23.30	606.0	0.789	1.073
974	C10H14	n-BUTYLBENZENE	134.221	185.30	456.46	660.55	28.87	497.0	0.392	0.858
975	C10H14	sec-BUTYLBENZENE	134.221	197.72	446.48	664.54	29.51	497.0	0.276	0.858
976	C10H14	tert-BUTYLBENZENE	134.221	215.27	442.30	660.00	29.70	492.0	0.266	0.863
977	C10H14	1,2,3,4-TETRAMETHYLBENZENE	134.221	266.91	478.25	695.10	28.40	487.5	0.368	0.901
978	C10H14	m-CYMENE	134.221	209.44	448.23	657.00	29.30	485.0	0.341	0.857
979	C10H14	o-CYMENE	134.221	201.64	451.33	662.00	29.30	489.0	0.337	0.873
980	C10H14	p-CYMENE	134.221	205.25	450.28	653.15	28.37	492.0	0.372	0.852
981	C10H14	m-DIETHYLBENZENE	134.221	189.26	454.29	663.00	28.80	488.0	0.350	0.860
982	C10H14	o-DIETHYLBENZENE	134.221	241.93	456.61	668.00	28.80	502.0	0.340	0.876
983	C10H14	p-DIETHYLBENZENE	134.221	230.32	456.94	657.96	28.03	497.0	0.404	0.858
984	C10H14	2-ETHYL-m-XYLENE	134.221	256.89	463.19	671.00	30.20	482.0	0.407	0.886
985	C10H14	2-ETHYL-p-XYLENE	134.221	219.52	459.98	663.00	28.80	482.0	0.411	0.873
986	C10H14	3-ETHYL-o-XYLENE	134.221	223.64	467.11	680.00	28.80	507.0	0.362	0.888
987	C10H14	4-ETHYL-m-XYLENE	134.221	210.27	461.59	665.00	28.80	482.0	0.414	0.872

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988	C10H14	4-ETHYL-o-XYLENE	134.221	206.22	462.93	667.00	28.80	490.0	0.411	0.871
989	C10H14	5-ETHYL-m-XYLENE	134.221	188.82	456.93	655.00	27.50	482.0	0.417	0.861
990	C10H14	ISOBUTYLBENZENE	134.221	221.70	445.94	650.15	30.40	456.0	0.381	0.849
991	C10H14	1,2,3,5-TETRAMETHYLBENZENE	134.221	249.46	471.15	679.00	29.70	482.0	0.424	0.887
992	C10H14	1,2,4,5-TETRAMETHYLBENZENE	134.221	352.38	469.99	675.15	29.38	482.0	0.435	-----
993	C10H14O	p-tert-BUTYLPHENOL	150.221	371.56	512.88	734.00	33.40	493.0	0.510	-----
994	C10H14O2	p-tert-BUTYLCATECHOL	166.220	325.00	558.00	776.00	37.70	511.0	0.740	-----
995	C10H15N	N,N-DIETYHLANILINE	149.236	235.15	489.42	702.00	28.50	556.0	0.426	0.931
996	C10H15N	2,6-DIETHYLANILINE	149.236	276.65	508.65	678.00	31.20	495.0	0.954	0.902
997	C10H16	CAMPHENE	136.237	320.15	433.65	638.00	27.50	499.0	0.296	-----
998	C10H16	D-LIMONENE	136.237	199.00	449.65	660.00	27.50	524.0	0.313	0.839
999	C10H16	alpha-PHELLANDRENE	136.237	-----	448.15	649.00	28.20	500.0	0.381	0.843
1000	C10H16	beta-PHELLANDRENE	136.237	-----	447.15	648.00	28.20	487.0	0.374	0.837
1001	C10H16	alpha-PINENE	136.237	209.15	429.29	632.00	27.60	504.0	0.286	0.857
1002	C10H16	beta-PINENE	136.237	211.61	439.19	643.00	27.60	506.0	0.325	0.867
1003	C10H16	alpha-TERPINENE	136.237	-----	450.35	652.00	28.00	506.0	0.376	0.830
1004	C10H16	gamma-TERPINENE	136.237	-----	456.15	661.00	28.00	505.0	0.375	0.845
1005	C10H16	TERPINOLENE	136.237	-----	458.15	672.00	27.70	509.0	0.301	0.858
1006	C10H16O	CAMPHOR	152.236	453.25	480.57	709.00	29.90	460.0	0.319	-----
1007	C10H18	1-DECYNE	138.252	229.16	447.16	632.49	24.27	557.5	0.426	0.762
1008	C10H18	cis-DECAHYDRONANPHTALENE	138.253	230.20	468.97	702.25	32.42	480.0	0.294	0.894
1009	C10H18	trans-DECAHYDRONAPHTHALENE	138.253	242.79	460.46	687.05	28.37	480.0	0.254	0.868
1010	C10H18O4	SEBACIC ACID	202.251	407.65	642.09	815.00	23.50	658.0	1.205	-----
1011	C10H20	n-BUTYLCYCLOHEXANE	140.269	198.42	454.13	667.00	25.70	534.0	0.274	0.796
1012	C10H20	1-CYCLOPENTYLPENTANE	140.268	190.16	453.76	647.49	25.05	536.5	0.398	0.787
1013	C10H20	1-DECENE	140.269	206.89	443.75	617.05	21.68	585.0	0.465	0.737
1014	C10H20O	1-DECANAL	156.268	267.15	488.15	657.00	21.50	580.0	0.642	0.821
1015	C10H20O2	n-DECANOIC ACID	172.268	304.75	543.15	713.00	22.50	600.0	0.877	-----
1016	C10H20O2	2-ETHYLHEXYL ACETATE	172.268	180.15	471.75	639.00	21.70	600.0	0.631	0.869
1017	C10H20O2	ISOPENTYL ISOVALERATE	172.268	215.00	467.15	637.00	22.00	600.0	0.579	0.854
1018	C10H22	n-DECANE	142.285	243.49	447.30	618.45	21.23	603.1	0.484	0.728
1019	C10H22	2-METHYLNONANE	142.285	198.50	440.15	610.00	21.20	583.0	0.472	0.723
1020	C10H22	3-METHYLNONANE	142.285	188.35	440.95	613.00	21.60	583.0	0.465	0.729
1021	C10H22	4-METHYLNONANE	142.285	174.45	438.85	610.00	21.60	583.0	0.465	0.728
1022	C10H22	5-METHYLNONANE	142.285	185.45	438.30	610.00	21.60	583.0	0.456	0.729
1023	C10H22	3-ETHYLOCTANE	142.284	185.46	439.66	613.60	21.89	561.0	0.446	0.736
1024	C10H22	4-ETHYLOCTANE	142.284	185.46	436.80	609.60	21.78	552.0	0.443	0.734
1025	C10H22	2,2-DIMETHYLOCTANE	142.285	-----	430.05	602.00	21.60	574.0	0.429	0.721
1026	C10H22	2,3-DIMETHYLOCTANE	142.284	219.16	437.47	613.20	21.89	567.0	0.424	0.734
1027	C10H22	2,4-DIMETHYLOCTANE	142.284	219.16	429.06	599.40	21.38	566.0	0.430	0.723
1028	C10H22	2,5-DIMETHYLOCTANE	142.284	219.16	431.66	603.00	21.48	569.0	0.432	0.726
1029	C10H22	2,6-DIMETHYLOCTANE	142.284	219.16	433.54	603.10	21.48	576.0	0.453	0.723
1030	C10H22	2,7-DIMETHYLOCTANE	142.284	219.16	433.03	602.90	20.97	590.0	0.438	0.720
1031	C10H22	3,3-DIMETHYLOCTANE	142.284	219.16	434.36	612.10	22.19	557.0	0.404	0.735
1032	C10H22	3,4-DIMETHYLOCTANE	142.284	219.16	436.56	614.00	22.39	551.0	0.417	0.741
1033	C10H22	3,5-DIMETHYLOCTANE	142.284	219.16	432.56	606.30	21.89	555.0	0.424	0.733
1034	C10H22	3,6-DIMETHYLOCTANE	142.284	219.16	433.96	608.30	21.89	562.0	0.424	0.732
1035	C10H22	4,4-DIMETHYLOCTANE	142.284	219.16	430.66	606.90	22.09	548.0	0.402	0.731
1036	C10H22	4,5-DIMETHYLOCTANE	142.284	219.16	435.29	612.20	22.39	546.0	0.418	0.743
1037	C10H22	4-PROPYLHEPTANE	142.284	219.16	430.66	601.00	21.78	545.0	0.444	0.732
1038	C10H22	4-ISOPROPYLHEPTANE	142.284	219.16	432.06	607.60	22.29	537.0	0.416	0.735
1039	C10H22	3-ETHYL-2-METHYLHEPTANE	142.284	219.16	434.36	610.90	22.29	544.0	0.415	0.740
1040	C10H22	4-ETHYL-2-METHYLHEPTANE	142.284	219.16	429.36	601.80	21.89	545.0	0.424	0.732
1041	C10H22	5-ETHYL-2-METHYLHEPTANE	142.284	219.16	432.86	606.70	21.89	555.0	0.424	0.732
1042	C10H22	3-ETHYL-3-METHYLHEPTANE	142.284	219.16	436.96	620.00	23.10	532.0	0.389	0.746
1043	C10H22	4-ETHYL-3-METHYLHEPTANE	142.284	219.16	435.36	614.30	22.80	530.0	0.410	0.746
1044	C10H22	3-ETHYL-5-METHYLHEPTANE	142.284	219.16	431.36	606.60	22.29	541.0	0.416	0.737
1045	C10H22	3-ETHYL-4-METHYLHEPTANE	142.284	219.16	436.16	615.50	22.80	533.0	0.409	0.747
1046	C10H22	4-ETHYL-4-METHYLHEPTANE	142.284	219.16	433.96	615.70	23.10	525.0	0.390	0.747
1047	C10H22	2,2,3-TRIMETHYLHEPTANE	142.284	219.16	430.76	611.70	22.70	546.0	0.378	0.738
1048	C10H22	2,2,4-TRIMETHYLHEPTANE	142.284	219.16	421.46	594.50	21.68	552.0	0.389	0.724
1049	C10H22	2,2,5-TRIMETHYLHEPTANE	142.284	219.16	423.96	598.00	21.68	559.0	0.389	0.724
1050	C10H22	2,2,6-TRIMETHYLHEPTANE	142.284	219.16	422.09	593.40	21.28	573.0	0.396	0.720
1051	C10H22	2,3,3-TRIMETHYLHEPTANE	142.284	219.16	433.36	617.50	23.20	538.0	0.371	0.745
1052	C10H22	2,3,4-TRIMETHYLHEPTANE	142.284	219.16	433.06	613.70	22.90	538.0	0.391	0.745
1053	C10H22	2,3,5-TRIMETHYLHEPTANE	142.284	219.16	433.86	612.80	22.39	547.0	0.397	0.741

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ K	$T_{boiling}$ K	$T_{critical}$ K	$P_{critcal}$ bar	$V_{critical}$ cm^3/mol	ω	ρ_{liq} @ 25 C g/cm^3
1054	C10H22	2,3,6-TRIMETHYLHEPTANE	142.284	219.16	429.16	604.10	21.89	560.0	0.403	0.731
1055	C10H22	2,4,4-TRIMETHYLHEPTANE	142.284	219.16	424.16	600.30	22.19	541.0	0.383	0.731
1056	C10H22	2,4,5-TRIMETHYLHEPTANE	142.284	219.16	429.66	606.90	22.39	544.0	0.397	0.737
1057	C10H22	2,4,6-TRIMETHYLHEPTANE	142.284	219.16	420.76	590.30	21.48	560.0	0.411	0.719
1058	C10H22	2,5,5-TRIMETHYLHEPTANE	142.284	219.16	425.96	602.90	22.19	550.0	0.383	0.736
1059	C10H22	3,3,4-TRIMETHYLHEPTANE	142.284	219.16	435.06	622.10	23.71	526.0	0.365	0.752
1060	C10H22	3,3,5-TRIMETHYLHEPTANE	142.284	219.16	428.85	609.50	23.20	578.5	0.382	0.739
1061	C10H22	3,4,4-TRIMETHYLHEPTANE	142.284	219.16	434.26	620.90	23.71	524.0	0.365	0.753
1062	C10H22	3,4,5-TRIMETHYLHEPTANE	142.284	219.16	435.66	612.80	22.39	547.0	0.417	0.752
1063	C10H22	3-ISOPROPYL-2-METHYLHEXANE	142.284	219.16	439.86	623.40	22.90	529.0	0.391	0.744
1064	C10H22	3,3-DIETHYLHEXANE	142.284	219.16	439.46	627.80	24.12	510.0	0.377	0.757
1065	C10H22	3,4-DIETHYLHEXANE	142.284	219.16	437.06	618.80	23.30	519.0	0.403	0.747
1066	C10H22	3-ETHYL-2,2-DIMETHYLHEXANE	142.284	219.16	429.26	611.70	23.10	526.0	0.369	0.745
1067	C10H22	4-ETHYL-2,2-DIMETHYLHEXANE	142.284	219.16	420.16	594.60	22.19	539.0	0.384	0.730
1068	C10H22	3-ETHYL-2,3-DIMETHYLHEXANE	142.284	219.16	436.86	626.80	24.22	516.0	0.359	0.760
1069	C10H22	4-ETHYL-2,3-DIMETHYLHEXANE	142.284	219.16	434.06	617.30	23.41	524.0	0.384	0.752
1070	C10H22	3-ETHYL-2,4-DIMETHYLHEXANE	142.284	219.16	433.26	616.10	23.41	522.0	0.385	0.751
1071	C10H22	4-ETHYL-2,4-DIMETHYLHEXANE	142.284	219.16	434.26	620.90	24.71	524.0	0.383	0.752
1072	C10H22	3-ETHYL-2,5-DIMETHYLHEXANE	142.284	219.16	427.26	603.50	22.39	537.0	0.397	0.737
1073	C10H22	4-ETHYL-3,3-DIMETHYLHEXANE	142.284	219.16	436.06	625.70	24.22	513.0	0.358	0.760
1074	C10H22	3-ETHYL-3,4-DIMETHYLHEXANE	142.284	219.16	435.26	624.50	24.22	511.0	0.359	0.760
1075	C10H22	2,2,3,3-TETRAMETHYLHEXANE	142.284	219.16	433.48	623.00	25.10	573.5	0.364	0.761
1076	C10H22	2,2,3,4-TETRAMETHYLHEXANE	142.284	219.16	431.96	620.40	23.71	525.0	0.345	0.751
1077	C10H22	2,2,3,5-TETRAMETHYLHEXANE	142.284	219.16	421.56	601.30	22.70	540.0	0.357	0.733
1078	C10H22	2,2,4,4-TETRAMETHYLHEXANE	142.284	219.16	426.96	610.20	22.49	535.0	0.344	0.742
1079	C10H22	2,2,4,5-TETRAMETHYLHEXANE	142.284	219.16	421.04	598.50	22.19	544.0	0.363	0.731
1080	C10H22	2,2,5,5-TETRAMETHYLHEXANE	142.284	260.56	410.63	581.40	21.90	573.5	0.375	0.715
1081	C10H22	2,3,3,4-TETRAMETHYLHEXANE	142.284	260.56	437.75	633.10	24.82	514.0	0.334	0.765
1082	C10H22	2,3,3,5-TETRAMETHYLHEXANE	142.284	260.56	426.26	610.10	23.20	531.0	0.351	0.745
1083	C10H22	2,3,4,4-TETRAMETHYLHEXANE	142.284	260.56	434.76	626.60	24.22	518.0	0.339	0.779
1084	C10H22	2,3,4,5-TETRAMETHYLHEXANE	142.284	260.56	429.36	613.20	23.41	530.0	0.365	0.746
1085	C10H22	3,3,4,4-TETRAMETHYLHEXANE	142.284	260.56	443.16	646.70	25.74	506.0	0.311	0.779
1086	C10H22	2,4-DIMETHYL-3-ISOPROPYLPENTANE	142.284	191.46	430.20	614.40	23.41	521.0	0.365	0.754
1087	C10H22	3,3-DIETHYL-2-METHYLPENTANE	142.284	191.46	442.86	639.90	25.33	501.0	0.346	0.775
1088	C10H22	3-ETHYL-2,2,3-TRIMETHYLPENTANE	142.284	191.46	442.66	646.00	25.74	503.0	0.311	0.778
1089	C10H22	3-ETHYL-2,2,4-TRIMETHYLPENTANE	142.284	191.46	428.46	615.30	23.71	518.0	0.346	0.753
1090	C10H22	3-ETHYL-2,3,4-TRIMETHYLPENTANE	142.284	191.46	442.60	642.30	25.43	506.0	0.329	0.773
1091	C10H22	2,2,3,3,4-PENTAMETHYLPENTANE	142.284	236.71	439.21	643.80	25.84	508.0	0.294	0.777
1092	C10H22	2,2,3,4,4-PENTAMETHYLPENTANE	142.284	234.41	432.45	627.30	24.01	521.0	0.308	0.764
1093	C10H22O	1-DECANOL	158.284	280.05	503.35	690.00	23.70	599.6	0.613	0.825
1094	C10H22O	DI-n-PENTYL ETHER	158.284	203.72	459.90	622.00	20.90	593.0	0.601	0.780
1095	C10H22O	ISODECANOL	158.284	213.15	493.00	644.00	22.80	591.0	0.913	0.837
1096	C10H22O5	TETRAETHYLENE GLYCOL DIMETHYL ETHER	222.282	243.45	548.95	705.00	19.40	674.0	0.965	1.006
1097	C10H22S	n-DECYL MERCAPTAN	174.351	247.56	512.35	696.00	21.30	624.0	0.588	0.841
1098	C10H22S	BUTYL-HEXYL-SULFIDE	174.344	238.16	513.16	701.03	21.41	649.5	0.551	0.841
1099	C10H22S	ETHYL-OCTYL-SULFIDE	174.344	238.16	513.16	701.03	21.41	649.5	0.551	0.841
1100	C10H22S	HEPTYL-PROPYL-SULFIDE	174.344	238.16	513.16	701.03	21.41	649.5	0.551	0.841
1101	C10H22S	METHYL-NONYL-SULFIDE	174.344	238.16	513.16	701.03	21.41	649.5	0.551	0.841
1102	C10H22S	PENTYL-SULFIDE	174.344	238.16	513.16	701.03	21.41	649.5	0.551	0.841
1103	C10H22S2	PENTYL-DISULFIDE	206.404	214.16	537.06	726.94	21.75	703.5	0.614	0.918
1104	C10H23N	n-DECYLAMINE	157.299	288.85	493.65	663.00	21.80	629.0	0.669	0.791
1105	C11H10	1-METHYLNAPHTHALENE	142.200	242.67	517.83	772.04	36.60	523.0	0.348	1.017
1106	C11H10	2-METHYLNAPHTHALENE	142.200	307.73	514.20	761.00	32.50	507.0	0.346	-----
1107	C11H14O2	n-BUTYL BENZOATE	178.231	251.65	523.15	724.00	25.90	555.0	0.575	1.001
1108	C11H16	n-PENTYLBENZENE	148.248	198.15	478.61	679.90	26.04	550.0	0.439	0.855
1109	C11H16O	p-tert-AMYLPHENOL	164.247	366.00	535.15	751.00	29.80	546.0	0.569	-----
1110	C11H20	1-UNDECYNE	152.279	248.16	468.16	650.99	22.12	613.5	0.470	0.769
1111	C11H20O2	2-ETHYLHEXYL ACRYLATE	184.279	183.15	489.15	655.00	20.70	639.0	0.673	0.880
1112	C11H22	1-UNDECENE	154.296	223.99	465.82	638.00	20.30	642.0	0.517	0.747
1113	C11H22	1-CYCLOPENTYLHEXANE	154.295	200.16	476.26	667.67	22.81	592.5	0.442	0.793
1114	C11H22	PENTYLCYCLOHEXANE	154.295	215.66	476.87	674.01	23.36	584.5	0.413	0.800
1115	C11H22O	1-UNDECANAL	170.295	273.15	506.15	672.00	20.00	632.0	0.697	0.823
1116	C11H24	n-UNDECANE	156.312	247.57	469.08	638.76	19.66	657.0	0.536	0.737
1117	C11H24O	1-UNDECANOL	172.311	289.05	518.15	704.00	20.80	643.0	0.587	0.831
1118	C11H24S	UNDECYL MERCAPTAN	188.378	270.15	530.55	710.00	19.80	676.0	0.636	0.841
1119	C11H24S	BUTYL-HEPTYL-SULFIDE	188.371	254.66	533.16	717.91	19.63	705.5	0.592	0.841

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ K	$T_{boiling}$ K	$T_{critical}$ K	$P_{critical}$ bar	$V_{critical}$ cm^3/mol	ω	ρ_{liq} @ 25 C g/cm^3
1120	C11H24S	DECYL-METHYL-SULFIDE	188.371	254.66	533.16	717.91	19.63	705.5	0.592	0.841
1121	C11H24S	ETHYL-NONYL-SULFIDE	188.371	254.66	533.16	717.91	19.63	705.5	0.592	0.841
1122	C11H24S	OCTYL-PROPYL-SULFIDE	188.371	254.66	533.16	717.91	19.63	705.5	0.592	0.841
1123	C12H8O	DIBENZOFURAN	168.195	355.65	557.86	837.80	32.00	533.0	0.275	-----
1124	C12H9N	DIBENZOPYRROLE	167.210	517.95	627.86	899.00	32.60	482.0	0.494	-----
1125	C12H10	ACENAPHTHENE	154.211	366.56	550.54	803.15	31.00	553.0	0.381	-----
1126	C12H10	BIPHENYL	154.211	342.37	528.15	789.26	38.47	501.6	0.366	-----
1127	C12H10O	DIPHENYL ETHER	170.211	300.02	531.46	763.00	31.30	502.8	0.472	-----
1128	C12H11N	p-AMINODIPHENYL	169.226	326.00	575.00	817.00	32.90	539.0	0.545	-----
1129	C12H11N	DIPHENYLAMINE	169.226	326.15	575.15	817.00	31.80	539.0	0.530	-----
1130	C12H11N3	p-AMINOAZOBENZENE	197.240	401.00	633.00	877.00	29.00	642.0	0.635	-----
1131	C12H11N3	1,3-DIPHENYLTRIAZENE	197.240	372.00	610.00	845.00	28.26	642.0	0.623	-----
1132	C12H12	1,2-DIMETHYLNAPHTHALENE	156.227	272.16	539.46	775.34	30.06	521.5	0.443	1.014
1133	C12H12	1,3-DIMETHYLNAPHTHALENE	156.227	269.16	538.36	773.76	30.06	521.5	0.443	1.003
1134	C12H12	1,4-DIMETHYLNAPHTHALENE	156.227	280.82	540.46	776.78	30.06	521.5	0.443	1.013
1135	C12H12	1,5-DIMETHYLNAPHTHALENE	156.227	355.16	538.16	773.47	30.06	521.5	0.443	-----
1136	C12H12	1,6-DIMETHYLNAPHTHALENE	156.227	259.16	536.16	770.60	30.06	521.5	0.443	0.999
1137	C12H12	1,7-DIMETHYLNAPHTHALENE	156.227	260.16	536.16	770.60	30.06	521.5	0.443	0.999
1138	C12H12	2,3-DIMETHYLNAPHTHALENE	156.227	378.16	541.16	777.78	30.06	521.5	0.443	-----
1139	C12H12	2,6-DIMETHYLNAPHTHALENE	156.227	384.55	535.15	777.00	31.70	520.0	0.418	-----
1140	C12H12	2,7-DIMETHYLNAPHTHALENE	156.227	370.15	536.15	778.00	31.70	520.0	0.420	-----
1141	C12H12	1-ETHYLNAPHTHALENE	156.227	259.34	531.48	776.00	30.00	520.0	0.363	1.004
1142	C12H12	2-ETHYLNAPHTHALENE	156.227	265.76	531.49	774.90	31.40	521.5	0.392	0.988
1143	C12H12N2	p-AMINODIPHENYLAMINE	184.241	341.15	627.15	867.00	31.90	596.0	0.694	-----
1144	C12H12N2	HYDRAZOBENZENE	184.241	404.15	573.00	792.00	30.90	556.0	0.680	-----
1145	C12H14	1,2,3-TRIMETHYLINDENE	158.243	344.65	509.00	726.00	27.70	529.0	0.441	-----
1146	C12H14O4	DIETHYL PHTHALATE	222.241	269.15	567.15	757.00	23.30	635.0	0.763	1.113
1147	C12H16	CYCLOHEXYLBENZENE	160.259	280.14	513.27	744.00	28.80	555.1	0.379	0.939
1148	C12H18	m-DIISOPROPYLBENZENE	162.275	210.02	476.33	684.00	24.50	600.0	0.359	0.852
1149	C12H18	p-DIISOPROPYLBENZENE	162.275	256.08	483.65	689.00	24.50	598.0	0.390	0.853
1150	C12H18	n-HEXYLBENZENE	162.275	212.00	499.26	698.00	23.80	618.0	0.478	0.855
1151	C12H18	1,2,3-TRIETHYLBENZENE	162.274	206.66	490.66	684.37	23.36	599.5	0.479	0.870
1152	C12H18	1,2,4-TRIETHYLBENZENE	162.274	206.66	490.66	684.37	23.36	599.5	0.479	0.870
1153	C12H18	1,3,5-TRIETHYLBENZENE	162.274	206.66	489.16	682.28	23.36	599.5	0.479	0.887
1154	C12H18	HEXAMETHYLBENZENE	162.274	438.66	536.60	758.00	22.38	599.5	0.396	-----
1155	C12H20O4	DIBUTYL MALEATE	228.288	188.15	553.15	716.00	19.00	719.0	0.899	0.991
1156	C12H22	BICYCLOHEXYL	166.307	276.78	512.19	727.00	25.60	598.0	0.428	0.883
1157	C12H22	1-DODECYNE	166.306	254.16	488.16	668.16	20.25	669.5	0.512	0.775
1158	C12H23N	DICYCLOHEXYLAMINE	181.321	273.05	529.00	737.00	25.20	619.0	0.513	0.909
1159	C12H24	1-DODECENE	168.323	237.93	486.50	657.00	18.90	700.0	0.564	0.756
1160	C12H24	1-CYCLOPENTYLHEPTANE	168.322	220.00	497.30	679.00	19.40	648.5	0.515	0.806
1161	C12H24	1-CYCLOHEXYLHEXANE	168.322	263.60	497.86	691.81	21.33	640.5	0.456	0.892
1162	C12H24O	1-DODECANAL	184.322	285.15	523.15	685.00	18.60	685.0	0.754	0.826
1163	C12H24O2	n-DODECANOIC ACID	200.321	317.15	571.85	734.00	19.40	705.0	0.967	-----
1164	C12H26	n-DODECANE	170.338	263.57	489.47	658.20	18.24	726.8	0.573	0.745
1165	C12H26O	DI-n-HEXYL ETHER	186.338	230.15	498.85	658.00	18.16	698.0	0.711	0.790
1166	C12H26O	1-DODECANOL	186.338	296.95	535.00	721.00	19.30	696.0	0.639	0.830
1167	C12H26O3	DIETHYLENE GLYCOL DI-n-BUTYL ETHER	218.337	212.95	529.15	680.00	17.60	803.0	0.846	0.881
1168	C12H26S	n-DODECYL MERCAPTAN	202.404	265.15	547.75	724.00	18.40	729.0	0.677	0.842
1169	C12H26S	BUTYL-OCTYL-SULFIDE	202.397	259.16	552.16	733.68	18.06	761.5	0.631	0.842
1170	C12H26S	DECYL-ETHYL-SULFIDE	202.397	259.16	552.16	733.68	18.06	761.5	0.631	0.842
1171	C12H26S	HEXYL-SULFIDE	202.397	259.16	552.16	733.68	18.06	761.5	0.631	0.842
1172	C12H26S	METHYL-UNDECYL-SULFIDE	202.397	259.16	552.16	733.68	18.06	761.5	0.631	0.842
1173	C12H26S	NONYL-PROPYL-SULFIDE	202.397	259.16	552.16	733.68	18.06	761.5	0.631	0.842
1174	C12H26S2	HEXYL-DISULFIDE	234.457	225.16	566.66	747.10	18.33	815.5	0.692	0.908
1175	C12H27BO3	TRI-n-BUTYL BORATE	230.156	203.15	506.65	743.15	19.89	863.3	0.189	0.854
1176	C12H27N	DODECYLAMINE	185.353	301.47	532.35	696.00	18.80	735.0	0.769	-----
1177	C12H27N	TRI-n-BUTYLAMINE	185.353	203.00	487.15	644.00	18.00	735.0	0.694	0.775
1178	C13H10	FLUORENE	166.222	387.94	570.44	870.00	47.00	400.0	0.349	-----
1179	C13H10O	BENZOPHENONE	182.222	321.35	579.24	816.00	30.10	591.0	0.545	-----
1180	C13H12	DIPHENYLMETHANE	168.238	298.39	537.42	768.00	29.20	547.0	0.462	-----
1181	C13H14	1-PROPYLNAPHTHALENE	170.254	264.69	545.96	771.45	27.56	577.5	0.488	0.987
1182	C13H14	2-PROPYLNAPHTHALENE	170.254	270.16	546.66	772.44	27.56	577.5	0.488	0.973
1183	C13H14	2ETHYL-3-METHYLNAPHTHALENE	170.254	344.16	550.16	776.44	27.13	577.5	0.488	-----
1184	C13H14	2ETHYL-6-METHYLNAPHTHALENE	170.254	318.16	543.16	766.56	27.13	577.5	0.488	-----
1185	C13H14	2ETHYL-7-METHYLNAPHTHALENE	170.254	318.16	543.16	766.56	27.13	577.5	0.488	-----

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ K	$T_{boiling}$ K	$T_{critical}$ K	$P_{critical}$ bar	$V_{critical}$ cm^3/mol	ω	ρ_{liq} @ 25 C g/cm^3
1186	C13H20	n-HEPTYLBENZENE	176.302	225.15	519.25	714.00	21.80	648.0	0.529	0.853
1187	C13H24	1-TRIDECYNE	180.333	268.16	507.16	684.11	18.61	725.5	0.553	0.781
1188	C13H26	1-TRIDECENE	182.349	250.08	505.93	675.00	17.70	756.0	0.612	0.762
1189	C13H26	1-CYCLOPENTYLOCTANE	182.348	229.16	516.86	702.06	19.14	704.5	0.526	0.801
1190	C13H26	1-CYCLOHEXYLHEPTANE	182.348	242.66	518.06	708.63	19.56	696.5	0.498	0.807
1191	C13H26O	1-TRIDECANAL	198.349	288.15	540.15	700.00	17.40	738.0	0.785	0.827
1192	C13H26O2	n-BUTYL NONANOATE	214.348	235.15	503.00	652.00	17.40	794.0	0.828	0.851
1193	C13H26O2	METHYL DODECANOATE	214.348	278.15	540.00	712.00	17.40	758.0	0.690	1.039
1194	C13H28	n-TRIDECANE	184.365	267.76	508.62	675.80	17.23	770.0	0.619	0.754
1195	C13H28O	1-TRIDECANOL	200.365	303.75	547.15	731.00	18.10	749.0	0.627	-----
1196	C13H28S	BUTYL-NONYL-SULFIDE	216.424	271.16	570.16	748.42	16.67	817.5	0.667	0.842
1197	C13H28S	DECYL-PROPYL-SULFIDE	216.424	271.16	570.16	748.42	16.67	817.5	0.667	0.842
1198	C13H28S	DODECYL-METHYL-SULFIDE	216.424	271.16	570.16	748.42	16.67	817.5	0.667	0.842
1199	C13H28S	ETHYL-UNDECYL-SULFIDE	216.424	271.16	570.16	748.42	16.67	817.5	0.667	0.842
1200	C13H28S	1-TRIDECANETHIOL	216.424	282.04	563.96	742.13	17.33	817.5	0.673	0.842
1201	C14H8O2	ANTHRAQUINONE	208.216	559.15	653.05	900.00	31.50	544.0	0.681	-----
1202	C14H10	ANTHRACENE	178.233	489.25	615.18	873.00	29.00	554.0	0.489	-----
1203	C14H10	DIPHENYLACETYLENE	178.233	335.65	573.00	832.00	29.00	611.0	0.384	-----
1204	C14H10	PHENANTHRENE	178.233	372.38	613.45	869.25	29.00	554.0	0.495	-----
1205	C14H12	cis-STILBENE	180.249	268.15	535.00	757.00	27.40	584.0	0.471	1.011
1206	C14H12	trans-STILBENE	180.249	397.35	579.65	820.00	27.40	578.0	0.490	-----
1207	C14H12O2	BENZYL BENZOATE	212.248	292.55	596.65	820.00	25.80	694.0	0.623	1.115
1208	C14H14	1,1-DIPHENYLETHANE	182.265	255.20	545.78	775.00	26.80	604.0	0.457	0.996
1209	C14H14	1,2-DIPHENYLETHANE	182.265	324.34	553.65	780.00	26.50	606.0	0.489	-----
1210	C14H14O	DIBENZYL ETHER	198.265	276.75	561.45	777.00	25.60	608.0	0.591	1.042
1211	C14H16	1-n-BUTYLNAPHTHALENE	184.281	253.43	562.54	792.00	26.80	631.0	0.495	0.973
1212	C14H16	2-BUTYLNAPHTHALENE	184.280	268.16	562.16	780.96	24.98	633.5	0.533	0.962
1213	C14H22	n-OCTYLBENZENE	190.329	237.15	537.55	729.00	20.20	703.0	0.572	0.853
1214	C14H22	1,2,3,4-TETRAETHYLBENZENE	190.328	284.96	524.16	708.20	19.30	711.5	0.562	0.883
1215	C14H22	1,2,3,5-TETRAETHYLBENZENE	190.328	284.16	523.66	707.52	19.30	711.5	0.562	0.878
1216	C14H22	1,2,4,5-TETRAETHYLBENZENE	190.328	283.16	523.16	706.85	19.30	711.5	0.562	0.875
1217	C14H22O	p-tert-OCTYLPHENOL	206.328	358.55	563.60	765.00	22.80	704.0	0.631	-----
1218	C14H28	1-TETRADECENE	196.376	260.30	524.25	692.00	16.60	817.0	0.648	0.768
1219	C14H28	1-CYCLOPENTYLNONANE	196.375	244.16	535.26	716.95	17.62	760.5	0.566	0.804
1220	C14H28	1-CYCLOHEXYLOCTANE	196.375	253.46	536.76	723.61	18.00	752.5	0.538	0.810
1221	C14H28O2	n-TETRADECANOIC ACID	228.375	327.55	599.35	756.00	17.00	811.0	1.025	-----
1222	C14H30	n-TETRADECANE	198.392	279.01	526.73	692.40	16.21	842.8	0.662	0.758
1223	C14H30O	1-TETRADECANOL	214.392	310.65	560.15	741.00	17.00	802.0	0.677	-----
1224	C14H30S	BUTYL-DECYL-SULFIDE	230.451	276.16	587.16	762.23	15.44	873.5	0.700	0.843
1225	C14H30S	DODECYL-ETHYL-SULFIDE	230.451	276.16	587.16	762.23	15.44	873.5	0.700	0.843
1226	C14H30S	HEPTYL-SULFIDE	230.451	276.16	587.16	762.23	15.44	873.5	0.700	0.843
1227	C14H30S	METHYL-TRIDECYL-SULFIDE	230.451	276.16	587.16	762.23	15.44	873.5	0.700	0.843
1228	C14H30S	PROPYL-UNDECYL-SULFIDE	230.451	276.16	587.16	762.23	15.44	873.5	0.700	0.843
1229	C14H30S	1-TETRADECANETHIOL	230.451	279.26	579.36	753.80	16.03	873.5	0.707	0.842
1230	C14H30S2	HEPTYL-DISULFIDE	262.511	235.16	593.86	765.96	15.65	927.5	0.758	0.900
1231	C14H31N	TETRADECYLAMINE	213.407	311.34	564.45	722.30	16.60	887.0	0.860	-----
1232	C15H10N2O2	DIPHENYLMETHANE-4,4'-DIISOCYANATE	250.257	311.20	609.00	802.00	22.80	712.0	0.950	-----
1233	C15H16O	p-CUMYLPHENOL	212.291	346.00	608.15	834.00	26.80	659.0	0.660	-----
1234	C15H16O2	BISPHENOL A	228.291	426.15	633.65	849.00	29.30	677.0	0.945	-----
1235	C15H18	1-PENTYLNAPHTHALENE	198.307	251.16	580.16	793.32	22.74	689.5	0.575	0.962
1236	C15H18	2-PENTYLNAPHTHALENE	198.307	269.16	583.16	797.48	22.74	689.5	0.575	0.953
1237	C15H24	n-NONYLBENZENE	204.356	249.00	555.20	741.00	18.95	790.0	0.638	0.852
1238	C15H24O	2,6-DI-tert-BUTYL-p-CRESOL	220.355	344.00	538.00	720.00	21.10	757.0	0.686	-----
1239	C15H24O	NONYLPHENOL	220.355	-----	581.00	757.00	20.70	757.0	0.900	0.949
1240	C15H28	1-PENTADECYNE	208.386	283.16	541.16	711.41	15.87	837.5	0.628	0.789
1241	C15H30	1-PENTADECENE	210.403	269.42	541.61	708.00	15.70	875.0	0.684	0.773
1242	C15H30	1-CYCLOPENTYLDECANE	210.402	251.03	552.54	730.64	16.29	816.5	0.604	0.807
1243	C15H30	1-CYCLOHEXYLNONANE	210.402	262.96	554.66	737.79	16.62	808.5	0.577	0.813
1244	C15H30O2	PENTADECANOIC ACID	242.402	325.68	612.05	766.00	16.00	864.0	1.040	-----
1245	C15H32	n-PENTADECANE	212.419	283.11	543.83	706.80	15.20	880.0	0.705	0.765
1246	C15H32O	1-PENTADECANOL	228.417	317.04	578.01	722.53	15.19	894.5	1.015	-----
1247	C15H32S	BUTYL-UNDECYL-SULFIDE	244.478	284.16	603.16	775.15	14.34	929.5	0.729	0.843
1248	C15H32S	DODECYL-PROPYL-SULFIDE	244.478	284.16	603.16	775.15	14.34	929.5	0.729	0.843
1249	C15H32S	ETHYL-TRIDECYL-SULFIDE	244.478	284.16	603.16	775.15	14.34	929.5	0.729	0.843
1250	C15H32S	METHYL-TETRADECYL-SULFIDE	244.478	284.16	603.16	775.15	14.34	929.5	0.729	0.843
1251	C15H32S	1-PENTADECANETHIOL	244.478	290.93	593.86	764.77	14.86	929.5	0.737	0.843

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ K	$T_{boiling}$ K	$T_{critical}$ K	$P_{critcal}$ bar	$V_{critical}$ cm^3/mol	ω	ρ_{liq} @ 25 C g/cm^3
1252	C16H10	FLUORANTHENE	202.255	383.33	655.95	905.00	26.10	655.0	0.588	-----
1253	C16H10	PYRENE	202.255	423.81	667.95	936.00	26.10	630.0	0.509	-----
1254	C16H12	1-PHENYLNAPHTHALENE	204.271	318.15	607.15	849.00	26.30	656.0	0.531	-----
1255	C16H20	1-n-HEXYLNAPHTHALENE	212.335	255.15	595.15	813.00	22.50	741.0	0.587	0.947
1256	C16H2204	DIBUTYL PHTHALATE	278.348	238.15	613.15	781.00	17.50	846.0	0.947	1.043
1257	C16H26	n-DECYLBENZENE	218.382	258.77	571.04	753.00	17.70	881.0	0.681	0.852
1258	C16H26	PENTAETHYLBENZENE	218.381	327.66	550.16	723.64	16.22	823.5	0.637	-----
1259	C16H30	1-HEXADECYNE	222.413	288.16	557.16	724.26	14.72	893.5	0.661	0.793
1260	C16H32	n-DECYLCYCLOHEXANE	224.430	271.42	570.75	751.25	16.50	858.0	0.663	0.815
1261	C16H32	1-CYCLOPENTYLUNDECANE	224.429	263.16	568.76	743.30	15.09	872.5	0.638	0.810
1262	C16H32	1-HEXADECENE	224.430	277.51	558.02	722.00	14.80	933.0	0.732	0.777
1263	C16H3202	n-HEXADECANOIC ACID	256.429	335.95	624.15	776.00	15.10	917.0	1.083	-----
1264	C16H34	n-HEXADECANE	226.446	291.34	560.01	720.60	14.19	930.0	0.747	0.770
1265	C16H34O	DI-n-OCTYL ETHER	242.445	265.55	559.65	707.00	14.40	910.0	0.934	0.803
1266	C16H34O	1-HEXADECANOL	242.445	322.35	585.15	761.00	15.10	907.0	0.748	-----
1267	C16H34S	BUTYL-DODECYL-SULFIDE	258.505	288.16	618.16	787.27	13.35	985.5	0.754	0.843
1268	C16H34S	ETHYL-TETRADECYL-SULFIDE	258.505	288.16	618.16	791.68	12.88	931.5	0.686	0.844
1269	C16H34S	METHYL-PENTADECYL-SULFIDE	258.505	288.16	618.16	787.27	13.35	985.5	0.754	0.843
1270	C16H34S	OCTYL-SULFIDE	258.505	288.16	618.16	787.27	13.35	985.5	0.754	0.843
1271	C16H34S	PROPYL-TRIDECYL-SULFIDE	258.505	288.16	618.16	787.27	13.35	985.5	0.754	0.843
1272	C16H34S	1-HEXADECANETHIOL	258.505	290.93	607.16	774.68	13.82	985.5	0.763	0.843
1273	C16H34S2	OCTYL-DISULFIDE	290.565	244.16	619.16	784.46	13.52	1039.5	0.806	0.894
1274	C17H28	n-UNDECYLBENZENE	232.409	268.00	586.40	764.00	16.72	910.0	0.738	0.851
1275	C17H32	1-HEPTADECYNE	236.440	295.16	572.16	736.21	13.70	949.5	0.690	0.796
1276	C17H34	1-CYCLOPENTYLDODECANE	238.456	268.16	584.06	755.17	14.03	928.5	0.669	0.812
1277	C17H34	1-CYCLOHEXYLUNDECANE	238.456	278.96	586.26	761.74	14.29	920.5	0.646	0.817
1278	C17H34	1-HEPTADECENE	238.457	284.40	573.48	736.00	14.10	955.0	0.753	0.782
1279	C17H36	n-HEPTADECANE	240.473	295.13	575.30	733.37	13.17	1005.8	0.768	0.773
1280	C17H36O	1-HEPTADECANOL	256.472	327.05	597.15	770.00	14.30	960.0	0.795	-----
1281	C17H36S	BUTYL-TRIDECYL-SULFIDE	272.531	294.16	632.16	798.63	12.46	1041.5	0.774	0.844
1282	C17H36S	ETHYL-PENTADECYL-SULFIDE	272.531	294.16	632.16	798.63	12.46	1041.5	0.774	0.844
1283	C17H36S	HEXADECYL-METHYL-SULFIDE	272.531	294.16	632.16	798.63	12.46	1041.5	0.774	0.844
1284	C17H36S	PROPYL-TETRADECYL-SULFIDE	272.531	294.16	632.16	798.63	12.46	1041.5	0.774	0.844
1285	C17H36S	1-HEPTADECANETHIOL	272.531	300.37	621.16	786.01	12.88	1041.5	0.783	-----
1286	C18H12	CHRYSENE	228.293	531.15	714.15	979.00	23.90	690.0	0.604	-----
1287	C18H14	m-TERPHENYL	230.309	360.00	650.00	924.85	35.06	767.7	0.558	-----
1288	C18H14	o-TERPHENYL	230.309	329.35	609.00	890.95	39.01	752.6	0.467	-----
1289	C18H14	p-TERPHENYL	230.309	485.00	649.15	925.95	33.24	762.6	0.528	-----
1290	C18H15P	TRIPHENYLPHOSPHINE	262.291	354.40	650.15	1008.00	78.40	554.0	0.452	-----
1291	C18H15O4P	TRIPHENYL PHOSPHATE	326.288	323.15	686.65	-----	-----	-----	-----	-----
1292	C18H16N2	N,N'-DIPHENYL-p-PHENYLENEDIAMINE	260.339	409.00	688.00	906.00	23.10	817.0	0.876	-----
1293	C18H22	2,3-DIMETHYL-2,3-DIPHENYLBUTANE	238.373	392.15	589.00	805.00	19.90	781.0	0.521	-----
1294	C18H2202	DICUMYL PEROXIDE	270.371	311.15	669.00	884.00	21.80	873.0	0.450	-----
1295	C18H30	n-DODECYLBENZENE	246.436	275.93	600.76	774.26	15.79	1000.0	0.786	0.849
1296	C18H30	HEXAETHYLBENZENE	246.435	401.16	571.16	734.78	13.82	935.5	0.698	-----
1297	C18H3202	LINOLEIC ACID	280.451	268.15	628.00	775.00	14.10	990.0	1.176	0.902
1298	C18H34	1-OCTADECYNE	250.467	300.16	586.16	747.33	12.77	1005.5	0.715	-----
1299	C18H3402	OLEIC ACID	282.467	286.53	633.00	781.00	13.90	1000.0	1.187	0.888
1300	C18H3404	DIBUTYL SEBACATE	314.466	263.95	622.15	768.00	13.20	1050.0	1.126	0.932
1301	C18H3404	DIHEXYL ADIPATE	314.466	259.35	621.15	767.00	13.20	1030.0	1.094	0.932
1302	C18H36	1-CYCOPENTYLTRIDECANE	252.482	278.16	598.56	766.47	13.07	984.5	0.697	0.814
1303	C18H36	1-CYCLOHEXYLDODECANE	252.482	285.66	600.86	772.83	13.31	976.5	0.675	0.819
1304	C18H36	1-OCTADECENE	252.484	290.76	587.97	748.00	13.40	1050.0	0.790	0.785
1305	C18H3602	STEARIC ACID	284.483	342.75	648.35	799.00	13.60	1020.0	1.084	-----
1306	C18H38	n-OCTADECANE	254.500	301.33	589.86	745.26	12.14	1070.0	0.795	-----
1307	C18H38O	DINONYL ETHER	270.499	-----	591.00	736.00	13.00	1020.0	1.002	0.808
1308	C18H38O	1-OCTADECANOL	270.499	331.05	608.15	777.00	13.60	1010.0	0.863	-----
1309	C18H38S	BUTYL-TETRADECYL-SULFIDE	286.558	298.16	646.16	810.53	11.66	1097.5	0.787	-----
1310	C18H38S	ETHYL-HEXADECYL-SULFIDE	286.558	298.16	646.16	810.53	11.66	1097.5	0.787	-----
1311	C18H38S	HEPTADECYL-METHYL-SULFIDE	286.558	298.16	646.16	810.53	11.66	1097.5	0.787	-----
1312	C18H38S	NONYL-SULFIDE	286.558	298.16	646.16	810.53	11.66	1097.5	0.787	-----
1313	C18H38S	PENTADECYL-PROPYL-SULFIDE	286.558	298.16	646.16	810.53	11.66	1097.5	0.787	-----
1314	C18H38S	1-OCTADECANETHIOL	286.558	300.93	633.16	795.36	12.04	1097.5	0.798	-----
1315	C18H38S2	NONYL-DISULFIDE	318.618	252.16	642.16	802.30	11.79	1151.5	0.832	0.889
1316	C19H26	1-n-NONYLNAPHTHALENE	254.415	284.15	639.00	849.00	16.80	1000.0	0.617	0.934
1317	C19H32	n-TRIDECYLBENZENE	260.463	283.15	614.43	783.00	15.00	1060.0	0.844	0.851

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ K	$T_{boiling}$ K	$T_{critical}$ K	$P_{critcal}$ bar	$V_{critical}$ cm^3/mol	ω	ρ_{liq} @ 25 C g/cm^3
1318	C19H36	1-NONADECYNE	264.493	306.16	600.16	758.94	11.94	1061.5	0.735	-----
1319	C19H3602	METHYL OLEATE	296.494	293.05	617.00	764.00	12.80	1060.0	1.049	0.870
1320	C19H38	1-CYCLOPENTYLTETRADECANE	266.509	282.00	612.16	772.00	11.20	1040.5	0.789	0.816
1321	C19H38	1-CYCLOHEXYLTRIDECANE	266.509	291.66	614.66	783.38	12.42	1032.5	0.700	0.821
1322	C19H38	1-NONADECENE	266.511	296.55	602.17	760.00	12.80	1100.0	0.841	0.788
1323	C19H3802	NONADECANOIC ACID	298.510	341.23	659.15	810.00	13.00	1080.0	1.070	-----
1324	C19H40	n-NONADECANE	268.527	305.33	603.05	755.93	11.17	1130.0	0.820	-----
1325	C19H40O	1-NONADECANOL	284.524	334.87	631.00	775.30	11.49	1118.5	0.976	-----
1326	C19H40S	BUTYL-PENTADECYL-SULFIDE	300.585	303.16	659.16	821.75	10.93	1153.5	0.794	-----
1327	C19H40S	ETHYL-HEPTADECYL-SULFIDE	300.585	303.16	659.16	821.75	10.93	1153.5	0.794	-----
1328	C19H40S	HEXADECYL-PROPYL-SULFIDE	300.585	303.16	659.16	821.75	10.93	1153.5	0.794	-----
1329	C19H40S	METHYL-OCTADECYL-SULFIDE	300.585	303.16	659.16	821.75	10.93	1153.5	0.794	-----
1330	C19H40S	1-NONADECANETHIOL	300.585	307.04	645.16	805.29	11.28	1153.5	0.807	-----
1331	C20H16	TRIPHENYLETHYLENE	256.347	342.15	669.00	908.00	21.00	860.0	0.600	-----
1332	C20H28	1-n-DECYLNAPHTHALENE	268.442	288.15	652.00	859.00	15.80	1070.0	0.642	0.928
1333	C20H3002	ABIETIC ACID	302.457	446.65	649.70	832.00	16.80	930.0	1.129	-----
1334	C20H31N	DEHYDROABIETYLAMINE	285.473	317.65	660.00	863.00	17.00	1020.0	0.742	-----
1335	C20H34	1-PHENYLTETRADECANE	274.489	289.16	627.16	792.00	14.19	1110.0	0.869	0.851
1336	C20H38	1-EICOSYNE	278.520	309.16	613.16	769.79	11.19	1117.5	0.750	-----
1337	C20H40	1-CYCLOPENTYLPENTADECANE	280.536	290.00	625.00	780.00	10.20	1096.5	0.833	0.818
1338	C20H40	1-CYCLOHEXYLTETRADECANE	280.536	297.16	627.16	792.82	11.62	1088.5	0.719	0.822
1339	C20H40	1-EICOSENE	280.538	301.76	615.54	771.00	12.20	1160.0	0.877	-----
1340	C20H42	n-EICOSANE	282.553	309.59	616.93	767.04	10.40	1190.0	0.876	-----
1341	C20H42O	1-EICOSANOL	298.553	338.55	629.15	792.00	12.40	1120.0	0.937	-----
1342	C20H42S	BUTYL-HEXADECYL-SULFIDE	314.612	308.16	671.16	832.33	10.27	1209.5	0.795	-----
1343	C20H42S	DECYL-SULFIDE	314.612	308.16	671.16	832.33	10.27	1209.5	0.795	-----
1344	C20H42S	ETHYL-OCTADECYL-SULFIDE	314.612	308.16	671.16	832.33	10.27	1209.5	0.795	-----
1345	C20H42S	HEPTADECYL-PROPYL-SULFIDE	314.612	308.16	671.16	832.33	10.27	1209.5	0.795	-----
1346	C20H42S	METHYL-NONADECYL-SULFIDE	314.612	308.16	671.16	832.33	10.27	1209.5	0.795	-----
1347	C20H42S	1-EICOSANETHIOL	314.612	310.37	656.16	814.57	10.58	1209.5	0.809	-----
1348	C20H42S2	DECYL-DISULFIDE	346.672	259.16	663.16	820.08	10.38	1263.5	0.830	0.885
1349	C21H2104P	TRI-o-CRESYL PHOSPHATE	368.369	240.15	-----	-----	-----	-----	-----	1.165
1350	C21H36	1-PHENYLPENTADECANE	288.515	295.16	639.16	800.00	13.48	1140.0	0.914	0.851
1351	C21H42	1-CYCLOPENTYLHEXADECANE	294.563	294.16	637.16	797.25	10.72	1152.5	0.748	0.819
1352	C21H42	1-CYCLOHEXYLPENTADECANE	294.563	302.16	640.16	803.46	10.90	1144.5	0.733	-----
1353	C22H38	1-PHENYLHEXADECANE	302.542	300.16	651.16	808.00	12.87	1200.0	0.964	-----
1354	C22H44	1-CYCLOHEXYLHEXADECANE	308.590	306.76	652.16	813.42	10.24	1200.5	0.741	-----
1355	C22H4402	n-BUTYL STEARATE	340.590	299.45	623.15	764.00	11.10	1230.0	1.035	-----
1356	C24H3804	DIISOOCTYL PHTHALATE	390.563	-----	694.00	851.00	11.80	1420.0	1.088	0.983
1357	C24H3804	DIOCTYL PHTHALATE	390.563	223.15	657.15	806.00	11.80	1270.0	1.142	0.980
1358	C24H42O	DINONYLPHENOL	346.597	-----	722.00	886.00	12.40	1220.0	1.136	-----
1359	C26H20	TETRAPHENYLETHYLENE	332.445	496.15	760.00	996.00	17.10	1020.0	0.729	-----
1360	C28H4604	DIISODECYL PHTHALATE	446.671	227.59	723.00	887.00	10.00	1460.0	1.076	0.973

Table 1-2 COMPUTER PROGRAM RESULTS

PHYSICAL PROPERTIES

1. Number.....		10
2. Formula.....		CCl4
3. Name.....		CARBON TETRACHLORIDE
4. Molecular Weight.... g/mol =		153.822
5. Freezing Point..... K =		250.33
6. Boiling Point..... K =		349.79
7. Critical Temp..... K =		556.35
8. Critical Pressure..... bar =		45.60
9. Critical Volume... cm3/mol =		276.0
10. Acentric Factor..... =		0.193
11. Density @ 25 C..... g/cm3 =		1.583

Chapter 2

VAPOR PRESSURE

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ABSTRACT

Results for vapor pressure as a function of temperature are presented for major organic chemical compounds. The coefficients are displayed in an easy-to-use table which is especially applicable for rapid engineering usage with the personal computer or hand calculator. The organic chemicals encompass hydrocarbon, oxygen, nitrogen, halogen, silicon, sulfur and other chemical type compounds.

VAPOR PRESSURE

The Antoine-type equation with extended terms was selected for correlation of vapor pressure as a function of temperature:

$$\log_{10} P = A + B/T + C \log_{10} T + D T + E T^2 \qquad (2\text{-}1)$$

where P = vapor pressure, mm Hg
A,B,C,D and E = regression coefficients for chemical compound
T = temperature, K

The results for vapor pressure are given in Table 2-1. The tabulation is applicable to a wide variety of substances including hydrocarbons (alkanes, olefins, acetylenes, cycloalkanes, ...); oxygenates (alcohols, aldehydes, ketones, acids, ethers, glycols, anhydrides, ...); halogenates (chlorinated, brominated, fluorinated and iodinated compounds); nitrogenates (nitriles, amines, cyanates, amides, ...); sulfur compounds (mercaptans, sulfides, sulfates, ...); silicon compounds (silanes, chlorosilanes, ...) and many other chemical types. The temperature range for which the equation may be used to predict vapor pressure is denoted by the respective minimum and maximum temperatures.

The last column in the table provides the vapor pressure of each substance at 25 C (77 F). These data are especially valuable in engineering applications at ambient conditions.

A comparison of calculated values and experimental data for vapor pressure is shown in Figure 2-1 for a representative chemical. The graph indicates good agreement of calculations and data.

In preparing the tabulation, a literature search was conducted to identify data source publications (1-35). The publications were screened for appropriate data. The compilation resulting from the screening is based on both experimental data and estimated values. In the absence of experimental data, estimates were primarily based on Riedel equation and on adjusting the A value in the equation to match the boiling point temperature of the compound. The estimates of the other coefficients for the compound were based on the same values of the compound's brother (closest member of same chemical family). Experimental data and estimates were then regressed to provide the same equation for all compounds.

EXAMPLES

The tabulated values maybe used for prediction and calculation of vapor pressure. Examples are shown in Table 2-2.

COMPUTER PROGRAM

A computer program, containing the coefficients for vapor pressure for all compounds, is available for a nominal fee (Carl L. Yaws, Box 10053, Lamar University, Beaumont, TX 77710, phone/FAX 409-880-8787). The computer program (random data file) is in ASCII which can be accessed by other software.

Computer program results for a representative compound are shown in Table 2-3.

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Figure 2-1 VAPOR PRESSURE

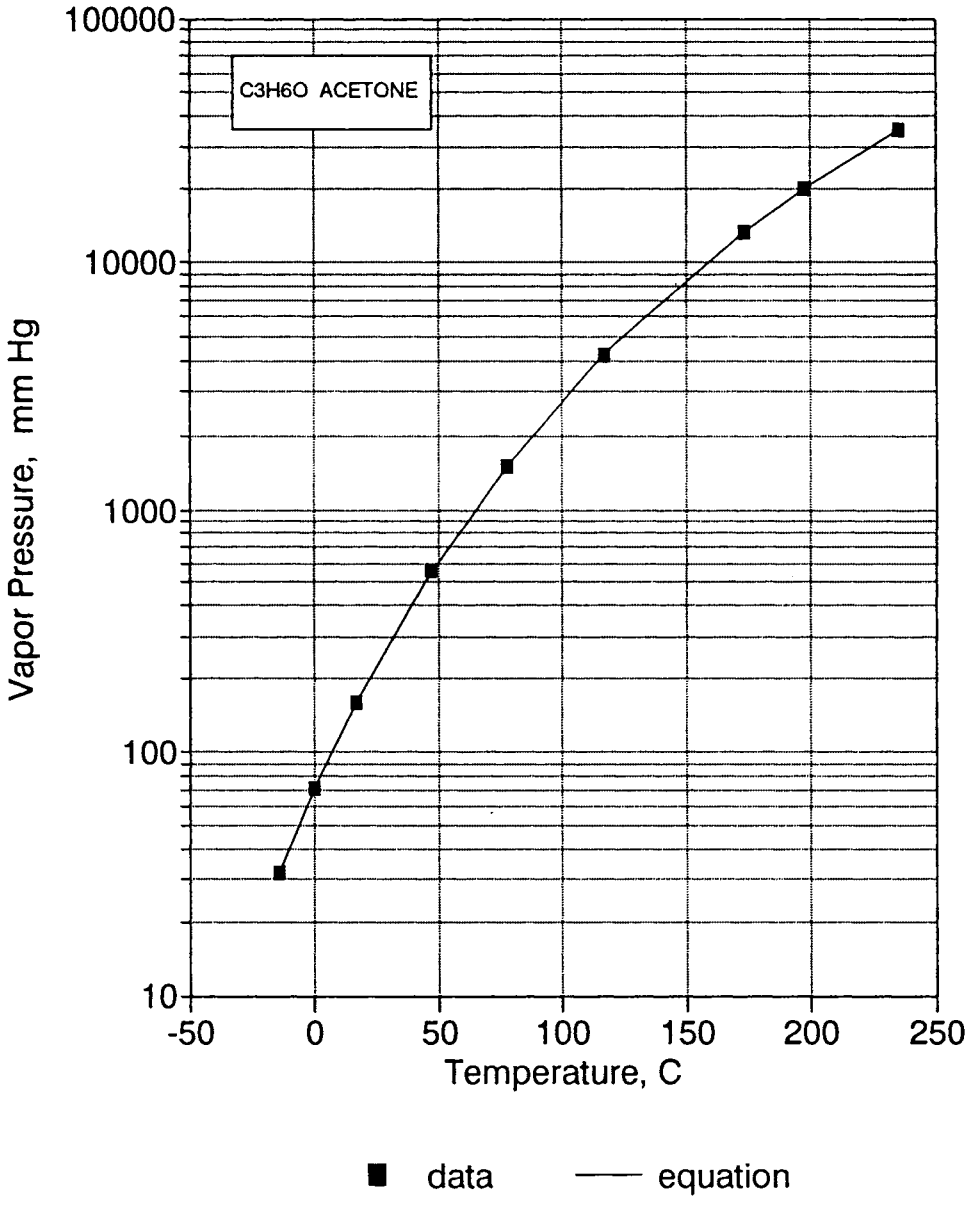

Table 2-1 VAPOR PRESSURE

$\log_{10} P = A + B/T + C \log_{10} T + D T + E T^2$ (P - mm Hg, T - K)

NO	FORMULA	NAME	A	B	C	D	E	T_{min}	T_{max}	P @ 25 C mm Hg
1	CBrClF2	BROMOCHLORODIFLUOROMETHANE	27.6647	-1.9063E+03	-7.4195E+00	-3.7276E-11	4.5327E-06	114	426	2.064E+03
2	CBrCl3	BROMOTRICHLOROMETHANE	-4.3224	-1.8417E+03	6.1642E+00	-1.2539E-02	6.4762E-06	252	606	3.896E+01
3	CBrF3	BROMOTRIFLUOROMETHANE	25.1401	-1.4666E+03	-6.7461E+00	-1.6045E-10	6.2569E-06	105	340	1.215E+04
4	CBr2F2	DIBROMODIFLUOROMETHANE	-3.5618	-1.4303E+03	6.1979E+00	-1.7310E-02	1.2349E-05	163	478	8.201E+02
5	CClF3	CHLOROTRIFLUOROMETHANE	6.4418	-1.0028E+03	1.6554E+00	-1.4218E-02	1.6777E-05	92	302	2.671E+04
6	CClN	CYANOGEN CHLORIDE	-9.0499	-1.2832E+03	8.2432E+00	-1.6132E-02	9.6127E-06	267	449	1.225E+03
7	CCl2F2	DICHLORODIFLUOROMETHANE	52.5701	-2.2537E+03	-1.8265E+01	1.2980E-02	2.0286E-13	115	385	4.847E+03
8	CCl2O	PHOSGENE	46.6551	-2.4657E+03	-1.5351E+01	9.2288E-03	2.1645E-13	145	455	1.418E+03
9	CCl3F	TRICHLOROFLUOROMETHANE	44.0884	-2.5022E+03	-1.4193E+01	7.8086E-03	1.3769E-13	162	471	8.026E+02
10	CCl4	CARBON TETRACHLORIDE	31.9407	-2.6614E+03	-8.5763E+00	-6.7136E-10	2.9732E-06	250	556	1.141E+02
11	CF2O	CARBONYL FLUORIDE	-71.0204	-3.7123E+02	4.1621E+01	-1.2131E-01	1.1355E-04	162	297	---
12	CF4	CARBON TETRAFLUORIDE	-19.0860	-5.7612E+02	1.6125E+01	-7.7262E-02	1.0889E-04	90	228	---
13	CHBr3	TRIBROMOMETHANE	-10.2943	-2.1700E+03	9.1193E+00	-1.6495E-02	7.4917E-06	281	696	5.501E+00
14	CHClF2	CHLORODIFLUOROMETHANE	40.3847	-2.0731E+03	-1.2317E+01	-2.5116E-10	1.0498E-05	116	369	7.711E+03
15	CHCl2F	DICHLOROFLUOROMETHANE	6.8004	-1.5999E+03	1.6648E+00	-1.0603E-02	8.3356E-06	138	452	1.360E+03
16	CHCl3	CHLOROFORM	56.6178	-3.2462E+03	-1.8700E+01	9.5150E-03	1.1553E-12	210	536	1.972E+02
17	CHF3	TRIFLUOROMETHANE	34.4731	-1.5956E+03	-1.0394E+01	2.1739E-09	1.2925E-05	118	299	3.558E+04
18	CHI3	TRIIODOMETHANE	257.5138	-1.0203E+04	-9.8604E+01	7.4485E-02	-2.1057E-05	410	795	---
19	CHN	HYDROGEN CYANIDE	-57.5717	-3.5182E+02	2.9640E+01	-4.7820E-02	2.8550E-05	260	457	7.410E+02
20	CHNS	ISOTHIOCYANIC-ACID	---	---	---	---	---	--	--	---
21	CH2BrCl	BROMOCHLOROMETHANE	2.7704	-2.0139E+03	3.7817E+00	-1.3241E-02	8.1979E-06	185	557	1.426E+02
22	CH2Br2	DIBROMOMETHANE	35.3525	-3.0445E+03	-9.5972E+00	5.8258E-10	2.9443E-06	221	611	4.521E+01
23	CH2ClF	CHLOROFLUOROMETHANE	455.6813	-9.4306E+03	-1.9947E+02	2.9158E-01	-1.5799E-04	218	425	2.268E+03
24	CH2Cl2	DICHLOROMETHANE	32.5609	-2.5166E+03	-8.8015E+00	1.2934E-10	3.3194E-06	178	510	4.330E+02
25	CH2F2	DIFLUOROMETHANE	48.7353	-2.0703E+03	-1.6775E+01	1.2809E-02	3.3704E-13	137	352	1.264E+04
26	CH2I2	DIIODOMETHANE	42.4554	-4.0527E+03	-1.1711E+01	-2.8020E-10	2.2058E-06	279	747	1.203E+00
27	CH2O	FORMALDEHYDE	41.9603	-2.1355E+03	-1.3765E+01	9.5680E-03	-5.1101E-12	181	408	3.889E+03
28	CH2O2	FORMIC ACID	27.9278	-2.5976E+03	-7.2489E+00	6.4110E-10	3.9421E-06	282	580	4.257E+01
29	CH3Br	METHYL BROMIDE	29.3988	-2.0406E+03	-7.9966E+00	-4.1899E-10	5.0174E-06	179	467	1.635E+03
30	CH3Cl	METHYL CHLORIDE	25.7264	-1.7503E+03	-6.7151E+00	-1.2956E-09	4.4341E-06	175	416	4.306E+03
31	CH3Cl3Si	METHYL TRICHLOROSILANE	20.1131	-2.0730E+03	-4.4776E+00	3.1120E-10	1.7615E-06	195	517	1.727E+02
32	CH3F	METHYL FLUORIDE	55.2801	-1.8879E+03	-2.0268E+01	1.8980E-02	-3.1692E-12	131	318	2.851E+04
33	CH3I	METHYL IODIDE	-20.3718	-1.2536E+03	1.3645E+01	-2.6955E-02	1.6389E-05	207	528	4.050E+02
34	CH3NO	FORMAMIDE	12.0765	-3.6151E+03	-3.2887E-01	9.1384E-10	-4.0029E-06	276	493	6.052E-02
35	CH3NO2	NITROMETHANE	35.8372	-3.0979E+03	-9.7786E+00	-4.3921E-10	3.4336E-06	245	588	3.593E+01
36	CH3NO2	METHYL-NITRITE	---	---	---	---	---	--	--	---
37	CH3NO3	METHYL-NITRATE	---	---	---	---	---	--	--	---
38	CH4	METHANE	14.6667	-5.7097E+02	-3.3373E+00	2.1999E-09	1.3096E-05	91	191	---
39	CH4Cl2Si	METHYL DICHLOROSILANE	32.5266	-2.3539E+03	-9.0702E+00	7.2608E-10	4.9896E-06	183	483	4.281E+02
40	CH4O	METHANOL	45.6171	-3.2447E+03	-1.3988E+01	6.6365E-03	-1.0507E-13	175	513	1.260E+02
41	CH4O3S	METHANESULFONIC ACID	-58.6166	-3.3580E+03	3.2320E+01	-5.3174E-02	2.6886E-05	293	561	4.281E-04
42	CH4S	METHYL MERCAPTAN	-1.7459	-1.7090E+03	6.6886E+00	-2.5397E-02	1.8914E-05	150	470	1.519E+03
43	CH5ClSi	METHYL CHLOROSILANE	39.5604	-2.3459E+03	-1.1829E+01	3.0032E-10	7.8573E-06	139	442	1.320E+03
44	CH5N	METHYLAMINE	30.5366	-2.2074E+03	-8.0919E+00	-2.7828E-11	3.5234E-06	180	430	2.650E+03
45	CH6Si	METHYL SILANE	-1.8743	-9.7410E+02	5.4592E+00	-2.0420E-02	2.0048E-05	116	353	1.151E+04
46	CN4O8	TETRANITROMETHANE	-2.1747	-2.5151E+03	6.4929E+00	-1.7444E-02	9.0071E-06	287	540	1.137E+01
47	CO	CARBON MONOXIDE	51.8145	-7.8824E+02	-2.2734E+01	5.1225E-02	6.1896E-11	68	133	---
48	COS	CARBONYL SULFIDE	36.8556	-1.7187E+03	-1.2036E+01	8.9612E-03	-1.1127E-13	134	379	9.564E+03
49	CO2	CARBON DIOXIDE	35.0169	-1.5119E+03	-1.1334E+01	9.3368E-03	1.7136E-09	217	304	4.827E+04
50	CS2	CARBON DISULFIDE	25.1475	-2.0439E+03	-6.7794E+00	3.4828E-03	-1.0105E-14	162	552	3.593E+02
51	C2BrF3	BROMOTRIFLUOROETHYLENE	-3.4016	-1.3242E+03	6.2543E+00	-1.8654E-02	1.3759E-05	173	432	1.969E+03
52	C2Br2F4	1,2-DIBROMOTETRAFLUOROETHANE	6.4970	-1.8310E+03	1.9094E+00	-1.0876E-02	7.6921E-06	163	488	3.322E+02
53	C2ClF3	CHLOROTRIFLUOROETHYLENE	81.1728	-2.9152E+03	-3.0175E+01	2.3253E-02	1.1177E-13	115	379	4.591E+03
54	C2ClF5	CHLOROPENTAFLUOROETHANE	-12.0581	-1.0154E+03	1.0548E+01	-3.0256E-02	2.4967E-05	174	353	6.857E+03
55	C2Cl2F4	1,2-DICHLOROTETRAFLUOROETHANE	59.2670	-2.7486E+03	-2.0474E+01	1.2814E-02	1.5578E-12	179	419	1.610E+03
56	C2Cl3F3	1,1,2-TRICHLOROTRIFLUOROETHANE	33.7192	-2.5323E+03	-9.3175E+00	1.4550E-08	3.9414E-06	238	487	3.315E+02
57	C2Cl4	TETRACHLOROETHYLENE	23.3960	-2.6888E+03	-5.3312E+00	-1.1436E-10	9.2370E-07	251	620	1.854E+01
58	C2Cl4F2	1,1,2,2-TETRACHLORODIFLUOROETHAN	-38.1282	-1.2604E+03	2.1347E+01	-3.4436E-02	1.7407E-05	299	551	---
59	C2Cl4O	TRICHLOROACETYL CHLORIDE	-13.2301	-2.0316E+03	1.0702E+01	-2.0537E-02	1.0411E-05	273	590	1.734E+01
60	C2Cl6	HEXACHLOROETHANE	-366.2243	6.6789E+03	1.5563E+02	-1.5563E-01	5.5600E-05	306	698	---
61	C2F4	TETRAFLUOROETHYLENE	30.4038	-1.5265E+03	-8.7830E+00	-2.6364E-09	9.4381E-06	142	306	2.454E+04
62	C2F6	HEXAFLUOROETHANE	21.4351	-1.2293E+03	-5.6610E+00	3.6729E-03	4.8788E-11	172	293	---
63	C2HBrClF3	HALOTHANE	-26.6804	-1.5205E+03	1.7746E+01	-3.9345E-02	2.3399E-05	223	521	3.023E+02

$\log_{10} P = A + B/T + C \log_{10} T + D T + E T^2$ (P - mm Hg, T - K)

NO	FORMULA	NAME	A	B	C	D	E	T_{min}	T_{max}	P @ 25 C mm Hg
64	C2HClF2	2-CHLORO-1,1-DIFLUOROETHYLENE	4.0143	-1.4420E+03	3.2509E+00	-1.6543E-02	1.4174E-05	135	401	3.544E+03
65	C2HCl3	TRICHLOROETHYLENE	23.6735	-2.3763E+03	-5.8275E+00	1.9586E-03	2.8882E-14	188	571	7.372E+01
66	C2HCl3O	DICHLOROACETYL CHLORIDE	-25.0907	-1.7624E+03	1.5817E+01	-2.6632E-02	1.3107E-05	298	579	---
67	C2HCl3O	TRICHLOROACETALDEHYDE	-0.9737	-2.2553E+03	5.7694E+00	-1.6755E-02	9.6236E-06	216	565	3.965E+01
68	C2HCl5	PENTACHLOROETHANE	72.1134	-4.6522E+03	-2.3777E+01	9.6908E-03	-3.3886E-13	244	665	3.670E+00
69	C2HF3	TRIFLUOROETHENE	117.5502	-2.8369E+03	-4.9719E+01	7.7625E-02	-4.9716E-05	180	244	---
70	C2HF3O2	TRIFLUOROACETIC ACID	63.4449	-3.6769E+03	-2.1130E+01	1.0777E-02	4.8480E-12	258	491	1.099E+02
71	C2HF5	PENTAFLUOROETHANE	-19.0457	-9.3948E+02	1.4257E+01	-4.0845E-02	3.4587E-05	170	342	9.501E+03
72	C2H2	ACETYLENE	72.6005	-2.3098E+03	-2.7223E+01	2.3721E-02	-3.8593E-10	189	308	3.660E+04
73	C2H2Br4	1,1,2,2-TETRABROMOETHANE	77.0296	-6.6208E+03	-2.2976E+01	-2.9801E-10	3.7484E-06	273	824	2.013E-02
74	C2H2Cl2	1,1-DICHLOROETHYLENE	-16.5419	-1.6655E+03	1.3923E+01	-4.0958E-02	2.9995E-05	151	482	5.987E+02
75	C2H2Cl2	cis-1,2-DICHLOROETHYLENE	55.9403	-3.1677E+03	-1.8572E+01	9.8828E-03	5.7644E-14	193	527	2.028E+02
76	C2H2Cl2	trans-1,2-DICHLOROETHYLENE	48.4574	-3.0496E+03	-1.4694E+01	-2.1262E-09	7.3465E-06	223	508	3.331E+02
77	C2H2Cl2O	CHLOROACETYL CHLORIDE	65.2863	-4.1288E+03	-2.1342E+01	9.2900E-03	-9.9800E-13	251	581	2.503E+01
78	C2H2Cl2O	DICHLOROACETALDEHYDE	-10.6633	-2.1012E+03	1.0310E+01	-2.4503E-02	1.4040E-05	223	555	5.549E+01
79	C2H2Cl2O2	DICHLOROACETIC ACID	-7.2806	-3.3706E+03	9.3771E+00	-2.0832E-02	9.5091E-06	287	686	1.784E-01
80	C2H2Cl3F	1,1,1-TRICHLOROFLUOROETHANE	7.3234	-2.1968E+03	1.7372E+00	-1.0298E-02	6.5023E-06	173	565	5.778E+01
81	C2H2Cl4	1,1,1,2-TETRACHLOROETHANE	-1.0712	-2.5074E+03	6.1536E+00	-1.8763E-02	1.0462E-05	203	624	1.205E+01
82	C2H2Cl4	1,1,2,2-TETRACHLOROETHANE	56.2356	-4.4615E+03	-1.6556E+01	-3.5724E-10	4.0425E-06	229	645	4.616E+00
83	C2H2F2	1,1-DIFLUOROETHYLENE	-5.4320	-8.3177E+02	7.4635E+00	-2.7851E-02	2.8548E-05	129	303	3.021E+04
84	C2H2F2	cis-1,2-DIFLUOROETHENE	86.1060	-2.3731E+03	-3.5088E+01	4.8677E-02	-2.7786E-05	195	278	---
85	C2H2F2	trans-1,2-DIFLUOROETHENE	86.1060	-2.3731E+03	-3.5088E+01	4.8677E-02	-2.7786E-05	195	278	---
86	C2H2F4	1,1,1,2-TETRAFLUOROETHANE	-10.4006	-1.1582E+03	9.8998E+00	-2.8823E-02	2.2877E-05	172	380	4.481E+03
87	C2H2O	KETENE	15.4553	-1.3110E+03	-2.8700E+00	-2.0015E-10	6.8688E-07	122	370	1.042E+04
88	C2H2O4	OXALIC ACID	-79.0432	-3.0545E+03	3.9089E+01	-4.4389E-02	1.4994E-05	463	804	---
89	C2H3Br	VINYL BROMIDE	-10.9281	-1.1619E+03	9.3115E+00	-2.2655E-02	1.7522E-05	135	473	1.044E+03
90	C2H3Cl	VINYL CHLORIDE	52.9654	-2.5016E+03	-1.7914E+01	1.0821E-02	-4.5310E-14	119	432	2.981E+03
91	C2H3ClF2	1-CHLORO-1,1-DIFLUOROETHANE	12.3975	-1.3494E+03	-1.8528E+00	-3.2595E-11	1.3316E-06	142	410	2.544E+03
92	C2H3ClO	ACETYL CHLORIDE	79.4009	-3.7788E+03	-2.7926E+01	1.6209E-02	-9.9562E-14	160	508	2.873E+02
93	C2H3ClO	CHLOROACETALDEHYDE	-31.3274	-1.4938E+03	1.8610E+01	-3.1242E-02	1.5886E-05	293	555	6.425E+01
94	C2H3ClO2	CHLOROACETIC ACID	42.6726	-4.5970E+03	-1.1348E+01	-2.8515E-10	1.7995E-06	333	686	---
95	C2H3ClO2	METHYL CHLOROFORMATE	2.4278	-2.3168E+03	4.7351E+00	-1.7920E-02	1.1303E-05	192	525	1.086E+02
96	C2H3Cl3	1,1,1-TRICHLOROETHANE	36.5468	-2.8421E+03	-1.0205E+01	-2.6369E-09	3.7075E-06	243	545	1.237E+02
97	C2H3Cl3	1,1,2-TRICHLOROETHANE	25.0845	-2.7368E+03	-5.9182E+00	2.5155E-10	1.1831E-06	237	602	2.324E+01
98	C2H3F	VINYL FLUORIDE	35.4702	-1.4160E+03	-1.2180E+01	1.2462E-02	1.5601E-13	113	328	1.985E+04
99	C2H3F3	1,1,1-TRIFLUOROETHANE	27.0988	-1.6340E+03	-7.3449E+00	5.3839E-09	6.0250E-06	162	346	9.535E+03
100	C2H3N	ACETONITRILE	23.1953	-2.3389E+03	-5.4954E+00	7.9894E-10	2.3293E-06	229	546	9.111E+01
101	C2H3NO	METHYL ISOCYANATE	-20.1597	-1.1878E+03	1.3274E+01	-2.4414E-02	1.3907E-05	256	505	4.571E+02
102	C2H4	ETHYLENE	18.7964	-9.9962E+02	-4.5788E+00	9.9746E-11	6.7880E-06	104	282	---
103	C2H4Br2	1,1-DIBROMOETHANE	25.1101	-2.8244E+03	-5.7669E+00	3.5499E-11	4.5284E-07	210	628	2.555E+01
104	C2H4Br2	1,2-DIBROMOETHANE	16.8759	-2.4267E+03	-3.0891E+00	-6.0088E-10	3.5901E-07	283	650	1.333E+01
105	C2H4Cl2	1,1-DICHLOROETHANE	33.3800	-2.6102E+03	-9.1336E+00	-2.8388E-11	3.7323E-06	176	523	2.272E+02
106	C2H4Cl2	1,2-DICHLOROETHANE	48.4226	-3.1803E+03	-1.5370E+01	7.2935E-03	2.6844E-14	237	561	7.911E+01
107	C2H4Cl2O	BIS(CHLOROMETHYL)ETHER	-3.4945	-2.2305E+03	6.7740E+00	-1.7332E-02	9.5511E-06	232	579	2.937E+01
108	C2H4F2	1,1-DIFLUOROETHANE	43.6454	-2.1089E+03	-1.4530E+01	1.0181E-02	4.1529E-14	156	387	4.507E+03
109	C2H4F2	1,2-DIFLUOROETHANE	-10.9499	-1.4207E+03	9.6589E+00	-2.2317E-02	1.4152E-05	215	476	6.165E+02
110	C2H4I2	1,2-DIIODOETHANE	-12.1695	-2.5085E+03	9.9834E+00	-1.6693E-02	6.9027E-06	371	750	---
111	C2H4O	ACETALDEHYDE	87.3702	-3.6822E+03	-3.1548E+01	2.0114E-02	5.5341E-13	150	461	8.984E+02
112	C2H4O	ETHYLENE OXIDE	39.9235	-2.3595E+03	-1.2517E+01	6.9835E-03	-1.1101E-13	161	469	1.316E+03
113	C2H4OS	THIOACETIC-ACID	139.8046	-6.9268E+03	-4.8917E+01	1.9908E-02	1.4987E-06	313	577	---
114	C2H4O2	ACETIC ACID	28.3756	-2.9734E+03	-7.0320E+00	-1.5051E-09	2.1806E-06	290	593	1.572E+01
115	C2H4O2	METHYL FORMATE	28.9576	-2.3582E+03	-7.4848E+00	7.4384E-10	2.7013E-06	174	487	5.855E+02
116	C2H4S	THIACYCLOPROPANE	53.8292	-2.9773E+03	-1.8176E+01	1.2693E-02	-2.8763E-06	238	555	2.500E+02
117	C2H5Br	BROMOETHANE	36.1816	-2.5170E+03	-1.0329E+01	-2.3368E-10	5.4956E-06	155	504	4.675E+02
118	C2H5Cl	ETHYL CHLORIDE	28.3448	-2.0788E+03	-7.5387E+00	-1.6384E-11	4.0550E-06	137	460	1.199E+03
119	C2H5ClO	2-CHLOROETHANOL	8.5478	-2.5196E+03	7.0198E-01	-3.9592E-03	2.2786E-06	206	585	7.179E+00
120	C2H5F	ETHYL FLUORIDE	1.3504	-1.1935E+03	4.0341E+00	-1.6032E-02	1.4458E-05	130	375	6.836E+03
121	C2H5I	ETHYL IODIDE	31.4422	-2.5719E+03	-8.4867E+00	-9.0736E-11	3.5710E-06	162	561	1.360E+02
122	C2H5N	ETHYLENEIMINE	8.7006	-2.2935E+03	1.8063E+00	-1.2965E-02	8.0129E-06	195	537	2.113E+02
123	C2H5NO	ACETAMIDE	-413.1683	8.1328E+03	1.7290E+02	-1.6059E-01	5.3892E-05	354	761	---
124	C2H5NO	N-METHYLFORMAMIDE	0.9176	-3.2184E+03	5.1705E+00	-1.3637E-02	6.2034E-06	269	721	2.527E-01
125	C2H5NO2	NITROETHANE	2.2734	-2.3901E+03	4.2953E+00	-1.4564E-02	8.7219E-06	184	593	2.081E+01
126	C2H5NO3	ETHYL-NITRATE	123.5101	-4.7884E+03	-4.8020E+01	5.0887E-02	-2.2419E-05	273	335	6.403E+01
127	C2H6	ETHANE	20.6973	-1.1341E+03	-5.2514E+00	-9.8774E-11	6.7329E-06	90	305	3.145E+04
128	C2H6AlCl	DIMETHYLALUMINUM CHLORIDE	15.2933	-2.5478E+03	-1.9137E+00	-3.3108E-03	1.6919E-06	252	619	1.499E+01
129	C2H6O	DIMETHYL ETHER	20.2699	-1.5914E+03	-4.6530E+00	-1.3178E-10	2.5623E-06	132	400	4.431E+03

$\log_{10} P = A + B/T + C \log_{10} T + D T + E T^2$ (P - mm Hg, T - K)

NO	FORMULA	NAME	A	B	C	D	E	T_{min}	T_{max}	P @ 25 C mm Hg
130	C2H6O	ETHANOL	23.8442	-2.8642E+03	-5.0474E+00	3.7448E-11	2.7361E-07	159	516	5.923E+01
131	C2H6OS	DIMETHYL SULFOXIDE	45.4653	-4.0439E+03	-1.3210E+01	1.0981E-07	6.4145E-06	292	465	6.092E-01
132	C2H6O2	ETHYLENE GLYCOL	82.4062	-6.3472E+03	-2.5433E+01	-2.3732E-09	8.7467E-06	260	645	9.178E-02
133	C2H6O4S	DIMETHYL SULFATE	33.9406	-3.8530E+03	-8.5921E+00	-1.1705E-10	8.2260E-07	241	758	6.762E-01
134	C2H6S	DIMETHYL SULFIDE	37.2604	-2.4251E+03	-1.1384E+01	5.8122E-03	8.5893E-14	175	503	4.905E+02
135	C2H6S	ETHYL MERCAPTAN	29.2763	-2.2725E+03	-7.7769E+00	-3.8954E-11	3.5170E-06	125	499	5.291E+02
136	C2H6S2	DIMETHYL DISULFIDE	36.2320	-3.1241E+03	-9.9328E+00	2.2831E-11	3.1730E-06	188	606	2.868E+01
137	C2H7N	DIMETHYLAMINE	36.9182	-2.4965E+03	-1.0417E+01	-1.6287E-09	4.6496E-06	181	438	1.520E+03
138	C2H7N	ETHYLAMINE	33.2962	-2.4307E+03	-9.0779E+00	-1.3848E-09	3.8183E-06	192	456	1.048E+03
139	C2H7NO	MONOETHANOLAMINE	72.9125	-5.8595E+03	-2.1914E+01	-7.1511E-10	5.9841E-06	284	638	3.688E-01
140	C2H8N2	ETHYLENEDIAMINE	94.0887	-5.2914E+03	-3.2204E+01	1.4860E-02	1.8928E-13	284	593	1.216E+01
141	C2H8Si	DIMETHYL SILANE	40.1984	-2.1333E+03	-1.2269E+01	3.7308E-10	9.1918E-06	123	402	3.172E+03
142	C2N2	CYANOGEN	36.3490	-2.1975E+03	-1.0483E+01	9.3862E-08	6.6894E-06	245	400	4.301E+03
143	C3F6	HEXAFLUOROPROPYLENE	22.6203	-1.5575E+03	-5.8544E+00	2.6148E-03	-9.7789E-14	117	368	4.896E+03
144	C3F6O	HEXAFLUOROACETONE	-8.0192	-1.4689E+03	1.0266E+01	-3.9760E-02	3.4907E-05	148	357	5.072E+03
145	C3F8	OCTAFLUOROPROPANE	9.4776	-1.2635E+03	-1.4699E-01	-4.9570E-03	4.7635E-06	125	345	6.631E+03
146	C3H2N2	MALONONITRILE	29.9195	-3.6823E+03	-7.4177E+00	7.4993E-10	1.7299E-06	305	715	---
147	C3H3Cl	PROPARGYL CHLORIDE	-26.7697	-1.0574E+03	1.5749E+01	-2.4927E-02	1.2863E-05	293	541	2.313E+02
148	C3H3N	ACRYLONITRILE	35.9210	-2.7763E+03	-1.0101E+01	-3.1547E-10	4.7299E-06	190	535	1.085E+02
149	C3H3NO	OXAZOLE	3.6339	-2.0244E+03	3.3305E+00	-1.2169E-02	7.4895E-06	189	554	1.326E+02
150	C3H4	METHYLACETYLENE	49.7385	-2.3298E+03	-1.6810E+01	1.1084E-02	-9.6739E-13	170	402	4.306E+03
151	C3H4	PROPADIENE	47.2240	-2.2683E+03	-1.4957E+01	1.0812E-10	1.2699E-05	137	393	5.429E+03
152	C3H4Cl2	2,3-DICHLOROPROPENE	3.6589	-2.0331E+03	3.0769E+00	-1.0877E-02	6.4885E-06	192	577	6.128E+01
153	C3H4O	ACROLEIN	57.9815	-3.0933E+03	-1.9638E+01	1.1486E-02	-2.3854E-14	185	506	2.741E+02
154	C3H4O	PROPARGYL ALCOHOL	46.9547	-3.5359E+03	-1.4526E+01	6.8506E-03	2.0410E-13	221	580	1.563E+01
155	C3H4O2	ACRYLIC ACID	23.0607	-3.1347E+03	-4.8813E+00	4.3690E-04	-4.9161E-13	287	615	3.968E+00
156	C3H4O2	beta-PROPIOLACTONE	3.8203	-2.9265E+03	3.7646E+00	-1.2141E-02	5.9783E-06	240	686	1.705E+00
157	C3H4O2	VINYL FORMATE	11.5695	-2.1425E+03	5.8720E-02	-8.4252E-03	5.3903E-06	200	498	3.134E+02
158	C3H4O3	ETHYLENE CARBONATE	-7.8597	-3.6466E+03	9.4034E+00	-1.8774E-02	7.6320E-06	310	790	---
159	C3H4O3	PYRUVIC ACID	-21.8344	-2.2634E+03	1.4247E+01	-2.2375E-02	1.0674E-05	287	635	1.276E+00
160	C3H5Br	3-BROMO-1-PROPENE	127.6280	-4.7573E+03	-4.9438E+01	4.8325E-02	-1.7990E-05	290	540	1.415E+02
161	C3H5Cl	2-CHLOROPROPENE	7.2269	-1.6159E+03	1.3121E+00	-9.3181E-03	7.1679E-06	136	478	8.184E+02
162	C3H5Cl	3-CHLOROPROPENE	8.6085	-1.7512E+03	6.0792E-01	-7.1675E-03	5.2228E-06	139	514	3.685E+02
163	C3H5ClO	alpha-EPICHLOROHYDRIN	24.7640	-2.8846E+03	-5.6252E+00	-1.1011E-10	5.3331E-07	216	610	1.649E+01
164	C3H5ClO2	METHYL CHLOROACETATE	-12.3383	-2.5698E+03	1.1516E+01	-2.6540E-02	1.4106E-05	241	600	7.569E+00
165	C3H5ClO2	ETHYL CHLOROFORMATE	5.0713	-3.4293E+03	6.0125E+00	-2.9459E-02	1.8989E-05	192	508	2.247E+01
166	C3H5Cl3	1,2,3-TRICHLOROPROPANE	-3.9501	-2.4501E+03	6.6887E+00	-1.4991E-02	7.3402E-06	258	652	3.680E+00
167	C3H5I	3-IODO-1-PROPENE	-16.9304	-1.7651E+03	1.2181E+01	-2.2472E-02	1.1296E-05	293	596	3.941E+01
168	C3H5N	PROPIONITRILE	33.7908	-2.9113E+03	-9.1506E+00	2.1173E-11	3.2756E-06	180	564	4.731E+01
169	C3H5NO	ACRYLAMIDE	17.0034	-4.4434E+03	-1.7158E+00	2.0063E-06	-8.0394E-10	358	477	---
170	C3H5NO	HYDRACRYLONITRILE	14.6476	-3.2574E+03	-1.9631E+00	1.1058E-10	4.4389E-07	227	690	8.017E-02
171	C3H5NO	LACTONITRILE	7.8257	-4.2877E+03	4.3978E+00	-2.0821E-02	1.0779E-05	233	643	1.194E-01
172	C3H5N3O9	NITROGLYCERINE	42.9395	-6.2087E+03	-1.0088E+01	-1.9266E-03	8.8162E-07	286	680	4.552E-04
173	C3H6	CYCLOPROPANE	37.8180	-1.8661E+03	-1.2278E+01	8.5712E-03	-2.9652E-13	146	398	5.413E+03
174	C3H6	PROPYLENE	24.5390	-1.5072E+03	-6.4800E+00	-4.2845E-11	5.4982E-06	89	365	8.677E+03
175	C3H6Br2	1,2-DIBROMOPROPANE	89.3805	-4.6368E+03	-3.2139E+01	2.4424E-02	-7.6841E-06	323	525	---
176	C3H6Cl2	1,1-DICHLOROPROPANE	34.1365	-2.8930E+03	-9.2386E+00	-6.6629E-10	2.9381E-06	200	560	6.826E+01
177	C3H6Cl2	1,2-DICHLOROPROPANE	5.4819	-2.1918E+03	2.6014E+00	-1.1751E-02	7.3435E-06	173	572	5.208E+01
178	C3H6Cl2	1,3-DICHLOROPROPANE	41.0896	-3.4298E+03	-1.1573E+01	1.0184E-10	3.4843E-06	174	603	1.815E+01
179	C3H6Cl2	2,2-DICHLOROPROPANE	-35.0912	-1.1632E+03	2.0045E+01	-3.3493E-02	1.7325E-05	267	539	1.455E+02
180	C3H6I2	1,2-DIIODOPROPANE	953.9088	-3.0672E+04	-3.7702E+02	2.9971E-01	-8.7922E-05	398	780	---
181	C3H6O	ACETONE	28.5884	-2.4690E+03	-7.3510E+00	2.8025E-10	2.7361E-06	178	508	2.297E+02
182	C3H6O	ALLYL ALCOHOL	21.3978	-2.9525E+03	-3.8137E+00	-2.7145E-03	1.8811E-06	144	545	2.607E+01
183	C3H6O	METHYL VINYL ETHER	9.2628	-1.8259E+03	1.3189E+00	-1.3985E-02	1.0826E-05	151	437	1.567E+03
184	C3H6O	n-PROPIONALDEHYDE	26.1637	-2.3059E+03	-6.5289E+00	-2.3065E-10	2.5454E-06	193	496	3.167E+02
185	C3H6O	1,2-PROPYLENE OXIDE	38.5381	-2.6310E+03	-1.1104E+01	4.2178E-10	5.5025E-06	161	482	5.331E+02
186	C3H6O	1,3-PROPYLENE OXIDE	-8.8497	-1.5158E+03	8.4393E+00	-1.8036E-02	1.0561E-05	230	520	3.238E+02
187	C3H6O2	ETHYL FORMATE	29.9404	-2.5263E+03	-7.8090E+00	-1.0111E-09	2.7447E-06	194	508	2.445E+02
188	C3H6O2	METHYL ACETATE	33.7235	-2.7204E+03	-9.1182E+00	-9.4316E-11	3.3102E-06	175	507	2.143E+02
189	C3H6O2	PROPIONIC ACID	20.2835	-3.1165E+03	-3.6015E+00	-1.3892E-03	7.1801E-07	252	604	3.703E+00
190	C3H6O2S	3-MERCAPTOPROPIONIC ACID	20.6694	-3.7287E+03	-3.8113E+00	-1.3575E-04	5.9461E-08	291	729	4.980E-02
191	C3H6O3	LACTIC ACID	-27.0836	-3.9661E+03	2.0233E+01	-4.2176E-02	2.0310E-05	291	616	8.127E-02
192	C3H6O3	METHOXYACETIC ACID	89.9021	-7.0625E+03	-2.7494E+01	-2.3273E-09	6.2004E-06	281	691	5.413E-02
193	C3H6O3	TRIOXANE	-41.2762	-1.3985E+03	2.2474E+01	-3.2609E-02	1.4871E-05	335	604	---
194	C3H6S	THIACYCLOBUTANE	55.0098	-3.3957E+03	-1.8134E+01	1.0468E-02	-1.6820E-06	268	603	5.265E+01
195	C3H7Br	1-BROMOPROPANE	-9.0284	-1.8916E+03	9.6910E+00	-2.7013E-02	1.7877E-05	163	544	1.388E+02

$\log_{10} P = A + B/T + C \log_{10} T + D T + E T^2$ (P - mm Hg, T - K)

NO	FORMULA	NAME	A	B	C	D	E	T_{min}	T_{max}	P @ 25 C mm Hg
196	C3H7Br	2-BROMOPROPANE	31.3032	-2.4924E+03	-8.4645E+00	1.6459E-10	3.7859E-06	184	532	2.164E+02
197	C3H7Cl	ISOPROPYL CHLORIDE	115.1259	-4.6278E+03	-4.2197E+01	2.5260E-02	-9.8906E-13	156	489	5.267E+02
198	C3H7Cl	n-PROPYL CHLORIDE	32.3325	-2.4850E+03	-8.8052E+00	8.9119E-11	3.6803E-06	150	503	3.443E+02
199	C3H7F	1-FLUOROPROPANE	78.2889	-2.8266E+03	-3.0340E+01	3.8006E-02	-1.9813E-05	203	305	2.015E+03
200	C3H7F	2-FLUOROPROPANE	-7.4089	-1.4919E+03	9.3510E+00	-3.1910E-02	2.4740E-05	224	416	2.576E+03
201	C3H7I	ISOPROPYL IODIDE	33.2023	-2.7569E+03	-9.0585E+00	-1.2099E-10	3.5044E-06	183	578	7.120E+01
202	C3H7I	n-PROPYL IODIDE	1.2733	-2.0214E+03	4.1138E+00	-1.2477E-02	7.6780E-06	172	593	4.315E+01
203	C3H7N	ALLYLAMINE	2.0234	-2.0506E+03	4.5707E+00	-1.6976E-02	1.1139E-05	185	505	2.424E+02
204	C3H7N	PROPYLENEIMINE	-8.2010	-1.7425E+03	8.5486E+00	-1.9631E-02	1.1456E-05	229	529	1.875E+02
205	C3H7NO	N,N-DIMETHYLFORMAMIDE	-47.9857	-2.3850E+03	2.8800E+01	-5.8596E-02	3.1386E-05	213	647	3.967E+00
206	C3H7NO	N-METHYLACETAMIDE	-13.3059	-3.0464E+03	1.1431E+01	-2.1324E-02	9.2790E-06	301	718	---
207	C3H7NO2	1-NITROPROPANE	2.0216	-2.5960E+03	4.8178E+00	-1.7338E-02	1.0562E-05	169	605	1.013E+01
208	C3H7NO2	2-NITROPROPANE	1.2047	-2.3533E+03	4.6729E+00	-1.4843E-02	8.8798E-06	182	594	1.731E+01
209	C3H7NO3	PROPYL-NITRATE	63.7382	-3.5281E+03	-2.2829E+01	2.2850E-02	-9.6496E-06	273	345	2.355E+01
210	C3H7NO3	ISOPROPYL-NITRATE	373.3215	-1.0882E+04	-1.5319E+02	1.6946E-01	-7.6001E-05	273	345	3.432E+01
211	C3H8	PROPANE	21.4469	-1.4627E+03	-5.2610E+00	3.2820E-11	3.7349E-06	85	370	7.160E+03
212	C3H8O	ISOPROPANOL	38.2363	-3.5513E+03	-1.0031E+01	-3.4740E-10	1.7367E-06	185	508	4.556E+01
213	C3H8O	METHYL ETHYL ETHER	149.5481	-5.6024E+03	-5.5552E+01	3.3138E-02	2.3724E-12	160	438	1.506E+03
214	C3H8O	n-PROPANOL	31.5155	-3.4570E+03	-7.5235E+00	-4.2870E-11	1.3029E-07	147	537	2.070E+01
215	C3H8O2	2-METHOXYETHANOL	153.3786	-7.1181E+03	-5.5450E+01	2.9037E-02	-4.8680E-13	188	564	9.005E+00
216	C3H8O2	METHYLAL	3.1192	-1.8848E+03	3.8791E+00	-1.6092E-02	1.1272E-05	168	481	3.985E+02
217	C3H8O2	1,2-PROPYLENE GLYCOL	90.2930	-6.6968E+03	-2.8109E+01	-1.3326E-10	9.3651E-06	213	626	1.289E-01
218	C3H8O2	1,3-PROPYLENE GLYCOL	27.4723	-4.0200E+03	-6.2839E+00	-6.7098E-10	2.2952E-06	246	658	4.404E-02
219	C3H8O3	GLYCEROL	-62.7929	-3.6585E+03	3.4249E+01	-5.1940E-02	2.2830E-05	291	723	1.687E-04
220	C3H8S	n-PROPYLMERCAPTAN	35.1293	-2.7533E+03	-9.7127E+00	-3.1666E-11	3.6742E-06	160	536	1.542E+02
221	C3H8S	ISOPROPYL MERCAPTAN	35.0477	-2.6208E+03	-9.7700E+00	2.6817E-11	4.0579E-06	143	517	2.772E+02
222	C3H8S	ETHYL-METHYL-SULFIDE	26.9924	-2.5860E+03	-6.1825E+00	-4.3595E-03	5.4459E-06	247	533	1.603E+02
223	C3H9N	n-PROPYLAMINE	24.6402	-2.3152E+03	-5.8711E+00	-4.6258E-11	1.5820E-06	190	497	3.076E+02
224	C3H9N	ISOPROPYLAMINE	54.7199	-3.0557E+03	-1.7947E+01	9.0585E-03	8.8279E-13	178	472	5.795E+02
225	C3H9N	TRIMETHYLAMINE	58.6807	-2.6860E+03	-2.0360E+01	1.3131E-02	-6.5630E-13	156	433	1.612E+03
226	C3H9NO	1-AMINO-2-PROPANOL	-15.5527	-3.5262E+03	1.4251E+01	-3.2309E-02	1.5978E-05	275	614	4.691E-01
227	C3H9NO	3-AMINO-1-PROPANOL	-12.9378	-3.9097E+03	1.3186E+01	-3.0020E-02	1.4189E-05	284	649	7.704E-02
228	C3H9NO	METHYLETHANOLAMINE	-11.0444	-3.1081E+03	1.1331E+01	-2.5709E-02	1.2719E-05	269	630	1.080E+00
229	C3H9O4P	TRIMETHYL PHOSPHATE	72.2176	-4.5518E+03	-2.4613E+01	1.3118E-02	-4.7970E-14	227	764	9.089E-01
230	C3H10N2	1,2-PROPANEDIAMINE	56.4745	-4.0665E+03	-1.7745E+01	7.1207E-03	-5.6869E-13	237	587	1.121E+01
231	C3H10Si	TRIMETHYL SILANE	4.9825	-1.4831E+03	2.4501E+00	-1.2940E-02	1.0503E-05	137	432	1.400E+03
232	C4Cl4S	TETRACHLOROTHIOPHENE	22.5714	-3.6797E+03	-4.5565E+00	-2.6662E-04	1.1279E-07	302	753	---
233	C4Cl6	HEXACHLORO-1,3-BUTADIENE	35.5910	-4.1380E+03	-9.0606E+00	2.9025E-10	5.9012E-07	252	741	2.212E-01
234	C4F8	OCTAFLUORO-2-BUTENE	33.3539	-1.9951E+03	-1.0130E+01	5.7197E-03	4.0766E-13	138	392	2.003E+03
235	C4F8	OCTAFLUOROCYCLOBUTANE	-41.2314	-8.0603E+02	2.4009E+01	-5.1039E-02	3.5019E-05	233	388	2.345E+03
236	C4F10	DECAFLUOROBUTANE	0.8538	-1.6238E+03	5.4162E+00	-2.4729E-02	2.0982E-05	145	386	2.004E+03
237	C4H2	BUTADIYNE(BIACETYLENE)	1450.9484	-2.7756E+04	-6.4784E+02	1.0221E+00	-6.3551E-04	195	275	---
238	C4H2O3	MALEIC ANHYDRIDE	-42.9778	-1.6928E+03	2.2430E+01	-2.7916E-02	1.1707E-05	326	721	---
239	C4H4	VINYLACETYLENE	36.4556	-2.3569E+03	-1.0425E+01	-8.3758E-10	4.8441E-06	180	454	1.532E+03
240	C4H4N2	SUCCINONITRILE	-10.5172	-3.6943E+03	1.0379E+01	-1.9214E-02	7.7119E-06	331	770	---
241	C4H4O	FURAN	24.9555	-2.1624E+03	-6.1066E+00	-2.4185E-10	2.0858E-06	188	490	5.998E+02
242	C4H4O2	DIKETENE	17.2147	-2.6139E+03	-3.0030E+00	-3.6848E-10	1.4806E-07	267	616	1.071E+01
243	C4H8O3	SUCCINIC ANHYDRIDE	44.8614	-5.0087E+03	-1.2203E+01	-1.1319E-10	2.3049E-06	393	811	---
244	C4H4O4	FUMARIC ACID	-179.4520	6.1572E+02	7.8000E+01	-7.1951E-02	2.2729E-05	560	771	---
245	C4H4O4	MALEIC ACID	-52.2664	-4.1120E+03	2.9193E+01	-4.0009E-02	1.4680E-05	403	773	---
246	C4H4S	THIOPHENE	36.6016	-2.9794E+03	-1.0104E+01	1.1445E-09	3.2472E-06	235	579	7.863E+01
247	C4H5Cl	CHLOROPRENE	8.9353	-1.9176E+03	7.3836E-01	-8.4743E-03	6.0224E-06	143	525	2.185E+02
248	C4H5N	trans-CROTONITRILE	43.4500	-3.2699E+03	-1.3368E+01	6.1392E-03	5.5131E-13	222	586	1.717E+01
249	C4H5N	cis-CROTONITRILE	-4.2755	-2.0100E+03	6.6525E+00	-1.6048E-02	9.5110E-06	201	568	3.196E+01
250	C4H5N	METHACRYLONITRILE	29.2563	-2.5669E+03	-7.7127E+00	1.0699E-09	3.2622E-06	237	554	7.118E+01
251	C4H5N	PYRROLE	54.1597	-4.2745E+03	-1.5873E+01	-4.5171E-10	4.2238E-06	250	640	8.347E+00
252	C4H5N	VINYLACETONITRILE	2.8218	-2.3780E+03	3.9704E+00	-1.3908E-02	8.3551E-06	186	584	1.848E+01
253	C4H5NO2	METHYL CYANOACETATE	1.1272	-3.5604E+03	5.7936E+00	-1.7133E-02	8.1441E-06	260	687	1.372E-01
254	C4H6	CYCLOBUTENE	68.1140	-2.6364E+03	-2.5728E+01	2.9287E-02	-1.2602E-05	196	446	1.660E+03
255	C4H6	1,2-BUTADIENE	21.1068	-1.7990E+03	-4.9387E+00	-4.7821E-11	2.7787E-06	137	444	1.258E+03
256	C4H6	1,3-BUTADIENE	30.0572	-1.9891E+03	-8.2922E+00	2.5664E-10	5.1334E-06	164	425	2.107E+03
257	C4H6	DIMETHYLACETYLENE	21.8577	-2.0010E+03	-5.1054E+00	1.1247E-03	-3.2651E-12	241	488	7.059E+02
258	C4H6	ETHYLACETYLENE	43.8278	-2.4255E+03	-1.4141E+01	8.2138E-03	7.4889E-14	147	443	1.415E+03
259	C4H6Cl2	1,3-DICHLORO-trans-2-BUTENE	55.5016	-4.1951E+03	-1.6481E+01	-1.7816E-11	4.5523E-06	276	618	1.134E+01
260	C4H6Cl2	1,4-DICHLORO-cis-2-BUTENE	4.7707	-2.6927E+03	3.1645E+00	-1.1767E-02	6.1930E-06	225	640	4.091E+00
261	C4H6Cl2	1,4-DICHLORO-trans-2-BUTENE	-10.2934	-2.3720E+03	9.5309E+00	-1.8798E-02	9.0511E-06	274	646	3.422E+00

$\log_{10} P = A + B/T + C \log_{10} T + D T + E T^2$ (P - mm Hg, T - K)

NO	FORMULA	NAME	A	B	C	D	E	T_{min}	T_{max}	P @ 25 C mm Hg
262	C4H6Cl2	3,4-DICHLORO-1-BUTENE	2.0344	-2.3243E+03	4.2431E+00	-1.3712E-02	7.7644E-06	212	589	2.186E+01
263	C4H6O	trans-CROTONALDEHYDE	34.3167	-3.1138E+03	-9.1374E+00	-4.2364E-10	2.5322E-06	197	571	3.078E+01
264	C4H6O	2,5-DIHYDROFURAN	-21.9588	-1.3933E+03	1.4178E+01	-2.4916E-02	1.3232E-05	273	542	1.577E+02
265	C4H6O	DIVINYL ETHER	-6.4142	-1.6906E+03	8.4954E+00	-2.6007E-02	1.8488E-05	172	463	6.702E+02
266	C4H6O	METHACROLEIN	1.0846	-1.9184E+03	4.4532E+00	-1.4392E-02	9.0180E-06	192	530	1.514E+02
267	C4H6O2	2-BUTYNE-1,4-DIOL	-32.5031	-4.7285E+03	2.2569E+01	-4.1243E-02	1.7537E-05	331	695	---
268	C4H6O2	gamma-BUTYROLACTONE	10.8996	-2.8661E+03	-3.8645E-01	-2.6501E-03	1.2711E-06	230	739	4.500E-01
269	C4H6O2	cis-CROTONIC ACID	-13.8773	-3.0350E+03	1.2204E+01	-2.4859E-02	1.1689E-05	289	647	5.877E-01
270	C4H6O2	trans-CROTONIC ACID	45.9341	-4.7347E+03	-1.2459E+01	3.1515E-09	2.0192E-06	345	666	---
271	C4H6O2	METHACRYLIC ACID	17.5903	-3.2940E+03	-2.5930E+00	6.4226E-12	-1.5429E-06	288	643	9.747E-01
272	C4H6O2	METHYL ACRYLATE	47.0416	-3.1218E+03	-1.4860E+01	7.1646E-03	3.4547E-14	196	536	8.653E+01
273	C4H6O2	VINYL ACETATE	12.7220	-2.1770E+03	-9.1458E-01	-4.5688E-03	2.9673E-06	180	524	1.145E+02
274	C4H6O3	ACETIC ANHYDRIDE	43.5021	-3.8643E+03	-1.2162E+01	-2.1843E-09	3.3250E-06	200	448	5.529E+00
275	C4H6O4	SUCCINIC ACID	-81.7799	-3.2780E+03	4.0443E+01	-4.6257E-02	1.5606E-05	461	806	---
276	C4H6O5	DIGLYCOLIC ACID	-49.4206	-4.8216E+03	2.8168E+01	-3.8017E-02	1.3265E-05	421	820	---
277	C4H6O5	MALIC ACID	-63.1758	-5.9090E+03	3.6133E+01	-5.2316E-02	1.9119E-05	403	781	---
278	C4H6O6	TARTARIC ACID	-137.3095	-5.7193E+03	6.6921E+01	-7.6973E-02	2.5181E-05	479	828	---
279	C4H7N	n-BUTYRONITRILE	4.8780	-2.5505E+03	3.6306E+00	-1.6630E-02	1.0604E-05	161	582	1.957E+01
280	C4H7N	ISOBUTYRONITRILE	2.9839	-2.3552E+03	4.0660E+00	-1.4788E-02	8.7671E-06	202	565	3.278E+01
281	C4H7NO	ACETONE CYANOHYDRIN	-85.1224	-8.9206E+02	4.1877E+01	-6.0910E-02	3.0327E-05	253	647	1.106E+00
282	C4H7NO	2-METHACRYLAMIDE	-32.1945	-2.3705E+03	1.8470E+01	-2.4536E-02	9.4360E-06	384	741	---
283	C4H7NO	3-METHOXYPROPIONITRILE	35.8541	-3.5204E+03	-1.0010E+01	3.4139E-03	-7.9103E-14	210	638	1.975E+00
284	C4H7NO	2-PYRROLIDONE	0.4237	-3.6221E+03	5.4272E+00	-1.2988E-02	5.3697E-06	298	792	---
285	C4H8	1-BUTENE	27.3116	-1.9235E+03	-7.2064E+00	7.4852E-12	3.6481E-06	88	420	2.253E+03
286	C4H8	cis-2-BUTENE	31.5551	-2.1055E+03	-8.7864E+00	-1.0602E-10	5.0886E-06	134	436	1.601E+03
287	C4H8	trans-2-BUTENE	43.0938	-2.2458E+03	-1.4152E+01	9.0594E-03	-1.9908E-13	168	429	1.755E+03
288	C4H8	CYCLOBUTANE	26.5442	-1.9783E+03	-6.9448E+00	2.5342E-10	3.8845E-06	182	460	1.175E+03
289	C4H8	ISOBUTENE	39.2295	-2.1094E+03	-1.2567E+01	7.7304E-03	-1.3659E-13	133	418	2.308E+03
290	C4H8Br2	1,2-DIBROMOBUTANE	138.6495	-5.8082E+03	-5.3138E+01	4.7750E-02	-1.6041E-05	281	659	3.111E+00
291	C4H8Br2	2,3-DIBROMOBUTANE	123.7728	-5.4664E+03	-4.6795E+01	4.0611E-02	-1.3278E-05	278	657	3.750E+00
292	C4H8Cl2	1,4-DICHLOROBUTANE	1.1907	-2.5846E+03	4.6334E+00	-1.3364E-02	6.8967E-06	236	641	4.125E+00
293	C4H8I2	1,2-DIIODOBUTANE	975.5011	-3.0154E+04	-3.8894E+02	3.2576E-01	-1.0110E-04	383	726	---
294	C4H8O	n-BUTYRALDEHYDE	66.8411	-3.6784E+03	-2.2609E+01	1.1697E-02	2.9647E-13	177	525	1.114E+02
295	C4H8O	ISOBUTYRALDEHYDE	89.6241	-4.2317E+03	-3.1724E+01	1.7799E-02	2.8054E-12	208	507	1.733E+02
296	C4H8O	1,2-EPOXYBUTANE	13.3628	-2.1142E+03	-1.0214E+00	-6.4578E-03	4.8665E-06	123	526	1.784E+02
297	C4H8O	METHYL ETHYL KETONE	47.7060	-3.0965E+03	-1.5184E+01	7.4846E-03	-1.7084E-13	186	536	9.550E+01
298	C4H8O	ETHYL VINYL ETHER	5.5570	-1.8563E+03	2.6934E+00	-1.4082E-02	1.0248E-05	157	475	5.107E+02
299	C4H8O	TETRAHYDROFURAN	34.8700	-2.7523E+03	-9.5958E+00	1.9889E-10	3.5465E-06	165	540	1.622E+02
300	C4H8O2	cis-2-BUTENE-1,4-DIOL	92.8466	-7.4351E+03	-2.8620E+01	3.2422E-09	8.1439E-06	284	678	6.527E-03
301	C4H8O2	trans-2-BUTENE-1,4-DIOL	69.3513	-5.9220E+03	-2.1957E+01	9.0107E-03	-1.2354E-12	300	681	---
302	C4H8O2	ISOBUTYRIC ACID	11.3037	-3.1625E+03	7.2630E-01	-8.9331E-03	4.8215E-06	227	609	1.815E+00
303	C4H8O2	n-BUTYRIC ACID	8.0847	-3.3219E+03	2.4312E+00	-1.1734E-02	5.7992E-06	268	628	9.458E-01
304	C4H8O2	1,4-DIOXANE	20.5761	-2.4658E+03	-4.3645E+00	-2.7053E-10	8.5235E-07	285	587	3.818E+01
305	C4H8O2	ETHYL ACETATE	0.6955	-2.2498E+03	5.4643E+00	-1.9451E-02	1.2362E-05	190	523	9.335E+01
306	C4H8O2	METHYL PROPIONATE	35.4850	-2.9788E+03	-9.6340E+00	-1.5818E-11	3.0270E-06	186	531	8.401E+01
307	C4H8O2	n-PROPYL FORMATE	28.6983	-2.6926E+03	-7.2435E+00	-8.7226E-11	1.9456E-06	180	538	8.252E+01
308	C4H8O2S	SULFOLANE	-4.4873	-3.6491E+03	7.3819E+00	-1.4643E-02	5.7933E-06	301	849	---
309	C4H8S	TETRAHYDROTHIOPHENE	31.3909	-3.0225E+03	-8.1508E+00	1.5440E-10	2.0231E-06	177	632	1.839E+01
310	C4H9Br	1-BROMOBUTANE	74.7061	-4.0663E+03	-2.5610E+01	1.3166E-02	1.4210E-13	161	577	4.195E+01
311	C4H9Br	2-BROMOBUTANE	10.0875	-2.3152E+03	6.6773E-01	-9.2242E-03	5.9862E-06	161	567	5.707E+01
312	C4H9Cl	n-BUTYL CHLORIDE	35.7808	-2.8632E+03	-9.8957E+00	5.1598E-11	3.5488E-06	150	537	1.016E+02
313	C4H9Cl	sec-BUTYL CHLORIDE	28.2992	-2.4353E+03	-7.3590E+00	-1.3048E-11	3.0834E-06	142	521	1.570E+02
314	C4H9Cl	tert-BUTYL CHLORIDE	-15.9627	-1.3296E+03	1.1483E+01	-2.2322E-02	1.2859E-05	248	507	3.020E+02
315	C4H9I	2-IODO-2-METHYLPROPANE	-98.3670	2.8353E+02	4.6127E+01	-5.8084E-02	2.5345E-05	315	588	---
316	C4H9N	PYRROLIDINE	50.2467	-3.6404E+03	-1.4826E+01	6.5779E-10	5.0196E-06	215	569	6.266E+01
317	C4H9NO	N,N-DIMETHYLACETAMIDE	27.8419	-3.3379E+03	-6.6412E+00	2.4260E-10	9.8824E-07	253	658	2.000E+00
318	C4H9NO	MORPHOLINE	23.4107	-2.8912E+03	-5.1633E+00	-1.9719E-09	7.3526E-07	270	618	1.006E+01
319	C4H9NO2	1-NITROBUTANE	671.7377	-2.0216E+04	-2.7069E+02	2.4868E-01	-8.5859E-05	359	624	---
320	C4H9NO2	2-NITROBUTANE	105.2369	-4.8267E+03	-3.9220E+01	3.3350E-02	-1.0807E-05	348	615	---
321	C4H10	n-BUTANE	27.0441	-1.9049E+03	-7.1805E+00	-6.6845E-11	4.2190E-06	135	425	1.830E+03
322	C4H10	ISOBUTANE	31.2541	-1.9532E+03	-8.8060E+00	8.9246E-11	5.7501E-06	114	408	2.657E+03
323	C4H10N2	PIPERAZINE	-55.9690	-1.3030E+03	2.8525E+01	-3.7190E-02	1.5599E-05	379	638	---
324	C4H10O	n-BUTANOL	39.6673	-4.0017E+03	-1.0295E+01	-3.2572E-10	8.6672E-07	184	563	7.050E+00
325	C4H10O	sec-BUTANOL	49.4476	-4.2487E+03	-1.3793E+01	6.2736E-11	2.1988E-06	158	536	1.832E+01
326	C4H10O	tert-BUTANOL	71.8181	-4.9966E+03	-2.1805E+01	1.9238E-08	5.8247E-06	299	506	---
327	C4H10O	DIETHYL ETHER	41.7519	-2.7410E+03	-1.2270E+01	-3.1948E-10	5.9802E-06	157	467	5.353E+02

$\log_{10} P = A + B/T + C \log_{10} T + D T + E T^2$ (P - mm Hg, T - K)

NO	FORMULA	NAME	A	B	C	D	E	T_{min}	T_{max}	P @ 25 C mm Hg
328	C4H10O	METHYL-PROPYL-ETHER	448.6238	-1.1762E+04	-1.8629E+02	2.0930E-01	-8.9491E-05	273	476	4.565E+02
329	C4H10O	METHYL ISOPROPYL ETHER	10.1637	-1.9189E+03	6.8923E-01	-1.1682E-02	9.3524E-06	128	465	6.045E+02
330	C4H10O	ISOBUTANOL	109.2803	-6.3060E+03	-3.6947E+01	1.4462E-02	-3.9480E-13	165	548	1.045E+01
331	C4H10O2	1,3-BUTANEDIOL	109.4540	-7.4377E+03	-3.6627E+01	1.4845E-02	-7.6634E-14	196	643	2.008E-02
332	C4H10O2	1,4-BUTANEDIOL	22.4549	-4.2023E+03	-4.2015E+00	-7.4539E-10	6.1761E-07	293	667	1.044E-02
333	C4H10O2	2,3-BUTANEDIOL	46.6247	-4.7864E+03	-1.2792E+01	-8.5522E-10	3.8460E-06	281	611	1.820E-01
334	C4H10O2	t-BUTYL HYDROPEROXIDE	11.5999	-2.7658E+03	-2.1182E-01	-4.1964E-03	2.1416E-06	277	576	5.476E+00
335	C4H10O2	1,2-DIMETHOXYETHANE	34.8262	-2.7674E+03	-1.0083E+01	4.3212E-03	4.0618E-13	215	536	7.636E+01
336	C4H10O2	2-ETHOXYETHANOL	115.8686	-6.0128E+03	-4.0900E+01	2.0888E-02	1.6481E-15	183	569	5.307E+00
337	C4H10O3	DIETHYLENE GLYCOL	6.5069	-4.6109E+03	4.6273E+00	-1.8361E-02	8.2923E-06	263	745	5.685E-03
338	C4H10O4S	DIETHYL SULFATE	37.5380	-4.0299E+03	-1.0340E+01	2.9825E-03	-1.4666E-11	248	483	2.115E-01
339	C4H10S	n-BUTYL MERCAPTAN	36.2672	-3.0452E+03	-9.9743E+00	-9.1432E-11	3.2087E-06	157	569	4.550E+01
340	C4H10S	ISOBUTYL MERCAPTAN	35.2778	-2.9105E+03	-9.6829E+00	3.9960E-11	3.2308E-06	128	559	6.973E+01
341	C4H10S	sec-BUTYL MERCAPTAN	10.0200	-2.3218E+03	1.1050E+00	-1.3014E-02	9.2202E-06	133	554	8.065E+01
342	C4H10S	tert-BUTYL MERCAPTAN	32.9088	-2.6250E+03	-8.9422E+00	-1.0585E-10	3.1646E-06	274	530	1.814E+02
343	C4H10S	DIETHYL SULFIDE	2.8992	-2.2313E+03	4.1589E+00	-1.6341E-02	1.0499E-05	169	557	5.857E+01
344	C4H10S	ISOPROPYL-METHYL-SULFIDE	60.9138	-3.4687E+03	-2.0565E+01	1.2370E-02	-1.9629E-06	260	551	8.074E+01
345	C4H10S	METHYL-PROPYL-SULFIDE	53.4630	-3.4390E+03	-1.7201E+01	7.8569E-03	-1.1672E-08	269	563	5.083E+01
346	C4H10S2	DIETHYL DISULFIDE	4.9562	-2.8307E+03	3.6929E+00	-1.6131E-02	9.4578E-06	172	642	4.277E+00
347	C4H11N	n-BUTYLAMINE	25.0711	-2.5701E+03	-5.8985E+00	7.9399E-10	1.1920E-06	224	532	9.149E+01
348	C4H11N	ISOBUTYLAMINE	-6.8794	-2.0381E+03	8.8812E+00	-2.5376E-02	1.6317E-05	189	514	1.397E+02
349	C4H11N	sec-BUTYLAMINE	6.5307	-2.0596E+03	2.2551E+00	-1.2393E-02	8.3513E-06	169	514	1.778E+02
350	C4H11N	tert-BUTYLAMINE	24.1625	-2.1505E+03	-6.0687E+00	2.1369E-03	-9.2692E-14	206	484	3.716E+02
351	C4H11N	DIETHYLAMINE	32.6260	-2.4918E+03	-9.3285E+00	3.9900E-03	1.1732E-12	223	497	2.373E+02
352	C4H11NO	DIMETHYLETHANOLAMINE	1.6173	-3.5071E+03	6.9312E+00	-2.6316E-02	1.5111E-05	214	572	3.179E+00
353	C4H11NO2	DIETHANOLAMINE	122.0877	-8.8422E+03	-4.0422E+01	1.4062E-02	1.1986E-12	301	542	---
354	C4H11NO2	2-AMINOETHOXYETHANOL	0.8861	-5.3757E+03	8.4953E+00	-2.7084E-02	1.2483E-05	273	698	8.158E-04
355	C4H12N2O	N-AMINOETHYL ETHANOLAMINE	-20.3645	-4.6961E+03	1.7262E+01	-3.6406E-02	1.6261E-05	293	699	1.546E-03
356	C4H12Si	TETRAMETHYLSILANE	27.2755	-2.1081E+03	-7.1240E+00	-4.0697E-11	3.1382E-06	174	450	7.180E+02
357	C4H13N3	DIETHYLENE TRIAMINE	-23.5969	-2.6670E+03	1.5808E+01	-2.8417E-02	1.4246E-05	234	676	2.339E-01
358	C5Cl6	HEXACHLOROCYCLOPENTADIENE	-9.7942	-3.3161E+03	1.0171E+01	-2.1115E-02	9.2045E-06	284	746	5.956E-02
359	C5H4O2	FURFURAL	32.0337	-3.4930E+03	-8.1424E+00	2.2074E-10	1.9582E-06	237	657	2.209E+00
360	C5H5N	PYRIDINE	33.5541	-3.1318E+03	-8.8646E+00	7.1293E-12	2.2813E-06	232	620	2.079E+01
361	C5H6	CYCLOPENTADIENE	-22.1335	-1.1705E+03	1.4556E+01	-3.0457E-02	1.9817E-05	188	507	4.356E+02
362	C5H6	2-METHYL-1-BUTENE-3-YNE	39.3298	-2.3664E+03	-1.2384E+01	6.7937E-03	8.2122E-14	160	492	5.957E+02
363	C5H6	1-PENTENE-3-YNE	41.9647	-2.8411E+03	-1.2372E+01	-1.0010E-10	5.9824E-06	150	520	2.258E+02
364	C5H6	1-PENTENE-4-YNE	47.2587	-2.6717E+03	-1.5453E+01	8.5851E-03	-1.2301E-13	150	503	4.168E+02
365	C5H6N2	GLUTARONITRILE	60.1486	-5.3093E+03	-1.8776E+01	6.8232E-03	-1.3443E-13	244	782	8.234E-03
366	C5H6O2	FURFURYL ALCOHOL	31.4348	-3.7851E+03	-7.9113E+00	2.0812E-03	1.2964E-13	259	632	6.082E-01
367	C5H6O3	GLUTARIC ANHYDRIDE	42.8029	-5.1785E+03	-1.1378E+01	-4.9820E-11	1.8154E-06	328	838	---
368	C5H6O4	CITRACONIC ACID	-11.6730	-5.4940E+03	1.2578E+01	-2.4297E-02	9.0728E-06	356	829	---
369	C5H6O4	ITACONIC ACID	-58.5861	-3.8726E+03	3.0953E+01	-3.7898E-02	1.2924E-05	439	821	---
370	C5H6S	2-METHYLTHIOPHENE	62.0938	-3.8470E+03	-2.0540E+01	1.0500E-02	-1.1254E-06	282	610	2.488E+01
371	C5H6S	3-METHYLTHIOPHENE	55.1117	-3.6703E+03	-1.7715E+01	8.0917E-03	-3.7915E-07	284	615	2.213E+01
372	C5H7N	N-METHYLPYRROLE	36.2741	-3.2734E+03	-9.7612E+00	-2.8918E-10	2.2419E-06	217	610	2.193E+01
373	C5H7NO2	ETHYL CYANOACETATE	5.0305	-3.1246E+03	1.6321E+00	1.6027E-11	-6.0406E-15	251	679	3.882E-02
374	C5H8	CYCLOPENTENE	30.1132	-2.3537E+03	-8.0609E+00	-5.7786E-11	3.4591E-06	138	507	3.805E+02
375	C5H8	ISOPRENE	32.4693	-2.2755E+03	-9.4314E+00	4.1627E-03	-3.0643E-14	127	484	5.506E+02
376	C5H8	3-METHYL-1,2-BUTADIENE	26.7883	-2.2642E+03	-6.7693E+00	-1.6862E-10	2.0892E-06	160	490	4.264E+02
377	C5H8	2-METHYL-1,3-BUTADIENE	-1.9750	-1.7013E+03	6.1902E+00	-2.0627E-02	1.4120E-05	255	483	5.512E+02
378	C5H8	1,2-PENTADIENE	26.6297	-2.2985E+03	-6.6707E+00	-2.5834E-11	1.7060E-06	136	500	3.680E+02
379	C5H8	cis-1,3-PENTADIENE	31.3245	-2.3715E+03	-8.7812E+00	3.1436E-03	-2.2535E-14	132	499	3.795E+02
380	C5H8	trans-1,3-PENTADIENE	27.3750	-2.2348E+03	-7.2358E+00	2.1441E-03	-6.6289E-14	186	500	4.112E+02
381	C5H8	1,4-PENTADIENE	23.7408	-2.0505E+03	-5.6970E+00	-5.9671E-11	1.1242E-06	125	479	7.352E+02
382	C5H8	2,3-PENTADIENE	29.2390	-2.4236E+03	-7.6062E+00	-1.1983E-10	2.4346E-06	148	497	3.203E+02
383	C5H8	1-PENTYNE	33.8369	-2.4684E+03	-9.4301E+00	6.1345E-10	4.6760E-06	167	481	4.357E+02
384	C5H8	2-PENTYNE	-52.3434	-8.4024E+02	2.7976E+01	-4.6584E-02	2.4750E-05	240	522	2.370E+02
385	C5H8	3-METHYL-1-BUTYNE	-39.2632	-1.1773E+03	2.3847E+01	-5.4802E-02	3.7819E-05	183	463	6.587E+02
386	C5H8	SPIROPENTANE	140.1393	-4.7087E+03	-5.5343E+01	5.8108E-02	-2.3249E-05	276	500	4.578E+02
387	C5H8N4O12	PENTAERYTHRITOL TETRANITRATE	-130.9886	-2.7510E+03	6.3602E+01	-8.1824E-02	3.1971E-05	414	676	---
388	C5H8O	CYCLOPENTANONE	47.8103	-3.7609E+03	-1.3972E+01	-5.8657E-10	4.8771E-06	222	626	1.140E+01
389	C5H8O	METHYL ISOPROPENYL KETONE	-0.1399	-2.1308E+03	5.0651E+00	-1.4555E-02	8.3111E-06	220	566	4.424E+01
390	C5H8O2	ACETYLACETONE	-6.0090	-2.7795E+03	8.6491E+00	-2.1654E-02	1.1292E-05	250	602	4.148E+00
391	C5H8O2	ALLYL ACETATE	26.8017	-2.6874E+03	-6.6456E+00	3.4187E-11	2.2725E-06	138	559	3.517E+01
392	C5H8O2	ETHYL ACRYLATE	55.0109	-3.5904E+03	-1.7694E+01	8.0510E-03	-4.8864E-13	202	553	3.858E+01
393	C5H8O2	METHYL METHACRYLATE	106.8960	-5.2741E+03	-3.7654E+01	1.8620E-02	-3.6507E-13	225	564	3.853E+01

$\log_{10} P = A + B/T + C \log_{10} T + D T + E T^2$ (P - mm Hg, T - K)

NO	FORMULA	NAME	A	B	C	D	E	T_{min}	T_{max}	P @ 25 C mm Hg
394	C5H8O2	VINYL PROPIONATE	-67.2714	-4.7030E+02	3.3190E+01	-4.4868E-02	2.0880E-05	362	546	---
395	C5H8O3	2-HYDROXYETHYL ACRYLATE	9.6617	-3.9805E+03	2.3231E+00	-1.3294E-02	7.0087E-06	213	662	5.234E-02
396	C5H8O3	LEVULINIC ACID	-12.7087	-4.1736E+03	1.2081E+01	-2.3812E-02	1.1829E-05	308	556	---
397	C5H8O3	METHYL ACETOACETATE	12.9412	-3.4913E+03	7.2725E-01	-1.2394E-02	6.9235E-06	193	642	8.931E-01
398	C5H8O4	GLUTARIC ACID	109.3324	-9.6083E+03	-3.4494E+01	9.0733E-03	1.4829E-12	371	807	---
399	C5H9N	VALERONITRILE	43.7757	-3.7040E+03	-1.2460E+01	-3.4293E-11	3.8460E-06	177	603	7.294E+00
400	C5H9NO	n-BUTYL ISOCYANATE	6.0766	-2.6575E+03	3.1413E+00	-1.5075E-02	9.0562E-06	193	568	1.765E+01
401	C5H9NO	N-METHYL-2-PYRROLIDONE	-0.8097	-3.0788E+03	5.8572E+00	-1.4916E-02	6.9974E-06	249	724	3.404E-01
402	C5H9NO4	L-GLUTAMIC ACID	-84.7291	-4.4621E+03	4.1913E+01	-4.5554E-02	1.4115E-05	497	886	---
403	C5H10	CYCLOPENTANE	29.1547	-2.3512E+03	-7.6965E+00	-1.6212E-10	3.1250E-06	179	512	3.177E+02
404	C5H10	2-METHYL-1-BUTENE	30.2418	-2.2723E+03	-8.1482E+00	5.2331E-11	3.6802E-06	136	465	6.100E+02
405	C5H10	2-METHYL-2-BUTENE	33.7539	-2.4260E+03	-9.4429E+00	9.8488E-11	4.7156E-06	139	471	4.681E+02
406	C5H10	3-METHYL-1-BUTENE	31.1486	-2.1764E+03	-8.6146E+00	5.9672E-11	4.7555E-06	105	450	9.021E+02
407	C5H10	1-PENTENE	36.2741	-2.4452E+03	-1.0405E+01	-7.4629E-11	5.4070E-06	110	465	6.412E+02
408	C5H10	cis-2-PENTENE	34.0427	-2.4524E+03	-9.5014E+00	-5.0816E-11	4.3638E-06	122	476	4.951E+02
409	C5H10	trans-2-PENTENE	30.6231	-2.3239E+03	-8.2648E+00	-1.7049E-11	3.6666E-06	133	475	5.058E+02
410	C5H10Br2	2,3-DIBROMO-2-METHYLBUTANE	-166.9586	1.6951E+03	7.3382E+01	-7.5898E-02	2.7650E-05	354	668	---
411	C5H10Cl2	1,5-DICHLOROPENTANE	10.1987	-3.1090E+03	1.1611E+00	-1.0363E-02	5.5991E-06	200	663	1.128E+00
412	C5H10O	METHYL ISOPROPYL KETONE	131.9592	-5.9468E+03	-4.7557E+01	2.4756E-02	-2.0397E-13	181	553	5.221E+01
413	C5H10O	2-PENTANONE	18.3056	-2.3477E+03	-3.6667E+00	7.1502E-04	1.0912E-13	196	561	3.728E+01
414	C5H10O	DIETHYL KETONE	32.2560	-2.9431E+03	-8.5068E+00	-4.5720E-10	2.6177E-06	234	561	3.699E+01
415	C5H10O	VALERALDEHYDE	45.7561	-3.5036E+03	-1.3292E+01	-4.3157E-10	4.7373E-06	182	554	3.434E+01
416	C5H10O2	n-BUTYL FORMATE	20.4567	-2.5589E+03	-4.2259E+00	7.1544E-11	4.8667E-07	181	559	2.888E+01
417	C5H10O2	ETHYL PROPIONATE	43.7540	-3.4774E+03	-1.2477E+01	1.6521E-11	3.9087E-06	199	546	3.670E+01
418	C5H10O2	ISOBUTYL FORMATE	16.5919	-2.3290E+03	-2.9026E+00	2.7455E-11	1.6584E-07	177	551	4.101E+01
419	C5H10O2	ISOPROPYL ACETATE	22.2064	-2.4989E+03	-4.8975E+00	-2.7852E-10	8.3385E-07	200	538	6.036E+01
420	C5H10O2	n-PROPYL ACETATE	43.0548	-3.4692E+03	-1.2217E+01	2.4748E-10	3.7508E-06	178	549	3.328E+01
421	C5H10O2	METHYL n-BUTYRATE	44.5661	-3.5234E+03	-1.2770E+01	-1.4010E-10	4.0354E-06	187	555	3.227E+01
422	C5H10O2	2-METHYLBUTYRIC ACID	15.1348	-3.7848E+03	1.7558E-01	-1.2814E-02	7.1577E-06	193	643	4.905E-01
423	C5H10O2	ISOVALERIC ACID	3.7904	-3.6011E+03	5.0920E+00	-1.8480E-02	9.4559E-06	244	634	4.393E-01
424	C5H10O2	VALERIC ACID	15.3454	-3.9024E+03	-2.4353E-02	-1.1099E-02	5.6315E-06	239	651	2.442E-01
425	C5H10O2	TETRAHYDROFURFURYL ALCOHOL	-11.5234	-2.9418E+03	1.1327E+01	-2.7120E-02	1.5221E-05	193	639	8.046E-01
426	C5H10O2S	3-METHYL SULFOLANE	6.6099	-3.8689E+03	2.7869E+00	-1.0238E-02	4.3052E-06	274	817	7.244E-03
427	C5H10O3	DIETHYL CARBONATE	75.6312	-4.9957E+03	-2.3680E+01	1.8618E-09	8.4774E-06	230	576	1.083E+01
428	C5H10O3	ETHYL LACTATE	32.0863	-2.9164E+03	-9.5666E+00	6.5114E-03	4.5645E-13	247	588	3.750E+00
429	C5H10S	THIACYCLOHEXANE	56.9128	-3.9263E+03	-1.8271E+01	8.0697E-03	-5.0144E-07	302	657	---
430	C5H10S	CYCLOPENTANETHIOL	114.1137	-5.4064E+03	-4.1699E+01	3.0074E-02	-8.1552E-06	354	629	---
431	C5H11Br	1-BROMOPENTANE	955.2944	-2.6563E+04	-3.9056E+02	3.8087E-01	-1.3843E-04	314	565	---
432	C5H11Cl	1-CHLOROPENTANE	-4.4886	-2.2604E+03	7.8088E+00	-2.3675E-02	1.4884E-05	174	568	3.285E+01
433	C5H11Cl	1-CHLORO-3-METHYLBUTANE	223.0545	-7.3403E+03	-8.8795E+01	8.6724E-02	-3.2149E-05	312	559	---
434	C5H11Cl	2-CHLORO-2-METHYLBUTANE	-77.5603	-2.7352E+02	3.7920E+01	-5.2500E-02	2.4568E-05	280	549	7.646E+01
435	C5H11N	N-METHYLPYRROLIDINE	4.2451	-2.0090E+03	2.9553E+00	-1.1618E-02	7.2587E-06	183	550	1.002E+02
436	C5H11N	PIPERIDINE	2.3169	-2.1085E+03	3.5103E+00	-9.6044E-03	4.9394E-06	263	594	3.210E+01
437	C5H11NO	tert-BUTYLFORMAMIDE	-7.8846	-3.0206E+03	9.0045E+00	-1.8723E-02	8.4726E-06	289	692	2.730E-01
438	C5H12	ISOPENTANE	29.2963	-2.1762E+03	-7.8830E+00	-4.6512E-11	3.8997E-06	113	460	6.886E+02
439	C5H12	NEOPENTANE	26.6662	-1.9307E+03	-7.0448E+00	7.4104E-09	3.9463E-06	257	434	1.286E+03
440	C5H12	n-PENTANE	33.3239	-2.4227E+03	-9.2354E+00	9.0199E-11	4.1050E-06	143	470	5.136E+02
441	C5H12O	2,2-DIMETHYL-1-PROPANOL	-130.9341	-4.9954E+02	6.3932E+01	-9.6510E-02	4.6921E-05	327	550	---
442	C5H12O	tert-PENTYL-ALCOHOL	-419.8340	6.9337E+03	1.8329E+02	-2.1490E-01	9.1359E-05	328	549	---
443	C5H12O	2-METHYL-1-BUTANOL	176.1269	-8.7997E+03	-6.2366E+01	2.7514E-02	-7.2309E-13	203	565	3.128E+00
444	C5H12O	2-METHYL-2-BUTANOL	-17.2086	-3.0396E+03	1.5691E+01	-4.0746E-02	2.1944E-05	264	545	1.680E+01
445	C5H12O	3-METHYL-1-BUTANOL	35.8184	-4.3519E+03	-7.6449E+00	-7.4737E-03	4.7915E-06	161	579	3.182E+00
446	C5H12O	3-METHYL-2-BUTANOL	85.7112	-5.9542E+03	-2.6392E+01	1.4969E-11	5.9121E-06	188	574	9.141E+00
447	C5H12O	1-PENTANOL	71.2535	-5.4977E+03	-2.1366E+01	3.8108E-10	5.0339E-06	196	586	2.470E+00
448	C5H12O	2-PENTANOL	13.3731	-3.8492E+03	2.4579E+00	-2.3532E-02	1.4141E-05	200	552	6.104E+00
449	C5H12O	3-PENTANOL	20.2685	-3.4913E+03	-2.0432E+00	-1.0453E-02	6.2649E-06	204	547	8.776E+00
450	C5H12O	METHYL sec-BUTYL ETHER	9.1153	-2.1112E+03	1.2696E+00	-1.2214E-02	8.8206E-06	150	498	2.080E+02
451	C5H12O	METHYL tert-BUTYL ETHER	4.7409	-1.9493E+03	3.0770E+00	-1.4463E-02	1.0039E-05	165	497	2.495E+02
452	C5H12O	METHYL ISOBUTYL ETHER	6.2559	-2.0615E+03	2.5628E+00	-1.4245E-02	9.9920E-06	160	497	2.108E+02
453	C5H12O	ETHYL PROPYL ETHER	60.0270	-3.6280E+03	-1.8751E+01	-2.4191E-11	8.9552E-06	146	500	1.806E+02
454	C5H12O2	ETHYLENE GLYCOL MONOPROPYL ETHER	-19.0128	-2.5324E+03	1.4629E+01	-3.3547E-02	2.0289E-05	183	582	3.120E+00
455	C5H12O2	NEOPENTYL GLYCOL	103.2376	-8.4730E+03	-3.1418E+01	-5.8384E-07	6.4629E-06	400	643	---
456	C5H12O2	1,5-PENTANEDIOL	42.1731	-5.3023E+03	-1.0917E+01	-7.7321E-12	2.4225E-06	257	673	3.900E-03
457	C5H12O3	2-(2-METHOXYETHOXY)ETHANOL	186.1982	-9.4372E+03	-6.6416E+01	3.0358E-02	9.1914E-13	250	630	1.799E-01
458	C5H12O4	PENTAERYTHRITOL	81.2393	-9.9990E+03	-2.3002E+01	9.7212E-04	3.1478E-06	534	633	---
459	C5H12S	n-PENTYL MERCAPTAN	-1.1525	-2.4630E+03	6.1419E+00	-1.8809E-02	1.0844E-05	197	598	1.381E+01

$\log_{10} P = A + B/T + C \log_{10} T + D T + E T^2$ (P - mm Hg, T - K)

NO	FORMULA	NAME	A	B	C	D	E	T_{min}	T_{max}	P @ 25 C mm Hg
460	C5H12S	BUTYL-METHYL-SULFIDE	66.7879	-4.0859E+03	-2.2320E+01	1.1587E-02	-1.3035E-06	290	591	1.559E+01
461	C5H12S	ETHYL-PROPYL-SULFIDE	70.2978	-4.1217E+03	-2.3837E+01	1.3303E-02	-1.9415E-06	287	584	1.928E+01
462	C5H12S	2-METHYL-2-BUTANETHIOL	34.6541	-2.9752E+03	-9.3212E+00	-7.9016E-04	3.4339E-06	270	566	4.787E+01
463	C5H13N	n-PENTYLAMINE	-4.5117	-2.2580E+03	7.4447E+00	-1.9689E-02	1.1379E-05	218	555	3.002E+01
464	C5H13NO2	METHYL DIETHANOLAMINE	8.3233	-6.2875E+03	6.7885E+00	-3.0317E-02	1.4678E-05	252	678	1.988E-04
465	C6Cl6	HEXACHLOROBENZENE	-134.3625	-1.5459E+03	6.1748E+01	-6.5123E-02	2.0872E-05	502	825	---
466	C6F6	HEXAFLUOROBENZENE	-38.8085	-1.3422E+03	2.2204E+01	-3.8813E-02	2.1000E-05	278	517	8.443E+01
467	C6H3ClN2O4	1-CHLORO-2,4-DINITROBENZENE	-3.2922	-4.8517E+03	8.2836E+00	-1.8820E-02	7.3627E-06	327	814	---
468	C6H3Cl2NO2	1,2-DICHLORO-4-NITROBENZENE	-7.2030	-3.6532E+03	8.9786E+00	-1.8070E-02	7.4738E-06	316	758	---
469	C6H3Cl3	1,2,4-TRICHLOROBENZENE	15.5947	-2.8920E+03	-2.5549E+00	2.0384E-04	-7.0601E-14	290	725	4.303E-01
470	C6H3N3O6	1,3,5-TRINITROBENZENE	19.2854	-4.4976E+03	-3.6158E+00	-5.2495E-09	1.5596E-12	398	748	---
471	C6H4Br2	m-DIBROMOBENZENE	59.2974	-4.6960E+03	-1.8644E+01	6.7598E-03	-2.5567E-13	266	761	2.685E-01
472	C6H4ClNO2	m-CHLORONITROBENZENE	-10.5500	-3.2885E+03	1.0124E+01	-1.8725E-02	7.7944E-06	318	742	---
473	C6H4ClNO2	o-CHLORONITROBENZENE	-3.5744	-3.5871E+03	7.3361E+00	-1.6133E-02	6.7639E-06	306	757	---
474	C6H4ClNO2	p-CHLORONITROBENZENE	-21.4396	-3.0103E+03	1.4461E+01	-2.2062E-02	8.7001E-06	357	751	---
475	C6H4Cl2	m-DICHLOROBENZENE	3.2904	-2.5839E+03	3.2893E+00	-9.5398E-03	4.6397E-06	248	684	2.144E+00
476	C6H4Cl2	o-DICHLOROBENZENE	31.3614	-3.5226E+03	-7.8886E+00	-2.2250E-10	1.1842E-06	256	705	1.355E+00
477	C6H4Cl2	p-DICHLOROBENZENE	36.2276	-3.6756E+03	-9.6308E+00	-1.3372E-09	1.9905E-06	326	685	---
478	C6H4F2	m-DIFLUOROBENZENE	93.7777	-4.4188E+03	-3.4029E+01	2.5614E-02	-6.9770E-06	309	553	---
479	C6H4F2	o-DIFLUOROBENZENE	88.5722	-4.1066E+03	-3.2664E+01	2.9267E-02	-1.0923E-05	304	405	---
480	C6H4F2	p-DIFLUOROBENZENE	87.9772	-4.2909E+03	-3.1542E+01	2.2689E-02	-5.7306E-06	307	556	---
481	C6H4N2O4	m-DINITROBENZENE	-19.7265	-4.1175E+03	1.4670E+01	-2.3736E-02	8.9178E-06	364	805	---
482	C6H4N2O4	o-DINITROBENZENE	-24.2463	-4.1140E+03	1.6344E+01	-2.4085E-02	8.6190E-06	390	831	---
483	C6H4N2O4	p-DINITROBENZENE	-57.4971	-2.8352E+03	2.9400E+01	-3.4235E-02	1.1758E-05	447	803	---
484	C6H5Br	BROMOBENZENE	-9.4583	-2.3551E+03	9.2584E+00	-1.9386E-02	9.6324E-06	242	670	4.251E+00
485	C6H5Cl	MONOCHLOROBENZENE	19.4343	-2.5801E+03	-3.9391E+00	-4.4005E-11	4.9583E-07	228	632	1.196E+01
486	C6H5ClO	m-CHLOROPHENOL	21.6353	-3.2353E+03	-4.6016E+00	-1.9099E-10	1.0770E-06	306	729	---
487	C6H5ClO	o-CHLOROPHENOL	18.2631	-2.6520E+03	-3.6728E+00	8.3047E-10	1.3841E-06	282	675	2.531E+00
488	C6H5ClO	p-CHLOROPHENOL	-9.8143	-2.5177E+03	8.3886E+00	-1.2250E-02	5.1440E-06	316	738	---
489	C6H5Cl2N	3,4-DICHLOROANILINE	-15.2685	-3.3857E+03	1.1926E+01	-1.9227E-02	7.4179E-06	345	800	---
490	C6H5F	FLUOROBENZENE	-5.4849	-1.8597E+03	7.1515E+00	-1.6467E-02	9.2622E-06	231	560	7.715E+01
491	C6H5I	IODOBENZENE	32.7342	-3.5824E+03	-8.4197E+00	2.0073E-10	1.5910E-06	242	721	1.062E+00
492	C6H5NO2	NITROBENZENE	-54.4937	-2.1123E+03	2.9321E+01	-4.4839E-02	2.0162E-05	279	719	2.500E-01
493	C6H6	BENZENE	31.7718	-2.7254E+03	-8.4443E+00	-5.3534E-09	2.7187E-06	279	562	9.495E+01
494	C6H6ClN	m-CHLOROANILINE	65.6033	-5.3779E+03	-2.0518E+01	6.7867E-03	2.1167E-13	263	751	6.590E-02
495	C6H6ClN	o-CHLOROANILINE	90.6491	-6.0410E+03	-3.0118E+01	1.1564E-02	4.8388E-13	271	722	2.042E-01
496	C6H6ClN	p-CHLOROANILINE	-15.3259	-2.8592E+03	1.1527E+01	-1.8071E-02	7.2359E-06	343	754	---
497	C6H6N2	cis-DICYANO-1-BUTENE	5.8017	-4.1358E+03	4.4579E+00	-1.7654E-02	8.5171E-06	249	691	2.847E-02
498	C6H6N2	trans-DICYANO-1-BUTENE	2.4678	-4.0104E+03	5.7900E+00	-1.8851E-02	8.9537E-06	260	689	3.307E-02
499	C6H6N2	1,4-DICYANO-2-BUTENE	-20.1232	-3.7427E+03	1.4764E+01	-2.4708E-02	9.8055E-06	349	755	---
500	C6H6N2O2	m-NITROANILINE	125.1147	-8.0609E+03	-4.3204E+01	1.9083E-02	1.9535E-12	387	579	---
501	C6H6N2O2	o-NITROANILINE	-112.5774	-1.5945E+03	5.4577E+01	-7.6775E-02	3.6152E-05	345	558	---
502	C6H6N2O2	p-NITROANILINE	56.1642	-5.3655E+03	-1.7958E+01	9.0920E-03	7.0305E-10	421	609	---
503	C6H6O	PHENOL	23.5332	-3.4961E+03	-4.8990E+00	1.2160E-04	9.6537E-13	314	694	---
504	C6H6O2	1,2-BENZENEDIOL	-75.0168	-1.1958E+03	3.5449E+01	-3.8535E-02	1.4681E-05	378	764	---
505	C6H6O2	1,3-BENZENEDIOL	-40.1526	-3.6125E+03	2.3198E+01	-3.1795E-02	1.1659E-05	382	810	---
506	C6H6O2	p-HYDROQUINONE	46.0254	-5.5833E+03	-1.2677E+01	3.0019E-03	-8.0308E-12	445	822	---
507	C6H6O3	1,2,3-BENZENETRIOL	13.8033	-4.0143E+03	-1.4894E+00	1.7902E-09	2.9165E-07	407	830	---
508	C6H6S	PHENYL MERCAPTAN	-5.4919	-2.8549E+03	8.1770E+00	-1.9494E-02	9.2817E-06	258	689	1.511E+00
509	C6H7N	ANILINE	124.3764	-7.1676E+03	-4.2763E+01	1.7336E-02	5.7138E-15	267	699	4.905E-01
510	C6H7N	2-METHYLPYRIDINE	34.3728	-3.2825E+03	-9.0927E+00	-3.6324E-10	2.1425E-06	206	621	1.134E+01
511	C6H7N	3-METHYLPYRIDINE	35.2679	-3.4346E+03	-9.3555E+00	-1.3286E-10	2.0641E-06	255	645	6.055E+00
512	C6H7N	4-METHYLPYRIDINE	-18.9075	-2.0520E+03	1.3080E+01	-2.2709E-02	1.0877E-05	277	646	5.898E+00
513	C6H8	1,3-CYCLOHEXADIENE	32.7055	-2.7281E+03	-8.8297E+00	4.2152E-11	3.1600E-06	161	558	9.726E+01
514	C6H8	METHYLCYCLOPENTADIENE	9.7525	-2.1337E+03	6.9389E-01	-9.3574E-03	6.4104E-06	150	541	1.238E+02
515	C6H8N2	ADIPONITRILE	7.1898	-4.7244E+03	3.7992E+00	-1.5064E-02	6.4906E-06	276	781	6.771E-04
516	C6H8N2	METHYLGLUTARONITRILE	14.6669	-4.5558E+03	6.0200E-01	-1.2402E-02	5.9533E-06	228	742	5.106E-03
517	C6H8N2	m-PHENYLENEDIAMINE	-2.1314	-3.4126E+03	5.5842E+00	-9.6378E-03	3.7115E-06	334	824	---
518	C6H8N2	o-PHENYLENEDIAMINE	-23.8872	-3.0704E+03	1.5395E+01	-2.1989E-02	8.2796E-06	377	781	---
519	C6H8N2	p-PHENYLENEDIAMINE	-36.2709	-2.9092E+03	2.0434E+01	-2.5933E-02	9.2817E-06	413	796	---
520	C6H8N2	PHENYLHYDRAZINE	71.3143	-6.1509E+03	-2.1292E+01	7.2424E-11	4.6365E-06	292	761	2.573E-02
521	C6H8N2O	BIS(CYANOETHYL)ETHER	57.3170	-6.5835E+03	-1.5829E+01	2.9371E-10	1.9717E-06	247	783	1.751E-04
522	C6H8O4	DIMETHYL MALEATE	-1.9173	-3.4310E+03	7.0795E+00	-1.9039E-02	9.2324E-06	254	675	1.726E-01
523	C6H8O6	ASCORBIC ACID	-175.2051	-5.5764E+03	8.4273E+01	-9.9268E-02	3.3909E-05	465	783	---
524	C6H8O7	CITRIC ACID	-75.5828	-7.1822E+03	4.2237E+01	-5.8401E-02	2.0221E-05	426	822	---
525	C6H10	1-METHYLCYCLOPENTENE	30.8840	-2.6219E+03	-8.2001E+00	1.5229E-04	2.5331E-06	268	542	1.175E+02

$\log_{10} P = A + B/T + C \log_{10} T + D T + E T^2$ (P - mm Hg, T - K)

NO	FORMULA	NAME	A	B	C	D	E	T_{min}	T_{max}	P @ 25 C mm Hg
526	C6H10	3-METHYLCYCLOPENTENE	84.2905	-3.6414E+03	-3.1463E+01	3.0590E-02	-1.2356E-05	263	394	1.767E+02
527	C6H10	4-METHYLCYCLOPENTENE	52.1568	-3.1062E+03	-1.7205E+01	1.0261E-02	-1.6256E-06	271	544	1.202E+02
528	C6H10	CYCLOHEXENE	52.1749	-3.2380E+03	-1.6878E+01	8.0388E-03	1.3259E-13	170	560	8.868E+01
529	C6H10	2,3-DIMETHYL-1,3-BUTADIENE	29.9755	-2.5577E+03	-7.8544E+00	2.2361E-10	2.4591E-06	197	526	1.515E+02
530	C6H10	1,5-HEXADIENE	10.5886	-2.0106E+03	2.8813E-01	-9.5620E-03	7.1640E-06	132	507	2.207E+02
531	C6H10	cis,trans-2,4-HEXADIENE	5.6098	-2.1512E+03	2.6753E+00	-1.2840E-02	8.2559E-06	177	538	8.317E+01
532	C6H10	trans,trans-2,4-HEXADIENE	40.7122	-3.0869E+03	-1.1634E+01	2.3357E-09	4.1939E-06	228	535	8.786E+01
533	C6H10	1-HEXYNE	55.7231	-3.2541E+03	-1.8405E+01	9.5814E-03	9.2278E-14	141	516	1.329E+02
534	C6H10	2-HEXYNE	51.6017	-3.3176E+03	-1.6451E+01	7.1637E-03	1.6871E-13	184	549	8.006E+01
535	C6H10	3-HEXYNE	18.3265	-2.2166E+03	-3.6371E+00	2.2419E-04	-1.9213E-14	170	544	9.097E+01
536	C6H10O	CYCLOHEXANONE	70.5022	-4.4120E+03	-2.3605E+01	1.1205E-02	-1.5648E-13	242	629	4.324E+00
537	C6H10O	MESITYL OXIDE	34.0136	-3.2840E+03	-8.9451E+00	-1.0706E-10	1.9953E-06	220	600	1.102E+01
538	C6H10O2	epsilon-CAPROLACTONE	-35.1025	-1.9390E+03	1.9302E+01	-2.6524E-02	1.1577E-05	272	771	1.887E-01
539	C6H10O2	ETHYL METHACRYLATE	27.9574	-2.8696E+03	-6.9383E+00	-2.3481E-10	1.6779E-06	223	577	2.058E+01
540	C6H10O2	n-PROPYL ACRYLATE	-14.2111	-2.1969E+03	1.1608E+01	-2.3737E-02	1.2300E-05	273	569	1.445E+01
541	C6H10O3	ETHYLACETOACETATE	13.2623	-3.0925E+03	-7.3852E-01	-4.6405E-03	2.3962E-06	234	643	7.797E-01
542	C6H10O3	PROPIONIC ANHYDRIDE	-3.9636	-2.9323E+03	7.6716E+00	-2.0145E-02	1.0758E-05	228	618	1.363E+00
543	C6H10O4	ADIPIC ACID	59.7715	-7.3614E+03	-1.6370E+01	1.7452E-06	2.0667E-06	426	611	---
544	C6H10O4	DIETHYL OXALATE	5.0526	-3.5060E+03	4.2854E+00	-1.6974E-02	8.7698E-06	233	646	4.132E-01
545	C6H10O4	ETHYLENE GLYCOL DIACETATE	167.0849	-1.0545E+04	-5.4181E+01	1.2204E-11	1.3938E-05	242	653	7.729E-02
546	C6H10O4	ETHYLIDENE DIACETATE	150.2951	-9.1567E+03	-4.8925E+01	1.0422E-09	1.3981E-05	292	635	5.816E-01
547	C6H11N	HEXANENITRILE	11.0057	-2.6129E+03	-3.5500E-01	-3.6747E-03	2.0975E-06	193	622	2.847E+00
548	C6H11NO	epsilon-CAPROLACTAM	-6.5636	-3.5773E+03	8.1932E+00	-1.4866E-02	5.7323E-06	342	806	---
549	C6H11NO	CYCLOHEXANONE OXIME	-30.2431	-2.4875E+03	1.7987E+01	-2.5651E-02	1.0303E-05	363	715	---
550	C6H12	CYCLOHEXANE	48.5529	-3.0874E+03	-1.5521E+01	7.3830E-03	6.3563E-12	280	554	9.843E+01
551	C6H12	2,3-DIMETHYL-1-BUTENE	30.3612	-2.4492E+03	-8.0866E+00	5.7386E-11	2.9830E-06	116	500	2.523E+02
552	C6H12	2,3-DIMETHYL-2-BUTENE	36.2976	-2.7371E+03	-1.0600E+01	4.0594E-03	5.2266E-14	199	524	1.255E+02
553	C6H12	3,3-DIMETHYL-1-BUTENE	53.9034	-2.8808E+03	-1.8024E+01	1.0035E-02	-2.8642E-13	158	480	4.303E+02
554	C6H12	2-ETHYL-1-BUTENE	30.7807	-2.4852E+03	-8.5324E+00	3.0560E-03	1.6108E-14	142	512	1.753E+02
555	C6H12	trans-3-METHYL-2-PENTENE	-2.3218	-1.9687E+03	6.3933E+00	-1.9584E-02	1.2261E-05	250	521	1.399E+02
556	C6H12	1-HEXENE	33.4486	-2.6221E+03	-9.1784E+00	3.0930E-12	3.6780E-06	133	504	1.860E+02
557	C6H12	cis-2-HEXENE	30.8810	-2.4822E+03	-8.6590E+00	3.5070E-03	3.9648E-14	132	513	1.497E+02
558	C6H12	trans-2-HEXENE	33.4508	-2.6886E+03	-9.1025E+00	-8.3643E-11	3.1688E-06	140	513	1.554E+02
559	C6H12	cis-3-HEXENE	32.6260	-2.6286E+03	-8.8452E+00	2.1251E-11	3.3095E-06	135	509	1.649E+02
560	C6H12	trans-3-HEXENE	32.6960	-2.6457E+03	-8.8555E+00	-2.9450E-11	3.2926E-06	160	509	1.594E+02
561	C6H12	METHYLCYCLOPENTANE	32.4766	-2.6434E+03	-8.7933E+00	2.0749E-11	3.2158E-06	131	533	1.374E+02
562	C6H12	2-METHYL-1-PENTENE	32.9509	-2.6171E+03	-8.9572E+00	-8.7635E-11	3.1710E-06	137	507	1.954E+02
563	C6H12	2-METHYL-2-PENTENE	30.0876	-2.5736E+03	-7.8673E+00	-2.1219E-11	2.3548E-06	138	514	1.577E+02
564	C6H12	3-METHYL-1-PENTENE	35.0173	-2.5652E+03	-9.8547E+00	2.2120E-11	4.5149E-06	120	495	2.693E+02
565	C6H12	3-METHYL-cis-2-PENTENE	29.4561	-2.5243E+03	-7.6890E+00	-4.0644E-11	2.6159E-06	138	515	1.571E+02
566	C6H12	4-METHYL-1-PENTENE	44.7746	-2.7364E+03	-1.4283E+01	7.3100E-03	4.8402E-14	120	496	2.714E+02
567	C6H12	4-METHYL-cis-2-PENTENE	33.8373	-2.5887E+03	-9.3331E+00	-9.8033E-11	3.6761E-06	138	499	2.440E+02
568	C6H12	4-METHYL-trans-2-PENTENE	33.4412	-2.5983E+03	-9.1711E+00	-1.1438E-10	3.5389E-06	132	501	2.227E+02
569	C6H12N2	TRIETHYLENEDIAMINE	57.6476	-4.9631E+03	-1.6755E+01	1.7547E-07	3.6887E-06	434	655	---
570	C6H12O	BUTYL VINYL ETHER	3.5099	-2.4111E+03	4.2976E+00	-1.8090E-02	1.1571E-05	181	536	4.921E+01
571	C6H12O	CYCLOHEXANOL	49.9123	-4.8446E+03	-1.3711E+01	3.5451E-09	1.5932E-06	297	625	7.554E-01
572	C6H12O	1-HEXANAL	-10.8651	-2.3852E+03	1.0619E+01	-2.5662E-02	1.4529E-05	217	579	1.126E+01
573	C6H12O	ETHYL ISOPROPYL KETONE	87.6742	-5.4447E+03	-2.7894E+01	-8.4222E-10	9.7551E-06	200	567	1.810E+01
574	C6H12O	2-HEXANONE	4.0508	-2.6276E+03	3.7783E+00	-1.4342E-02	8.0592E-06	217	587	1.065E+01
575	C6H12O	3-HEXANONE	41.5000	-3.5485E+03	-1.1617E+01	2.3758E-10	3.2773E-06	218	583	1.393E+01
576	C6H12O	METHYL ISOBUTYL KETONE	64.1919	-4.3577E+03	-1.9766E+01	-3.9997E-10	7.1020E-06	189	571	1.985E+01
577	C6H12O2	n-PENTYL FORMATE	8.6264	-3.0941E+03	2.6316E+00	-1.6152E-02	9.4969E-06	200	576	6.153E+00
578	C6H12O2	n-BUTYL ACETATE	4.3830	-2.7134E+03	3.9835E+00	-1.6575E-02	9.7246E-06	200	579	1.152E+01
579	C6H12O2	sec-BUTYL ACETATE	11.3615	-2.5445E+03	2.5232E-01	-8.6981E-03	5.5066E-06	174	561	2.226E+01
580	C6H12O2	tert-BUTYL ACETATE	-28.0818	-1.5744E+03	1.7253E+01	-3.0433E-02	1.5894E-05	283	545	4.663E+01
581	C6H12O2	ETHYL n-BUTYRATE	1.4298	-2.4683E+03	5.0326E+00	-1.8024E-02	1.1247E-05	175	571	1.697E+01
582	C6H12O2	ETHYL ISOBUTYRATE	6.6661	-2.3847E+03	2.1818E+00	-1.0957E-02	6.8003E-06	185	553	2.538E+01
583	C6H12O2	ISOBUTYL ACETATE	35.1224	-3.2426E+03	-9.3893E+00	1.7877E-11	2.6707E-06	174	561	1.782E+01
584	C6H12O2	n-PROPYL PROPIONATE	28.0816	-3.0218E+03	-6.8307E+00	-3.3989E-10	1.1397E-06	197	578	1.398E+01
585	C6H12O2	CYCLOHEXYL PEROXIDE	16.8158	-4.5516E+03	-4.3507E-02	-1.2089E-02	5.8187E-06	253	685	2.265E-02
586	C6H12O2	DIACETONE ALCOHOL	-10.1327	-2.2331E+03	8.6771E+00	-1.4450E-02	7.7882E-06	229	606	1.708E+00
587	C6H12O2	2-ETHYL BUTYRIC ACID	0.0986	-3.6483E+03	6.6758E+00	-2.0070E-02	9.8395E-06	258	655	1.871E-01
588	C6H12O2	n-HEXANOIC ACID	55.7058	-5.6602E+03	-1.5458E+01	1.0823E-09	1.8718E-06	270	667	4.346E-02
589	C6H12O3	2-ETHOXYETHYL ACETATE	1.9276	-3.1451E+03	5.7407E+00	-2.1017E-02	1.1834E-05	211	597	2.341E+00
590	C6H12O3	HYDROXYCAPROIC ACID	-16.5030	-5.7732E+03	1.5880E+01	-3.2654E-02	1.3186E-05	334	758	---
591	C6H12O3	PARALDEHYDE	-23.0555	-2.0812E+03	1.5478E+01	-2.8496E-02	1.4336E-05	286	579	1.102E+01

$\log_{10} P = A + B/T + C \log_{10} T + D T + E T^2$ (P - mm Hg, T - K)

NO	FORMULA	NAME	A	B	C	D	E	T_{min}	T_{max}	P @ 25 C mm Hg
592	C6H12O3	sec-BUTYL GLYCOLATE	83.6124	-4.8819E+03	-2.9906E+01	2.4934E-02	-8.7092E-06	301	451	---
593	C6H12S	THIACYCLOHEPTANE	176.8865	-7.0818E+03	-6.7575E+01	5.5282E-02	-1.7234E-05	351	640	---
594	C6H13N	CYCLOHEXYLAMINE	62.6197	-4.0549E+03	-2.0524E+01	9.2844E-03	-1.5497E-12	255	615	1.006E+01
595	C6H13N	HEXAMETHYLENEIMINE	50.4247	-4.1023E+03	-1.4587E+01	-7.6705E-10	3.7877E-06	236	615	8.087E+00
596	C6H14	2,2-DIMETHYLBUTANE	33.1285	-2.4527E+03	-9.2016E+00	-4.7077E-10	4.1755E-06	174	489	3.195E+02
597	C6H14	2,3-DIMETHYLBUTANE	33.6319	-2.5524E+03	-9.3142E+00	1.4759E-10	3.9140E-06	145	500	2.353E+02
598	C6H14	n-HEXANE	69.7378	-3.6278E+03	-2.3927E+01	1.2810E-02	-1.6844E-13	178	507	1.526E+02
599	C6H14	2-METHYLPENTANE	30.7477	-2.4888E+03	-8.2295E+00	-2.3723E-11	3.2402E-06	120	498	2.113E+02
600	C6H14	3-METHYLPENTANE	35.2848	-2.6773E+03	-9.8546E+00	2.2352E-11	4.0277E-06	110	504	1.899E+02
601	C6H14N2O2	LYSINE	146.3052	-1.1586E+04	-4.7671E+01	1.3593E-02	-8.6096E-11	483	821	---
602	C6H14O	2-ETHYL-1-BUTANOL	217.1721	-1.0215E+04	-7.8194E+01	3.6089E-02	4.3427E-12	250	580	1.530E+00
603	C6H14O	1-HEXANOL	53.9686	-4.9501E+03	-1.5199E+01	-6.6922E-10	2.3647E-06	229	611	9.272E-01
604	C6H14O	2-HEXANOL	53.6472	-4.7399E+03	-1.5189E+01	1.9796E-10	2.5900E-06	223	586	2.486E+00
605	C6H14O	2-METHYL-1-PENTANOL	26.1511	-3.5143E+03	-5.6950E+00	1.9370E-10	1.1685E-07	223	582	1.917E+00
606	C6H14O	4-METHYL-2-PENTANOL	43.2285	-4.0171E+03	-1.1821E+01	-1.3977E-10	2.4177E-06	183	574	5.246E+00
607	C6H14O	n-BUTYL ETHYL ETHER	8.5224	-2.4667E+03	1.9513E+00	-1.4047E-02	9.2664E-06	170	531	5.162E+01
608	C6H14O	DIISOPROPYL ETHER	15.9552	-2.0276E+03	-2.8551E+00	2.7662E-04	-9.9111E-14	188	500	1.487E+02
609	C6H14O	DI-n-PROPYL ETHER	44.0232	-3.2820E+03	-1.2792E+01	1.2682E-10	4.8776E-06	150	531	6.253E+01
610	C6H14O	METHYL tert-PENTYL ETHER	9.0032	-2.2495E+03	1.2518E+00	-1.1267E-02	7.5982E-06	160	534	7.449E+01
611	C6H14O2	ACETAL	32.9053	-3.1266E+03	-8.7033E+00	1.8687E-03	-2.0390E-13	173	541	2.755E+01
612	C6H14O2	2-BUTOXYETHANOL	-39.3735	-3.0058E+03	2.5696E+01	-5.7339E-02	3.2713E-05	203	600	8.721E-01
613	C6H14O2	1,6-HEXANEDIOL	98.5706	-7.8238E+03	-3.1753E+01	1.0862E-02	-9.3985E-13	315	670	---
614	C6H14O2	HEXYLENE GLYCOL	12.4830	-5.5212E+03	4.5945E+00	-2.8890E-02	1.5535E-05	223	621	1.262E-02
615	C6H14O2S	DI-n-PROPYL SULFONE	45.5346	-5.3305E+03	-1.2180E+01	-7.2205E-10	1.5917E-06	303	763	---
616	C6H14O3	DIETHYLENE GLYCOL DIMETHYL ETHER	-25.6309	-2.4739E+03	1.7797E+01	-3.8906E-02	2.2088E-05	203	604	2.972E+00
617	C6H14O3	DIPROPYLENE GLYCOL	-34.4044	-2.5539E+03	1.9845E+01	-3.0216E-02	1.5480E-05	233	654	3.181E-02
618	C6H14O3	2-(2-ETHOXYETHOXY)ETHANOL	108.9937	-7.4542E+03	-3.4699E+01	-7.3427E-11	1.0904E-05	195	632	1.262E-01
619	C6H14O3	TRIMETHYLOLPROPANE	-98.9783	-2.5253E+03	4.8303E+01	-6.1680E-02	2.5945E-05	331	709	---
620	C6H14O4	TRIETHYLENE GLYCOL	13.3551	-3.8387E+03	-1.3933E+00	1.4247E-10	9.8759E-07	266	700	1.319E-03
621	C6H14O6	SORBITOL	8.3436	-1.3304E+04	1.0812E+01	-3.4183E-02	1.1537E-05	371	959	---
622	C6H14S	n-HEXYLMERCAPTAN	3.6922	-2.8348E+03	4.2831E+00	-1.6786E-02	9.5563E-06	193	623	4.238E+00
623	C6H14S	BUTYL-ETHYL-SULFIDE	77.6473	-4.6358E+03	-2.6411E+01	1.4144E-02	-2.0253E-06	306	609	---
624	C6H14S	ISOPROPYL-SULFIDE	81.9806	-4.3714E+03	-2.8802E+01	1.8793E-02	-4.1562E-06	286	586	1.925E+01
625	C6H14S	METHYL-PENTYL-SULFIDE	-77.9132	-8.5910E+02	3.8748E+01	-5.4706E-02	2.4907E-05	343	588	---
626	C6H14S	PROPYL-SULFIDE	101.1564	-5.2143E+03	-3.6171E+01	2.3976E-02	-5.6621E-06	305	610	---
627	C6H14S2	PROPYL-DISULFIDE	149.9561	-7.0370E+03	-5.5867E+01	4.2982E-02	-1.3632E-05	346	501	---
628	C6H15Al	TRIETHYL ALUMINUM	42.4467	-5.4613E+03	-1.0406E+01	9.1793E-05	-1.8982E-14	221	720	2.559E-02
629	C6H15Al2Cl3	ETHYL ALUMINUM SESQUICHLORIDE	1009.6078	-3.7457E+04	-3.8125E+02	1.9481E-01	-5.3609E-11	253	500	4.797E-02
630	C6H15N	DIISOPROPYLAMINE	198.8840	-7.9159E+03	-7.3734E+01	4.0300E-02	-3.8643E-13	177	523	7.932E+01
631	C6H15N	DI-n-PROPYLAMINE	2.0630	-2.6611E+03	5.1601E+00	-1.8720E-02	1.1000E-05	210	556	2.007E+01
632	C6H15N	n-HEXYLAMINE	57.8555	-3.9804E+03	-1.8579E+01	8.1204E-03	1.0791E-12	252	583	8.987E+00
633	C6H15N	TRIETHYLAMINE	8.8604	-2.2482E+03	1.2692E+00	-1.1021E-02	7.4404E-06	158	535	6.853E+01
634	C6H15NO	6-AMINOHEXANOL	-215.9646	1.2568E+03	9.6830E+01	-1.1493E-01	4.9388E-05	331	681	---
635	C6H15NO2	DIISOPROPANOLAMINE	-36.5701	-5.3225E+03	2.5621E+01	-4.9745E-02	2.1952E-05	318	672	---
636	C6H15NO3	TRIETHANOLAMINE	135.3206	-1.0312E+04	-4.4637E+01	1.4368E-02	-1.7552E-13	294	787	3.676E-06
637	C6H15N3	N-AMINOETHYL PIPERAZINE	-2.4787	-3.7348E+03	7.7097E+00	-2.0701E-02	9.7725E-06	254	708	5.870E-02
638	C6H15O4P	TRIETHYL PHOSPHATE	93.8194	-5.3692E+03	-3.2942E+01	1.7761E-02	-4.3029E-14	216	794	3.925E-01
639	C6H16N2	HEXAMETHYLENEDIAMINE	-22.2161	-3.1489E+03	1.5888E+01	-2.8891E-02	1.2928E-05	314	663	---
640	C6H18N3OP	HEXAMETHYL PHOSPHORAMIDE	79.7221	-6.0554E+03	-2.4895E+01	-7.1377E-08	9.5549E-06	280	506	4.579E-02
641	C6H18N4	TRIETHYLENE TETRAMINE	-6.5589	-5.1778E+03	1.1362E+01	-2.9298E-02	1.3055E-05	285	718	4.107E-04
642	C6H18OSi2	HEXAMETHYLDISILOXANE	13.1786	-2.2417E+03	-1.3026E+00	-3.3036E-03	2.0403E-06	205	519	4.296E+01
643	C6H18O3Si3	HEXAMETHYLCYCLOTRISILOXANE	37.4172	-3.4814E+03	-1.0103E+01	1.0086E-08	2.2130E-06	337	554	---
644	C6H19NSi2	HEXAMETHYLDISILAZANE	90.5970	-4.9110E+03	-3.1339E+01	1.5295E-02	1.3413E-12	293	544	1.378E+01
645	C7H3ClF3NO2	4-CHLORO-3-NITROBENZOTRIFLUORIDE	-9.2380	-3.4778E+03	1.0265E+01	-2.2184E-02	1.0033E-05	293	686	5.965E-02
646	C7H3Cl2F3	2,4-DICHLOROBENZOTRIFLUORIDE	0.9827	-2.9598E+03	5.2153E+00	-1.5452E-02	7.7787E-06	248	646	1.109E+00
647	C7H3Cl2NO	3,4-DICHLOROPHENYL ISOCYANATE	-656.2031	9.6595E+03	2.9354E+02	-4.0817E-01	2.0633E-04	316	527	---
648	C7H4ClF3	p-CHLOROBENZOTRIFLUORIDE	-2.8084	-2.4667E+03	6.5704E+00	-1.7128E-02	9.1387E-06	237	601	7.621E+00
649	C7H4Cl2O	m-CHLOROBENZOYL CHLORIDE	33.2875	-3.8982E+03	-8.7948E+00	2.3275E-03	-1.9629E-13	280	724	1.395E-01
650	C7H4F3NO2	3-NITROBENZOTRIFLUORIDE	92.4123	-6.0515E+03	-3.0845E+01	1.2137E-02	-1.1882E-13	272	667	2.572E-01
651	C7H5ClO	BENZOYL CHLORIDE	1.1537	-2.6751E+03	4.0043E+00	-8.9221E-03	4.1180E-06	273	697	6.247E-01
652	C7H5ClO2	o-CHLOROBENZOIC ACID	-42.9847	-3.1867E+03	2.3694E+01	-3.0284E-02	1.0828E-05	415	792	---
653	C7H5Cl3	BENZOTRICHLORIDE	0.4912	-2.7285E+03	4.4706E+00	-1.0580E-02	4.7621E-06	268	737	4.688E-01
654	C7H5F3	BENZOTRIFLUORIDE	28.3157	-2.6906E+03	-7.4330E+00	2.3153E-03	3.9138E-13	244	565	3.882E+01
655	C7H5N	BENZONITRILE	5.6061	-2.8639E+03	2.4465E+00	-8.4626E-03	3.9790E-06	260	699	7.670E-01
656	C7H5NO	PHENYL ISOCYANATE	26.0365	-3.1145E+03	-6.1914E+00	1.2247E-11	1.5742E-06	243	648	2.572E+00
657	C7H5N3O6	2,4,6-TRINITROTOLUENE	6.3156	-2.6756E+03	-4.6215E-02	6.1747E-09	-2.3743E-12	354	518	---

$\log_{10} P = A + B/T + C \log_{10} T + D T + E T^2$ (P - mm Hg, T - K)

NO	FORMULA	NAME	A	B	C	D	E	T_{min}	T_{max}	P @ 25 C mm Hg
658	C7H6Cl2	BENZYL DICHLORIDE	2.5175	-2.6069E+03	3.1664E+00	-7.3890E-03	3.4017E-06	257	731	5.111E-01
659	C7H6Cl2	2,4-DICHLOROTOLUENE	31.9325	-3.7438E+03	-8.0123E+00	-7.5077E-11	1.2500E-06	260	705	4.579E-01
660	C7H6N2O4	2,4-DINITROTOLUENE	11.5966	-3.0079E+03	-1.6468E+00	1.5949E-03	-1.8722E-14	343	814	---
661	C7H6N2O4	2,5-DINITROTOLUENE	-3.2242	-4.8907E+03	8.2992E+00	-1.8972E-02	7.4327E-06	326	814	---
662	C7H6N2O4	2,6-DINITROTOLUENE	-14.5673	-4.2746E+03	1.2904E+01	-2.3800E-02	9.4513E-06	339	770	---
663	C7H6N2O4	3,4-DINITROTOLUENE	-1.5478	-5.1010E+03	7.5705E+00	-1.7734E-02	6.7654E-06	332	842	---
664	C7H6N2O4	3,5-DINITROTOLUENE	-5.7421	-3.2067E+03	6.4644E+00	-8.3308E-03	3.1010E-06	366	814	---
665	C7H6O	BENZALDEHYDE	28.4711	-3.4489E+03	-6.8363E+00	-2.8173E-10	9.5236E-07	247	695	1.180E+00
666	C7H6O2	BENZOIC ACID	-140.0388	8.0479E+01	6.2611E+01	-6.5321E-02	2.4596E-05	396	524	---
667	C7H6O2	p-HYDROXYBENZALDEHYDE	11.2084	-4.0163E+03	6.0941E-02	-3.4771E-03	1.2348E-06	390	844	---
668	C7H6O2	SALICYLALDEHYDE	31.2437	-3.5351E+03	-8.0244E+00	7.8869E-10	2.7203E-06	266	680	5.929E-01
669	C7H6O3	SALICYLIC ACID	177.3858	-1.2871E+04	-5.6301E+01	-1.6667E-07	1.1353E-05	432	739	---
670	C7H7Br	p-BROMOTOLUENE	12.8209	-2.6568E+03	-1.4314E+00	-8.9677E-04	3.9733E-07	300	699	---
671	C7H7Cl	BENZYL CHLORIDE	12.1503	-2.9139E+03	-3.7120E-01	-5.2889E-03	2.6296E-06	234	686	1.304E+00
672	C7H7Cl	o-CHLOROTOLUENE	33.2792	-3.4099E+03	-8.6743E+00	6.1874E-10	1.8987E-06	237	656	3.525E+00
673	C7H7Cl	p-CHLOROTOLUENE	61.8901	-4.3760E+03	-1.9840E+01	7.7991E-03	1.0781E-13	281	660	2.790E+00
674	C7H7F	p-FLUOROTOLUENE	107.7550	-5.0398E+03	-3.9443E+01	2.9500E-02	-8.2554E-06	341	590	---
675	C7H7NO	FORMANILIDE	-5.9746	-3.8576E+03	8.4845E+00	-1.7089E-02	6.8480E-06	323	787	---
676	C7H7NO2	m-NITROTOLUENE	12.1169	-2.7684E+03	-1.4768E+00	4.6539E-04	-1.8362E-14	289	734	2.071E-01
677	C7H7NO2	o-NITROTOLUENE	7.8266	-2.9908E+03	1.1064E+00	-4.9168E-03	2.2375E-06	270	720	1.845E-01
678	C7H7NO2	p-NITROTOLUENE	9.9641	-2.6549E+03	-8.0182E-01	5.3926E-04	-4.1090E-14	325	736	---
679	C7H7NO3	o-NITROANISOLE	3.7708	-4.1871E+03	4.6593E+00	-1.4263E-02	6.0583E-06	284	782	3.488E-03
680	C7H8	TOLUENE	34.0775	-3.0379E+03	-9.1635E+00	1.0289E-11	2.7035E-06	178	592	2.845E+01
681	C7H8	1,3,5-CYCLOHEPTATRIENE	142.6727	-5.4014E+03	-5.5950E+01	5.8830E-02	-2.5652E-05	273	340	2.354E+01
682	C7H8O	ANISOLE	-8.1053	-2.5386E+03	9.0289E+00	-2.0462E-02	1.0536E-05	236	642	3.610E+00
683	C7H8O	BENZYL ALCOHOL	-36.2189	-3.3475E+03	2.3337E+01	-4.4600E-02	2.1443E-05	258	677	8.114E-02
684	C7H8O	m-CRESOL	105.5280	-6.9748E+03	-3.5083E+01	1.2508E-02	-2.4317E-12	285	706	1.130E-01
685	C7H8O	o-CRESOL	89.4591	-6.0489E+03	-2.9483E+01	1.0936E-02	1.9933E-12	304	698	---
686	C7H8O	p-CRESOL	122.8998	-7.6175E+03	-4.1637E+01	1.5709E-02	-8.9199E-13	308	705	---
687	C7H8O2	GUAIACOL	62.5937	-5.2602E+03	-1.8589E+01	4.2117E-09	4.8237E-06	305	697	---
688	C7H8O2	p-METHOXYPHENOL	-11.8605	-3.5151E+03	1.0904E+01	-1.9681E-02	7.9826E-06	329	758	---
689	C7H9N	BENZYLAMINE	7.0445	-3.2078E+03	2.6513E+00	-1.1970E-02	6.0428E-06	227	684	6.517E-01
690	C7H9N	2,6-DIMETHYLPYRIDINE	46.2468	-3.9493E+03	-1.3162E+01	-1.1004E-09	3.4080E-06	267	624	5.435E+00
691	C7H9N	N-METHYLANILINE	-7.2448	-2.9648E+03	8.9163E+00	-2.0616E-02	1.0451E-05	216	702	4.531E-01
692	C7H9N	m-TOLUIDINE	7.0317	-3.2034E+03	2.3006E+00	-9.7791E-03	4.6824E-06	243	709	3.025E-01
693	C7H9N	o-TOLUIDINE	96.5685	-6.2643E+03	-3.2263E+01	1.2361E-02	6.2915E-13	249	694	2.575E-01
694	C7H9N	p-TOLUIDINE	-13.9927	-2.5795E+03	1.0832E+01	-1.7705E-02	7.6741E-06	317	693	---
695	C7H10	2-NORBORNENE	-32.8921	-1.0869E+03	1.8252E+01	-2.6719E-02	1.2726E-05	319	583	---
696	C7H10N2	TOLUENEDIAMINE	43.8539	-5.4930E+03	-1.1472E+01	-3.9637E-10	1.2598E-06	371	804	---
697	C7H11NO	CYCLOHEXYL ISOCYANATE	12.0255	-3.4717E+03	1.2043E+00	-1.3523E-02	7.6331E-06	193	633	1.019E+00
698	C7H12	1-HEPTYNE	257.7236	-8.1481E+03	-1.0333E+02	1.0182E-01	-3.7742E-05	287	560	5.264E+01
699	C7H12O2	n-BUTYL ACRYLATE	37.5709	-3.3554E+03	-1.0814E+01	3.9510E-03	2.3590E-14	209	598	5.450E+00
700	C7H12O2	ISOBUTYL ACRYLATE	2.7565	-2.7679E+03	4.7435E+00	-1.7391E-02	9.9204E-06	212	580	8.075E+00
701	C7H12O2	n-PROPYL METHACRYLATE	0.3871	-2.6502E+03	5.4688E+00	-1.6946E-02	9.2970E-06	223	599	6.374E+00
702	C7H12O4	DIETHYL MALONATE	64.4785	-5.0283E+03	-2.0379E+01	7.5224E-03	-4.3640E-14	224	653	2.691E-01
703	C7H14	CYCLOHEPTANE	54.0858	-3.6109E+03	-1.7331E+01	7.5272E-03	1.7553E-12	265	604	2.161E+01
704	C7H14	1,1-DIMETYLCYCLOPENTANE	58.1943	-3.4151E+03	-1.9294E+01	9.6704E-03	-2.4361E-15	203	547	7.610E+01
705	C7H14	cis-1,2-DIMETHYLCYCLOPENTANE	36.3623	-3.0025E+03	-1.0070E+01	-1.0435E-09	3.3726E-06	219	565	4.722E+01
706	C7H14	trans-1,2-DIMETHYLCYCLOPENTANE	36.8109	-2.9536E+03	-1.0275E+01	-4.6212E-12	3.6730E-06	156	553	6.400E+01
707	C7H14	cis-1,3-DIMETHYLCYCLOPENTANE	35.4255	-2.7286E+03	-1.0444E+01	4.6608E-03	1.7565E-14	139	551	6.613E+01
708	C7H14	trans-1,3-DIMETHYLCYCLOPENTANE	53.1912	-3.3121E+03	-1.7277E+01	8.3107E-03	5.0896E-14	139	553	6.449E+01
709	C7H14	ETHYLCYCLOPENTANE	36.3631	-3.0448E+03	-1.0038E+01	3.5007E-11	3.2347E-06	135	570	3.980E+01
710	C7H14	2-ETHYL-1-PENTENE	45.6909	-3.3443E+03	-1.3400E+01	9.4764E-11	4.9466E-06	168	543	5.705E+01
711	C7H14	3-ETHYL-1-PENTENE	32.1696	-2.7728E+03	-8.5671E+00	-4.3108E-13	2.6975E-06	146	530	8.140E+01
712	C7H14	1-HEPTENE	38.1255	-3.0640E+03	-1.0679E+01	1.2244E-10	3.6680E-06	154	537	5.627E+01
713	C7H14	cis-2-HEPTENE	9.1082	-2.3022E+03	1.1634E+00	-1.0763E-02	7.0739E-06	164	549	4.847E+01
714	C7H14	trans-2-HEPTENE	35.9810	-2.9861E+03	-9.9356E+00	-3.7562E-11	3.4663E-06	164	543	4.882E+01
715	C7H14	cis-3-HEPTENE	51.1587	-3.3361E+03	-1.6342E+01	7.3561E-03	-4.5258E-14	137	545	5.312E+01
716	C7H14	trans-3-HEPTENE	11.4048	-2.4198E+03	4.8920E-01	-1.1842E-02	8.4421E-06	137	540	5.238E+01
717	C7H14	METHYLCYCLOHEXANE	38.0955	-3.0738E+03	-1.0684E+01	-5.1766E-11	3.5282E-06	147	572	4.598E+01
718	C7H14	2-METHYL-1-HEXENE	31.6484	-2.7938E+03	-8.3748E+00	-3.2642E-11	2.5818E-06	170	538	6.089E+01
719	C7H14	3-METHYL-1-HEXENE	38.3500	-3.0067E+03	-1.0784E+01	-1.4078E-10	3.7671E-06	145	528	8.242E+01
720	C7H14	4-METHYL-1-HEXENE	13.7716	-2.3436E+03	-8.5755E-01	-8.2352E-03	5.9905E-06	132	534	7.349E+01
721	C7H14	2,3,3-TRIMETHYL-1-BUTENE	34.3198	-2.7439E+03	-9.4453E+00	4.8805E-11	3.4012E-06	163	531	1.115E+02
722	C7H14O	DIISOPROPYL KETONE	39.9665	-3.4805E+03	-1.1093E+01	-3.3888E-10	3.1900E-06	205	576	1.341E+01
723	C7H14O	2-HEPTANONE	-13.0256	-2.6425E+03	1.1879E+01	-2.7571E-02	1.4560E-05	238	612	3.797E+00

$\log_{10} P = A + B/T + C \log_{10} T + D T + E T^2$ (P - mm Hg, T - K)

NO	FORMULA	NAME	A	B	C	D	E	T_{min}	T_{max}	P @ 25 C mm Hg
724	C7H14O	1-HEPTANAL	82.0370	-5.0309E+03	-2.7566E+01	1.2058E-02	6.7371E-13	230	603	3.533E+00
725	C7H14O	1-METHYLCYCLOHEXANOL	-47.6960	-2.4407E+03	2.7425E+01	-4.6818E-02	2.2498E-05	299	603	---
726	C7H14O	cis-2-METHYLCYCLOHEXANOL	-28.3266	-2.2272E+03	1.7515E+01	-2.9010E-02	1.4232E-05	280	614	1.446E+00
727	C7H14O	trans-2-METHYLCYCLOHEXANOL	33.9333	-3.7421E+03	-8.6881E+00	1.0473E-09	2.1842E-06	269	616	1.197E+00
728	C7H14O	cis-3-METHYLCYCLOHEXANOL	14.1810	-3.7184E+03	2.7148E-01	-1.0466E-02	5.2141E-06	268	618	5.300E-01
729	C7H14O	trans-3-METHYLCYCLOHEXANOL	6.7678	-3.5847E+03	3.5943E+00	-1.5274E-02	7.5766E-06	273	617	5.728E-01
730	C7H14O	cis-4-METHYLCYCLOHEXANOL	-111.8683	-1.5989E+03	5.5870E+01	-8.3457E-02	3.8048E-05	325	622	---
731	C7H14O	trans-4-METHYLCYCLOHEXANOL	-77.5317	-2.0679E+03	4.0418E+01	-6.1911E-02	2.8176E-05	327	622	---
732	C7H14O	5-METHYL-2-HEXANONE	48.0969	-4.0180E+03	-1.3841E+01	-4.8110E-10	3.8749E-06	199	601	5.201E+00
733	C7H14O2	n-BUTYL PROPIONATE	34.9074	-3.5538E+03	-9.0906E+00	9.7933E-11	1.6987E-06	184	594	4.413E+00
734	C7H14O2	ETHYL ISOVALERATE	13.3878	-2.8353E+03	-3.0743E-01	-9.0271E-03	5.5521E-06	174	588	8.311E+00
735	C7H14O2	ISOPENTYL ACETATE	10.0856	-2.8848E+03	1.2945E+00	-1.1623E-02	6.7499E-06	195	599	5.595E+00
736	C7H14O2	n-PENTYL ACETATE	7.8848	-3.0696E+03	2.7085E+00	-1.5165E-02	8.7135E-06	202	598	3.504E+00
737	C7H14O2	n-PROPYL n-BUTYRATE	9.3498	-2.8326E+03	1.5675E+00	-1.2107E-02	7.3132E-06	178	594	5.864E+00
738	C7H14O2	n-HEPTANOIC ACID	202.0065	-1.1589E+04	-6.9941E+01	2.5732E-02	4.2361E-13	266	680	5.545E-03
739	C7H14O3	ETHYL-3-ETHOXYPROPIONATE	-5.1616	-3.2227E+03	9.1650E+00	-2.6421E-02	1.4383E-05	223	609	1.284E+00
740	C7H15Br	1-BROMOHEPTANE	43.3327	-4.0389E+03	-1.2105E+01	-1.5959E-10	3.0522E-06	217	651	1.272E+00
741	C7H15N	N-METHYLCYCLOHEXYLAMINE	-13.2174	-2.3986E+03	1.1171E+01	-2.2656E-02	1.1306E-05	265	622	4.271E+00
742	C7H16	2,2-DIMETHYLPENTANE	6.2875	-2.1682E+03	2.6936E+00	-1.5525E-02	1.0917E-05	149	521	1.052E+02
743	C7H16	2,3-DIMETHYLPENTANE	39.7737	-2.9050E+03	-1.2012E+01	5.1334E-03	-2.3807E-14	160	537	6.887E+01
744	C7H16	2,4-DIMETHYLPENTANE	35.9436	-2.8460E+03	-9.9938E+00	8.0693E-11	3.6419E-06	154	520	9.835E+01
745	C7H16	3,3-DIMETHYLPENTANE	30.2570	-2.6313E+03	-7.9839E+00	4.6848E-13	2.7170E-06	139	536	8.271E+01
746	C7H16	3-ETHYLPENTANE	8.5463	-2.2979E+03	1.5503E+00	-1.2233E-02	8.2670E-06	155	541	5.792E+01
747	C7H16	n-HEPTANE	65.0257	-3.8188E+03	-2.1684E+01	1.0387E-02	1.0206E-14	183	540	4.555E+01
748	C7H16	2-METHYLHEXANE	54.1075	-3.3785E+03	-1.7547E+01	8.2594E-03	-3.4967E-14	155	530	6.601E+01
749	C7H16	3-METHYLHEXANE	35.2535	-2.9310E+03	-9.6667E+00	-5.2026E-11	3.2107E-06	154	535	6.149E+01
750	C7H16	2,2,3-TRIMETHYLBUTANE	32.3633	-2.6614E+03	-8.7743E+00	-7.6870E-10	3.2006E-06	249	531	1.023E+02
751	C7H16O	1-HEPTANOL	-19.9205	-4.3239E+03	1.8794E+01	-5.0553E-02	2.6161E-05	239	632	2.156E-01
752	C7H16O	2-HEPTANOL	53.5603	-4.6821E+03	-1.5411E+01	7.1219E-10	4.1355E-06	243	588	1.232E+00
753	C7H16O	5-METHYL-1-HEXANOL	-22.3023	-3.2580E+03	1.6815E+01	-3.4479E-02	1.6736E-05	293	605	3.860E-01
754	C7H16O	ISOPROPYL-TERT-BUTYL-ETHER	480.2536	-1.3423E+04	-1.9683E+02	2.0283E-01	-7.8469E-05	314	558	---
755	C7H16S	n-HEPTYL MERCAPTAN	-7.0418	-2.8798E+03	9.1280E+00	-2.2899E-02	1.1894E-05	230	645	1.306E+00
756	C7H16S	BUTYL-PROPYL-SULFIDE	362.7259	-1.2483E+04	-1.4264E+02	1.2046E-01	-3.8508E-05	372	654	---
757	C7H16S	ETHYL-PENTYL-SULFIDE	757.8673	-2.3337E+04	-3.0359E+02	2.6757E-01	-8.8823E-05	372	638	---
758	C7H16S	HEXYL-METHYL-SULFIDE	757.8673	-2.3337E+04	-3.0359E+02	2.6757E-01	-8.8823E-05	372	638	---
759	C7H17N	1-AMINOHEPTANE	55.9576	-4.4793E+03	-1.6540E+01	-9.1120E-10	4.8463E-06	254	607	2.739E+00
760	C8H4Cl2O2	ISOPHTHALOYL CHLORIDE	48.7180	-5.6827E+03	-1.3141E+01	-5.4832E-10	1.6803E-06	317	768	---
761	C8H4O3	PHTHALIC ANHYDRIDE	30.6331	-3.8783E+03	-7.8671E+00	1.1148E-09	2.5885E-06	404	791	---
762	C8H6	ETHYNYLBENZENE	77.3201	-4.7127E+03	-2.6032E+01	1.2744E-02	-1.4952E-06	355	655	---
763	C8H6O4	ISOPHTHALIC ACID	101.8930	-1.2470E+04	-2.9146E+01	1.2145E-08	2.4529E-06	619	****	---
764	C8H6O4	PHTHALIC ACID	-90.3221	-3.2214E+03	4.4109E+01	-5.0056E-02	1.6895E-05	464	800	---
765	C8H6O4	TEREPHTHALIC ACID	105.8916	-1.4001E+04	-3.0009E+01	-2.1837E-07	2.0825E-06	700	****	---
766	C8H6S	BENZOTHIOPHENE	-9.5352	-2.6947E+03	8.8858E+00	-1.5478E-02	6.5159E-06	305	754	---
767	C8H7N	INDOLE	94.1625	-6.9431E+03	-3.0613E+01	9.9280E-03	1.7461E-13	274	790	1.218E-02
768	C8H8	STYRENE	55.8621	-4.0240E+03	-1.7609E+01	6.6842E-03	1.9438E-13	243	648	6.113E+00
769	C8H8	1,3,5,7-CYCLOOCTATETRAENE	174.8742	-6.4461E+03	-6.9148E+01	7.2135E-02	-3.1103E-05	273	350	7.840E+00
770	C8H8O	ACETOPHENONE	55.5798	-4.5101E+03	-1.7284E+01	6.4184E-03	6.5557E-13	293	701	3.965E-01
771	C8H8O	p-TOLUALDEHYDE	-6.7169	-3.0255E+03	8.4112E+00	-1.7602E-02	7.9137E-06	290	698	2.536E-01
772	C8H8O2	METHYL BENZOATE	-13.6342	-2.9133E+03	1.1773E+01	-2.3979E-02	1.1324E-05	261	693	3.839E-01
773	C8H8O2	o-TOLUIC ACID	-35.8816	-3.2354E+03	2.1133E+01	-3.0165E-02	1.1587E-05	377	751	---
774	C8H8O2	p-TOLUIC ACID	-67.6587	-2.2339E+03	3.3347E+01	-3.7709E-02	1.3130E-05	453	773	---
775	C8H8O3	METHYL SALICYLATE	202.6840	-1.2160E+04	-6.6670E+01	-1.8009E-09	1.8060E-05	265	701	3.425E-02
776	C8H8O3	VANILLIN	-25.5830	-4.0860E+03	1.7515E+01	-2.8177E-02	1.0912E-05	355	777	---
777	C8H9NO	ACETANILIDE	-29.5448	-3.4172E+03	1.7932E+01	-2.4444E-02	8.8193E-06	387	825	---
778	C8H10	ETHYLBENZENE	36.1998	-3.3402E+03	-9.7970E+00	-1.1467E-11	2.5758E-06	178	617	9.631E+00
779	C8H10	m-XYLENE	34.6803	-3.2981E+03	-9.2570E+00	-4.3563E-10	2.4103E-06	225	617	8.450E+00
780	C8H10	o-XYLENE	37.2413	-3.4573E+03	-1.0126E+01	9.0676E-11	2.6123E-06	248	630	6.629E+00
781	C8H10	p-XYLENE	60.0531	-4.0159E+03	-1.9441E+01	8.2881E-03	-2.3647E-12	286	616	8.896E+00
782	C8H10O	m-ETHYLPHENOL	211.0890	-9.5120E+03	-7.9105E+01	5.7745E-02	-1.7291E-05	424	503	---
783	C8H10O	p-ETHYLPHENOL	16.9092	-3.7255E+03	-1.7886E+00	-4.2275E-03	1.8002E-06	318	716	---
784	C8H10O	PHENETOLE	-8.3543	-2.7728E+03	9.4482E+00	-2.1842E-02	1.1038E-05	244	647	1.562E+00
785	C8H10O	2-PHENYLETHANOL	-9.2064	-3.1412E+03	9.5151E+00	-1.9088E-02	9.2863E-06	247	684	8.650E-02
786	C8H10O	2,3-XYLENOL	82.9273	-6.0367E+03	-2.6948E+01	9.7390E-03	2.5196E-12	346	723	---
787	C8H10O	2,4-XYLENOL	53.3866	-5.1516E+03	-1.5095E+01	-1.3196E-09	2.8455E-06	346	708	---
788	C8H10O	2,5-XYLENOL	47.5888	-4.8102E+03	-1.3186E+01	-1.0208E-09	2.7045E-06	348	707	---
789	C8H10O	2,6-XYLENOL	87.1964	-5.8721E+03	-2.8853E+01	1.1130E-02	2.2316E-12	319	701	---

$\log_{10} P = A + B/T + C \log_{10} T + D T + E T^2$ (P - mm Hg, T - K)

NO	FORMULA	NAME	A	B	C	D	E	T_{min}	T_{max}	P @ 25 C mm Hg
790	C8H10O	3,4-XYLENOL	68.6521	-6.1500E+03	-2.0184E+01	-1.1259E-10	4.0266E-06	338	730	---
791	C8H10O	3,5-XYLENOL	-44.9150	-2.8912E+03	2.5704E+01	-3.9714E-02	1.6464E-05	337	716	---
792	C8H11N	N,N-DIMETHYLANILINE	20.1770	-3.1095E+03	-4.0127E+00	5.8538E-10	3.5387E-07	276	687	7.076E-01
793	C8H11N	o-ETHYLANILINE	8.6419	-3.5422E+03	2.2380E+00	-1.2061E-02	5.9601E-06	227	704	1.710E-01
794	C8H11N	2,4,6-TRIMETHYLPYRIDINE	38.3952	-3.5792E+03	-1.0994E+01	3.7210E-03	-8.0514E-14	229	653	1.977E+00
795	C8H11NO	p-PHENETIDINE	3.1746	-3.9881E+03	4.8784E+00	-1.4857E-02	6.5179E-06	277	754	1.046E-02
796	C8H12	1,5-CYCLOOCTADIENE	4.4346	-2.7129E+03	3.5539E+00	-1.3761E-02	7.5139E-06	204	645	4.952E+00
797	C8H12	VINYLCYCLOHEXENE	72.8256	-4.2313E+03	-2.4638E+01	1.1831E-02	5.7377E-14	164	599	1.570E+01
798	C8H12O4	1,4-CYCLOHEXANEDICARBOXYLIC ACID	-154.1402	-1.1010E+03	6.7478E+01	-5.9160E-02	1.6947E-05	586	889	---
799	C8H12O4	DIETHYL MALEATE	26.9138	-3.7706E+03	-6.2019E+00	1.5946E-10	1.0585E-06	264	680	1.035E-01
800	C8H14O2	n-BUTYL METHACRYLATE	5.9469	-3.0212E+03	3.2591E+00	-1.4190E-02	7.6392E-06	223	616	2.122E+00
801	C8H14O3	BUTYRIC ANHYDRIDE	111.9208	-6.7589E+03	-3.8201E+01	1.5853E-02	3.1976E-13	200	639	2.830E-01
802	C8H14O4	DIETHYL SUCCINATE	-9.0047	-4.0194E+03	1.1644E+01	-3.0216E-02	1.4883E-05	252	660	4.378E-02
803	C8H16	CYCLOOCTANE	73.2250	-4.4541E+03	-2.4825E+01	1.3715E-02	-2.4083E-06	367	647	---
804	C8H16	1,1-DIMETHYLCYCLOHEXANE	33.1329	-3.0084E+03	-8.8498E+00	-4.3621E-10	2.3704E-06	240	591	2.266E+01
805	C8H16	cis-1,2-DIMETHYLCYCLOHEXANE	32.1635	-3.0728E+03	-8.4344E+00	6.8943E-10	1.9558E-06	223	606	1.448E+01
806	C8H16	trans-1,2-DIMETHYLCYCLOHEXANE	31.9364	-2.9889E+03	-8.4129E+00	-6.9874E-11	2.1641E-06	185	596	1.936E+01
807	C8H16	cis-1,3-DIMETHYLCYCLOHEXANE	32.4775	-3.0067E+03	-8.5896E+00	7.0258E-11	2.1739E-06	198	591	2.148E+01
808	C8H16	trans-1,3-DIMETHYLCYCLOHEXANE	32.4384	-3.0550E+03	-8.5372E+00	2.2892E-10	2.0099E-06	183	598	1.762E+01
809	C8H16	cis-1,4-DIMETHYLCYCLOHEXANE	31.9151	-3.0253E+03	-8.3613E+00	5.7055E-12	1.9673E-06	186	598	1.793E+01
810	C8H16	trans-1,4-DIMETHYLCYCLOHEXANE	32.5731	-2.9872E+03	-8.6494E+00	-2.1355E-09	2.2946E-06	236	590	2.267E+01
811	C8H16	ETHYLCYCLOHEXANE	32.7090	-3.1283E+03	-8.6023E+00	-3.9268E-11	1.9935E-06	162	609	1.282E+01
812	C8H16	2-ETHYL-1-HEXENE	-0.9882	-2.3855E+03	6.1309E+00	-2.0135E-02	1.2580E-05	173	574	1.979E+01
813	C8H16	1-METHYL-1-ETHYLCYCLOPENTANE	11.1029	-2.5757E+03	6.9091E-01	-1.2137E-02	8.3378E-06	135	582	1.977E+01
814	C8H16	1-OCTENE	56.1183	-3.7657E+03	-1.8006E+01	7.7387E-03	-1.3036E-13	171	567	1.741E+01
815	C8H16	trans-2-OCTENE	6.0888	-2.4722E+03	2.6638E+00	-1.2993E-02	7.8755E-06	185	577	1.639E+01
816	C8H16	trans-3-OCTENE	9.0877	-2.5796E+03	1.5749E+00	-1.2824E-02	8.2120E-06	163	574	1.734E+01
817	C8H16	trans-4-OCTENE	3.8148	-2.5476E+03	4.1541E+00	-1.7663E-02	1.0898E-05	179	573	1.785E+01
818	C8H16	n-PROPYLCYCLOPENTANE	33.9220	-3.2097E+03	-8.9914E+00	-3.2992E-11	2.0684E-06	156	603	1.236E+01
819	C8H16	2,4,4-TRIMETHYL-1-PENTENE	2.4008	-2.2801E+03	4.5221E+00	-1.7723E-02	1.1158E-05	180	553	4.474E+01
820	C8H16	2,4,4-TRIMETHYL-2-PENTENE	33.6284	-3.0090E+03	-8.9606E+00	2.3421E-10	2.1539E-06	167	558	3.592E+01
821	C8H16O	2-ETHYLHEXANAL	8.1124	-3.2254E+03	2.8038E+00	-1.5918E-02	9.0787E-06	200	607	1.965E+00
822	C8H16O	1-OCTANAL	64.3916	-5.0161E+03	-1.9394E+01	6.8258E-10	5.5416E-06	246	621	1.178E+00
823	C8H16O	2-OCTANONE	-8.6901	-3.6873E+03	1.1757E+01	-3.2793E-02	1.6676E-05	253	624	5.496E-01
824	C8H16O2	n-BUTYL n-BUTYRATE	13.3448	-3.2742E+03	3.3579E-01	-1.1943E-02	7.0298E-06	181	616	1.811E+00
825	C8H16O2	n-HEXYL ACETATE	8.8519	-3.2317E+03	2.2858E+00	-1.4351E-02	8.2306E-06	192	618	1.324E+00
826	C8H16O2	ISOBUTYL ISOBUTYRATE	19.4898	-3.1402E+03	-2.8082E+00	-5.5690E-03	3.2425E-06	192	602	4.333E+00
827	C8H16O2	n-OCTANOIC ACID	110.8655	-8.1565E+03	-3.6088E+01	1.1152E-02	9.9900E-13	290	692	3.437E-03
828	C8H16O4	DIETHYLENE GLYCOL ETHYL ETHER AC	45.9906	-4.3020E+03	-1.3729E+01	5.2997E-03	-2.5976E-13	248	660	1.479E-01
829	C8H18	2,2-DIMETHYLHEXANE	38.7670	-3.1841E+03	-1.0857E+01	1.9275E-12	3.4797E-06	152	550	3.403E+01
830	C8H18	2,3-DIMETHYLHEXANE	57.3778	-3.7143E+03	-1.8599E+01	8.2907E-03	-2.8441E-12	272	563	2.342E+01
831	C8H18	2,4-DIMETHYLHEXANE	56.2877	-3.6225E+03	-1.8225E+01	8.1864E-03	8.7232E-12	272	554	3.034E+01
832	C8H18	2,5-DIMETHYLHEXANE	40.0260	-3.2647E+03	-1.1282E+01	-6.5408E-10	3.6200E-06	182	550	3.030E+01
833	C8H18	3,3-DIMETHYLHEXANE	38.0712	-3.1736E+03	-1.0617E+01	6.3090E-11	3.3817E-06	147	562	2.860E+01
834	C8H18	3,4-DIMETHYLHEXANE	38.6119	-3.2685E+03	-1.0752E+01	3.6386E-09	3.2771E-06	272	569	2.166E+01
835	C8H18	3-ETHYLHEXANE	40.2079	-3.3651E+03	-1.1285E+01	-5.4180E-09	3.4199E-06	272	565	2.002E+01
836	C8H18	3-ETHYL-2-METHYLPENTANE	70.5211	-4.0062E+03	-2.4167E+01	1.4484E-02	-2.5304E-06	282	567	2.390E+01
837	C8H18	3-METHYL-3-ETHYLPENTANE	35.2518	-3.0871E+03	-9.6172E+00	-2.3414E-11	2.9375E-06	182	577	2.299E+01
838	C8H18	2-METHYLHEPTANE	37.6930	-3.2611E+03	-1.0391E+01	-1.0524E-12	3.0560E-06	164	560	2.065E+01
839	C8H18	3-METHYLHEPTANE	52.8828	-3.6231E+03	-1.6804E+01	7.1828E-03	7.4077E-14	153	564	1.960E+01
840	C8H18	4-METHYLHEPTANE	40.2080	-3.3661E+03	-1.1279E+01	-8.7855E-11	3.4055E-06	152	562	2.049E+01
841	C8H18	n-OCTANE	29.0948	-3.0114E+03	-7.2653E+00	-2.2696E-11	1.4680E-06	216	569	1.405E+01
842	C8H18	2,2,3-TRIMETHYLPENTANE	35.9540	-3.0569E+03	-9.8896E+00	-7.2916E-11	3.1060E-06	161	564	3.207E+01
843	C8H18	2,2,4-TRIMETHYLPENTANE	50.3422	-3.2789E+03	-1.6111E+01	7.4260E-03	-9.1804E-14	166	544	4.933E+01
844	C8H18	2,3,3-TRIMETHYLPENTANE	33.9671	-2.9982E+03	-9.1858E+00	-2.1839E-10	2.8100E-06	172	574	2.699E+01
845	C8H18	2,3,4-TRIMETHYLPENTANE	34.1565	-3.0232E+03	-9.2267E+00	2.7691E-11	2.7828E-06	164	566	2.712E+01
846	C8H18	2,2,3,3-TETRAMETHYLBUTANE	403.3685	-1.2917E+04	-1.6038E+02	1.4286E-01	-4.8604E-05	376	568	---
847	C8H18O	DI-n-BUTYL ETHER	12.9321	-3.0416E+03	4.2929E-01	-1.2370E-02	7.5943E-06	178	581	6.019E+00
848	C8H18O	DI-sec-BUTYL ETHER	4.7651	-2.7465E+03	4.2606E+00	-2.0225E-02	1.2846E-05	173	559	1.613E+01
849	C8H18O	DI-tert-BUTYL ETHER	-3.1154	-2.2501E+03	7.0062E+00	-2.1131E-02	1.2902E-05	195	550	3.318E+01
850	C8H18O	2-ETHYL-1-HEXANOL	182.5024	-9.9679E+03	-6.3556E+01	2.4581E-02	3.4324E-13	203	640	1.359E-01
851	C8H18O	1-OCTANOL	-26.3876	-4.2263E+03	2.1093E+01	-5.0048E-02	2.4611E-05	258	653	7.899E-02
852	C8H18O	2-OCTANOL	-16.9480	-4.2841E+03	1.7277E+01	-4.7705E-02	2.4444E-05	242	637	2.416E-01
853	C8H18O2	DI-t-BUTYL PEROXIDE	-17.3901	-2.1221E+03	1.3506E+01	-3.0330E-02	1.7215E-05	233	547	2.513E+01
854	C8H18O2S	DI-n-BUTYL SULFONE	-6.7614	-4.2955E+03	9.4799E+00	-2.0356E-02	8.3388E-06	318	767	---
855	C8H18O3	DIETHYLENE GLYCOL DIETHYL ETHER	31.0938	-3.7273E+03	-7.6847E+00	-2.9675E-10	1.5639E-06	229	624	5.200E-01

$\log_{10} P = A + B/T + C \log_{10} T + D T + E T^2$ (P - mm Hg, T - K)

NO	FORMULA	NAME	A	B	C	D	E	T_{min}	T_{max}	P @ 25 C mm Hg
856	C8H18O3	DIETHYLENE GLYCOL MONOBUTYL EHTE	-46.2629	-4.4530E+03	3.1671E+01	-7.5265E-02	4.0651E-05	205	654	2.201E-02
857	C8H18O4	TRIETHYLENE GLYCOL DIMETHYL ETHE	9.9777	-4.3785E+03	3.2930E+00	-1.9174E-02	9.9170E-06	229	651	4.029E-02
858	C8H18O5	TETRAETHYLENE GLYCOL	104.9113	-1.0373E+04	-3.1015E+01	-1.6045E-09	4.6066E-06	268	722	6.090E-07
859	C8H18S	n-OCTYL MERCAPTAN	50.9589	-4.6326E+03	-1.4583E+01	3.0340E-10	3.2768E-06	224	664	4.243E-01
860	C8H18S	tert-OCTYL MERCAPTAN	7.2993	-2.6253E+03	1.9354E+00	-1.0430E-02	5.8477E-06	199	627	4.935E+00
861	C8H18S	BUTYL-SULFIDE	796.0429	-2.4760E+04	-3.1803E+02	2.7497E-01	-8.9514E-05	379	650	---
862	C8H18S	ETHYL-HEXYL-SULFIDE	1400.4298	-4.2566E+04	-5.6059E+02	4.7845E-01	-1.5340E-04	388	661	---
863	C8H18S	HEPTYL-METHYL-SULFIDE	1400.4298	-4.2566E+04	-5.6059E+02	4.7845E-01	-1.5340E-04	388	661	---
864	C8H18S	PENTYL-PROPYL-SULFIDE	1400.4298	-4.2566E+04	-5.6059E+02	4.7845E-01	-1.5340E-04	388	661	---
865	C8H18S2	BUTYL-DISULFIDE	230.2473	-1.0332E+04	-8.6093E+01	5.8851E-02	-1.5236E-05	374	704	---
866	C8H19N	DI-n-BUTYLAMINE	103.4087	-6.4571E+03	-3.3284E+01	1.5763E-10	1.1476E-05	211	608	2.585E+00
867	C8H19N	DIISOBUTYLAMINE	22.0141	-2.8234E+03	-4.7498E+00	-7.4792E-11	7.8720E-07	203	580	7.265E+00
868	C8H19N	n-OCTYLAMINE	-28.0873	-2.3939E+03	1.7839E+01	-3.1586E-02	1.5502E-05	273	627	9.671E-01
869	C8H23N5	TETRAETHYLENEPENTAMINE	24.9007	-7.4002E+03	-4.9209E-01	-1.9264E-02	8.7883E-06	243	774	7.955E-07
870	C8H24O4Si4	OCTAMETHYLCYCLOTETRASILOXANE	-40.6427	-2.5644E+03	2.4617E+01	-4.5950E-02	2.2737E-05	291	587	9.764E-01
871	C9H4O5	TRIMELLITIC ANHYDRIDE	-39.6819	-5.4887E+03	2.3878E+01	-3.1856E-02	1.0428E-05	438	890	---
872	C9H6N2O2	TOLUENE DIISOCYANATE	-18.2929	-3.6537E+03	1.4544E+01	-2.8216E-02	1.2344E-05	287	737	1.333E-02
873	C9H7N	ISOQUINOLINE	45.5737	-4.4715E+03	-1.3308E+01	4.0186E-03	-6.4589E-14	299	803	---
874	C9H7N	QUINOLINE	76.5432	-5.7748E+03	-2.4619E+01	8.4666E-03	3.5586E-13	258	782	6.034E-02
875	C9H7NO	8-HYDROXYQUINOLINE	-12.7774	-3.5666E+03	1.1091E+01	-1.8860E-02	7.3318E-06	346	788	---
876	C9H8	INDENE	94.3667	-5.7427E+03	-3.1916E+01	1.3095E-02	-1.4035E-12	272	687	1.086E+00
877	C9H8O	2-METHYLBENZOFURAN	59.0455	-4.6509E+03	-1.8481E+01	6.6104E-03	-3.8444E-13	290	698	4.867E-01
878	C9H10	INDANE	37.3577	-3.7337E+03	-1.0040E+01	6.3179E-11	2.2062E-06	222	685	1.541E+00
879	C9H10	cis-PROPENYLBENZENE	64.8029	-4.0396E+03	-2.2673E+01	1.8969E-02	-6.6567E-06	291	454	1.640E+00
880	C9H10	trans-PROPENYLBENZENE	-253.5058	4.3311E+03	1.0817E+02	-1.0629E-01	3.7879E-05	378	665	---
881	C9H10	alpha-METHYLSTYRENE	-0.8626	-2.5638E+03	5.3807E+00	-1.3516E-02	6.7181E-06	250	654	2.630E+00
882	C9H10	m-METHYLSTYRENE	11.6959	-2.9912E+03	3.3334E-01	-8.8935E-03	4.9793E-06	187	657	1.902E+00
883	C9H10	o-METHYLSTYRENE	36.8413	-3.7269E+03	-9.7997E+00	1.4115E-10	1.9658E-06	205	659	1.850E+00
884	C9H10	p-METHYLSTYRENE	50.6506	-4.0628E+03	-1.5524E+01	5.5381E-03	-1.1313E-13	239	665	1.827E+00
885	C9H10O2	BENZYL ACETATE	46.1904	-4.6053E+03	-1.2820E+01	1.6574E-10	2.5462E-06	222	699	1.771E-01
886	C9H10O2	ETHYL BENZOATE	40.8047	-3.9985E+03	-1.1793E+01	4.0697E-03	-1.2372E-13	238	698	2.668E-01
887	C9H10O3	ETHYL VANILLIN	-27.5098	-5.0251E+03	1.9836E+01	-3.5011E-02	1.3941E-05	351	748	---
888	C9H11NO	p-DIMETHYLAMINOBENZALDEHYDE	31.1247	-4.1807E+03	-8.1760E+00	2.5709E-03	3.2343E-13	348	832	---
889	C9H12	CUMENE	-0.9234	-2.9558E+03	7.1685E+00	-2.5369E-02	1.4858E-05	177	631	4.548E+00
890	C9H12	m-ETHYLTOLUENE	39.8909	-3.6042E+03	-1.1466E+01	3.5274E-03	7.3492E-14	178	637	3.036E+00
891	C9H12	o-ETHYLTOLUENE	15.1142	-2.9821E+03	-1.2619E+00	-6.3248E-03	3.5155E-06	192	651	2.609E+00
892	C9H12	p-ETHYLTOLUENE	46.9026	-3.8382E+03	-1.4154E+01	4.9305E-03	-1.3901E-13	211	640	2.994E+00
893	C9H12	MESITYLENE	37.6361	-3.6753E+03	-1.0156E+01	-1.0068E-10	2.4232E-06	228	637	2.478E+00
894	C9H12	n-PROPYLBENZENE	39.8219	-3.6978E+03	-1.0962E+01	8.7429E-11	2.6959E-06	174	638	3.422E+00
895	C9H12	1,2,3-TRIMETHYLBENZENE	2.7492	-2.6428E+03	3.6120E+00	-1.0213E-02	5.0553E-06	248	665	1.689E+00
896	C9H12	1,2,4-TRIMETHYLBENZENE	2.1667	-2.6318E+03	4.0350E+00	-1.1776E-02	6.0956E-06	229	649	2.262E+00
897	C9H12O	BENZYL ETHYL ETHER	27.6421	-3.4249E+03	-6.5804E+00	9.3417E-10	1.0547E-06	276	662	9.242E-01
898	C9H12O	2-PHENYL-2-PROPANOL	10.6041	-3.1597E+03	1.4321E-01	-3.8988E-03	1.7578E-06	309	660	---
899	C9H12O2	CUMENE HYDROPEROXIDE	65.7553	-7.2353E+03	-1.7947E+01	-2.8383E-08	4.8915E-06	264	443	3.266E-03
900	C9H14O	ISOPHORONE	33.9350	-3.5233E+03	-9.5117E+00	3.5518E-03	-7.9256E-14	265	715	4.374E-01
901	C9H14O6	GLYCERYL TRIACETATE	0.5931	-4.6647E+03	7.3556E+00	-2.2339E-02	1.0189E-05	277	704	2.477E-03
902	C9H16	1-NONYNE	168.0426	-7.0162E+03	-6.3306E+01	4.6976E-02	-1.2272E-05	323	611	---
903	C9H16O4	AZELAIC ACID	129.6139	-1.1868E+04	-3.9405E+01	-2.0707E-08	5.9824E-06	380	811	---
904	C9H18	BUTYLCYCLOPENTANE	63.5929	-4.3226E+03	-2.0646E+01	8.7543E-03	-2.7299E-07	314	625	---
905	C9H18	cis,cis-1,3,5-TRIMETHYLCYCLOHEXA	-323.4899	5.4756E+03	1.3990E+02	-1.5273E-01	5.9984E-05	351	608	---
906	C9H18	cis,trans-1,3,5-TRIMETHYLCYCLOHE	-211.1731	2.6774E+03	9.3218E+01	-1.0535E-01	4.2323E-05	353	602	---
907	C9H18	ISOPROPYLCYCLOHEXANE	38.6401	-3.5537E+03	-1.0621E+01	8.7017E-11	2.7087E-06	184	627	4.793E+00
908	C9H18	1-NONENE	60.6089	-4.2023E+03	-1.9446E+01	7.8308E-03	1.5910E-13	192	593	5.385E+00
909	C9H18	n-PROPYLCYCLOHEXANE	33.6844	-3.4070E+03	-8.8018E+00	-7.6792E-11	1.6258E-06	178	639	4.190E+00
910	C9H18O	DIISOBUTYL KETONE	-12.9061	-2.8810E+03	1.2212E+01	-2.9636E-02	1.5909E-05	227	615	1.683E+00
911	C9H18O	1-NONANAL	67.9442	-5.4374E+03	-2.0455E+01	2.7722E-10	5.3570E-06	255	640	3.705E-01
912	C9H18O2	n-BUTYL VALERATE	16.6975	-3.4064E+03	-1.5457E+00	-6.8086E-03	3.9686E-06	180	629	5.896E-01
913	C9H18O2	n-NONANOIC ACID	100.7681	-8.4475E+03	-3.0662E+01	8.9301E-10	5.6788E-06	286	703	1.172E-03
914	C9H18O2	n-OCTYL FORMATE	-14.4563	-2.5677E+03	1.1553E+01	-2.2727E-02	1.1727E-05	234	645	6.089E-01
915	C9H20	3,3-DIETHYLPENTANE	-12.5469	-2.1828E+03	1.0630E+01	-2.2169E-02	1.1665E-05	240	610	7.289E+00
916	C9H20	2,2-DIMETHYL-3-ETHYLPENTANE	10.1040	-2.6142E+03	9.0709E-01	-1.0373E-02	6.3652E-06	174	590	1.131E+01
917	C9H20	3-ETHYL-2,3-DIMETHYLPENTANE	113.9533	-5.3218E+03	-4.1997E+01	3.1893E-02	-9.1036E-06	303	607	---
918	C9H20	2,4-DIMETHYL-3-ETHYLPENTANE	12.5531	-2.7306E+03	3.5965E-02	-1.0320E-02	6.6977E-06	151	591	1.005E+01
919	C9H20	2,2-DIMETHYLHEPTANE	45.1437	-3.7011E+03	-1.2947E+01	7.5743E-11	3.8061E-06	160	577	1.077E+01
920	C9H20	2,6-DIMETHYLHEPTANE	49.6777	-3.7128E+03	-1.5362E+01	5.8912E-03	1.0266E-13	170	579	9.312E+00
921	C9H20	3-ETHYLHEPTANE	12.6472	-2.8943E+03	2.7706E-01	-1.1564E-02	7.3625E-06	158	590	6.793E+00

$\log_{10} P = A + B/T + C \log_{10} T + D T + E T^2$ (P - mm Hg, T - K)

NO	FORMULA	NAME	A	B	C	D	E	T_{min}	T_{max}	P @ 25 C mm Hg
922	C9H20	4-ETHYLHEPTANE	93.5549	-4.9603E+03	-3.3114E+01	2.1111E-02	-4.5301E-06	303	585	---
923	C9H20	2,3-DIMETHYLHEPTANE	72.9382	-4.4209E+03	-2.4596E+01	1.2655E-02	-1.4424E-06	302	590	---
924	C9H20	2,4-DIMETHYLHEPTANE	43.3671	-3.6628E+03	-1.2245E+01	-3.1999E-04	3.6684E-06	297	577	1.033E+01
925	C9H20	2,5-DIMETHYLHEPTANE	55.7744	-3.9934E+03	-1.7395E+01	4.9547E-03	1.6265E-06	300	581	---
926	C9H20	3,4-DIMETHYLHEPTANE	73.3252	-4.4089E+03	-2.4822E+01	1.3200E-02	-1.7419E-06	302	592	---
927	C9H20	3,5-DIMETHYLHEPTANE	51.8497	-3.8750E+03	-1.5826E+01	3.6661E-03	2.0126E-06	299	583	---
928	C9H20	4,4-DIMETHYLHEPTANE	64.8742	-4.1098E+03	-2.1453E+01	1.0302E-02	-7.4066E-07	297	585	1.030E+01
929	C9H20	3-ETHYL-2-METHYLHEXANE	69.4666	-4.2845E+03	-2.3255E+01	1.1739E-02	-1.2011E-06	300	588	---
930	C9H20	4-ETHYL-2-METHYLHEXANE	54.6479	-3.9134E+03	-1.7035E+01	5.0564E-03	1.4792E-06	298	580	---
931	C9H20	3-ETHYL-3-METHYLHEXANE	65.4400	-4.1356E+03	-2.1749E+01	1.0999E-02	-1.1938E-06	301	598	---
932	C9H20	3-ETHYL-4-METHYLHEXANE	66.9215	-4.2282E+03	-2.2222E+01	1.0861E-02	-9.5641E-07	302	594	---
933	C9H20	2,2,3-TRIMETHYLHEXANE	39.8016	-3.4508E+03	-1.1093E+01	4.0116E-06	3.0574E-06	296	588	1.127E+01
934	C9H20	2,2,4-TRIMETHYLHEXANE	50.2219	-3.6674E+03	-1.5411E+01	4.1515E-03	1.6925E-06	291	574	1.499E+01
935	C9H20	2,3,3-TRIMETHYLHEXANE	56.0669	-3.8539E+03	-1.7923E+01	7.3435E-03	1.3032E-07	298	596	---
936	C9H20	2,3,4-TRIMETHYLHEXANE	74.6496	-4.3667E+03	-2.5532E+01	1.4575E-02	-2.4380E-06	300	595	---
937	C9H20	2,3,5-TRIMETHYLHEXANE	48.3587	-3.7091E+03	-1.4491E+01	2.6885E-03	2.3246E-06	295	579	1.175E+01
938	C9H20	2,4,4-TRIMETHYLHEXANE	63.6395	-3.9565E+03	-2.1186E+01	1.1037E-02	-1.2484E-06	293	582	1.336E+01
939	C9H20	3,3,4-TRIMETHYLHEXANE	59.8798	-3.9554E+03	-1.9537E+01	9.1750E-03	-6.4602E-07	300	602	---
940	C9H20	2-METHYLOCTANE	6.0191	-2.8579E+03	3.4068E+00	-1.6572E-02	9.8047E-06	193	587	6.226E+00
941	C9H20	3-METHYLOCTANE	9.8147	-2.9609E+03	1.9061E+00	-1.5675E-02	9.7961E-06	166	590	6.275E+00
942	C9H20	4-METHYLOCTANE	11.2012	-2.9467E+03	1.2133E+00	-1.4423E-02	9.1770E-06	160	588	6.852E+00
943	C9H20	n-NONANE	8.8817	-2.8042E+03	1.5262E+00	-1.0464E-02	5.7972E-06	220	596	4.450E+00
944	C9H20	2,2,3,3-TETRAMETHYLPENTANE	35.4216	-3.2760E+03	-9.5678E+00	9.0298E-10	2.4355E-06	263	611	9.449E+00
945	C9H20	2,2,3,4-TETRAMETHYLPENTANE	52.3443	-3.6477E+03	-1.6608E+01	6.9991E-03	-5.1010E-14	152	592	1.262E+01
946	C9H20	2,2,4,4-TETRAMETHYLPENTANE	-3.8184	-2.2442E+03	7.0671E+00	-1.9644E-02	1.1435E-05	207	571	2.001E+01
947	C9H20	2,3,3,4-TETRAMETHYLPENTANE	65.9876	-4.0672E+03	-2.2199E+01	1.2445E-02	-2.0351E-06	300	608	---
948	C9H20	2,2,5-TRIMETHYLHEXANE	7.8816	-2.6422E+03	2.3902E+00	-1.5376E-02	9.7931E-06	167	568	1.660E+01
949	C9H20O	2,6-DIMETHYL-4-HEPTANOL	10.9218	-4.1891E+03	3.2601E+00	-2.1994E-02	1.2379E-05	208	603	3.029E-01
950	C9H20O	1-NONANOL	111.7949	-8.3502E+03	-3.4786E+01	3.3682E-10	7.2697E-06	268	673	2.284E-02
951	C9H20O	2-NONANOL	-1.1889	-4.3218E+03	8.8539E+00	-2.9377E-02	1.5343E-05	238	623	6.751E-02
952	C9H20S	n-NONYL MERCAPTAN	-12.6269	-3.2744E+03	1.1911E+01	-2.6433E-02	1.2780E-05	253	681	1.311E-01
953	C9H20S	BUTYL-PENTYL-SULFIDE	77.5993	-4.4994E+03	-2.7270E+01	1.8520E-02	-5.2382E-06	402	533	---
954	C9H20S	ETHYL-HEPTYL-SULFIDE	77.5993	-4.4994E+03	-2.7270E+01	1.8520E-02	-5.2382E-06	402	533	---
955	C9H20S	HEXYL-PROPYL-SULFIDE	77.5993	-4.4994E+03	-2.7270E+01	1.8520E-02	-5.2382E-06	402	533	---
956	C9H20S	METHYL-OCTYL-SULFIDE	77.5993	-4.4994E+03	-2.7270E+01	1.8520E-02	-5.2382E-06	402	533	---
957	C9H21N	n-NONYLAMINE	87.6004	-5.8022E+03	-2.9187E+01	1.1826E-02	-2.1798E-12	273	648	2.782E-01
958	C9H21N	TRIPROPYLAMINE	45.7821	-4.3495E+03	-1.2623E+01	-6.2525E-11	2.4778E-06	180	578	1.512E+00
959	C10H6O8	PYROMELLITIC ACID	-175.6445	-3.9334E+03	7.9624E+01	-7.6697E-02	2.2512E-05	554	893	---
960	C10H7Br	1-BROMONAPHTHALENE	5.4815	-3.6780E+03	2.9858E+00	-9.7457E-03	4.0451E-06	279	824	9.717E-03
961	C10H7Cl	1-CHLORONAPHTHALENE	93.7760	-6.6521E+03	-3.0859E+01	1.0748E-02	-3.2318E-14	269	785	2.046E-02
962	C10H8	NAPHTHALENE	34.9161	-3.9357E+03	-9.0648E+00	-2.0672E-09	1.5550E-06	353	748	---
963	C10H8	AZULENE	448.1038	-1.6769E+04	-1.7310E+02	1.2871E-01	-3.5996E-05	433	773	---
964	C10H9N	QUINALDINE	-14.3595	-4.4014E+03	1.4558E+01	-3.4414E-02	1.4987E-05	272	773	9.405E-03
965	C10H10	m-DIVINYLBENZENE	38.5125	-3.7960E+03	-1.0930E+01	3.4461E-03	-3.2401E-16	206	692	5.786E-01
966	C10H10	1-METHYLINDENE	-25.1496	-2.1593E+03	1.5324E+01	-2.2019E-02	9.0801E-06	350	703	---
967	C10H10	2-METHYLINDENE	-28.2567	-1.9586E+03	1.6553E+01	-2.3305E-02	9.7151E-06	353	684	---
968	C10H10O4	DIMETHYL PHTHALATE	12.6974	-4.1989E+03	3.4630E-01	-7.6524E-03	3.3490E-06	272	766	3.071E-03
969	C10H10O4	DIMETHYL TEREPHTHALATE	-23.1247	-2.4471E+03	1.3496E+01	-1.5109E-02	5.5490E-06	404	772	---
970	C10H12	DICYCLOPENTADIENE	26.8270	-3.1207E+03	-6.4697E+00	-3.7793E-07	1.1384E-06	307	443	---
971	C10H12	1,2,3,4-TETRAHYDRONAPHTHALENE	39.9174	-4.1320E+03	-1.0780E+01	1.9691E-10	2.0405E-06	237	720	3.678E-01
972	C10H12O	ANETHOLE	-6.3301	-3.3205E+03	8.4249E+00	-1.7871E-02	7.8280E-06	295	723	5.592E-02
973	C10H12O4	DIALLYL MALEATE	15.4205	-4.7760E+03	9.5106E-01	-1.5469E-02	7.7640E-06	226	693	6.812E-03
974	C10H14	n-BUTYLBENZENE	49.9687	-4.3981E+03	-1.4352E+01	4.2054E-11	3.4379E-06	185	661	1.023E+00
975	C10H14	sec-BUTYLBENZENE	61.5904	-4.5093E+03	-1.9522E+01	6.9865E-03	7.8205E-14	198	665	1.751E+00
976	C10H14	tert-BUTYLBENZENE	41.4522	-3.9027E+03	-1.1410E+01	2.4230E-10	2.2517E-06	215	660	2.135E+00
977	C10H14	1,2,3,4-TETRAMETHYLBENZENE	-32.4220	-2.1756E+03	1.8715E+01	-2.6796E-02	1.1010E-05	353	695	---
978	C10H14	m-CYMENE	4.9207	-2.9235E+03	3.4809E+00	-1.3932E-02	7.4450E-06	209	657	1.724E+00
979	C10H14	o-CYMENE	7.1102	-3.0029E+03	2.5743E+00	-1.2918E-02	6.9705E-06	202	662	1.501E+00
980	C10H14	p-CYMENE	-5.5137	-3.0256E+03	8.9840E+00	-2.5597E-02	1.3823E-05	205	653	1.465E+00
981	C10H14	m-DIETHYLBENZENE	37.1857	-3.8380E+03	-9.8677E+00	6.3157E-11	1.7741E-06	189	663	1.132E+00
982	C10H14	o-DIETHYLBENZENE	3.4308	-2.9876E+03	4.1014E+00	-1.3931E-02	6.9359E-06	242	668	1.052E+00
983	C10H14	p-DIETHYLBENZENE	-2.4793	-2.8942E+03	6.7988E+00	-1.8269E-02	9.3732E-06	230	658	1.055E+00
984	C10H14	2-ETHYL-m-XYLENE	62.1333	-4.6665E+03	-1.9724E+01	7.3435E-03	-1.1916E-13	257	671	7.337E-01
985	C10H14	2-ETHYL-p-XYLENE	11.0144	-2.9801E+03	2.7007E-01	-6.7946E-03	3.5409E-06	220	663	9.469E-01
986	C10H14	3-ETHYL-o-XYLENE	36.9976	-3.9360E+03	-9.7603E+00	7.2747E-11	1.6679E-06	224	680	6.212E-01
987	C10H14	4-ETHYL-m-XYLENE	10.6755	-3.0166E+03	5.3834E-01	-7.7304E-03	4.0929E-06	210	665	8.892E-01

$\log_{10} P = A + B/T + C \log_{10} T + D T + E T^2$ (P - mm Hg, T - K)

NO	FORMULA	NAME	A	B	C	D	E	T_{min}	T_{max}	P @ 25 C mm Hg
988	C10H14	4-ETHYL-o-XYLENE	60.0226	-4.5814E+03	-1.8945E+01	7.0278E-03	1.4101E-14	206	667	7.478E-01
989	C10H14	5-ETHYL-m-XYLENE	63.6620	-4.6313E+03	-2.0395E+01	7.8833E-03	4.4259E-14	189	655	1.030E+00
990	C10H14	ISOBUTYLBENZENE	-7.0438	-2.6892E+03	8.7843E+00	-2.1426E-02	1.1248E-05	222	650	1.926E+00
991	C10H14	1,2,3,5-TETRAMETHYLBENZENE	-3.9778	-2.9600E+03	7.3226E+00	-1.7725E-02	8.6365E-06	249	679	4.970E-01
992	C10H14	1,2,4,5-TETRAMETHYLBENZENE	-51.3593	-1.6523E+03	2.6656E+01	-3.5721E-02	1.5018E-05	352	675	---
993	C10H14O	p-tert-BUTYLPHENOL	-54.7404	-2.4727E+03	2.8991E+01	-3.9356E-02	1.5430E-05	372	734	---
994	C10H14O2	p-tert-BUTYLCATECHOL	-7.8630	-4.5064E+03	1.0224E+01	-2.1429E-02	8.6391E-06	325	776	---
995	C10H15N	N,N-DIETYHLANILINE	34.5048	-4.1694E+03	-8.6686E+00	-7.2562E-11	8.8939E-07	235	702	1.411E-01
996	C10H15N	2,6-DIETHYLANILINE	-4.0230	-4.7696E+03	9.9926E+00	-2.7756E-02	1.2952E-05	277	678	3.815E-03
997	C10H16	CAMPHENE	32.9148	-3.3183E+03	-8.6235E+00	-1.4100E-09	1.9327E-06	320	638	---
998	C10H16	D-LIMONENE	9.3771	-2.8246E+03	1.0584E+00	-8.9107E-03	4.8462E-06	199	660	1.979E+00
999	C10H16	alpha-PHELLANDRENE	12.3991	-2.9959E+03	-1.6574E-01	-7.0035E-03	3.6922E-06	220	649	1.516E+00
1000	C10H16	beta-PHELLANDRENE	10.4546	-3.0154E+03	8.9414E-01	-9.3665E-03	4.9425E-06	220	648	1.585E+00
1001	C10H16	alpha-PINENE	21.4735	-2.7156E+03	-5.0076E+00	2.8146E-03	-1.5389E-06	209	632	4.751E+00
1002	C10H16	beta-PINENE	46.3728	-3.9789E+03	-1.3284E+01	-1.3113E-10	3.4783E-06	212	643	2.926E+00
1003	C10H16	alpha-TERPINENE	43.9494	-4.0418E+03	-1.2314E+01	4.3012E-10	2.8828E-06	220	652	1.510E+00
1004	C10H16	gamma-TERPINENE	4.2428	-3.0193E+03	3.8560E+00	-1.4383E-02	7.5045E-06	220	661	1.087E+00
1005	C10H16	TERPINOLENE	29.6203	-3.6749E+03	-7.1907E+00	9.0533E-04	-1.1109E-15	200	672	5.910E-01
1006	C10H16O	CAMPHOR	115.6738	-7.1537E+03	-3.9077E+01	1.4335E-02	-6.1661E-11	453	709	---
1007	C10H18	1-DECYNE	-16.5555	-2.2598E+03	1.1813E+01	-1.8849E-02	8.0521E-06	351	632	---
1008	C10H18	cis-DECAHYDRONANPHTALENE	45.6345	-4.2100E+03	-1.2881E+01	-7.8083E-11	2.8637E-06	230	702	7.859E-01
1009	C10H18	trans-DECAHYDRONAPHTHALENE	76.1002	-5.0300E+03	-2.5078E+01	9.7608E-03	-2.5814E-13	243	687	1.218E+00
1010	C10H18O4	SEBACIC ACID	165.2175	-1.2613E+04	-5.4591E+01	1.6475E-02	-3.3040E-12	408	815	---
1011	C10H20	n-BUTYLCYCLOHEXANE	33.6340	-3.6479E+03	-8.6428E+00	-9.6941E-11	1.1897E-06	198	667	1.314E+00
1012	C10H20	1-CYCLOPENTYLPENTANE	44.3550	-4.1544E+03	-1.2314E+01	-5.2585E-04	3.0850E-06	333	647	---
1013	C10H20	1-DECENE	2.2678	-3.1244E+03	5.4320E+00	-2.0137E-02	1.1221E-05	207	617	1.672E+00
1014	C10H20O	1-DECANAL	82.5061	-6.3937E+03	-2.5303E+01	-1.9398E-09	6.3146E-06	267	657	1.029E-01
1015	C10H20O2	n-DECANOIC ACID	196.1175	-1.3955E+04	-6.2586E+01	7.4527E-09	1.2291E-05	305	713	---
1016	C10H20O2	2-ETHYLHEXYL ACETATE	18.0496	-3.9772E+03	-9.0811E-01	-1.2571E-02	7.2550E-06	180	639	2.290E-01
1017	C10H20O2	ISOPENTYL ISOVALERATE	22.2542	-2.9750E+03	-5.2266E+00	2.0253E-03	-1.8744E-14	215	637	8.854E-01
1018	C10H22	n-DECANE	26.5125	-3.3584E+03	-6.1174E+00	-3.3225E-10	4.8554E-07	243	618	1.426E+00
1019	C10H22	2-METHYLNONANE	56.8132	-4.6022E+03	-1.6769E+01	-1.5533E-10	4.4072E-06	199	610	1.885E+00
1020	C10H22	3-METHYLNONANE	64.6522	-4.5644E+03	-2.0802E+01	8.1382E-03	-3.4025E-14	188	613	1.978E+00
1021	C10H22	4-METHYLNONANE	12.4486	-3.0918E+03	4.2102E-01	-1.1259E-02	6.7772E-06	174	610	2.322E+00
1022	C10H22	5-METHYLNONANE	3.7845	-3.2217E+03	5.2149E+00	-2.2500E-02	1.3173E-05	185	610	2.215E+00
1023	C10H22	3-ETHYLOCTANE	81.3943	-5.0355E+03	-2.7491E+01	1.3341E-02	-1.3742E-06	323	614	---
1024	C10H22	4-ETHYLOCTANE	87.2735	-5.1369E+03	-2.9989E+01	1.6016E-02	-2.3588E-06	321	610	---
1025	C10H22	2,2-DIMETHYLOCTANE	3.7585	-2.7486E+03	3.8574E+00	-1.4111E-02	7.6942E-06	225	602	3.641E+00
1026	C10H22	2,3-DIMETHYLOCTANE	66.6393	-4.6014E+03	-2.1496E+01	7.8420E-03	5.1865E-07	321	613	---
1027	C10H22	2,4-DIMETHYLOCTANE	35.4998	-3.7636E+03	-8.6134E+00	-5.0412E-03	5.3779E-06	316	599	---
1028	C10H22	2,5-DIMETHYLOCTANE	60.2445	-4.4047E+03	-1.8847E+01	5.0920E-03	1.6422E-06	317	603	---
1029	C10H22	2,6-DIMETHYLOCTANE	156.5719	-6.7262E+03	-5.9349E+01	4.9770E-02	-1.7181E-05	318	462	---
1030	C10H22	2,7-DIMETHYLOCTANE	38.7548	-3.9152E+03	-9.8475E+00	-4.2320E-03	5.1351E-06	319	603	---
1031	C10H22	3,3-DIMETHYLOCTANE	54.9080	-4.2103E+03	-1.6830E+01	3.9908E-03	1.7435E-06	318	612	---
1032	C10H22	3,4-DIMETHYLOCTANE	68.1212	-4.6019E+03	-2.2192E+01	8.8808E-03	5.5663E-08	320	614	---
1033	C10H22	3,5-DIMETHYLOCTANE	67.0778	-4.5538E+03	-2.1748E+01	8.2992E-03	3.6514E-07	317	606	---
1034	C10H22	3,6-DIMETHYLOCTANE	49.3284	-4.1335E+03	-1.4367E+01	9.0414E-04	3.0570E-06	319	608	---
1035	C10H22	4,4-DIMETHYLOCTANE	52.7481	-4.1112E+03	-1.5989E+01	3.3029E-03	2.0078E-06	315	607	---
1036	C10H22	4,5-DIMETHYLOCTANE	76.0376	-4.7828E+03	-2.5490E+01	1.2197E-02	-1.1443E-06	319	612	---
1037	C10H22	4-PROPYLHEPTANE	51.7167	-4.1866E+03	-1.5336E+01	1.7503E-03	2.8445E-06	317	601	---
1038	C10H22	4-ISOPROPYLHEPTANE	80.0469	-4.8377E+03	-2.7213E+01	1.4110E-02	-1.8540E-06	316	608	---
1039	C10H22	3-ETHYL-2-METHYLHEPTANE	71.0698	-4.6406E+03	-2.3462E+01	1.0298E-02	-4.7207E-07	318	611	---
1040	C10H22	4-ETHYL-2-METHYLHEPTANE	76.3971	-4.7458E+03	-2.5661E+01	1.2347E-02	-1.1103E-06	315	602	---
1041	C10H22	5-ETHYL-2-METHYLHEPTANE	70.5597	-4.6436E+03	-2.3186E+01	9.7061E-03	-1.4400E-07	317	607	---
1042	C10H22	3-ETHYL-3-METHYLHEPTANE	67.2602	-4.4892E+03	-2.2061E+01	9.7119E-03	-5.1833E-07	319	620	---
1043	C10H22	4-ETHYL-3-METHYLHEPTANE	83.5934	-4.9398E+03	-2.8698E+01	1.5712E-02	-2.5128E-06	318	614	---
1044	C10H22	3-ETHYL-5-METHYLHEPTANE	50.7351	-4.1090E+03	-1.5062E+01	2.0425E-03	2.5513E-06	317	607	---
1045	C10H22	3-ETHYL-4-METHYLHEPTANE	80.9936	-4.8859E+03	-2.7607E+01	1.4585E-02	-2.1028E-06	319	616	---
1046	C10H22	4-ETHYL-4-METHYLHEPTANE	68.5490	-4.4902E+03	-2.2630E+01	1.0382E-02	-7.5401E-07	317	616	---
1047	C10H22	2,2,3-TRIMETHYLHEPTANE	42.3175	-3.8075E+03	-1.1774E+01	-4.1100E-04	3.2063E-06	315	612	---
1048	C10H22	2,2,4-TRIMETHYLHEPTANE	34.4057	-3.5644E+03	-8.4449E+00	-4.1996E-03	4.8827E-06	308	595	---
1049	C10H22	2,2,5-TRIMETHYLHEPTANE	27.8150	-3.4273E+03	-5.6827E+00	-7.0320E-03	5.9070E-06	310	598	---
1050	C10H22	2,2,6-TRIMETHYLHEPTANE	8.6749	-2.9752E+03	2.3524E+00	-1.5554E-02	9.2247E-06	310	593	---
1051	C10H22	2,3,3-TRIMETHYLHEPTANE	49.0603	-3.9786E+03	-1.4603E+01	2.5999E-03	2.0186E-06	316	618	---
1052	C10H22	2,3,4-TRIMETHYLHEPTANE	65.4081	-4.4359E+03	-2.1249E+01	8.6379E-03	-1.4051E-08	317	614	---
1053	C10H22	2,3,5-TRIMETHYLHEPTANE	92.7669	-5.1409E+03	-3.2519E+01	1.9489E-02	-3.8700E-06	317	613	---

$\log_{10} P = A + B/T + C \log_{10} T + D T + E T^2$ (P - mm Hg, T - K)

NO	FORMULA	NAME	A	B	C	D	E	T_{min}	T_{max}	P @ 25 C mm Hg
1054	C10H22	2,3,6-TRIMETHYLHEPTANE	41.1335	-3.8435E+03	-1.1089E+01	-1.9948E-03	4.0805E-06	315	604	---
1055	C10H22	2,4,4-TRIMETHYLHEPTANE	54.0724	-4.0427E+03	-1.6677E+01	4.4287E-03	1.5529E-06	310	600	---
1056	C10H22	2,4,5-TRIMETHYLHEPTANE	58.3551	-4.2448E+03	-1.8307E+01	5.5537E-03	1.2052E-06	314	607	---
1057	C10H22	2,4,6-TRIMETHYLHEPTANE	15.9590	-3.1803E+03	-5.9365E-01	-1.2952E-02	8.3992E-06	309	590	---
1058	C10H22	2,5,5-TRIMETHYLHEPTANE	29.7678	-3.4725E+03	-6.5430E+00	-5.8798E-03	5.3640E-06	312	603	---
1059	C10H22	3,3,4-TRIMETHYLHEPTANE	55.3693	-4.1259E+03	-1.7269E+01	5.5026E-03	8.6995E-07	317	622	---
1060	C10H22	3,3,5-TRIMETHYLHEPTANE	79.7191	-4.7188E+03	-2.7294E+01	1.5052E-02	-2.4141E-06	313	610	---
1061	C10H22	3,4,4-TRIMETHYLHEPTANE	57.3601	-4.1652E+03	-1.8105E+01	6.3641E-03	5.6007E-07	316	621	---
1062	C10H22	3,4,5-TRIMETHYLHEPTANE	108.3906	-5.5548E+03	-3.8975E+01	2.5878E-02	-6.1851E-06	318	613	---
1063	C10H22	3-ISOPROPYL-2-METHYLHEXANE	165.0874	-6.9768E+03	-6.2423E+01	4.8743E-02	-1.4382E-05	318	623	---
1064	C10H22	3,3-DIETHYLHEXANE	72.4818	-4.6008E+03	-2.4312E+01	1.2372E-02	-1.6299E-06	320	628	---
1065	C10H22	3,4-DIETHYLHEXANE	89.6991	-5.0846E+03	-3.1270E+01	1.8468E-02	-3.5895E-06	319	619	---
1066	C10H22	3-ETHYL-2,2-DIMETHYLHEXANE	51.3900	-3.9790E+03	-1.5644E+01	3.8686E-03	1.5493E-06	313	612	---
1067	C10H22	4-ETHYL-2,2-DIMETHYLHEXANE	19.5418	-3.1584E+03	-2.3512E+00	-9.9985E-03	6.9575E-06	307	595	---
1068	C10H22	3-ETHYL-2,3-DIMETHYLHEXANE	69.7644	-4.4848E+03	-2.3261E+01	1.1587E-02	-1.3978E-06	318	627	---
1069	C10H22	4-ETHYL-2,3-DIMETHYLHEXANE	75.0688	-4.6609E+03	-2.5306E+01	1.2913E-02	-1.6500E-06	317	617	---
1070	C10H22	3-ETHYL-2,4-DIMETHYLHEXANE	77.0647	-4.6991E+03	-2.6148E+01	1.3800E-02	-1.9752E-06	316	616	---
1071	C10H22	4-ETHYL-2,4-DIMETHYLHEXANE	99.8986	-5.2673E+03	-3.5632E+01	2.3335E-02	-5.4868E-06	316	621	---
1072	C10H22	3-ETHYL-2,5-DIMETHYLHEXANE	64.4906	-4.3655E+03	-2.0893E+01	8.2671E-03	2.0753E-07	312	604	---
1073	C10H22	4-ETHYL-3,3-DIMETHYLHEXANE	64.6460	-4.3415E+03	-2.1165E+01	9.6098E-03	-7.0000E-07	317	626	---
1074	C10H22	3-ETHYL-3,4-DIMETHYLHEXANE	66.2861	-4.3712E+03	-2.1859E+01	1.0342E-02	-9.6623E-07	317	625	---
1075	C10H22	2,2,3,3-TETRAMETHYLHEXANE	110.5241	-5.4530E+03	-4.0210E+01	2.8578E-02	-7.5620E-06	314	623	---
1076	C10H22	2,2,3,4-TETRAMETHYLHEXANE	64.6414	-4.2837E+03	-2.1222E+01	9.7824E-03	-7.4964E-07	314	620	---
1077	C10H22	2,2,3,5-TETRAMETHYLHEXANE	11.0588	-2.9272E+03	1.0937E+00	-1.3086E-02	7.9386E-06	308	601	---
1078	C10H22	2,2,4,4-TETRAMETHYLHEXANE	120.0491	-5.5764E+03	-4.4295E+01	3.2983E-02	-9.2000E-06	308	610	---
1079	C10H22	2,2,4,5-TETRAMETHYLHEXANE	44.3313	-3.7422E+03	-1.2716E+01	7.0194E-04	2.8949E-06	307	599	---
1080	C10H22	2,2,5,5-TETRAMETHYLHEXANE	15.1639	-2.9837E+03	-5.2179E-01	-1.2202E-02	8.0498E-06	300	581	---
1081	C10H22	2,3,3,4-TETRAMETHYLHEXANE	56.2570	-4.0994E+03	-1.7787E+01	6.6874E-03	2.1253E-07	318	633	---
1082	C10H22	2,3,3,5-TETRAMETHYLHEXANE	39.5641	-3.6386E+03	-1.0800E+01	-7.8227E-04	3.2261E-06	310	610	---
1083	C10H22	2,3,4,4-TETRAMETHYLHEXANE	62.6524	-4.2449E+03	-2.0417E+01	9.1248E-03	-5.8440E-07	315	627	---
1084	C10H22	2,3,4,5-TETRAMETHYLHEXANE	40.4650	-3.7289E+03	-1.1065E+01	-8.8788E-04	3.3247E-06	313	613	---
1085	C10H22	3,3,4,4-TETRAMETHYLHEXANE	70.9826	-4.4512E+03	-2.3980E+01	1.3216E-02	-2.2933E-06	320	647	---
1086	C10H22	2,4-DIMETHYL-3-ISOPROPYLPENTANE	86.9811	-4.8692E+03	-3.0383E+01	1.8437E-02	-3.7507E-06	313	614	---
1087	C10H22	3,3-DIETHYL-2-METHYLPENTANE	72.7173	-4.5749E+03	-2.4526E+01	1.3099E-02	-2.0730E-06	322	640	---
1088	C10H22	3-ETHYL-2,2,3-TRIMETHYLPENTANE	74.5660	-4.5329E+03	-2.5472E+01	1.4700E-02	-2.8218E-06	320	646	---
1089	C10H22	3-ETHYL-2,2,4-TRIMETHYLPENTANE	61.1872	-4.1607E+03	-1.9836E+01	8.5615E-03	-3.1058E-07	311	615	---
1090	C10H22	3-ETHYL-2,3,4-TRIMETHYLPENTANE	83.5354	-4.8126E+03	-2.9052E+01	1.7675E-02	-3.7440E-06	320	642	---
1091	C10H22	2,2,3,3,4-PENTAMETHYLPENTANE	60.0195	-4.1084E+03	-1.9550E+01	9.2480E-03	-9.4842E-07	317	644	---
1092	C10H22	2,2,3,4,4-PENTAMETHYLPENTANE	96.0096	-4.9637E+03	-3.4432E+01	2.3655E-02	-5.9877E-06	311	627	---
1093	C10H22O	1-DECANOL	103.0308	-8.1526E+03	-3.1641E+01	-7.2300E-10	6.0332E-06	280	690	8.505E-03
1094	C10H22O	DI-n-PENTYL ETHER	31.5633	-3.5807E+03	-7.9975E+00	-2.3601E-10	1.8944E-06	204	622	8.566E-01
1095	C10H22O	ISODECANOL	13.5831	-4.8371E+03	2.5431E+00	-2.1303E-02	1.1413E-05	213	644	2.067E-02
1096	C10H22O5	TETRAETHYLENE GLYCOL DIMETHYL ET	14.0128	-4.3341E+03	-1.2383E-01	-7.1725E-03	3.4491E-06	243	705	2.177E-03
1097	C10H22S	n-DECYL MERCAPTAN	67.3579	-5.9003E+03	-1.9956E+01	4.9800E-10	4.2317E-06	248	696	3.668E-02
1098	C10H22S	BUTYL-HEXYL-SULFIDE	69.9661	-4.2921E+03	-2.4230E+01	1.5724E-02	-4.2537E-06	416	560	---
1099	C10H22S	ETHYL-OCTYL-SULFIDE	69.9661	-4.2921E+03	-2.4230E+01	1.5724E-02	-4.2537E-06	416	560	---
1100	C10H22S	HEPTYL-PROPYL-SULFIDE	69.9661	-4.2921E+03	-2.4230E+01	1.5724E-02	-4.2537E-06	416	560	---
1101	C10H22S	METHYL-NONYL-SULFIDE	69.9661	-4.2921E+03	-2.4230E+01	1.5724E-02	-4.2537E-06	416	560	---
1102	C10H22S	PENTYL-SULFIDE	69.9661	-4.2921E+03	-2.4230E+01	1.5724E-02	-4.2537E-06	416	560	---
1103	C10H22S2	PENTYL-DISULFIDE	281.8811	-1.2799E+04	-1.0509E+02	6.7955E-02	-1.6575E-05	401	727	---
1104	C10H23N	n-DECYLAMINE	-33.9072	-2.7517E+03	2.0663E+01	-3.4930E-02	1.6215E-05	289	663	1.045E-01
1105	C11H10	1-METHYLNAPHTHALENE	29.8895	-3.9535E+03	-7.2253E+00	2.1109E-11	8.9552E-07	243	772	6.770E-02
1106	C11H10	2-METHYLNAPHTHALENE	56.2052	-5.2563E+03	-1.6195E+01	8.1583E-11	3.0253E-06	308	761	---
1107	C11H14O2	n-BUTYL BENZOATE	7.6313	-3.5509E+03	2.0943E+00	-9.2518E-03	4.3287E-06	252	724	3.388E-02
1108	C11H16	n-PENTYLBENZENE	34.2755	-3.6829E+03	-9.3387E+00	2.7727E-03	-8.8315E-15	198	680	4.380E-01
1109	C11H16O	p-tert-AMYLPHENOL	-29.9224	-3.0806E+03	1.8272E+01	-2.6676E-02	1.0399E-05	366	751	---
1110	C11H20	1-UNDECYNE	25.5196	-3.6568E+03	-5.0668E+00	-4.2478E-03	3.1571E-06	353	651	---
1111	C11H20O2	2-ETHYLHEXYL ACRYLATE	34.3532	-3.8584E+03	-9.3203E+00	3.0189E-03	-2.7271E-14	183	655	1.778E-01
1112	C11H22	1-UNDECENE	60.2094	-5.0417E+03	-1.7776E+01	9.0476E-10	4.2624E-06	224	638	4.928E-01
1113	C11H22	1-CYCLOPENTYLHEXANE	48.3003	-4.5708E+03	-1.3563E+01	-4.1718E-04	3.0684E-06	351	668	---
1114	C11H22	PENTYLCYCLOHEXANE	32.6784	-4.0505E+03	-7.4298E+00	-5.0121E-03	4.3369E-06	351	674	---
1115	C11H22O	1-UNDECANAL	-31.8129	-3.1374E+03	2.0433E+01	-3.7256E-02	1.7537E-05	273	672	4.734E-02
1116	C11H24	n-UNDECANE	82.9230	-5.6085E+03	-2.7327E+01	1.0469E-02	7.0870E-13	248	639	4.117E-01
1117	C11H24O	1-UNDECANOL	188.0700	-1.1188E+04	-6.4590E+01	2.2644E-02	3.3487E-12	289	704	2.964E-03
1118	C11H24S	UNDECYL MERCAPTAN	191.0623	-1.0913E+04	-6.6394E+01	2.5057E-02	-5.1267E-13	270	710	4.396E-03
1119	C11H24S	BUTYL-HEPTYL-SULFIDE	64.2099	-4.1311E+03	-2.1958E+01	1.3714E-02	-3.5731E-06	428	584	---

$\log_{10} P = A + B/T + C \log_{10} T + D T + E T^2$ (P - mm Hg, T - K)

NO	FORMULA	NAME	A	B	C	D	E	T_{min}	T_{max}	P @ 25 C mm Hg
1120	C11H24S	DECYL-METHYL-SULFIDE	64.2099	-4.1311E+03	-2.1958E+01	1.3714E-02	-3.5731E-06	428	584	---
1121	C11H24S	ETHYL-NONYL-SULFIDE	64.2099	-4.1311E+03	-2.1958E+01	1.3714E-02	-3.5731E-06	428	584	---
1122	C11H24S	OCTYL-PROPYL-SULFIDE	64.2099	-4.1311E+03	-2.1958E+01	1.3714E-02	-3.5731E-06	428	584	---
1123	C12H8O	DIBENZOFURAN	17.6646	-3.1989E+03	-3.3446E+00	6.0686E-10	4.4676E-07	356	838	---
1124	C12H9N	DIBENZOPYRROLE	-119.8570	-3.2537E+02	5.2568E+01	-4.6797E-02	1.4113E-05	518	899	---
1125	C12H10	ACENAPHTHENE	28.8173	-4.1623E+03	-6.7750E+00	-1.0872E-09	6.3928E-07	367	803	---
1126	C12H10	BIPHENYL	53.0479	-5.3509E+03	-1.4955E+01	2.1039E-09	2.4345E-06	342	789	---
1127	C12H10O	DIPHENYL ETHER	-26.9635	-2.5909E+03	1.6420E+01	-2.4334E-02	1.0244E-05	300	763	---
1128	C12H11N	p-AMINODIPHENYL	-3.8805	-4.0795E+03	7.5647E+00	-1.5752E-02	6.1473E-06	326	817	---
1129	C12H11N	DIPHENYLAMINE	9.7736	-3.9008E+03	9.1207E-01	-5.8980E-03	2.3012E-06	326	817	---
1130	C12H11N3	p-AMINOAZOBENZENE	-19.0955	-4.2712E+03	1.3826E+01	-2.0210E-02	6.9384E-06	401	877	---
1131	C12H11N3	1,3-DIPHENYLTRIAZENE	-13.8496	-4.2319E+03	1.1797E+01	-1.9348E-02	7.0094E-06	372	845	---
1132	C12H12	1,2-DIMETHYLNAPHTHALENE	80.9531	-6.5659E+03	-2.5417E+01	5.8637E-03	1.2737E-06	402	775	---
1133	C12H12	1,3-DIMETHYLNAPHTHALENE	84.8587	-5.6887E+03	-2.9242E+01	1.8312E-02	-4.7895E-06	421	585	---
1134	C12H12	1,4-DIMETHYLNAPHTHALENE	-60.7398	-1.2148E+03	2.8693E+01	-2.8126E-02	9.2388E-06	421	777	---
1135	C12H12	1,5-DIMETHYLNAPHTHALENE	71.6143	-5.9394E+03	-2.2479E+01	6.7276E-03	2.3898E-07	423	773	---
1136	C12H12	1,6-DIMETHYLNAPHTHALENE	31.1131	-4.1403E+03	-7.5477E+00	-6.4435E-04	1.5135E-06	421	771	---
1137	C12H12	1,7-DIMETHYLNAPHTHALENE	150.1682	-8.2324E+03	-5.4206E+01	3.4631E-02	-9.1270E-06	423	595	---
1138	C12H12	2,3-DIMETHYLNAPHTHALENE	71.1090	-5.9471E+03	-2.2272E+01	6.5823E-03	2.5956E-07	428	778	---
1139	C12H12	2,6-DIMETHYLNAPHTHALENE	-6.9795	-2.9488E+03	7.4483E+00	-1.1581E-02	4.3391E-06	383	777	---
1140	C12H12	2,7-DIMETHYLNAPHTHALENE	-1.7726	-3.1042E+03	5.3361E+00	-9.6632E-03	3.6806E-06	369	778	---
1141	C12H12	1-ETHYLNAPHTHALENE	7.5650	-3.7597E+03	2.6035E+00	-1.1581E-02	5.1365E-06	259	776	2.516E-02
1142	C12H12	2-ETHYLNAPHTHALENE	138.9424	-7.4909E+03	-5.0409E+01	3.4108E-02	-9.5362E-06	391	566	---
1143	C12H12N2	p-AMINODIPHENYLAMINE	-1.7258	-5.0658E+03	7.3819E+00	-1.6555E-02	6.1361E-06	341	867	---
1144	C12H12N2	HYDRAZOBENZENE	16.8982	-5.0039E+03	-3.5846E-01	-9.9629E-03	4.2938E-06	404	573	---
1145	C12H14	1,2,3-TRIMETHYLINDENE	17.5334	-3.2091E+03	-3.0901E+00	1.9203E-10	7.8034E-08	345	726	---
1146	C12H14O4	DIETHYL PHTHALATE	72.1438	-7.0747E+03	-2.1029E+01	-3.2404E-10	3.4691E-06	269	757	4.884E-04
1147	C12H16	CYCLOHEXYLBENZENE	-14.0614	-3.5138E+03	1.2631E+01	-2.6285E-02	1.1568E-05	280	744	3.981E-02
1148	C12H18	m-DIISOPROPYLBENZENE	31.8443	-3.8099E+03	-7.8983E+00	8.3393E-11	8.1613E-07	210	684	3.932E-01
1149	C12H18	p-DIISOPROPYLBENZENE	9.3996	-3.4567E+03	1.8257E+00	-1.1471E-02	5.4813E-06	256	689	2.457E-01
1150	C12H18	n-HEXYLBENZENE	6.7694	-3.6050E+03	3.3416E+00	-1.5306E-02	7.8479E-06	212	698	1.205E-01
1151	C12H18	1,2,3-TRIETHYLBENZENE	-358.0208	7.9022E+03	1.4783E+02	-1.2821E-01	4.1279E-05	419	684	---
1152	C12H18	1,2,4-TRIETHYLBENZENE	67.3455	-4.5199E+03	-2.3280E+01	1.7857E-02	-5.7468E-06	319	493	---
1153	C12H18	1,3,5-TRIETHYLBENZENE	-396.9101	9.0363E+03	1.6348E+02	-1.4157E-01	4.5564E-05	418	682	---
1154	C12H18	HEXAMETHYLBENZENE	148.1217	-7.3688E+03	-5.4569E+01	3.7882E-02	-1.0004E-05	451	758	---
1155	C12H20O4	DIBUTYL MALEATE	2.4103	-5.0321E+03	6.9147E+00	-2.2687E-02	1.0287E-05	275	716	6.212E-04
1156	C12H22	BICYCLOHEXYL	43.7149	-4.4737E+03	-1.2082E+01	1.0564E-10	2.4453E-06	277	727	1.075E-01
1157	C12H22	1-DODECYNE	-7.8023	-2.8587E+03	8.3798E+00	-1.5468E-02	6.5514E-06	386	668	---
1158	C12H23N	DICYCLOHEXYLAMINE	-50.5512	-2.7053E+03	2.8273E+01	-4.5702E-02	2.0443E-05	273	737	3.363E-02
1159	C12H24	1-DODECENE	-8.5899	-3.5241E+03	1.0806E+01	-2.8161E-02	1.4267E-05	238	657	1.590E-01
1160	C12H24	1-CYCLOPENTYLHEPTANE	48.0744	-4.8876E+03	-1.3081E+01	-2.0206E-03	3.6908E-06	368	679	---
1161	C12H24	1-CYCLOHEXYLHEXANE	44.2276	-4.6610E+03	-1.1795E+01	-2.0286E-03	3.3751E-06	367	692	---
1162	C12H24O	1-DODECANAL	-47.6290	-3.1249E+03	2.7611E+01	-4.6717E-02	2.1392E-05	285	685	1.528E-02
1163	C12H24O2	n-DODECANOIC ACID	-83.0980	-4.7634E+03	4.6211E+01	-7.6239E-02	3.2073E-05	317	734	---
1164	C12H26	n-DODECANE	-5.6532	-3.4698E+03	9.0272E+00	-2.3185E-02	1.1235E-05	264	658	1.357E-01
1165	C12H26O	DI-n-HEXYL ETHER	10.0096	-4.1641E+03	2.8039E+00	-1.7099E-02	8.7760E-06	230	658	4.605E-02
1166	C12H26O	1-DODECANOL	114.5440	-9.2062E+03	-3.5275E+01	-1.3222E-09	6.1548E-06	297	721	8.467E-04
1167	C12H26O3	DIETHYLENE GLYCOL DI-n-BUTYL ETH	61.7424	-5.1004E+03	-1.9671E+01	8.2329E-03	1.0941E-13	213	680	2.605E-02
1168	C12H26S	n-DODECYL MERCAPTAN	90.3277	-6.5839E+03	-2.9741E+01	1.0992E-02	-1.5813E-13	265	724	8.517E-03
1169	C12H26S	BUTYL-OCTYL-SULFIDE	488.0936	-1.9912E+04	-1.8598E+02	1.3095E-01	-3.7088E-05	407	582	---
1170	C12H26S	DECYL-ETHYL-SULFIDE	59.3379	-3.9911E+03	-2.0048E+01	1.2080E-02	-3.0384E-06	439	608	---
1171	C12H26S	HEXYL-SULFIDE	59.3379	-3.9911E+03	-2.0048E+01	1.2080E-02	-3.0384E-06	439	608	---
1172	C12H26S	METHYL-UNDECYL-SULFIDE	59.3379	-3.9911E+03	-2.0048E+01	1.2080E-02	-3.0384E-06	439	608	---
1173	C12H26S	NONYL-PROPYL-SULFIDE	59.3379	-3.9911E+03	-2.0048E+01	1.2080E-02	-3.0384E-06	439	608	---
1174	C12H26S2	HEXYL-DISULFIDE	317.1013	-1.4847E+04	-1.1741E+02	7.1405E-02	-1.6270E-05	426	747	---
1175	C12H27BO3	TRI-n-BUTYL BORATE	8.3425	-2.6942E+03	7.8090E-01	-5.9864E-03	3.0070E-06	203	743	5.259E-01
1176	C12H27N	DODECYLAMINE	120.8152	-7.8738E+03	-4.0876E+01	1.5576E-02	6.7451E-13	301	696	---
1177	C12H27N	TRI-n-BUTYLAMINE	14.3754	-4.1372E+03	9.5698E-01	-1.5617E-02	8.5491E-06	203	644	9.350E-02
1178	C13H10	FLUORENE	53.9382	-5.3622E+03	-1.6059E+01	4.5696E-03	8.1430E-13	388	870	---
1179	C13H10O	BENZOPHENONE	16.4144	-3.8064E+03	-2.3984E+00	-7.4544E-04	2.9345E-07	321	816	---
1180	C13H12	DIPHENYLMETHANE	50.8894	-5.2749E+03	-1.4246E+01	-4.2994E-10	2.4197E-06	298	768	---
1181	C13H14	1-PROPYLNAPHTHALENE	131.8028	-7.9574E+03	-4.6101E+01	2.4187E-02	-4.5747E-06	428	771	---
1182	C13H14	2-PROPYLNAPHTHALENE	144.8838	-8.3997E+03	-5.1219E+01	2.7910E-02	-5.5943E-06	433	772	---
1183	C13H14	2ETHYL-3-METHYLNAPHTHALENE	256.5800	-1.2145E+04	-9.4901E+01	5.9570E-02	-1.4277E-05	469	776	---
1184	C13H14	2ETHYL-6-METHYLNAPHTHALENE	117.2705	-7.6092E+03	-4.0107E+01	1.8664E-02	-2.8127E-06	465	767	---
1185	C13H14	2ETHYL-7-METHYLNAPHTHALENE	117.2705	-7.6092E+03	-4.0107E+01	1.8664E-02	-2.8127E-06	465	767	---

$\log_{10} P = A + B/T + C \log_{10} T + D T + E T^2$ (P - mm Hg, T - K)

NO	FORMULA	NAME	A	B	C	D	E	T_{min}	T_{max}	P @ 25 C mm Hg
1186	C13H20	n-HEPTYLBENZENE	89.2811	-6.4093E+03	-2.9248E+01	1.0328E-02	6.2451E-14	225	714	3.098E-02
1187	C13H24	1-TRIDECYNE	33.4188	-4.3334E+03	-7.7611E+00	-3.6928E-03	3.3986E-06	393	684	---
1188	C13H26	1-TRIDECENE	8.1909	-3.7115E+03	2.5607E+00	-1.2858E-02	6.2798E-06	250	675	6.361E-02
1189	C13H26	1-CYCLOPENTYLOCTANE	43.3958	-5.0519E+03	-1.0882E+01	-4.6584E-03	4.4687E-06	385	702	---
1190	C13H26	1-CYCLOHEXYLHEPTANE	41.7798	-4.8887E+03	-1.0490E+01	-3.9757E-03	3.9933E-06	384	709	---
1191	C13H26O	1-TRIDECANAL	161.5042	-9.7660E+03	-5.5591E+01	2.1036E-02	5.5498E-13	288	700	2.914E-03
1192	C13H26O2	n-BUTYL NONANOATE	6.5223	-4.4759E+03	5.0441E+00	-2.2415E-02	1.1463E-05	235	652	2.125E-02
1193	C13H26O2	METHYL DODECANOATE	68.5001	-6.4740E+03	-1.9996E+01	4.9208E-10	3.4462E-06	278	712	4.108E-03
1194	C13H28	n-TRIDECANE	49.2391	-4.9649E+03	-1.3769E+01	-2.1146E-09	2.5902E-06	268	676	5.580E-02
1195	C13H28O	1-TRIDECANOL	119.2170	-9.5810E+03	-3.6776E+01	1.4106E-09	6.2604E-06	304	731	---
1196	C13H28S	BUTYL-NONYL-SULFIDE	55.2758	-3.8714E+03	-1.8466E+01	1.0771E-02	-2.6240E-06	450	630	---
1197	C13H28S	DECYL-PROPYL-SULFIDE	55.2758	-3.8714E+03	-1.8466E+01	1.0771E-02	-2.6240E-06	450	630	---
1198	C13H28S	DODECYL-METHYL-SULFIDE	55.2758	-3.8714E+03	-1.8466E+01	1.0771E-02	-2.6240E-06	450	630	---
1199	C13H28S	ETHYL-UNDECYL-SULFIDE	55.2758	-3.8714E+03	-1.8466E+01	1.0771E-02	-2.6240E-06	450	630	---
1200	C13H28S	1-TRIDECANETHIOL	177.1486	-1.0227E+04	-6.2559E+01	3.1360E-02	-5.3595E-06	424	742	---
1201	C14H8O2	ANTHRAQUINONE	144.9121	-1.2120E+04	-4.5070E+01	1.1051E-03	6.2679E-06	559	653	---
1202	C14H10	ANTHRACENE	-120.0992	4.4780E+00	5.2574E+01	-4.7696E-02	1.5020E-05	489	873	---
1203	C14H10	DIPHENYLACETYLENE	-5.1555	-3.4335E+03	7.2102E+00	-1.3104E-02	5.0073E-06	336	832	---
1204	C14H10	PHENANTHRENE	50.2858	-5.7409E+03	-1.3935E+01	-8.8520E-10	2.1343E-06	372	869	---
1205	C14H12	cis-STILBENE	33.3864	-3.9885E+03	-1.0330E+01	1.3550E-02	-7.3213E-06	268	535	6.861E-03
1206	C14H12	trans-STILBENE	68.6303	-6.3776E+03	-2.1015E+01	5.7183E-03	1.8334E-12	397	820	---
1207	C14H12O2	BENZYL BENZOATE	-1.5640	-4.6284E+03	7.3630E+00	-1.8259E-02	7.4580E-06	293	820	2.242E-04
1208	C14H14	1,1-DIPHENYLETHANE	7.7920	-3.8630E+03	2.4667E+00	-1.1120E-02	4.9686E-06	255	775	1.162E-02
1209	C14H14	1,2-DIPHENYLETHANE	48.5573	-5.2841E+03	-1.3410E+01	-1.0073E-09	2.1338E-06	324	780	---
1210	C14H14O	DIBENZYL ETHER	1.7972	-3.8773E+03	3.9185E+00	-4.9549E-03	1.4918E-14	277	777	1.026E-03
1211	C14H16	1-n-BUTYLNAPHTHALENE	49.7689	-5.5181E+03	-1.3708E+01	1.2616E-10	1.9679E-06	253	792	3.284E-03
1212	C14H16	2-BUTYLNAPHTHALENE	1878.6219	-6.3688E+04	-7.3714E+02	5.6673E-01	-1.7095E-04	412	567	---
1213	C14H22	n-OCTYLBENZENE	1.8919	-4.1324E+03	6.1473E+00	-2.0294E-02	9.6879E-06	237	729	1.131E-02
1214	C14H22	1,2,3,4-TETRAETHYLBENZENE	62.7022	-4.6397E+03	-2.1207E+01	1.5260E-02	-4.6147E-06	339	523	---
1215	C14H22	1,2,3,5-TETRAETHYLBENZENE	-298.2878	6.4585E+03	1.2247E+02	-1.0039E-01	3.0644E-05	447	708	---
1216	C14H22	1,2,4,5-TETRAETHYLBENZENE	-316.0617	7.0146E+03	1.2952E+02	-1.0593E-01	3.2289E-05	447	707	---
1217	C14H22O	p-tert-OCTYLPHENOL	112.8024	-8.1574E+03	-3.7219E+01	1.2314E-02	6.6452E-12	359	765	---
1218	C14H28	1-TETRADECENE	100.1124	-7.0403E+03	-3.3050E+01	1.1591E-02	-1.3156E-14	260	692	1.496E-02
1219	C14H28	1-CYCLOPENTYLNONANE	51.7890	-5.6110E+03	-1.3889E+01	-3.1493E-03	4.0422E-06	399	717	---
1220	C14H28	1-CYCLOHEXYLOCTANE	44.7900	-5.2699E+03	-1.1386E+01	-4.0422E-03	4.0233E-06	399	724	---
1221	C14H28O2	n-TETRADECANOIC ACID	-79.3115	-4.6936E+03	4.3573E+01	-6.8469E-02	2.7919E-05	328	756	---
1222	C14H30	n-TETRADECANE	106.1056	-7.3461E+03	-3.5195E+01	1.2356E-02	-8.3950E-13	279	692	1.156E-02
1223	C14H30O	1-TETRADECANOL	130.2611	-1.0422E+04	-4.0360E+01	1.7910E-09	6.8167E-06	311	741	---
1224	C14H30S	BUTYL-DECYL-SULFIDE	51.8592	-3.7684E+03	-1.7144E+01	9.7076E-03	-2.2970E-06	460	651	---
1225	C14H30S	DODECYL-ETHYL-SULFIDE	51.8592	-3.7684E+03	-1.7144E+01	9.7076E-03	-2.2970E-06	460	651	---
1226	C14H30S	HEPTYL-SULFIDE	51.8592	-3.7684E+03	-1.7144E+01	9.7076E-03	-2.2970E-06	460	651	---
1227	C14H30S	METHYL-TRIDECYL-SULFIDE	51.8592	-3.7684E+03	-1.7144E+01	9.7076E-03	-2.2970E-06	460	651	---
1228	C14H30S	PROPYL-UNDECYL-SULFIDE	51.8592	-3.7684E+03	-1.7144E+01	9.7076E-03	-2.2970E-06	460	651	---
1229	C14H30S	1-TETRADECANETHIOL	174.4855	-1.0525E+04	-6.0972E+01	2.8387E-02	-4.2369E-06	437	754	---
1230	C14H30S2	HEPTYL-DISULFIDE	313.8133	-1.5713E+04	-1.1450E+02	6.3386E-02	-1.2849E-05	448	766	---
1231	C14H31N	TETRADECYLAMINE	127.2644	-8.5930E+03	-4.2895E+01	1.5716E-02	4.4317E-13	311	722	---
1232	C15H10N2O2	DIPHENYLMETHANE-4,4'-DIISOCYANAT	-15.5268	-4.7726E+03	1.3371E+01	-2.5298E-02	1.1904E-05	311	609	---
1233	C15H16O	p-CUMYLPHENOL	-6.5190	-4.5451E+03	9.0675E+00	-1.7864E-02	6.7285E-06	346	834	---
1234	C15H16O2	BISPHENOL A	172.1183	-1.4667E+04	-5.4854E+01	1.1985E-02	9.7628E-12	426	849	---
1235	C15H18	1-PENTYLNAPHTHALENE	213.6784	-1.1340E+04	-7.7250E+01	4.3708E-02	-9.2840E-06	458	793	---
1236	C15H18	2-PENTYLNAPHTHALENE	244.7128	-1.2467E+04	-8.9196E+01	5.1526E-02	-1.1188E-05	463	797	---
1237	C15H24	n-NONYLBENZENE	-0.9235	-4.2232E+03	7.3073E+00	-2.0964E-02	9.7152E-06	249	741	4.042E-03
1238	C15H24O	2,6-DI-tert-BUTYL-p-CRESOL	69.7769	-6.5661E+03	-2.0402E+01	4.0687E-09	3.5418E-06	344	720	---
1239	C15H24O	NONYLPHENOL	6.1076	-5.4241E+03	5.3661E+00	-2.0127E-02	8.7825E-06	279	757	9.394E-05
1240	C15H28	1-PENTADECYNE	16.5889	-4.2684E+03	-5.9774E-01	-1.0847E-02	5.7477E-06	413	711	---
1241	C15H30	1-PENTADECENE	113.3410	-7.8282E+03	-3.7725E+01	1.3147E-02	4.8168E-13	269	708	4.537E-03
1242	C15H30	1-CYCLOPENTYLDECANE	56.1979	-6.0504E+03	-1.5301E+01	-2.9629E-03	4.0349E-06	414	731	---
1243	C15H30	1-CYCLOHEXYLNONANE	47.2365	-5.6428E+03	-1.2038E+01	-4.3786E-03	4.1572E-06	414	738	---
1244	C15H30O2	PENTADECANOIC ACID	245.4056	-1.7856E+04	-7.8444E+01	-4.1719E-09	1.4029E-05	326	766	---
1245	C15H32	n-PENTADECANE	116.5157	-8.0410E+03	-3.8799E+01	1.3398E-02	-4.4444E-13	283	707	3.429E-03
1246	C15H32O	1-PENTADECANOL	4883.7775	-1.7356E+05	-1.8909E+03	1.3107E+00	-3.4597E-04	503	723	---
1247	C15H32S	BUTYL-UNDECYL-SULFIDE	48.9050	-3.6775E+03	-1.6007E+01	8.8160E-03	-2.0298E-06	469	672	---
1248	C15H32S	DODECYL-PROPYL-SULFIDE	48.9050	-3.6775E+03	-1.6007E+01	8.8160E-03	-2.0298E-06	469	672	---
1249	C15H32S	ETHYL-TRIDECYL-SULFIDE	48.9050	-3.6775E+03	-1.6007E+01	8.8160E-03	-2.0298E-06	469	672	---
1250	C15H32S	METHYL-TETRADECYL-SULFIDE	48.9050	-3.6775E+03	-1.6007E+01	8.8160E-03	-2.0298E-06	469	672	---
1251	C15H32S	1-PENTADECANETHIOL	159.2799	-1.0391E+04	-5.4523E+01	2.2127E-02	-2.3039E-06	449	765	---

$\log_{10} P = A + B/T + C \log_{10} T + D T + E T^2$ (P - mm Hg, T - K)

NO	FORMULA	NAME	A	B	C	D	E	T_{min}	T_{max}	P @ 25 C mm Hg
1252	C16H10	FLUORANTHENE	70.6802	-6.4840E+03	-2.2241E+01	7.2184E-03	-6.3035E-13	383	905	---
1253	C16H10	PYRENE	70.7671	-6.9413E+03	-2.1790E+01	6.0727E-03	1.5767E-12	424	936	---
1254	C16H12	1-PHENYLNAPHTHALENE	0.1631	-4.3345E+03	5.8605E+00	-1.3899E-02	5.3712E-06	318	849	---
1255	C16H20	1-n-HEXYLNAPHTHALENE	52.8437	-6.1027E+03	-1.4546E+01	4.4942E-11	1.8419E-06	255	813	3.514E-04
1256	C16H2204	DIBUTYL PHTHALATE	152.6750	-1.0754E+04	-5.1170E+01	1.6933E-02	2.4948E-14	238	781	1.091E-05
1257	C16H26	n-DECYLBENZENE	-4.4754	-4.4669E+03	9.1965E+00	-2.4010E-02	1.0848E-05	259	753	1.272E-03
1258	C16H26	PENTAETHYLBENZENE	-176.2373	2.4449E+03	7.3939E+01	-6.0885E-02	1.8275E-05	359	724	---
1259	C16H30	1-HEXADECYNE	136.7323	-7.6251E+03	-5.0137E+01	3.8522E-02	-1.2734E-05	445	724	---
1260	C16H32	n-DECYLCYCLOHEXANE	108.4769	-7.9333E+03	-3.5723E+01	1.1860E-02	-3.0571E-13	271	751	1.024E-03
1261	C16H32	1-CYCLOPENTYLUNDECANE	36.3759	-5.7482E+03	-7.1096E+00	-1.0164E-02	6.1164E-06	427	743	---
1262	C16H32	1-HEXADECENE	10.5925	-4.4210E+03	1.9605E+00	-1.2372E-02	5.5619E-06	278	722	2.638E-03
1263	C16H3202	n-HEXADECANOIC ACID	34.6559	-5.2645E+03	-8.8645E+00	2.3028E-03	-3.6120E-13	336	776	---
1264	C16H34	n-HEXADECANE	99.1091	-7.5333E+03	-3.2251E+01	1.0453E-02	1.2328E-12	291	721	1.433E-03
1265	C16H34O	DI-n-OCTYL ETHER	4.7440	-5.1545E+03	6.1040E+00	-2.2754E-02	1.0549E-05	266	707	5.171E-04
1266	C16H34O	1-HEXADECANOL	218.9440	-1.3794E+04	-7.4743E+01	2.4485E-02	2.1992E-12	322	761	---
1267	C16H34S	BUTYL-DODECYL-SULFIDE	46.4778	-3.6016E+03	-1.5078E+01	8.1055E-03	-1.8220E-06	477	691	---
1268	C16H34S	ETHYL-TETRADECYL-SULFIDE	46.4778	-3.6016E+03	-1.5078E+01	8.1055E-03	-1.8220E-06	477	691	---
1269	C16H34S	METHYL-PENTADECYL-SULFIDE	46.4778	-3.6016E+03	-1.5078E+01	8.1055E-03	-1.8220E-06	477	691	---
1270	C16H34S	OCTYL-SULFIDE	46.4778	-3.6016E+03	-1.5078E+01	8.1055E-03	-1.8220E-06	477	691	---
1271	C16H34S	PROPYL-TRIDECYL-SULFIDE	46.4778	-3.6016E+03	-1.5078E+01	8.1055E-03	-1.8220E-06	477	691	---
1272	C16H34S	1-HEXADECANETHIOL	146.3286	-1.0322E+04	-4.8992E+01	1.6719E-02	-6.5786E-07	461	775	---
1273	C16H34S2	OCTYL-DISULFIDE	281.8096	-1.5461E+04	-1.0076E+02	4.9300E-02	-8.3216E-06	469	784	---
1274	C17H28	n-UNDECYLBENZENE	124.1549	-8.8970E+03	-4.1223E+01	1.3662E-02	-8.1321E-14	268	764	2.421E-04
1275	C17H32	1-HEPTADECYNE	226.5587	-1.0745E+04	-8.5256E+01	6.4064E-02	-1.9726E-05	457	736	---
1276	C17H34	1-CYCLOPENTYLDODECANE	18.2871	-5.4528E+03	2.8681E-01	-1.6297E-02	7.7805E-06	441	755	---
1277	C17H34	1-CYCLOHEXYLUNDECANE	30.3012	-5.6687E+03	-4.7892E+00	-1.1229E-02	6.0766E-06	440	762	---
1278	C17H34	1-HEPTADECENE	87.0835	-7.7982E+03	-2.6138E+01	1.9006E-09	4.5584E-06	284	736	4.536E-04
1279	C17H36	n-HEPTADECANE	173.4039	-1.0943E+04	-5.9212E+01	2.0705E-02	-1.3433E-12	295	733	2.273E-04
1280	C17H36O	1-HEPTADECANOL	-2.1471	-6.6524E+03	1.1311E+01	-3.3612E-02	1.3573E-05	327	770	---
1281	C17H36S	BUTYL-TRIDECYL-SULFIDE	44.3249	-3.5329E+03	-1.4258E+01	7.4918E-03	-1.6466E-06	485	709	---
1282	C17H36S	ETHYL-PENTADECYL-SULFIDE	44.3249	-3.5329E+03	-1.4258E+01	7.4918E-03	-1.6466E-06	485	709	---
1283	C17H36S	HEXADECYL-METHYL-SULFIDE	44.3249	-3.5329E+03	-1.4258E+01	7.4918E-03	-1.6466E-06	485	709	---
1284	C17H36S	PROPYL-TETRADECYL-SULFIDE	44.3249	-3.5329E+03	-1.4258E+01	7.4918E-03	-1.6466E-06	485	709	---
1285	C17H36S	1-HEPTADECANETHIOL	98.9718	-8.9675E+03	-3.0316E+01	3.1006E-03	2.8533E-06	471	786	---
1286	C18H12	CHRYSENE	-50.1566	-3.4381E+03	2.5178E+01	-2.4620E-02	7.0144E-06	531	979	---
1287	C18H14	m-TERPHENYL	-14.7175	-4.3577E+03	1.1935E+01	-1.8441E-02	6.4370E-06	360	925	---
1288	C18H14	o-TERPHENYL	-8.0641	-4.0928E+03	9.1076E+00	-1.6326E-02	6.0467E-06	329	891	---
1289	C18H14	p-TERPHENYL	-39.6342	-3.2661E+03	2.1080E+01	-2.2574E-02	6.9092E-06	485	926	---
1290	C18H15P	TRIPHENYLPHOSPHINE	-2.5257	-4.7269E+03	6.7467E+00	-1.2384E-02	4.1401E-06	354	****	---
1291	C18H1504P	TRIPHENYL PHOSPHATE	28.0972	-5.6684E+03	-5.9768E+00	-3.1567E-09	1.0751E-12	323	687	---
1292	C18H16N2	N,N'-DIPHENYL-p-PHENYLENEDIAMINE	-19.7400	-5.5157E+03	1.5157E+01	-2.3357E-02	7.8058E-06	409	906	---
1293	C18H22	2,3-DIMETHYL-2,3-DIPHENYLBUTANE	90.1236	-7.2210E+03	-2.8976E+01	8.9691E-03	-4.1974E-13	392	805	---
1294	C18H2202	DICUMYL PEROXIDE	20.0849	-1.6206E+03	-5.7800E+00	2.3158E-03	1.2360E-12	311	669	---
1295	C18H30	n-DODECYLBENZENE	145.6916	-1.0165E+04	-4.8761E+01	1.5985E-02	4.8810E-13	276	774	5.102E-05
1296	C18H30	HEXAETHYLBENZENE	10.9941	-3.9288E+03	7.7647E-01	-8.2286E-03	4.0556E-06	407	735	---
1297	C18H3202	LINOLEIC ACID	40.6453	-7.5442E+03	-7.5552E+00	-1.0656E-02	5.2640E-06	268	628	8.664E-07
1298	C18H34	1-OCTADECYNE	329.5375	-1.4335E+04	-1.2543E+02	9.2940E-02	-2.7568E-05	469	747	---
1299	C18H3402	OLEIC ACID	78.6973	-8.8227E+03	-2.2472E+01	4.8353E-11	2.6578E-06	287	633	5.453E-07
1300	C18H3404	DIBUTYL SEBACATE	25.1840	-6.3289E+03	-2.7197E+00	-1.0001E-02	4.3607E-06	274	768	4.293E-06
1301	C18H3404	DIHEXYL ADIPATE	12.9950	-6.6542E+03	3.9639E+00	-2.3327E-02	1.0417E-05	259	767	2.857E-06
1302	C18H36	1-CYCOPENTYLTRIDECANE	-12.7007	-4.7034E+03	1.2652E+01	-2.5643E-02	1.0193E-05	453	766	---
1303	C18H36	1-CYCLOHEXYLDODECANE	20.2835	-5.6053E+03	-6.1610E-01	-1.4798E-02	7.0062E-06	452	773	---
1304	C18H36	1-OCTADECENE	125.2363	-1.0086E+04	-3.8883E+01	-1.1233E-09	7.1580E-06	291	748	6.744E-05
1305	C18H3602	STEARIC ACID	-40.3638	-4.7724E+03	2.4502E+01	-3.7665E-02	1.4595E-05	343	799	---
1306	C18H38	n-OCTADECANE	-15.0772	-4.8702E+03	1.4501E+01	-3.1625E-02	1.3478E-05	301	745	---
1307	C18H38O	DINONYL ETHER	32.8943	-6.3222E+03	-5.3308E+00	-1.0980E-02	5.5688E-06	273	591	5.249E-05
1308	C18H38O	1-OCTADECANOL	30.1086	-7.2605E+03	-2.9558E+00	-1.5338E-02	6.1296E-06	331	777	---
1309	C18H38S	BUTYL-TETRADECYL-SULFIDE	42.3262	-3.4681E+03	-1.3499E+01	6.9364E-03	-1.4913E-06	493	727	---
1310	C18H38S	ETHYL-HEXADECYL-SULFIDE	42.3262	-3.4681E+03	-1.3499E+01	6.9364E-03	-1.4913E-06	493	727	---
1311	C18H38S	HEPTADECYL-METHYL-SULFIDE	42.3262	-3.4681E+03	-1.3499E+01	6.9364E-03	-1.4913E-06	493	727	---
1312	C18H38S	NONYL-SULFIDE	42.3262	-3.4681E+03	-1.3499E+01	6.9364E-03	-1.4913E-06	493	727	---
1313	C18H38S	PENTADECYL-PROPYL-SULFIDE	42.3262	-3.4681E+03	-1.3499E+01	6.9364E-03	-1.4913E-06	493	727	---
1314	C18H38S	1-OCTADECANETHIOL	58.7548	-7.8553E+03	-1.4451E+01	-8.3488E-03	5.7427E-06	482	795	---
1315	C18H38S2	NONYL-DISULFIDE	193.1989	-1.3103E+04	-6.5470E+01	2.2376E-02	-1.1247E-06	488	802	---
1316	C19H26	1-n-NONYLNAPHTHALENE	9.5431	-4.9776E+03	2.4344E+00	-1.2052E-02	4.8826E-06	284	849	5.160E-05
1317	C19H32	n-TRIDECYLBENZENE	160.3924	-1.1093E+04	-5.3875E+01	1.7532E-02	3.7270E-13	283	783	1.271E-05

$\log_{10} P = A + B/T + C \log_{10} T + D T + E T^2$ (P - mm Hg, T - K)

NO	FORMULA	NAME	A	B	C	D	E	T_{min}	T_{max}	P @ 25 C mm Hg
1318	C19H36	1-NONADECYNE	448.8162	-1.8597E+04	-1.7170E+02	1.2507E-01	-3.6011E-05	481	759	---
1319	C19H3602	METHYL OLEATE	79.3010	-8.3180E+03	-2.2989E+01	1.4073E-09	3.1603E-06	293	764	6.284E-06
1320	C19H38	1-CYCLOPENTYLTETRADECANE	-110.6422	-1.5625E+03	5.0810E+01	-5.1913E-02	1.6687E-05	465	772	---
1321	C19H38	1-CYCLOHEXYLTRIDECANE	-5.4644	-4.9857E+03	9.6230E+00	-2.2358E-02	8.9036E-06	464	783	---
1322	C19H38	1-NONADECENE	95.5175	-8.7380E+03	-2.8710E+01	-7.3561E-10	4.6274E-06	297	760	3.806E-05
1323	C19H3802	NONADECANOIC ACID	-165.8469	-6.3582E+03	8.5521E+01	-1.2752E-01	4.9131E-05	341	810	---
1324	C19H40	n-NONADECANE	76.7647	-7.7205E+03	-2.2376E+01	6.5102E-11	3.1141E-06	305	756	---
1325	C19H40O	1-NONADECANOL	3144.6124	-1.2162E+05	-1.1981E+03	7.5841E-01	-1.8279E-04	547	775	---
1326	C19H40S	BUTYL-PENTADECYL-SULFIDE	40.6881	-3.4142E+03	-1.2881E+01	6.4926E-03	-1.3696E-06	500	743	---
1327	C19H40S	ETHYL-HEPTADECYL-SULFIDE	40.6881	-3.4142E+03	-1.2881E+01	6.4926E-03	-1.3696E-06	500	743	---
1328	C19H40S	HEXADECYL-PROPYL-SULFIDE	40.6881	-3.4142E+03	-1.2881E+01	6.4926E-03	-1.3696E-06	500	743	---
1329	C19H40S	METHYL-OCTADECYL-SULFIDE	40.6881	-3.4142E+03	-1.2881E+01	6.4926E-03	-1.3696E-06	500	743	---
1330	C19H40S	1-NONADECANETHIOL	5.7906	-6.1701E+03	6.0897E+00	-2.1963E-02	8.9263E-06	492	805	---
1331	C20H16	TRIPHENYLETHYLENE	1.1386	-4.9715E+03	5.6613E+00	-1.3449E-02	4.8480E-06	342	908	---
1332	C20H28	1-n-DECYLNAPHTHALENE	9.7493	-5.1523E+03	2.4619E+00	-1.2244E-02	4.8981E-06	288	859	2.214E-05
1333	C20H3002	ABIETIC ACID	36.2755	-6.3461E+03	-8.7558E+00	1.5404E-06	2.3687E-06	447	650	---
1334	C20H31N	DEHYDROABIETYLAMINE	4.4503	-5.4572E+03	5.0824E+00	-1.5481E-02	5.9302E-06	318	863	---
1335	C20H34	1-PHENYLTETRADECANE	305.7678	-1.6591E+04	-1.0971E+02	5.4580E-02	-9.5588E-06	478	792	---
1336	C20H38	1-EICOSYNE	603.4276	-2.4137E+04	-2.3157E+02	1.6619E-01	-4.6732E-05	492	770	---
1337	C20H40	1-CYCLOPENTYLPENTADECANE	-161.1344	3.3660E+01	7.0326E+01	-6.4380E-02	1.9394E-05	476	780	---
1338	C20H40	1-CYCLOHEXYLTETRADECANE	-31.0024	-4.3362E+03	1.9690E+01	-2.9411E-02	1.0569E-05	476	793	---
1339	C20H40	1-EICOSENE	142.6341	-1.0430E+04	-4.7275E+01	1.4711E-02	1.0584E-12	302	771	---
1340	C20H42	n-EICOSANE	19.4193	-5.8699E+03	-4.4282E-01	-1.2606E-02	5.2241E-06	310	767	---
1341	C20H42O	1-EICOSANOL	112.0728	-1.1079E+04	-3.3201E+01	2.9672E-09	3.3864E-06	339	792	---
1342	C20H42S	BUTYL-HEXADECYL-SULFIDE	39.2403	-3.3660E+03	-1.2337E+01	6.1075E-03	-1.2656E-06	506	759	---
1343	C20H42S	DECYL-SULFIDE	39.2403	-3.3660E+03	-1.2337E+01	6.1075E-03	-1.2656E-06	506	759	---
1344	C20H42S	ETHYL-OCTADECYL-SULFIDE	39.2403	-3.3660E+03	-1.2337E+01	6.1075E-03	-1.2656E-06	506	759	---
1345	C20H42S	HEPTADECYL-PROPYL-SULFIDE	39.2403	-3.3660E+03	-1.2337E+01	6.1075E-03	-1.2656E-06	506	759	---
1346	C20H42S	METHYL-NONADECYL-SULFIDE	39.2403	-3.3660E+03	-1.2337E+01	6.1075E-03	-1.2656E-06	506	759	---
1347	C20H42S	1-EICOSANETHIOL	-43.9590	-4.5256E+03	2.5230E+01	-3.4015E-02	1.1570E-05	502	815	---
1348	C20H42S2	DECYL-DISULFIDE	72.7420	-9.3678E+03	-1.8552E+01	-9.3714E-03	6.4158E-06	508	820	---
1349	C21H2104P	TRI-o-CRESYL PHOSPHATE	21.1624	-5.2756E+03	-3.3565E+00	8.6660E-06	-2.9202E-09	428	566	---
1350	C21H36	1-PHENYLPENTADECANE	318.9977	-1.7673E+04	-1.1386E+02	5.4021E-02	-8.7250E-06	489	800	---
1351	C21H42	1-CYCLOPENTYLHEXADECANE	-187.5470	7.5766E+02	8.0621E+01	-7.1155E-02	2.0926E-05	488	797	---
1352	C21H42	1-CYCLOHEXYLPENTADECANE	-89.1311	-2.4564E+03	4.2178E+01	-4.4101E-02	1.3952E-05	486	803	---
1353	C22H38	1-PHENYLHEXADECANE	301.1363	-1.7645E+04	-1.0606E+02	4.5880E-02	-6.1587E-06	500	808	---
1354	C22H44	1-CYCLOHEXYLHEXADECANE	-150.0216	-4.2008E+02	6.5603E+01	-5.8899E-02	1.7241E-05	497	813	---
1355	C22H4402	n-BUTYL STEARATE	-0.7975	-5.9182E+03	8.9492E+00	-2.5746E-02	1.0847E-05	299	764	---
1356	C24H3804	DIISOOCTYL PHTHALATE	24.8803	-7.5821E+03	-1.2216E+00	-1.5470E-02	6.5101E-06	260	851	2.475E-08
1357	C24H3804	DIOCTYL PHTHALATE	27.8473	-7.6834E+03	-2.1134E+00	-1.5234E-02	6.2365E-06	298	806	7.244E-08
1358	C24H42O	DINONYLPHENOL	-0.7422	-7.2012E+03	8.9887E+00	-2.2697E-02	8.2181E-06	350	886	---
1359	C26H20	TETRAPHENYLETHYLENE	-35.5767	-4.7226E+03	2.0148E+01	-2.2596E-02	6.5760E-06	496	996	---
1360	C28H4604	DIISODECYL PHTHALATE	81.7895	-7.4225E+03	-2.6916E+01	1.1502E-02	-4.3530E-14	233	723	5.267E-07

Table 2-2 EXAMPLES

Example 1 Estimate the vapor pressure of methanol (CH4O) at a temperature of 25.13 C (298.28 K).

Substitution of the coefficients and temperature into the equation for vapor pressure yields:

$$\log_{10} P = 45.6171 - 3.2447E+03/298.28 - 1.3988E+01*\log_{10}(298.28) + 6.6365E-03*298.28 - 1.0507E-13*298.28^2$$

$$= 2.1034$$

$$P = 126.88 \text{ mm Hg}$$

The calculated and data values compare favorably (126.88 vs 127.90, deviation = 0.80%).

Example 2 Estimate the vapor pressure of acetone (C3H60) at a temperature of 47.35 C (320.50 K).

Substitution of the coefficients and temperature into the equation for vapor pressure yields:

$$\log_{10} P = 28.5884 - 2.4690E+03/320.50 - 7.3510E+00*\log_{10}(320.50) + 2.8025E-10*320.50 + 2.7361E06*320.50^2$$

$$= 2.7456$$

$$P = 556.71 \text{ mm Hg}$$

The calculated and data values compare favorably (556.71 vs 558.40, deviation = 0.30%).

Table 2-3 COMPUTER PROGRAM RESULTS

VAPOR PRESSURE

COMPOUND: 493 C6H6 BENZENE

LOG P = A+B/T+C*LOG(T)+D*T+E*T^2	A = 31.7718
P = VAPOR PRESSUE, mm HG	B = -2725.4
T = TEMPERATURE, K	C = -8.4443
LOG = LOGARITHM TO BASE 10	D = -5.3534E-09
TMIN = 278.68 TMAX = 562.16	E = 2.7187E-06

TEMP K	VAPOR PRESSURE mm HG
280	38.62
298.15	94.97
300	103.34
320	239.38
340	493.89
360	927.69
380	1613.64
400	2634.60
420	4081.55
440	6052.57
460	8652.99
480	12.00E+03
500	16.21E+03
520	21.43E+03
540	27.82E+03
560	35.57E+03
562.16	36.50E+03

Chapter 3

EXPLOSIVE LIMITS IN AIR

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ABSTRACT

Results for lower and upper explosive (flammable) limits in air are presented for major organic chemical compounds. The results are displayed in an easy-to-use table which is especially applicable for rapid engineering usage. The organic chemicals encompass hydrocarbon, oxygen, nitrogen, halogen, silicon, sulfur and other chemical type compounds.

EXPLOSIVE LIMITS IN AIR

The results for lower (LEL) and upper (UEL) explosive limits in air are presented in Table 3-1. The LEL and UEL values are the lower and upper concentrations (expressed as volume %) for flammability. The tabulation also provides the freezing and boiling point temperatures which are helpful in determining whether the substance is a gas, liquid or solid at ambient conditions. The tabulation is based on both experimental data and estimated values.

A comparison of estimates and data is shown in Figure 3-1 for normal alkanes. The graph discloses favorable agreement.

In the data collection, a literature search was conducted to identify data source publications (1-59). The publications were screened and copies of appropriate data were made. These data were then keyed into the computer to provide a data base for which experimental data are available. The data base also served as a basis to check the accuracy of the estimation methods.

Upon completion of data collection, estimation of values for the remaining compounds was performed. The estimates are primarily based on the methods of Shebeko (16) and Jones (2). The Jones method (regression of the stoichiometric concentrations for volume % fuel in fuel plus air) is shown below:

$$C_mH_xO_y + z\,O_2 \text{ -----> } m\,CO_2 + x/2\,H_2O$$

$$LEL,\ \% = 0.55\,(100)/(4.76m + 1.19x + 1 - 2.38y) \quad (3\text{-}1)$$

$$UEL,\ \% = 3.50\,(100)/(4.76m + 1.19x + 1 - 2.38y) \quad (3\text{-}2)$$

Evaluation of the above equations with normal alkanes disclosed favorable agreement of estimates and data. For lower explosive limit, very favorable agreement was experienced for small, intermediate and large size alkanes. For upper explosive limit, rough agreement was experienced for small and large size alkanes. More favorable agreement was experienced for intermediate size alkanes.

The lower and upper explosive limits in air are often needed for gas mixtures. The Le Chatelier equation (2) for gas mixtures is:

$$LEL_{mixture},\ \% = 1 / \Sigma\,(y_i/LEL_i) \quad (3\text{-}3)$$

$$UEL_{mixture},\ \% = 1 / \Sigma\,(y_i/UEL_i) \quad (3\text{-}4)$$

where y_i = mole fraction of component i on a combustible basis

EXAMPLES

The tabulated values maybe used in engineering applications involving pure components and mixtures in air. Examples are shown in Table 3-2.

COMPUTER PROGRAM

A computer program, containing the data for all compounds, is available for a nominal fee (Carl L. Yaws, Box 10053, Lamar University, Beaumont, TX 77710, phone/FAX 409-880-8787). The computer program (random data file) is in ASCII which can be accessed by other software.

Computer program results for a representative compound are shown in Table 3-3.

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Figure 3-1 LOWER EXPLOSIVE LIMIT FOR NORMAL ALKANES

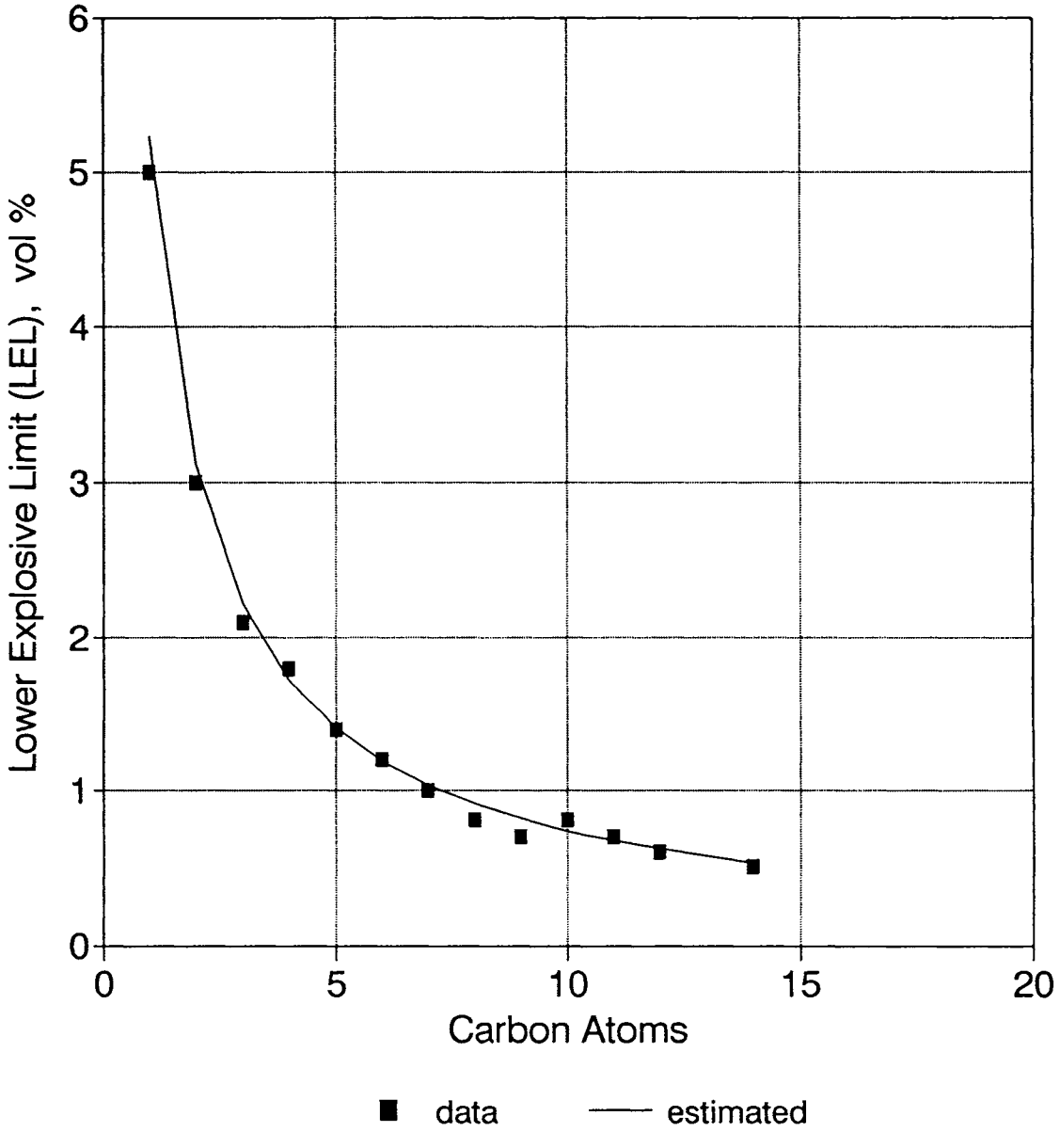

Table 3-1 EXPLOSIVE LIMITS IN AIR

LEL - Lower Explosive Limit
UEL - Upper Explosive Limit

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	LEL vol %	UEL vol %
1	CBrClF2	BROMOCHLORODIFLUOROMETHANE	165.365	-255.10	24.78	-	--	--
2	CBrCl3	BROMOTRICHLOROMETHANE	198.273	-5.80	220.82	-	--	--
3	CBrF3	BROMOTRIFLUOROMETHANE	148.910	-270.40	-72.20	-	--	--
4	CBr2F2	DIBROMODIFLUOROMETHANE	209.816	-166.18	73.02	-	--	--
5	CClF3	CHLOROTRIFLUOROMETHANE	104.459	-293.80	-114.54	-	--	--
6	CClN	CYANOGEN CHLORIDE	61.470	20.30	55.13	2	--	23.5
7	CCl2F2	DICHLORODIFLUOROMETHANE	120.913	-252.40	-21.62	-	--	--
8	CCl2O	PHOSGENE	98.916	-198.00	45.61	-	--	--
9	CCl3F	TRICHLOROFLUOROMETHANE	137.368	-168.00	74.88	-	--	--
10	CCl4	CARBON TETRACHLORIDE	153.822	-9.08	169.95	-	--	--
11	CF2O	CARBONYL FLUORIDE	66.007	-168.27	-120.23	-	--	--
12	CF4	CARBON TETRAFLUORIDE	88.005	-298.46	-198.51	-	--	--
13	CHBr3	TRIBROMOMETHANE	252.731	46.49	300.56	2	--	35.3
14	CHClF2	CHLORODIFLUOROMETHANE	86.468	-251.36	-41.49	2	--	26.9
15	CHCl2F	DICHLOROFLUOROMETHANE	102.923	-211.00	48.02	2	--	54.7
16	CHCl3	CHLOROFORM	119.377	-82.34	142.12	2	--	12.9
17	CHF3	TRIFLUOROMETHANE	70.014	-247.32	-115.89	2	--	35.3
18	CHI3	TRIIODOMETHANE	393.732	253.42	424.42	-	--	--
19	CHN	HYDROGEN CYANIDE	27.026	8.17	78.26	1	6.0	41.0
20	CHNS	ISOTHIOCYANIC-ACID	59.086	-----	-----	-	--	--
21	CH2BrCl	BROMOCHLOROMETHANE	129.384	-126.31	154.49	2	--	22.6
22	CH2Br2	DIBROMOMETHANE	173.835	-62.59	206.51	2	--	27.2
23	CH2ClF	CHLOROFLUOROMETHANE	68.478	-207.38	15.64	-	--	--
24	CH2Cl2	DICHLOROMETHANE	84.932	-139.25	103.55	1	15.5	66.0
25	CH2F2	DIFLUOROMETHANE	52.024	-213.07	-60.97	2	--	27.2
26	CH2I2	DIIODOMETHANE	267.836	42.98	359.60	-	--	--
27	CH2O	FORMALDEHYDE	30.026	-133.60	-2.38	1	7.0	73.0
28	CH2O2	FORMIC ACID	46.026	47.12	213.01	1	18.0	57.0
29	CH3Br	METHYL BROMIDE	94.939	-136.48	38.41	1	10.0	16.0
30	CH3Cl	METHYL CHLORIDE	50.488	-143.86	-11.60	1	10.7	17.4
31	CH3Cl3Si	METHYL TRICHLOROSILANE	149.478	-108.04	151.52	1	5.1	--
32	CH3F	METHYL FLUORIDE	34.033	-223.24	-108.99	2	--	22.2
33	CH3I	METHYL IODIDE	141.939	-87.61	108.37	-	--	--
34	CH3NO	FORMAMIDE	45.041	36.59	427.73	2	7.0	29.3
35	CH3NO2	NITROMETHANE	61.040	-19.39	214.16	1	7.3	22.2
36	CH3NO2	METHYL-NITRITE	61.040	1.42	10.42	-	--	--
37	CH3NO3	METHYL-NITRATE	77.040	-116.12	150.82	-	--	--
38	CH4	METHANE	16.043	-296.46	-258.68	1	5.0	15.0
39	CH4Cl2Si	METHYL DICHLOROSILANE	115.034	-131.08	106.79	1	3.4	--
40	CH4O	METHANOL	32.042	-143.82	148.46	1	7.3	36.0
41	CH4O3S	METHANESULFONIC ACID	96.107	67.39	550.13	-	--	--
42	CH4S	METHYL MERCAPTAN	48.109	-189.35	42.73	1	3.9	21.8
43	CH5ClSi	METHYL CHLOROSILANE	80.589	-209.38	47.66	2	5.9	--
44	CH5N	METHYLAMINE	31.057	-136.23	20.61	1	4.9	20.7
45	CH6Si	METHYL SILANE	46.144	-250.26	-70.42	2	4.3	--
46	CN4O8	TETRANITROMETHANE	196.033	57.02	258.26	-	--	--
47	CO	CARBON MONOXIDE	28.010	-337.00	-312.61	1	12.5	74.0
48	COS	CARBONYL SULFIDE	60.076	-217.84	-58.27	1	12.0	29.0
49	CO2	CARBON DIOXIDE	44.010	-69.83	-109.26	-	--	--
50	CS2	CARBON DISULFIDE	76.143	-168.83	115.20	1	1.3	50.0
51	C2BrF3	BROMOTRIFLUOROETHYLENE	160.921	-----	27.50	2	--	37.0
52	C2Br2F4	1,2-DIBROMOTETRAFLUOROETHANE	259.824	-166.90	117.07	-	--	--
53	C2ClF3	CHLOROTRIFLUOROETHYLENE	116.470	-252.67	-18.13	1	8.4	38.7
54	C2ClF5	CHLOROPENTAFLUOROETHANE	154.467	-146.99	-38.40	-	--	--
55	C2Cl2F4	1,2-DICHLOROTETRAFLUOROETHANE	170.921	-137.20	38.79	-	--	--
56	C2Cl3F3	1,1,2-TRICHLOROTRIFLUOROETHANE	187.375	-31.00	117.68	-	--	--
57	C2Cl4	TETRACHLOROETHYLENE	165.833	-8.23	250.25	-	--	--
58	C2Cl4F2	1,1,2,2-TETRACHLORODIFLUOROETHANE	203.830	78.80	199.13	-	--	--
59	C2Cl4O	TRICHLOROACETYL CHLORIDE	181.832	-----	244.40	-	--	--
60	C2Cl6	HEXACHLOROETHANE	236.738	368.24	368.33	-	--	--
61	C2F4	TETRAFLUOROETHYLENE	100.016	-204.07	-104.15	1	11.0	60.0
62	C2F6	HEXAFLUOROETHANE	138.012	-149.26	-108.76	-	--	--
63	C2HBrClF3	HALOTHANE	197.382	-----	122.36	-	--	--

LEL - Lower Explosive Limit
UEL - Upper Explosive Limit

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	LEL vol %	UEL vol %
64	C2HClF2	2-CHLORO-1,1-DIFLUOROETHYLENE	98.479	-217.30	-1.48	2	--	26.2
65	C2HCl3	TRICHLOROETHYLENE	131.388	-120.55	188.51	1	8.0	10.5
66	C2HCl3O	DICHLOROACETYL CHLORIDE	147.387	-459.67	228.20	-	--	31.7
67	C2HCl3O	TRICHLOROACETALDEHYDE	147.387	-70.87	207.86	2	7.8	14.7
68	C2HCl5	PENTACHLOROETHANE	202.293	-20.20	319.78	-	--	--
69	C2HF3	TRIFLUOROETHENE	82.025	-289.52	-61.85	-	--	--
70	C2HF3O2	TRIFLUOROACETIC ACID	114.024	4.55	161.24	2	--	28.0
71	C2HF5	PENTAFLUOROETHANE	120.022	-153.40	-54.40	-	--	--
72	C2H2	ACETYLENE	26.038	-113.35	-119.47	1	2.5	80.0
73	C2H2Br4	1,1,2,2-TETRABROMOETHANE	345.654	32.00	470.30	2	--	24.5
74	C2H2Cl2	1,1-DICHLOROETHYLENE	96.943	-188.50	88.81	1	7.3	16.0
75	C2H2Cl2	cis-1,2-DICHLOROETHYLENE	96.943	-112.00	140.90	1	5.6	12.8
76	C2H2Cl2	trans-1,2-DICHLOROETHYLENE	96.943	-57.64	117.86	1	5.6	12.8
77	C2H2Cl2O	CHLOROACETYL CHLORIDE	112.943	-7.60	222.80	2	--	16.3
78	C2H2Cl2O	DICHLOROACETALDEHYDE	112.943	-58.27	191.93	2	9.0	29.0
79	C2H2Cl2O2	DICHLOROACETIC ACID	128.942	56.12	381.20	2	11.9	43.3
80	C2H2Cl3F	1,1,1-TRICHLOROFLUOROETHANE	151.394	-----	199.13	-	--	--
81	C2H2Cl4	1,1,1,2-TETRACHLOROETHANE	167.849	-94.38	266.90	2	4.9	12.1
82	C2H2Cl4	1,1,2,2-TETRACHLOROETHANE	167.849	-46.84	293.18	-	--	--
83	C2H2F2	1,1-DIFLUOROETHYLENE	64.035	-227.20	-122.17	1	5.5	21.3
84	C2H2F2	cis-1,2-DIFLUOROETHENE	64.035	-265.45	-13.52	-	--	--
85	C2H2F2	trans-1,2-DIFLUOROETHENE	64.035	-265.45	-13.52	-	--	--
86	C2H2F4	1,1,1,2-TETRAFLUOROETHANE	102.031	-149.80	-14.80	-	--	--
87	C2H2O	KETENE	42.037	-240.07	-57.66	-	--	--
88	C2H2O4	OXALIC ACID	90.036	373.10	564.53	2	8.5	28.0
89	C2H3Br	VINYL BROMIDE	106.950	-216.04	60.44	1	9.0	15.0
90	C2H3Cl	VINYL CHLORIDE	62.499	-244.82	7.93	1	3.6	33.0
91	C2H3ClF2	1-CHLORO-1,1-DIFLUOROETHANE	100.495	-203.44	13.98	1	6.2	17.9
92	C2H3ClO	ACETYL CHLORIDE	78.498	-171.13	123.35	2	5.7	15.6
93	C2H3ClO	CHLOROACETALDEHYDE	78.498	-----	184.73	2	5.7	18.4
94	C2H3ClO2	CHLOROACETIC ACID	94.497	140.00	372.83	-	--	--
95	C2H3ClO2	METHYL CHLOROFORMATE	94.497	-----	159.53	1	6.7	15.6
96	C2H3Cl3	1,1,1-TRICHLOROETHANE	133.404	-22.72	165.34	1	8.0	10.5
97	C2H3Cl3	1,1,2-TRICHLOROETHANE	133.404	-33.97	236.93	2	8.6	27.8
98	C2H3F	VINYL FLUORIDE	46.044	-256.90	-97.96	1	2.6	21.7
99	C2H3F3	1,1,1-TRIFLUOROETHANE	84.041	-168.34	-53.32	2	--	20.5
100	C2H3N	ACETONITRILE	41.053	-46.89	178.88	1	4.4	16.0
101	C2H3NO	METHYL ISOCYANATE	57.052	1.40	101.93	1	5.3	26.0
102	C2H4	ETHYLENE	28.054	-272.45	-154.62	1	2.7	36.0
103	C2H4Br2	1,1-DIBROMOETHANE	187.862	-81.40	226.40	2	3.9	20.5
104	C2H4Br2	1,2-DIBROMOETHANE	187.862	49.62	268.45	-	--	--
105	C2H4Cl2	1,1-DICHLOROETHANE	98.959	-142.53	135.14	1	5.4	11.4
106	C2H4Cl2	1,2-DICHLOROETHANE	98.959	-32.19	182.19	1	6.2	16.0
107	C2H4Cl2O	BIS(CHLOROMETHYL)ETHER	114.959	-42.70	220.73	2	6.5	21.9
108	C2H4F2	1,1-DIFLUOROETHANE	66.051	-178.60	-14.44	1	3.7	18.0
109	C2H4F2	1,2-DIFLUOROETHANE	66.051	-----	86.90	2	4.6	21.5
110	C2H4I2	1,2-DIIODOETHANE	281.863	181.42	392.02	-	--	--
111	C2H4O	ACETALDEHYDE	44.053	-189.40	68.72	1	1.6	10.4
112	C2H4O	ETHYLENE OXIDE	44.053	-169.06	51.26	1	3.0	--
113	C2H4OS	THIOACETIC-ACID	76.113	-189.38	188.62	-	--	--
114	C2H4O2	ACETIC ACID	60.053	61.99	244.22	1	5.4	16.0
115	C2H4O2	METHYL FORMATE	60.053	-146.20	89.15	1	5.9	20.0
116	C2H4S	THIACYCLOPROPANE	60.114	-162.00	130.86	-	--	--
117	C2H5Br	BROMOETHANE	108.966	-181.48	101.03	1	6.7	11.3
118	C2H5Cl	ETHYL CHLORIDE	64.514	-213.52	54.09	1	3.8	15.4
119	C2H5ClO	2-CHLOROETHANOL	80.514	-89.50	263.48	1	4.9	15.9
120	C2H5F	ETHYL FLUORIDE	48.060	-225.76	-35.86	2	--	17.3
121	C2H5I	ETHYL IODIDE	155.966	-167.98	162.14	-	--	--
122	C2H5N	ETHYLENEIMINE	43.068	-108.31	132.53	1	3.3	5.4
123	C2H5NO	ACETAMIDE	59.068	177.80	430.07	2	3.6	20.5
124	C2H5NO	N-METHYLFORMAMIDE	59.068	25.16	391.12	2	3.6	18.6
125	C2H5NO2	NITROETHANE	75.067	-129.14	237.33	1	3.4	17.3
126	C2H5NO3	ETHYL-NITRATE	91.066	-138.26	188.98	-	--	--
127	C2H6	ETHANE	30.070	-297.04	-127.48	1	3.0	12.5
128	C2H6AlCl	DIMETHYLALUMINUM CHLORIDE	92.054	-5.80	258.80	-	--	--
129	C2H6O	DIMETHYL ETHER	46.069	-222.68	-12.71	1	3.4	18.0

LEL - Lower Explosive Limit
UEL - Upper Explosive Limit

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	LEL vol %	UEL vol %
130	C2H6O	ETHANOL	46.069	-173.38	172.92	1	4.3	19.0
131	C2H6OS	DIMETHYL SULFOXIDE	78.135	65.34	372.20	1	2.6	28.5
132	C2H6O2	ETHYLENE GLYCOL	62.068	8.60	387.14	1	3.2	21.6
133	C2H6O4S	DIMETHYL SULFATE	126.133	-25.24	371.84	-	--	--
134	C2H6S	DIMETHYL SULFIDE	62.136	-144.89	99.19	1	2.2	19.7
135	C2H6S	ETHYL MERCAPTAN	62.136	-234.20	95.00	1	2.8	18.0
136	C2H6S2	DIMETHYL DISULFIDE	94.202	-120.48	229.55	2	1.9	--
137	C2H7N	DIMETHYLAMINE	45.084	-133.94	44.38	1	2.8	14.4
138	C2H7N	ETHYLAMINE	45.084	-113.80	61.84	1	3.5	14.0
139	C2H7NO	MONOETHANOLAMINE	61.084	50.90	339.80	2	3.1	21.6
140	C2H8N2	ETHYLENEDIAMINE	60.099	52.05	243.07	1	4.2	14.4
141	C2H8Si	DIMETHYL SILANE	60.171	-238.40	-3.28	2	2.7	83.0
142	C2N2	CYANOGEN	52.036	-18.22	-6.07	1	6.0	32.0
143	C3F6	HEXAFLUOROPROPYLENE	150.023	-249.70	-21.28	2	--	28.3
144	C3F6O	HEXAFLUOROACETONE	166.023	-187.60	-17.09	-	--	--
145	C3F8	OCTAFLUOROPROPANE	188.020	-233.84	-34.15	-	--	--
146	C3H2N2	MALONONITRILE	66.062	89.15	425.03	2	2.9	19.0
147	C3H3Cl	PROPARGYL CHLORIDE	74.510	-----	136.13	2	3.4	41.0
148	C3H3N	ACRYLONITRILE	53.064	-118.34	171.23	1	2.4	17.3
149	C3H3NO	OXAZOLE	69.063	-----	157.10	-	--	--
150	C3H4	METHYLACETYLENE	40.065	-152.86	-9.78	1	1.7	39.9
151	C3H4	PROPADIENE	40.065	-213.30	-30.10	1	2.1	--
152	C3H4Cl2	2,3-DICHLOROPROPENE	110.970	-114.97	198.68	1	2.6	7.8
153	C3H4O	ACROLEIN	56.064	-125.86	126.84	1	2.8	31.0
154	C3H4O	PROPARGYL ALCOHOL	56.064	-61.24	236.48	1	2.4	50.3
155	C3H4O2	ACRYLIC ACID	72.064	56.30	285.80	1	2.4	20.2
156	C3H4O2	beta-PROPIOLACTONE	72.064	-28.12	323.60	1	2.9	25.1
157	C3H4O2	VINYL FORMATE	72.064	-----	116.33	2	3.3	18.8
158	C3H4O3	ETHYLENE CARBONATE	88.063	97.52	460.40	2	3.6	25.1
159	C3H4O3	PYRUVIC ACID	88.063	56.48	329.00	2	3.6	16.6
160	C3H5Br	3-BROMO-1-PROPENE	120.977	-182.90	158.02	-	--	--
161	C3H5Cl	2-CHLOROPROPENE	76.525	-215.32	72.77	1	4.5	16.0
162	C3H5Cl	3-CHLOROPROPENE	76.525	-210.10	112.93	1	2.9	11.1
163	C3H5ClO	alpha-EPICHLOROHYDRIN	92.525	-70.96	241.00	1	3.8	21.0
164	C3H5ClO2	METHYL CHLOROACETATE	108.524	-25.82	265.68	2	3.5	12.8
165	C3H5ClO2	ETHYL CHLOROFORMATE	108.524	-114.07	199.13	2	3.5	12.8
166	C3H5Cl3	1,2,3-TRICHLOROPROPANE	147.431	5.54	314.33	1	3.2	12.6
167	C3H5I	3-IODO-1-PROPENE	167.977	-146.72	215.62	-	--	--
168	C3H5N	PROPIONITRILE	55.079	-135.20	207.23	1	3.1	14.0
169	C3H5NO	ACRYLAMIDE	71.079	184.10	378.68	2	2.7	20.6
170	C3H5NO	HYDRACRYLONITRILE	71.079	-50.80	429.80	1	2.3	12.1
171	C3H5NO	LACTONITRILE	71.079	-40.27	362.93	2	2.7	17.9
172	C3H5N3O9	NITROGLYCERINE	227.088	55.40	481.73	-	--	--
173	C3H6	CYCLOPROPANE	42.081	-197.36	-27.00	1	2.4	10.4
174	C3H6	PROPYLENE	42.081	-301.45	-53.90	1	2.0	11.0
175	C3H6Br2	1,2-DIBROMOPROPANE	201.888	-67.34	284.02	-	--	--
176	C3H6Cl2	1,1-DICHLOROPROPANE	112.986	-----	190.58	1	3.1	14.5
177	C3H6Cl2	1,2-DICHLOROPROPANE	112.986	-148.79	205.47	1	3.4	14.5
178	C3H6Cl2	1,3-DICHLOROPROPANE	112.987	-147.10	248.72	2	3.4	14.5
179	C3H6Cl2	2,2-DICHLOROPROPANE	112.986	-28.82	156.76	-	--	--
180	C3H6I2	1,2-DIIODOPROPANE	295.889	-3.98	440.62	-	--	--
181	C3H6O	ACETONE	58.080	-138.46	133.32	1	2.6	12.8
182	C3H6O	ALLYL ALCOHOL	58.080	-200.20	206.74	1	2.5	18.0
183	C3H6O	METHYL VINYL ETHER	58.080	-187.60	41.90	1	2.6	39.0
184	C3H6O	n-PROPIONALDEHYDE	58.080	-112.00	118.40	1	2.6	16.1
185	C3H6O	1,2-PROPYLENE OXIDE	58.080	-169.47	93.02	1	2.1	21.5
186	C3H6O	1,3-PROPYLENE OXIDE	58.080	-----	118.13	1	2.8	37.0
187	C3H6O2	ETHYL FORMATE	74.079	-111.28	129.76	1	2.7	13.5
188	C3H6O2	METHYL ACETATE	74.079	-144.40	134.49	1	3.1	16.0
189	C3H6O2	PROPIONIC ACID	74.079	-5.26	286.11	2	2.9	14.8
190	C3H6O2S	3-MERCAPTOPROPIONIC ACID	106.145	63.50	442.13	2	2.2	--
191	C3H6O3	LACTIC ACID	90.079	64.40	344.93	2	3.1	18.0
192	C3H6O3	METHOXYACETIC ACID	90.079	46.13	401.20	2	3.1	20.2
193	C3H6O3	TRIOXANE	90.079	142.70	238.10	1	3.6	29.0
194	C3H6S	THIACYCLOBUTANE	74.140	-99.74	202.96	-	--	--
195	C3H7Br	1-BROMOPROPANE	122.993	-166.00	159.80	2	--	13.8

LEL - Lower Explosive Limit
UEL - Upper Explosive Limit

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	LEL vol %	UEL vol %
196	C3H7Br	2-BROMOPROPANE	122.993	-128.20	138.94	2	--	13.8
197	C3H7Cl	ISOPROPYL CHLORIDE	78.541	-178.92	96.26	1	2.8	10.7
198	C3H7Cl	n-PROPYL CHLORIDE	78.541	-189.04	115.74	1	2.6	11.1
199	C3H7F	1-FLUOROPROPANE	62.087	-254.18	26.24	-	--	--
200	C3H7F	2-FLUOROPROPANE	62.087	-208.03	15.19	-	--	--
201	C3H7I	ISOPROPYL IODIDE	169.993	-130.00	193.10	-	--	--
202	C3H7I	n-PROPYL IODIDE	169.993	-150.34	216.41	-	--	--
203	C3H7N	ALLYAMINE	57.095	-126.76	127.94	1	2.2	22.0
204	C3H7N	PROPYLENEIMINE	57.095	-47.47	141.53	2	2.3	15.1
205	C3H7NO	N,N-DIMETHYLFORMAMIDE	73.095	-76.77	307.40	1	2.2	15.2
206	C3H7NO	N-METHYLACETAMIDE	73.095	82.40	401.00	2	2.4	13.9
207	C3H7NO2	1-NITROPROPANE	89.094	-155.18	268.12	1	2.2	13.8
208	C3H7NO2	2-NITROPROPANE	89.094	-132.38	248.45	1	2.6	11.0
209	C3H7NO3	PROPYL-NITRATE	105.093	-147.98	230.02	1	2.0	--
210	C3H7NO3	ISOPROPYL-NITRATE	105.093	-147.98	212.92	-	--	--
211	C3H8	PROPANE	44.096	-305.84	-43.67	1	2.1	9.5
212	C3H8O	ISOPROPANOL	60.096	-126.17	180.07	1	2.0	12.0
213	C3H8O	METHYL ETHYL ETHER	60.096	-171.67	45.23	1	2.0	10.1
214	C3H8O	n-PROPANOL	60.096	-195.16	206.96	1	2.0	12.0
215	C3H8O2	2-METHOXYETHANOL	76.095	-121.18	255.92	1	2.3	24.5
216	C3H8O2	METHYLAL	76.095	-156.64	107.33	1	1.6	17.6
217	C3H8O2	1,2-PROPYLENE GLYCOL	76.095	-76.00	369.68	1	2.6	12.5
218	C3H8O2	1,3-PROPYLENE GLYCOL	76.095	-16.06	417.92	1	2.6	16.6
219	C3H8O3	GLYCEROL	92.095	64.72	554.00	2	2.7	19.0
220	C3H8S	n-PROPYLMERCAPTAN	76.163	-171.76	153.90	2	1.8	--
221	C3H8S	ISOPROPYL MERCAPTAN	76.163	-202.97	126.61	2	1.8	--
222	C3H8S	ETHYL-METHYL-SULFIDE	76.156	-158.71	152.60	-	--	--
223	C3H9N	n-PROPYLAMINE	59.111	-117.40	119.30	1	2.0	10.4
224	C3H9N	ISOPROPYLAMINE	59.111	-139.36	90.32	1	2.0	10.4
225	C3H9N	TRIMETHYLAMINE	59.111	-178.73	37.17	1	2.0	11.6
226	C3H9NO	1-AMINO-2-PROPANOL	75.111	35.13	319.03	2	2.2	16.9
227	C3H9NO	3-AMINO-1-PROPANOL	75.111	51.80	369.50	2	2.2	16.5
228	C3H9NO	METHYLETHANOLAMINE	75.111	23.90	316.40	2	2.2	15.2
229	C3H9O4P	TRIMETHYL PHOSPHATE	140.076	-51.07	378.86	-	--	--
230	C3H10N2	1,2-PROPANEDIAMINE	74.126	-33.92	246.74	2	1.9	16.9
231	C3H10Si	TRIMETHYL SILANE	74.198	-212.60	44.06	2	2.0	--
232	C4Cl4S	TETRACHLOROTHIOPHENE	221.921	83.88	452.11	-	--	--
233	C4Cl6	HEXACHLORO-1,3-BUTADIENE	260.760	-5.80	419.00	2	--	15.7
234	C4F8	OCTAFLUORO-2-BUTENE	200.031	-211.00	26.98	2	--	18.7
235	C4F8	OCTAFLUOROCYCLOBUTANE	200.031	-40.34	21.24	-	--	--
236	C4F10	DECAFLUOROBUTANE	238.028	-198.76	28.40	-	--	--
237	C4H2	BUTADIYNE(BIACETYLENE)	50.060	-32.78	50.56	2	2.5	15.6
238	C4H2O3	MALEIC ANHYDRIDE	98.058	127.13	395.60	1	1.4	7.1
239	C4H4	VINYLACETYLENE	52.076	-----	41.18	2	2.2	31.7
240	C4H4N2	SUCCINONITRILE	80.089	136.67	512.60	2	2.1	14.4
241	C4H4O	FURAN	68.075	-122.08	88.43	1	2.3	14.3
242	C4H4O2	DIKETENE	84.075	20.30	258.89	2	2.5	16.8
243	C4H4O3	SUCCINIC ANHYDRIDE	100.074	247.73	506.17	2	2.7	20.3
244	C4H4O4	FUMARIC ACID	116.073	548.60	554.00	2	2.9	18.7
245	C4H4O4	MALEIC ACID	116.073	266.54	557.33	-	--	--
246	C4H4S	THIOPHENE	84.142	-36.78	183.49	-	--	--
247	C4H5Cl	CHLOROPRENE	88.536	-202.00	138.92	1	4.0	20.0
248	C4H5N	trans-CROTONITRILE	67.090	-60.07	250.21	2	2.1	15.5
249	C4H5N	cis-CROTONITRILE	67.090	-98.68	225.41	2	2.1	15.5
250	C4H5N	METHACRYLONITRILE	67.090	-32.44	194.54	2	2.1	15.5
251	C4H5N	PYRROLE	67.090	-10.14	265.73	1	2.0	12.0
252	C4H5N	VINYLACETONITRILE	67.090	-124.60	245.34	2	2.0	15.6
253	C4H5NO2	METHYL CYANOACETATE	99.089	8.47	401.16	2	--	13.0
254	C4H6	CYCLOBUTENE	54.091	-182.90	36.68	2	2.0	12.9
255	C4H6	1,2-BUTADIENE	54.092	-213.16	51.53	2	2.0	12.0
256	C4H6	1,3-BUTADIENE	54.092	-164.02	24.06	1	2.0	11.5
257	C4H6	DIMETHYLACETYLENE	54.092	-26.03	80.56	2	2.0	41.8
258	C4H6	ETHYLACETYLENE	54.092	-194.30	46.53	2	2.0	32.9
259	C4H6Cl2	1,3-DICHLORO-trans-2-BUTENE	124.997	-----	263.93	2	2.4	12.2
260	C4H6Cl2	1,4-DICHLORO-cis-2-BUTENE	124.997	-54.40	306.50	2	2.5	12.7
261	C4H6Cl2	1,4-DICHLORO-trans-2-BUTENE	124.997	33.80	313.00	1	1.5	4.0

LEL - Lower Explosive Limit
UEL - Upper Explosive Limit

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	LEL vol %	UEL vol %
262	C4H6Cl2	3,4-DICHLORO-1-BUTENE	124.997	-78.07	238.73	2	2.4	13.3
263	C4H6O	trans-CROTONALDEHYDE	70.091	-105.70	219.38	1	2.1	15.5
264	C4H6O	2,5-DIHYDROFURAN	70.091	-----	150.53	2	2.1	20.0
265	C4H6O	DIVINYL ETHER	70.091	-149.98	82.94	1	1.7	27.0
266	C4H6O	METHACROLEIN	70.091	-113.80	154.40	2	2.1	14.6
267	C4H6O2	2-BUTYNE-1,4-DIOL	86.090	136.13	460.40	2	2.3	35.7
268	C4H6O2	gamma-BUTYROLACTONE	86.090	-46.07	399.20	1	2.0	12.6
269	C4H6O2	cis-CROTONIC ACID	86.090	59.90	341.42	2	2.3	14.6
270	C4H6O2	trans-CROTONIC ACID	86.090	160.52	365.00	1	2.2	15.1
271	C4H6O2	METHACRYLIC ACID	86.090	59.00	321.80	1	1.6	8.7
272	C4H6O2	METHYL ACRYLATE	86.090	-106.29	176.36	1	2.8	25.0
273	C4H6O2	VINYL ACETATE	86.090	-135.04	162.50	1	2.6	13.4
274	C4H6O3	ACETIC ANHYDRIDE	102.090	-99.40	281.53	1	2.9	10.3
275	C4H6O4	SUCCINIC ACID	118.089	370.40	604.13	2	2.6	14.4
276	C4H6O5	DIGLYCOLIC ACID	134.089	298.40	638.33	2	2.8	20.3
277	C4H6O5	MALIC ACID	134.089	266.00	623.93	2	2.8	16.8
278	C4H6O6	TARTARIC ACID	150.088	402.80	728.33	2	3.0	18.7
279	C4H7N	n-BUTYRONITRILE	69.106	-169.42	243.68	1	1.6	11.4
280	C4H7N	ISOBUTYRONITRILE	69.106	-96.61	218.50	2	1.9	11.5
281	C4H7NO	ACETONE CYANOHYDRIN	85.106	-4.00	373.73	1	2.2	12.0
282	C4H7NO	2-METHACRYLAMIDE	85.106	230.90	418.73	2	2.0	15.1
283	C4H7NO	3-METHOXYPROPIONITRILE	85.106	-81.45	330.53	2	2.0	16.8
284	C4H7NO	2-PYRROLIDONE	85.106	77.00	473.00	2	--	13.1
285	C4H8	1-BUTENE	56.107	-301.63	20.75	1	1.6	9.3
286	C4H8	cis-2-BUTENE	56.107	-218.00	38.70	1	1.6	9.7
287	C4H8	trans-2-BUTENE	56.107	-157.95	33.58	1	1.8	9.7
288	C4H8	CYCLOBUTANE	56.107	-131.21	54.52	2	1.8	11.1
289	C4H8	ISOBUTENE	56.107	-220.61	19.58	1	1.8	8.8
290	C4H8Br2	1,2-DIBROMOBUTANE	215.915	-85.70	331.36	-	--	--
291	C4H8Br2	2,3-DIBROMOBUTANE	215.915	-30.08	321.82	-	--	--
292	C4H8Cl2	1,4-DICHLOROBUTANE	127.013	-35.14	309.02	2	2.2	10.1
293	C4H8I2	1,2-DIIODOBUTANE	309.916	42.64	398.50	-	--	--
294	C4H8O	n-BUTYRALDEHYDE	72.107	-141.52	166.64	1	2.5	12.5
295	C4H8O	ISOBUTYRALDEHYDE	72.107	-85.00	147.38	1	1.6	10.6
296	C4H8O	1,2-EPOXYBUTANE	72.107	-238.00	146.16	1	1.5	18.3
297	C4H8O	METHYL ETHYL KETONE	72.107	-124.01	175.35	1	1.8	10.0
298	C4H8O	ETHYL VINYL ETHER	72.107	-176.44	95.99	1	1.7	28.0
299	C4H8O	TETRAHYDROFURAN	72.107	-163.30	148.73	1	2.0	11.8
300	C4H8O2	cis-2-BUTENE-1,4-DIOL	88.106	51.80	455.00	2	2.1	13.7
301	C4H8O2	trans-2-BUTENE-1,4-DIOL	88.106	81.14	458.33	2	2.1	16.1
302	C4H8O2	ISOBUTYRIC ACID	88.106	-50.80	310.46	1	2.0	9.2
303	C4H8O2	n-BUTYRIC ACID	88.106	22.64	325.89	1	2.2	13.4
304	C4H8O2	1,4-DIOXANE	88.106	53.24	214.38	1	2.0	22.0
305	C4H8O2	ETHYL ACETATE	88.106	-118.39	170.71	1	2.2	11.4
306	C4H8O2	METHYL PROPIONATE	88.106	-125.50	175.01	1	2.5	13.0
307	C4H8O2	n-PROPYL FORMATE	88.106	-135.22	177.48	2	2.1	11.3
308	C4H8O2S	SULFOLANE	120.172	81.68	545.00	-	--	--
309	C4H8S	TETRAHYDROTHIOPHENE	88.173	-141.09	250.02	1	1.5	9.0
310	C4H9Br	1-BROMOBUTANE	137.019	-170.32	214.88	1	2.6	6.6
311	C4H9Br	2-BROMOBUTANE	137.019	-169.42	196.20	2	--	11.6
312	C4H9Cl	n-BUTYL CHLORIDE	92.568	-189.58	173.17	1	1.8	10.1
313	C4H9Cl	sec-BUTYL CHLORIDE	92.568	-204.34	154.58	2	1.9	9.9
314	C4H9Cl	tert-BUTYL CHLORIDE	92.568	-13.72	123.08	2	1.9	9.1
315	C4H9I	2-IODO-2-METHYLPROPANE	184.020	-36.74	212.02	-	--	--
316	C4H9N	PYRROLIDINE	71.122	-72.11	187.83	2	--	12.0
317	C4H9NO	N,N-DIMETHYLACETAMIDE	87.122	-4.00	330.98	1	1.8	13.8
318	C4H9NO	MORPHOLINE	87.122	26.42	262.40	1	1.8	10.8
319	C4H9NO2	1-NITROBUTANE	103.121	-114.38	307.22	-	--	--
320	C4H9NO2	2-NITROBUTANE	103.121	-205.58	283.46	-	--	--
321	C4H10	n-BUTANE	58.123	-216.92	31.10	1	1.8	8.5
322	C4H10	ISOBUTANE	58.123	-255.30	10.90	1	1.8	8.4
323	C4H10N2	PIPERAZINE	86.137	222.80	294.80	2	1.6	12.5
324	C4H10O	n-BUTANOL	74.123	-128.74	243.79	1	1.4	11.2
325	C4H10O	sec-BUTANOL	74.123	-174.46	211.19	1	1.7	9.8
326	C4H10O	tert-BUTANOL	74.123	78.48	180.36	1	2.4	8.0
327	C4H10O	DIETHYL ETHER	74.123	-177.34	93.97	1	1.9	48.0

LEL - Lower Explosive Limit
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NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	LEL vol %	UEL vol %
328	C4H10O	METHYL-PROPYL-ETHER	74.122	-177.30	101.43	2	1.9	11.8
329	C4H10O	METHYL ISOPROPYL ETHER	74.123	-229.40	87.39	2	1.8	14.3
330	C4H10O	ISOBUTANOL	74.123	-162.40	225.79	1	1.7	10.9
331	C4H10O2	1,3-BUTANEDIOL	90.122	-106.60	404.60	2	1.9	12.6
332	C4H10O2	1,4-BUTANEDIOL	90.122	67.82	442.40	2	1.9	13.2
333	C4H10O2	2,3-BUTANEDIOL	90.122	45.68	357.26	2	1.9	13.7
334	C4H10O2	t-BUTYL HYDROPEROXIDE	90.122	39.74	270.23	-	--	--
335	C4H10O2	1,2-DIMETHOXYETHANE	90.122	-72.40	183.29	2	1.9	18.7
336	C4H10O2	2-ETHOXYETHANOL	90.122	-----	275.00	1	1.7	15.6
337	C4H10O3	DIETHYLENE GLYCOL	106.122	13.19	473.00	2	2.0	17.1
338	C4H10O4S	DIETHYL SULFATE	154.187	-13.27	409.73	-	--	--
339	C4H10S	n-BUTYL MERCAPTAN	90.189	-176.24	209.23	-	--	--
340	C4H10S	ISOBUTYL MERCAPTAN	90.189	-228.71	191.28	2	1.4	--
341	C4H10S	sec-BUTYL MERCAPTAN	90.189	-220.23	184.96	2	1.4	--
342	C4H10S	tert-BUTYL MERCAPTAN	90.189	34.00	147.60	-	--	--
343	C4H10S	DIETHYL SULFIDE	90.189	-155.11	197.78	-	--	--
344	C4H10S	ISOPROPYL-METHYL-SULFIDE	90.183	-150.70	184.55	-	--	--
345	C4H10S	METHYL-PROPYL-SULFIDE	90.183	-171.33	204.01	-	--	--
346	C4H10S2	DIETHYL DISULFIDE	122.255	-150.74	309.16	2	1.2	--
347	C4H11N	n-BUTYLAMINE	73.138	-56.38	171.32	1	1.7	9.8
348	C4H11N	ISOBUTYLAMINE	73.138	-120.28	153.91	2	1.6	11.6
349	C4H11N	sec-BUTYLAMINE	73.138	-156.10	145.40	2	1.6	11.6
350	C4H11N	tert-BUTYLAMINE	73.138	-88.53	111.92	1	1.7	8.9
351	C4H11N	DIETHYLAMINE	73.138	-57.64	131.81	1	1.8	10.1
352	C4H11NO	DIMETHYLETHANOLAMINE	89.137	-74.20	273.20	2	1.7	11.5
353	C4H11NO2	DIETHANOLAMINE	105.137	82.40	516.00	2	1.8	13.4
354	C4H11NO2	2-AMINOETHOXYETHANOL	105.137	-----	465.53	2	1.8	17.1
355	C4H12N2O	N-AMINOETHYL ETHANOLAMINE	104.152	-----	470.93	2	1.0	8.0
356	C4H12Si	TETRAMETHYLSILANE	88.225	-146.34	79.97	1	1.5	--
357	C4H13N3	DIETHYLENE TRIAMINE	103.167	-38.20	404.78	1	2.0	6.7
358	C5Cl6	HEXACHLOROCYCLOPENTADIENE	272.771	52.41	462.20	-	--	--
359	C5H4O2	FURFURAL	96.086	-33.70	323.06	1	2.1	19.3
360	C5H5N	PYRIDINE	79.101	-42.92	239.47	1	1.8	12.4
361	C5H6	CYCLOPENTADIENE	66.103	-121.00	106.70	2	1.7	14.6
362	C5H6	2-METHYL-1-BUTENE-3-YNE	66.103	-171.40	90.05	2	1.7	25.1
363	C5H6	1-PENTENE-3-YNE	66.103	-----	138.65	2	1.7	25.1
364	C5H6	1-PENTENE-4-YNE	66.103	-----	108.50	2	1.7	22.9
365	C5H6N2	GLUTARONITRILE	94.116	-20.09	546.80	2	1.6	11.5
366	C5H6O2	FURFURYL ALCOHOL	98.101	5.67	338.00	1	1.8	16.3
367	C5H6O3	GLUTARIC ANHYDRIDE	114.101	130.73	553.17	2	2.0	13.1
368	C5H6O4	CITRACONIC ACID	130.100	181.40	632.93	2	2.1	14.6
369	C5H6O4	ITACONIC ACID	130.100	330.08	622.13	2	2.1	14.4
370	C5H6S	2-METHYLTHIOPHENE	98.162	-82.08	234.61	-	--	--
371	C5H6S	3-METHYLTHIOPHENE	98.162	-92.15	239.81	-	--	--
372	C5H7N	N-METHYLPYRROLE	81.117	-69.23	234.93	2	1.6	14.0
373	C5H7NO2	ETHYL CYANOACETATE	113.116	-8.50	402.80	2	1.7	10.6
374	C5H8	CYCLOPENTENE	68.118	-211.04	111.61	2	1.5	12.1
375	C5H8	ISOPRENE	68.118	-230.58	93.31	1	2.0	9.0
376	C5H8	3-METHYL-1,2-BUTADIENE	68.118	-172.52	105.53	2	1.6	15.2
377	C5H8	2-METHYL-1,3-BUTADIENE	68.118	-230.71	93.33	2	1.6	10.2
378	C5H8	1,2-PENTADIENE	68.118	-215.07	112.75	2	1.5	12.3
379	C5H8	cis-1,3-PENTADIENE	68.118	-221.44	111.33	2	1.6	13.1
380	C5H8	trans-1,3-PENTADIENE	68.118	-125.39	107.64	2	1.6	13.1
381	C5H8	1,4-PENTADIENE	68.118	-234.92	78.73	2	1.6	13.1
382	C5H8	2,3-PENTADIENE	68.118	-194.17	118.85	2	1.6	12.1
383	C5H8	1-PENTYNE	68.118	-158.26	104.32	2	1.6	22.3
384	C5H8	2-PENTYNE	68.118	-164.72	132.93	2	1.6	10.2
385	C5H8	3-METHYL-1-BUTYNE	68.118	-129.46	84.20	2	1.6	22.8
386	C5H8	SPIROPENTANE	68.118	-160.67	102.27	2	1.6	10.2
387	C5H8N4O12	PENTAERYTHRITOL TETRANITRATE	316.138	284.90	517.73	-	--	--
388	C5H8O	CYCLOPENTANONE	84.118	-60.34	267.17	2	1.7	10.4
389	C5H8O	METHYL ISOPROPENYL KETONE	84.118	-64.48	208.40	1	1.8	9.0
390	C5H8O2	ACETYLACETONE	100.117	-10.30	284.72	1	2.4	11.6
391	C5H8O2	ALLYL ACETATE	100.117	-211.27	219.20	2	1.7	11.8
392	C5H8O2	ETHYL ACRYLATE	100.117	-96.16	211.10	2	1.8	9.5
393	C5H8O2	METHYL METHACRYLATE	100.117	-54.76	212.54	1	2.1	12.5

LEL - Lower Explosive Limit
UEL - Upper Explosive Limit

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	LEL vol %	UEL vol %
394	C5H8O2	VINYL PROPIONATE	100.117	-459.67	196.16	2	1.7	11.8
395	C5H8O3	2-HYDROXYETHYL ACRYLATE	116.117	-76.27	411.53	2	1.8	12.9
396	C5H8O3	LEVULINIC ACID	116.117	95.00	474.44	2	1.8	10.6
397	C5H8O3	METHYL ACETOACETATE	116.117	-112.00	341.06	2	1.8	8.8
398	C5H8O4	GLUTARIC ACID	132.116	207.50	612.30	2	1.9	11.5
399	C5H9N	VALERONITRILE	83.133	-141.16	286.34	2	1.5	9.6
400	C5H9NO	n-BUTYL ISOCYANATE	99.133	-----	239.00	2	1.5	8.9
401	C5H9NO	N-METHYL-2-PYRROLIDONE	99.133	-11.20	395.60	1	2.2	12.2
402	C5H9NO4	L-GLUTAMIC ACID	147.131	435.20	746.33	2	1.7	13.2
403	C5H10	CYCLOPENTANE	70.134	-136.91	120.65	2	1.4	9.4
404	C5H10	2-METHYL-1-BUTENE	70.134	-215.63	88.07	1	1.4	9.6
405	C5H10	2-METHYL-2-BUTENE	70.134	-208.77	101.41	1	1.4	9.6
406	C5H10	3-METHYL-1-BUTENE	70.134	-271.28	68.11	2	1.5	9.1
407	C5H10	1-PENTENE	70.134	-265.40	85.93	1	1.5	8.7
408	C5H10	cis-2-PENTENE	70.134	-240.52	98.47	2	1.4	10.6
409	C5H10	trans-2-PENTENE	70.134	-220.47	97.41	2	1.4	10.6
410	C5H10Br2	2,3-DIBROMO-2-METHYLBUTANE	229.942	58.73	339.55	-	--	--
411	C5H10Cl2	1,5-DICHLOROPENTANE	141.040	-99.04	356.00	2	1.7	8.6
412	C5H10O	METHYL ISOPROPYL KETONE	86.134	-133.60	201.92	2	1.5	9.0
413	C5H10O	2-PENTANONE	86.134	-106.35	216.16	1	1.5	8.2
414	C5H10O	DIETHYL KETONE	86.134	-38.15	215.58	1	1.5	8.0
415	C5H10O	VALERALDEHYDE	86.134	-132.07	217.40	2	1.5	9.5
416	C5H10O2	n-BUTYL FORMATE	102.133	-133.42	222.98	1	1.7	8.0
417	C5H10O2	ETHYL PROPIONATE	102.133	-101.02	210.38	1	1.9	11.0
418	C5H10O2	ISOBUTYL FORMATE	102.133	-140.44	208.53	1	1.7	8.0
419	C5H10O2	ISOPROPYL ACETATE	102.133	-100.12	191.30	2	1.8	7.2
420	C5H10O2	n-PROPYL ACETATE	102.133	-139.00	214.70	1	2.0	8.0
421	C5H10O2	METHYL n-BUTYRATE	102.133	-122.44	216.95	2	1.6	8.8
422	C5H10O2	2-METHYLBUTYRIC ACID	102.133	-----	350.60	2	1.6	9.8
423	C5H10O2	ISOVALERIC ACID	102.133	-20.74	347.18	2	1.6	9.8
424	C5H10O2	VALERIC ACID	102.133	-29.20	365.90	2	1.6	9.6
425	C5H10O2	TETRAHYDROFURFURYL ALCOHOL	102.133	-----	352.40	1	1.5	9.7
426	C5H10O2S	3-METHYL SULFOLANE	134.199	32.90	528.80	-	--	--
427	C5H10O3	DIETHYL CARBONATE	118.133	-45.40	260.24	2	1.7	12.4
428	C5H10O3	ETHYL LACTATE	118.133	-14.80	310.10	1	1.5	10.6
429	C5H10S	THIACYCLOHEXANE	102.194	66.18	287.15	-	--	--
430	C5H10S	CYCLOPENTANETHIOL	102.194	-179.97	269.92	-	--	--
431	C5H11Br	1-BROMOPENTANE	151.046	-126.20	265.26	-	--	--
432	C5H11Cl	1-CHLOROPENTANE	106.595	-146.20	227.10	1	1.6	8.6
433	C5H11Cl	1-CHLORO-3-METHYLBUTANE	106.595	-155.90	209.32	-	--	--
434	C5H11Cl	2-CHLORO-2-METHYLBUTANE	106.595	-100.28	186.10	-	--	--
435	C5H11N	N-METHYLPYRROLIDINE	85.149	-130.00	174.47	2	--	9.5
436	C5H11N	PIPERIDINE	85.149	13.10	223.52	2	1.4	10.0
437	C5H11NO	tert-BUTYLFORMAMIDE	101.148	60.80	395.60	2	1.5	9.7
438	C5H12	ISOPENTANE	72.150	-255.82	82.11	1	1.4	7.6
439	C5H12	NEOPENTANE	72.150	2.17	49.10	1	1.4	7.5
440	C5H12	n-PENTANE	72.150	-201.51	96.93	1	1.4	7.8
441	C5H12O	2,2-DIMETHYL-1-PROPANOL	88.150	129.20	235.58	2	1.5	9.1
442	C5H12O	tert-PENTYL-ALCOHOL	88.149	128.93	235.67	2	1.5	9.5
443	C5H12O	2-METHYL-1-BUTANOL	88.150	-----	263.66	1	1.4	9.0
444	C5H12O	2-METHYL-2-BUTANOL	88.150	16.16	215.60	1	1.2	9.0
445	C5H12O	3-METHYL-1-BUTANOL	88.150	-178.96	268.16	1	1.2	9.0
446	C5H12O	3-METHYL-2-BUTANOL	88.150	-----	232.70	2	1.5	9.9
447	C5H12O	1-PENTANOL	88.150	-107.66	280.04	1	1.2	10.0
448	C5H12O	2-PENTANOL	88.150	-99.67	246.20	2	1.5	9.7
449	C5H12O	3-PENTANOL	88.150	-92.20	239.54	1	1.2	9.0
450	C5H12O	METHYL sec-BUTYL ETHER	88.150	-----	138.20	2	1.4	11.5
451	C5H12O	METHYL tert-BUTYL ETHER	88.150	-163.48	131.36	1	2.0	15.1
452	C5H12O	METHYL ISOBUTYL ETHER	88.150	-----	137.39	2	1.5	15.3
453	C5H12O	ETHYL PROPYL ETHER	88.150	-197.50	146.95	1	1.7	9.0
454	C5H12O2	ETHYLENE GLYCOL MONOPROPYL ETHER	104.149	-130.00	304.43	1	1.3	15.8
455	C5H12O2	NEOPENTYL GLYCOL	104.149	260.33	409.73	2	1.4	22.0
456	C5H12O2	1,5-PENTANEDIOL	104.149	3.20	462.20	2	1.5	10.9
457	C5H12O3	2-(2-METHOXYETHOXY)ETHANOL	120.148	-104.80	380.48	1	1.4	22.7
458	C5H12O4	PENTAERYTHRITOL	136.148	501.80	676.13	2	1.6	12.5
459	C5H12S	n-PENTYL MERCAPTAN	104.216	-104.26	259.95	-	--	--

LEL - Lower Explosive Limit
UEL - Upper Explosive Limit

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	LEL vol %	UEL vol %
460	C5H12S	BUTYL-METHYL-SULFIDE	104.210	-144.08	254.17	-	--	--
461	C5H12S	ETHYL-PROPYL-SULFIDE	104.210	-178.60	245.30	-	--	--
462	C5H12S	2-METHYL-2-BUTANETHIOL	104.210	-154.79	210.43	-	--	--
463	C5H13N	n-PENTYLAMINE	87.165	-67.00	220.10	2	1.3	9.5
464	C5H13NO2	METHYL DIETHANOLAMINE	119.164	-5.80	476.60	2	1.4	10.8
465	C6Cl6	HEXACHLOROBENZENE	284.782	443.39	588.92	2	3.5	6.7
466	C6F6	HEXAFLUOROBENZENE	186.056	41.18	176.47	2	--	13.6
467	C6H3ClN2O4	1-CHLORO-2,4-DINITROBENZENE	202.554	128.12	598.73	1	2.0	22.0
468	C6H3Cl2NO2	1,2-DICHLORO-4-NITROBENZENE	192.001	108.50	492.53	2	2.1	8.4
469	C6H3Cl3	1,2,4-TRICHLOROBENZENE	181.448	62.60	415.40	1	2.5	6.6
470	C6H3N3O6	1,3,5-TRINITROBENZENE	213.106	257.45	886.73	-	--	--
471	C6H4Br2	m-DIBROMOBENZENE	235.906	19.58	424.40	2	1.9	9.8
472	C6H4ClNO2	m-CHLORONITROBENZENE	157.556	112.10	456.08	2	--	8.8
473	C6H4ClNO2	o-CHLORONITROBENZENE	157.556	91.40	474.53	2	--	8.8
474	C6H4ClNO2	p-CHLORONITROBENZENE	157.556	182.30	467.60	2	--	8.8
475	C6H4Cl2	m-DICHLOROBENZENE	147.003	-12.57	343.54	2	1.8	7.8
476	C6H4Cl2	o-DICHLOROBENZENE	147.003	1.40	356.76	1	2.2	9.2
477	C6H4Cl2	p-DICHLOROBENZENE	147.003	127.38	345.31	2	1.8	7.8
478	C6H4F2	m-DIFLUOROBENZENE	114.094	-11.18	194.92	-	--	--
479	C6H4F2	o-DIFLUOROBENZENE	114.094	-29.18	196.72	-	--	--
480	C6H4F2	p-DIFLUOROBENZENE	114.094	8.62	191.93	-	--	--
481	C6H4N2O4	m-DINITROBENZENE	168.109	195.53	571.73	-	--	--
482	C6H4N2O4	o-DINITROBENZENE	168.109	242.47	605.93	2	1.8	9.8
483	C6H4N2O4	p-DINITROBENZENE	168.109	344.21	569.93	2	1.8	9.8
484	C6H5Br	BROMOBENZENE	157.010	-23.30	312.96	2	1.5	9.1
485	C6H5Cl	MONOCHLOROBENZENE	112.558	-49.36	269.10	1	1.3	7.1
486	C6H5ClO	m-CHLOROPHENOL	128.558	91.13	416.93	2	1.7	8.8
487	C6H5ClO	o-CHLOROPHENOL	128.558	47.93	345.88	2	1.7	8.8
488	C6H5ClO	p-CHLOROPHENOL	128.558	109.13	427.93	2	1.7	8.8
489	C6H5Cl2N	3,4-DICHLOROANILINE	162.018	160.70	521.33	1	2.8	7.2
490	C6H5F	FLUOROBENZENE	96.104	-43.98	184.51	2	1.6	9.1
491	C6H5I	IODOBENZENE	204.010	-24.38	371.21	-	--	--
492	C6H5NO2	NITROBENZENE	123.111	42.37	411.44	1	1.8	9.1
493	C6H6	BENZENE	78.114	41.95	176.16	1	1.4	7.1
494	C6H6ClN	m-CHLOROANILINE	127.573	13.28	443.30	2	1.5	8.8
495	C6H6ClN	o-CHLOROANILINE	127.573	407.91	407.91	2	1.5	8.8
496	C6H6ClN	p-CHLOROANILINE	127.573	157.82	446.90	1	2.2	8.8
497	C6H6N2	cis-DICYANO-1-BUTENE	106.127	-11.47	442.13	2	1.4	11.6
498	C6H6N2	trans-DICYANO-1-BUTENE	106.127	8.33	438.53	2	1.4	11.6
499	C6H6N2	1,4-DICYANO-2-BUTENE	106.127	168.53	524.93	2	1.4	11.6
500	C6H6N2O2	m-NITROANILINE	138.126	237.20	582.53	2	1.7	9.8
501	C6H6N2O2	o-NITROANILINE	138.126	160.70	544.73	2	1.5	9.8
502	C6H6N2O2	p-NITROANILINE	138.126	297.50	636.80	2	1.5	9.8
503	C6H6O	PHENOL	94.113	105.64	359.31	1	1.8	8.6
504	C6H6O2	1,2-BENZENEDIOL	110.112	220.01	473.90	2	1.6	9.8
505	C6H6O2	1,3-BENZENEDIOL	110.112	227.93	529.70	1	1.6	9.8
506	C6H6O2	p-HYDROQUINONE	110.112	340.70	545.00	2	1.6	15.3
507	C6H6O3	1,2,3-BENZENETRIOL	126.112	272.93	587.66	2	1.7	10.8
508	C6H6S	PHENYL MERCAPTAN	110.180	5.20	336.45	2	1.2	--
509	C6H7N	ANILINE	93.128	21.16	364.01	1	1.3	11.0
510	C6H7N	2-METHYLPYRIDINE	93.128	-88.08	264.92	1	--	11.9
511	C6H7N	3-METHYLPYRIDINE	93.128	-0.65	291.45	2	--	11.9
512	C6H7N	4-METHYLPYRIDINE	93.128	38.44	293.63	2	--	11.9
513	C6H8	1,3-CYCLOHEXADIENE	80.130	-169.87	176.61	2	1.4	11.8
514	C6H8	METHYLCYCLOPENTADIENE	80.130	-----	163.00	1	1.3	7.6
515	C6H8N2	ADIPONITRILE	108.143	36.48	563.00	1	1.7	5.0
516	C6H8N2	METHYLGLUTARONITRILE	108.143	-49.00	505.40	1	0.3	3.3
517	C6H8N2	m-PHENYLENEDIAMINE	108.143	141.53	548.33	2	1.3	9.8
518	C6H8N2	o-PHENYLENEDIAMINE	108.143	218.84	485.33	1	1.5	9.8
519	C6H8N2	p-PHENYLENEDIAMINE	108.143	283.73	512.33	2	1.3	9.8
520	C6H8N2	PHENYLHYDRAZINE	108.143	66.56	470.30	2	1.3	9.5
521	C6H8N2O	BIS(CYANOETHYL)ETHER	124.142	-15.34	582.53	2	1.4	12.4
522	C6H8O4	DIMETHYL MALEATE	144.127	-2.20	401.00	2	1.6	10.4
523	C6H8O6	ASCORBIC ACID	176.126	377.60	686.93	2	1.7	14.5
524	C6H8O7	CITRIC ACID	192.125	307.40	726.53	2	1.8	4.8
525	C6H10	1-METHYLCYCLOPENTENE	82.145	-196.94	168.44	2	1.3	8.4

LEL - Lower Explosive Limit
UEL - Upper Explosive Limit

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	LEL vol %	UEL vol %
526	C6H10	3-METHYLCYCLOPENTENE	82.145	-225.38	158.02	2	1.3	8.4
527	C6H10	4-METHYLCYCLOPENTENE	82.145	-257.51	167.29	2	1.3	8.4
528	C6H10	CYCLOHEXENE	82.145	-154.26	181.35	2	1.2	10.1
529	C6H10	2,3-DIMETHYL-1,3-BUTADIENE	82.145	-104.80	155.80	-	--	--
530	C6H10	1,5-HEXADIENE	82.145	-221.22	139.03	2	1.3	10.9
531	C6H10	cis,trans-2,4-HEXADIENE	82.145	-140.98	182.30	2	1.3	17.1
532	C6H10	trans,trans-2,4-HEXADIENE	82.145	-48.82	179.42	2	1.3	17.1
533	C6H10	1-HEXYNE	82.145	-205.42	160.39	2	1.3	16.6
534	C6H10	2-HEXYNE	82.145	-129.10	184.14	2	1.3	17.8
535	C6H10	3-HEXYNE	82.145	-153.58	178.16	2	1.3	17.8
536	C6H10O	CYCLOHEXANONE	98.145	-24.07	312.35	1	1.0	8.8
537	C6H10O	MESITYL OXIDE	98.145	-63.40	265.64	1	1.3	8.8
538	C6H10O2	epsilon-CAPROLACTONE	114.144	29.66	465.53	1	--	9.6
539	C6H10O2	ETHYL METHACRYLATE	114.144	-----	242.60	1	1.8	9.6
540	C6H10O2	n-PROPYL ACRYLATE	114.144	-----	246.20	2	1.4	9.9
541	C6H10O3	ETHYLACETOACETATE	130.144	-38.20	357.44	1	1.4	9.5
542	C6H10O3	PROPIONIC ANHYDRIDE	130.144	-49.00	336.20	1	1.5	11.9
543	C6H10O4	ADIPIC ACID	146.143	306.23	640.13	1	1.6	9.6
544	C6H10O4	DIETHYL OXALATE	146.143	-41.08	366.26	2	1.5	8.4
545	C6H10O4	ETHYLENE GLYCOL DIACETATE	146.143	-23.80	374.90	1	1.6	8.4
546	C6H10O4	ETHYLIDENE DIACETATE	146.143	65.93	336.20	2	1.5	8.5
547	C6H11N	HEXANENITRILE	97.160	-112.54	326.48	2	1.3	8.2
548	C6H11NO	epsilon-CAPROLACTAM	113.159	156.58	518.00	1	1.4	8.0
549	C6H11NO	CYCLOHEXANONE OXIME	113.159	194.00	406.40	2	1.3	9.8
550	C6H12	CYCLOHEXANE	84.161	43.77	177.30	1	1.3	8.0
551	C6H12	2,3-DIMETHYL-1-BUTENE	84.161	-251.07	132.10	2	1.2	9.1
552	C6H12	2,3-DIMETHYL-2-BUTENE	84.161	-101.79	163.76	2	1.2	8.1
553	C6H12	3,3-DIMETHYL-1-BUTENE	84.161	-175.36	106.25	2	1.2	9.0
554	C6H12	2-ETHYL-1-BUTENE	84.161	-204.77	148.41	2	1.2	9.0
555	C6H12	trans-3-METHYL-2-PENTENE	84.161	-217.21	158.81	2	1.3	8.0
556	C6H12	1-HEXENE	84.161	-219.57	146.26	2	1.2	9.2
557	C6H12	cis-2-HEXENE	84.161	-222.07	155.98	2	1.2	9.0
558	C6H12	trans-2-HEXENE	84.161	-207.36	154.17	2	1.2	9.0
559	C6H12	cis-3-HEXENE	84.161	-216.08	151.61	2	1.2	9.0
560	C6H12	trans-3-HEXENE	84.161	-172.16	152.76	2	1.2	9.0
561	C6H12	METHYLCYCLOPENTANE	84.161	-224.36	161.26	2	1.2	8.4
562	C6H12	2-METHYL-1-PENTENE	84.161	-212.31	143.78	2	1.2	9.0
563	C6H12	2-METHYL-2-PENTENE	84.161	-211.14	153.14	2	1.2	9.4
564	C6H12	3-METHYL-1-PENTENE	84.161	-243.31	129.52	2	1.2	9.4
565	C6H12	3-METHYL-cis-2-PENTENE	84.161	-210.71	153.86	2	1.2	8.6
566	C6H12	4-METHYL-1-PENTENE	84.161	-244.55	128.95	2	1.2	9.4
567	C6H12	4-METHYL-cis-2-PENTENE	84.161	-210.73	133.48	2	1.2	9.1
568	C6H12	4-METHYL-trans-2-PENTENE	84.161	-221.44	137.48	2	1.2	9.1
569	C6H12N2	TRIETHYLENEDIAMINE	112.175	321.98	345.20	2	1.2	9.2
570	C6H12O	BUTYL VINYL ETHER	100.161	-133.42	200.88	2	1.3	11.3
571	C6H12O	CYCLOHEXANOL	100.161	74.21	321.53	1	1.2	9.3
572	C6H12O	1-HEXANAL	100.161	-68.80	262.94	2	1.3	8.1
573	C6H12O	ETHYL ISOPROPYL KETONE	100.161	-----	236.12	2	1.3	7.8
574	C6H12O	2-HEXANONE	100.161	-68.44	261.86	1	1.2	8.0
575	C6H12O	3-HEXANONE	100.161	-68.17	254.30	1	1.0	8.0
576	C6H12O	METHYL ISOBUTYL KETONE	100.161	-119.20	241.70	1	1.4	7.5
577	C6H12O2	n-PENTYL FORMATE	116.160	-100.30	272.21	2	1.3	8.1
578	C6H12O2	n-BUTYL ACETATE	116.160	-100.30	258.80	1	1.7	7.6
579	C6H12O2	sec-BUTYL ACETATE	116.160	-146.20	233.60	1	1.7	7.6
580	C6H12O2	tert-BUTYL ACETATE	116.160	-----	204.80	2	1.3	7.3
581	C6H12O2	ETHYL n-BUTYRATE	116.160	-144.40	250.70	2	1.3	7.7
582	C6H12O2	ETHYL ISOBUTYRATE	116.160	-126.67	229.73	2	1.3	7.8
583	C6H12O2	ISOBUTYL ACETATE	116.160	-145.93	241.97	1	1.3	10.5
584	C6H12O2	n-PROPYL PROPIONATE	116.160	-104.62	252.50	2	1.3	7.7
585	C6H12O2	CYCLOHEXYL PEROXIDE	116.160	-4.00	422.33	2	1.3	11.7
586	C6H12O2	DIACETONE ALCOHOL	116.160	-47.20	334.13	1	1.8	6.9
587	C6H12O2	2-ETHYL BUTYRIC ACID	116.160	5.00	380.84	2	1.3	8.4
588	C6H12O2	n-HEXANOIC ACID	116.160	26.60	402.26	2	1.3	8.2
589	C6H12O3	2-ETHOXYETHYL ACETATE	132.159	-79.06	313.34	1	1.7	12.7
590	C6H12O3	HYDROXYCAPROIC ACID	132.159	141.53	577.13	2	1.4	8.7
591	C6H12O3	PARALDEHYDE	132.159	54.68	255.38	1	1.3	16.2

LEL - Lower Explosive Limit
UEL - Upper Explosive Limit

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	LEL vol %	UEL vol %
592	C6H12O3	sec-BUTYL GLYCOLATE	132.160	-459.67	351.50	-	--	--
593	C6H12S	THIACYCLOHEPTANE	116.221	66.18	287.15	-	--	--
594	C6H13N	CYCLOHEXYLAMINE	99.176	0.14	274.10	2	1.2	9.3
595	C6H13N	HEXAMETHYLENEIMINE	99.176	-34.60	269.06	1	1.6	2.3
596	C6H14	2,2-DIMETHYLBUTANE	86.177	-145.97	121.51	1	1.2	7.0
597	C6H14	2,3-DIMETHYLBUTANE	86.177	-198.33	136.36	1	1.2	7.0
598	C6H14	n-HEXANE	86.177	-139.56	155.71	1	1.2	7.5
599	C6H14	2-METHYLPENTANE	86.177	-244.48	140.47	1	1.2	7.0
600	C6H14	3-METHYLPENTANE	86.177	-261.22	145.89	2	1.2	7.7
601	C6H14N2O2	LYSINE	146.189	409.73	647.33	2	1.2	10.1
602	C6H14O	2-ETHYL-1-BUTANOL	102.177	-173.92	295.70	2	1.2	8.3
603	C6H14O	1-HEXANOL	102.177	-48.28	314.60	2	1.2	8.2
604	C6H14O	2-HEXANOL	102.177	-58.27	283.80	2	1.2	8.3
605	C6H14O	2-METHYL-1-PENTANOL	102.177	-----	298.40	2	1.0	7.7
606	C6H14O	4-METHYL-2-PENTANOL	102.177	-----	269.06	1	1.0	5.5
607	C6H14O	n-BUTYL ETHYL ETHER	102.177	-153.40	197.96	2	1.2	9.5
608	C6H14O	DIISOPROPYL ETHER	102.177	-121.90	154.94	1	1.4	21.0
609	C6H14O	DI-n-PROPYL ETHER	102.177	-189.76	193.35	2	1.2	9.5
610	C6H14O	METHYL tert-PENTYL ETHER	102.177	-----	187.34	2	1.2	9.1
611	C6H14O2	ACETAL	118.176	-148.00	218.48	1	1.6	10.4
612	C6H14O2	2-BUTOXYETHANOL	118.176	-94.00	340.38	1	1.1	12.7
613	C6H14O2	1,6-HEXANEDIOL	118.176	107.60	469.40	2	1.3	9.2
614	C6H14O2	HEXYLENE GLYCOL	118.176	-58.00	387.50	2	1.3	9.0
615	C6H14O2S	DI-n-PROPYL SULFONE	150.242	85.73	517.73	2	1.1	--
616	C6H14O3	DIETHYLENE GLYCOL DIMETHYL ETHER	134.175	-94.00	319.57	2	1.3	14.2
617	C6H14O3	DIPROPYLENE GLYCOL	134.175	-40.27	449.24	1	2.2	11.5
618	C6H14O3	2-(2-ETHOXYETHOXY)ETHANOL	134.175	-108.40	395.60	1	1.2	10.4
619	C6H14O3	TRIMETHYLOLPROPANE	134.175	136.40	552.00	2	1.3	9.7
620	C6H14O4	TRIETHYLENE GLYCOL	150.175	18.75	532.13	1	0.9	9.2
621	C6H14O6	SORBITOL	182.174	207.86	938.93	2	1.5	12.4
622	C6H14S	n-HEXYLMERCAPTAN	118.243	-112.95	306.79	2	0.4	--
623	C6H14S	BUTYL-ETHYL-SULFIDE	118.237	-139.22	291.67	-	--	--
624	C6H14S	ISOPROPYL-SULFIDE	118.237	-152.86	248.07	-	--	--
625	C6H14S	METHYL-PENTYL-SULFIDE	118.237	-137.18	262.42	-	--	--
626	C6H14S	PROPYL-SULFIDE	118.237	-152.86	289.13	-	--	--
627	C6H14S2	PROPYL-DISULFIDE	150.297	-121.85	376.70	-	--	--
628	C6H15Al	TRIETHYL ALUMINUN	114.167	-62.50	365.00	-	--	--
629	C6H15Al2Cl3	ETHYL ALUMINUM SESQUICHLORIDE	247.506	-4.00	408.20	-	--	--
630	C6H15N	DIISOPROPYLAMINE	101.192	-141.34	183.02	1	0.8	7.1
631	C6H15N	DI-n-PROPYLAMINE	101.192	-81.40	227.93	2	1.1	7.7
632	C6H15N	n-HEXYLAMINE	101.192	-6.34	268.70	2	1.1	8.2
633	C6H15N	TRIETHYLAMINE	101.192	-174.46	191.79	1	1.2	8.0
634	C6H15NO	6-AMINOHEXANOL	117.191	136.13	454.73	2	1.2	9.2
635	C6H15NO2	DIISOPROPANOLAMINE	133.191	113.00	479.75	2	1.2	9.8
636	C6H15NO3	TRIETHANOLAMINE	149.190	70.16	643.73	2	1.2	9.9
637	C6H15N3	N-AMINOETHYL PIPERAZINE	129.205	-2.20	428.72	2	1.1	9.4
638	C6H15O4P	TRIETHYL PHOSPHATE	182.156	-70.87	411.80	1	1.7	10.0
639	C6H16N2	HEXAMETHYLENEDIAMINE	116.207	105.44	395.40	1	0.7	6.3
640	C6H18N3OP	HEXAMETHYL PHOSPHORAMIDE	179.202	44.60	451.40	-	--	--
641	C6H18N4	TRIETHYLENE TETRAMINE	146.236	53.60	511.70	2	1.0	9.5
642	C6H18OSi2	HEXAMETHYLDISILOXANE	162.379	-90.80	212.94	1	1.3	18.6
643	C6H18O3Si3	HEXAMETHYLCYCLOTRISILOXANE	222.464	147.20	275.20	2	1.1	--
644	C6H19NSi2	HEXAMETHYLDISILAZANE	161.395	-----	258.80	1	0.8	16.3
645	C7H3ClF3NO2	4-CHLORO-3-NITROBENZOTRIFLUORIDE	225.554	-----	431.60	2	1.8	10.1
646	C7H3Cl2F3	2,4-DICHLOROBENZOTRIFLUORIDE	215.001	-14.08	351.50	2	--	7.9
647	C7H3Cl2NO	3,4-DICHLOROPHENYL ISOCYANATE	188.012	109.40	442.13	2	1.6	8.6
648	C7H4ClF3	p-CHLOROBENZOTRIFLUORIDE	180.557	-32.80	282.20	-	--	8.1
649	C7H4Cl2O	m-CHLOROBENZOYL CHLORIDE	175.014	44.33	436.73	2	--	7.3
650	C7H4F3NO2	3-NITROBENZOTRIFLUORIDE	191.110	29.93	397.00	2	1.6	9.0
651	C7H5ClO	BENZOYL CHLORIDE	140.569	31.10	386.60	1	1.2	4.9
652	C7H5ClO2	o-CHLOROBENZOIC ACID	156.568	287.60	548.60	2	1.5	7.7
653	C7H5Cl3	BENZOTRICHLORIDE	195.475	23.45	416.30	2	1.6	6.5
654	C7H5F3	BENZOTRIFLUORIDE	146.112	-20.22	215.69	2	--	8.4
655	C7H5N	BENZONITRILE	103.123	9.05	375.80	2	1.3	8.0
656	C7H5NO	PHENYL ISOCYANATE	119.123	-22.00	330.08	2	1.3	8.4
657	C7H5N3O6	2,4,6-TRINITROTOLUENE	227.133	177.53	571.73	-	--	--

LEL - Lower Explosive Limit
UEL - Upper Explosive Limit

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	LEL vol %	UEL vol %
658	C7H6Cl2	BENZYL DICHLORIDE	161.030	2.93	416.93	2	1.5	9.9
659	C7H6Cl2	2,4-DICHLOROTOLUENE	161.030	7.70	393.98	2	1.5	6.5
660	C7H6N2O4	2,4-DINITROTOLUENE	182.136	157.73	602.33	2	1.4	8.2
661	C7H6N2O4	2,5-DINITROTOLUENE	182.136	126.50	602.33	2	1.5	8.2
662	C7H6N2O4	2,6-DINITROTOLUENE	182.136	150.53	544.73	2	1.4	8.2
663	C7H6N2O4	3,4-DINITROTOLUENE	182.136	137.93	638.33	2	1.4	8.2
664	C7H6N2O4	3,5-DINITROTOLUENE	182.136	198.50	598.73	2	1.5	8.2
665	C7H6O	BENZALDEHYDE	106.124	-14.80	353.75	2	1.4	7.8
666	C7H6O2	BENZOIC ACID	122.123	252.27	480.65	2	1.4	8.0
667	C7H6O2	p-HYDROXYBENZALDEHYDE	122.123	242.60	590.00	2	1.4	8.4
668	C7H6O2	SALICYLALDEHYDE	122.123	19.40	385.70	2	1.4	8.4
669	C7H6O3	SALICYLIC ACID	138.123	317.48	492.53	2	1.5	8.6
670	C7H7Br	p-BROMOTOLUENE	171.037	80.24	363.83	2	--	7.6
671	C7H7Cl	BENZYL CHLORIDE	126.585	-38.20	354.92	1	1.1	7.1
672	C7H7Cl	o-CHLOROTOLUENE	126.585	-33.70	318.47	2	1.3	6.7
673	C7H7Cl	p-CHLOROTOLUENE	126.585	45.50	324.50	2	1.3	6.7
674	C7H7F	p-FLUOROTOLUENE	110.131	-70.22	241.90	-	--	--
675	C7H7NO	FORMANILIDE	121.139	122.00	519.80	2	--	8.0
676	C7H7NO2	m-NITROTOLUENE	137.138	60.89	449.33	1	1.6	7.6
677	C7H7NO2	o-NITROTOLUENE	137.138	26.29	432.48	1	2.2	7.6
678	C7H7NO2	p-NITROTOLUENE	137.138	124.88	461.30	1	1.6	7.6
679	C7H7NO3	o-NITROANISOLE	153.138	50.81	523.40	-	--	--
680	C7H8	TOLUENE	92.141	-138.95	231.13	1	1.2	7.1
681	C7H8	1,3,5-CYCLOHEPTATRIENE	92.140	-111.08	239.90	2	1.3	8.0
682	C7H8O	ANISOLE	108.140	-35.50	308.44	2	1.3	9.0
683	C7H8O	BENZYL ALCOHOL	108.140	4.46	400.46	2	1.3	7.9
684	C7H8O	m-CRESOL	108.140	54.03	396.10	1	1.1	7.6
685	C7H8O	o-CRESOL	108.140	87.87	375.80	1	1.4	7.6
686	C7H8O	p-CRESOL	108.140	94.60	395.56	1	1.1	7.6
687	C7H8O2	GUAIACOL	124.139	88.70	401.00	2	1.3	9.6
688	C7H8O2	p-METHOXYPHENOL	124.139	132.53	469.13	2	1.3	9.6
689	C7H9N	BENZYLAMINE	107.155	-50.80	364.10	2	1.2	7.8
690	C7H9N	2,6-DIMETHYLPYRIDINE	107.155	20.93	291.29	-	--	--
691	C7H9N	N-METHYLANILINE	107.155	-70.60	384.57	2	1.2	7.4
692	C7H9N	m-TOLUIDINE	107.155	-22.72	398.12	2	1.2	7.6
693	C7H9N	o-TOLUIDINE	107.155	-10.62	392.72	2	1.2	7.6
694	C7H9N	p-TOLUIDINE	107.155	110.75	392.45	2	1.2	7.6
695	C7H10	2-NORBORNENE	94.156	115.25	203.90	2	1.2	9.8
696	C7H10N2	TOLUENEDIAMINE	122.170	208.58	543.20	-	--	--
697	C7H11NO	CYCLOHEXYL ISOCYANATE	125.170	-----	336.20	2	1.1	8.6
698	C7H12	1-HEPTYNE	96.172	-113.60	211.48	2	1.1	7.2
699	C7H12O2	n-BUTYL ACRYLATE	128.171	-84.28	298.13	1	1.5	9.9
700	C7H12O2	ISOBUTYL ACRYLATE	128.171	-78.07	269.60	2	2.0	8.0
701	C7H12O2	n-PROPYL METHACRYLATE	128.171	-----	285.53	2	1.2	8.3
702	C7H12O4	DIETHYL MALONATE	160.170	-56.02	390.02	2	1.3	7.3
703	C7H14	CYCLOHEPTANE	98.188	17.60	245.82	2	1.1	7.1
704	C7H14	1,1-DIMETYLCYCLOPENTANE	98.188	-93.62	190.13	2	1.1	6.8
705	C7H14	cis-1,2-DIMETHYLCYCLOPENTANE	98.188	-65.00	211.15	2	1.1	7.3
706	C7H14	trans-1,2-DIMETHYLCYCLOPENTANE	98.188	-179.63	197.37	2	1.1	7.3
707	C7H14	cis-1,3-DIMETHYLCYCLOPENTANE	98.188	-208.66	195.39	2	1.1	7.3
708	C7H14	trans-1,3-DIMETHYLCYCLOPENTANE	98.188	-209.15	197.11	2	1.1	7.3
709	C7H14	ETHYLCYCLOPENTANE	98.188	-217.19	218.25	1	1.1	6.7
710	C7H14	2-ETHYL-1-PENTENE	98.188	-157.27	201.20	2	1.0	7.8
711	C7H14	3-ETHYL-1-PENTENE	98.188	-197.46	183.40	2	1.0	8.1
712	C7H14	1-HEPTENE	98.188	-181.98	200.55	2	1.0	8.0
713	C7H14	cis-2-HEPTENE	98.188	-164.47	209.14	2	1.1	7.8
714	C7H14	trans-2-HEPTENE	98.188	-165.06	208.31	2	1.1	7.8
715	C7H14	cis-3-HEPTENE	98.188	-213.95	204.35	2	1.1	7.8
716	C7H14	trans-3-HEPTENE	98.188	-213.93	204.21	2	1.1	7.8
717	C7H14	METHYLCYCLOHEXANE	98.188	-195.83	213.67	1	1.2	7.2
718	C7H14	2-METHYL-1-HEXENE	98.188	-153.17	197.31	2	1.0	7.8
719	C7H14	3-METHYL-1-HEXENE	98.188	-198.67	183.02	2	1.0	8.2
720	C7H14	4-METHYL-1-HEXENE	98.188	-222.61	188.11	2	1.1	8.1
721	C7H14	2,3,3-TRIMETHYL-1-BUTENE	98.188	-165.73	172.20	2	1.0	7.4
722	C7H14O	DIISOPROPYL KETONE	114.188	-91.01	255.92	2	1.1	7.0
723	C7H14O	2-HEPTANONE	114.188	-31.00	303.62	1	1.1	7.9

LEL - Lower Explosive Limit
UEL - Upper Explosive Limit

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	LEL vol %	UEL vol %
724	C7H14O	1-HEPTANAL	114.188	-45.40	307.04	2	1.1	7.1
725	C7H14O	1-METHYLCYCLOHEXANOL	114.188	78.80	314.60	2	1.1	7.7
726	C7H14O	cis-2-METHYLCYCLOHEXANOL	114.188	44.60	329.00	2	1.1	8.2
727	C7H14O	trans-2-METHYLCYCLOHEXANOL	114.188	24.80	331.70	2	1.1	8.2
728	C7H14O	cis-3-METHYLCYCLOHEXANOL	114.188	22.10	334.40	2	1.1	8.2
729	C7H14O	trans-3-METHYLCYCLOHEXANOL	114.188	31.10	334.40	2	1.1	8.2
730	C7H14O	cis-4-METHYLCYCLOHEXANOL	114.188	-----	339.80	2	1.1	8.2
731	C7H14O	trans-4-METHYLCYCLOHEXANOL	114.188	-----	339.80	2	1.1	8.2
732	C7H14O	5-METHYL-2-HEXANONE	114.188	-101.02	292.64	1	1.0	8.2
733	C7H14O2	n-BUTYL PROPIONATE	130.187	-129.14	295.88	2	1.1	6.8
734	C7H14O2	ETHYL ISOVALERATE	130.187	-146.74	273.74	2	1.1	6.9
735	C7H14O2	ISOPENTYL ACETATE	130.187	-109.30	287.78	1	1.0	7.5
736	C7H14O2	n-PENTYL ACETATE	130.187	-95.44	300.20	2	1.1	6.8
737	C7H14O2	n-PROPYL n-BUTYRATE	130.187	-139.36	289.94	2	1.1	6.8
738	C7H14O2	n-HEPTANOIC ACID	130.187	18.82	433.40	2	1.1	7.2
739	C7H14O3	ETHYL-3-ETHOXYPROPIONATE	146.186	-----	329.00	1	1.1	8.7
740	C7H15Br	1-BROMOHEPTANE	179.100	-68.98	354.02	2	1.0	7.2
741	C7H15N	N-METHYLCYCLOHEXYLAMINE	113.203	16.70	299.93	2	1.0	7.6
742	C7H16	2,2-DIMETHYLPENTANE	100.204	-190.86	174.54	2	1.0	6.0
743	C7H16	2,3-DIMETHYLPENTANE	100.204	-----	193.60	1	1.1	6.7
744	C7H16	2,4-DIMETHYLPENTANE	100.204	-182.63	176.88	2	1.0	6.5
745	C7H16	3,3-DIMETHYLPENTANE	100.204	-210.01	186.91	2	1.0	7.0
746	C7H16	3-ETHYLPENTANE	100.204	-181.48	200.25	2	1.0	7.0
747	C7H16	n-HEPTANE	100.204	-131.04	209.17	1	1.0	7.0
748	C7H16	2-METHYLHEXANE	100.204	-180.85	194.09	2	1.0	6.0
749	C7H16	3-METHYLHEXANE	100.204	-182.92	197.33	2	1.0	7.0
750	C7H16	2,2,3-TRIMETHYLBUTANE	100.204	-12.24	177.58	2	1.0	6.1
751	C7H16O	1-HEPTANOL	116.203	-29.20	349.34	2	1.0	7.2
752	C7H16O	2-HEPTANOL	116.203	-22.27	318.56	2	1.0	7.3
753	C7H16O	5-METHYL-1-HEXANOL	116.203	-----	341.60	2	1.0	7.3
754	C7H16O	ISOPROPYL-TERT-BUTYL-ETHER	116.203	-139.63	221.92	2	1.1	6.9
755	C7H16S	n-HEPTYL MERCAPTAN	132.270	-45.81	350.49	2	0.9	--
756	C7H16S	BUTYL-PROPYL-SULFIDE	132.263	-87.68	339.82	-	--	--
757	C7H16S	ETHYL-PENTYL-SULFIDE	132.263	-87.68	339.82	-	--	--
758	C7H16S	HEXYL-METHYL-SULFIDE	132.263	-87.68	339.82	-	--	--
759	C7H17N	1-AMINOHEPTANE	115.219	-2.20	314.42	2	1.0	7.2
760	C8H4Cl2O2	ISOPHTHALOYL CHLORIDE	203.024	110.93	528.53	2	1.5	6.9
761	C8H4O3	PHTHALIC ANHYDRIDE	148.118	268.00	544.10	1	1.7	--
762	C8H6	ETHYNYLBENZENE	102.135	-23.12	293.38	2	1.2	7.6
763	C8H6O4	ISOPHTHALIC ACID	166.133	654.80	895.73	2	1.3	7.7
764	C8H6O4	PHTHALIC ACID	166.133	375.80	616.73	2	1.3	7.7
765	C8H6O4	TEREPHTHALIC ACID	166.133	800.60	1037.93	2	1.3	7.7
766	C8H6S	BENZOTHIOPHENE	134.202	88.43	427.82	-	--	--
767	C8H7N	INDOLE	117.150	32.95	487.40	2	--	8.1
768	C8H8	STYRENE	104.152	-23.10	293.29	1	1.1	6.1
769	C8H8	1,3,5,7-CYCLOOCTATETRAENE	104.151	19.42	284.02	2	1.1	7.2
770	C8H8O	ACETOPHENONE	120.151	68.90	395.60	2	1.1	6.7
771	C8H8O	p-TOLUALDEHYDE	120.151	-----	399.20	2	1.1	6.7
772	C8H8O2	METHYL BENZOATE	136.150	9.68	391.10	2	1.2	6.7
773	C8H8O2	o-TOLUIC ACID	136.150	218.66	497.93	2	1.2	6.8
774	C8H8O2	p-TOLUIC ACID	136.150	355.28	527.00	2	1.2	6.8
775	C8H8O3	METHYL SALICYLATE	152.150	17.60	428.90	2	1.2	7.2
776	C8H8O3	VANILLIN	152.150	179.33	544.73	2	1.2	8.8
777	C8H9NO	ACETANILIDE	135.166	236.30	578.84	2	1.1	6.9
778	C8H10	ETHYLBENZENE	106.167	-138.91	277.16	1	1.0	6.7
779	C8H10	m-XYLENE	106.167	-54.13	282.42	1	1.1	7.0
780	C8H10	o-XYLENE	106.167	-13.31	291.97	1	1.0	6.0
781	C8H10	p-XYLENE	106.167	55.87	281.05	1	1.1	7.0
782	C8H10O	m-ETHYLPHENOL	122.167	-----	400.12	2	1.1	6.7
783	C8H10O	p-ETHYLPHENOL	122.167	113.14	424.38	2	1.1	6.7
784	C8H10O	PHENETOLE	122.167	-21.14	338.00	2	1.1	7.8
785	C8H10O	2-PHENYLETHANOL	122.167	-15.07	426.02	2	1.1	7.0
786	C8H10O	2,3-XYLENOL	122.167	162.61	422.46	2	1.1	6.4
787	C8H10O	2,4-XYLENOL	122.167	76.15	411.76	2	1.1	6.4
788	C8H10O	2,5-XYLENOL	122.167	166.71	412.12	2	1.1	6.4
789	C8H10O	2,6-XYLENOL	122.167	114.10	393.93	1	1.4	6.4

LEL - Lower Explosive Limit
UEL - Upper Explosive Limit

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	LEL vol %	UEL vol %
790	C8H10O	3,4-XYLENOL	122.167	149.18	440.60	2	1.1	6.4
791	C8H10O	3,5-XYLENOL	122.167	146.19	431.13	2	1.1	6.4
792	C8H11N	N,N-DIMETHYLANILINE	121.182	36.41	380.37	2	1.0	6.4
793	C8H11N	o-ETHYLANILINE	121.182	-51.88	409.10	2	1.0	6.7
794	C8H11N	2,4,6-TRIMETHYLPYRIDINE	121.182	-47.47	339.53	2	1.0	8.9
795	C8H11NO	p-PHENETIDINE	137.181	38.93	490.73	2	1.0	8.3
796	C8H12	1,5-CYCLOOCTADIENE	108.183	-92.51	302.22	2	1.0	8.6
797	C8H12	VINYLCYCLOHEXENE	108.183	-164.47	262.13	2	1.0	8.8
798	C8H12O4	1,4-CYCLOHEXANEDICARBOXYLIC ACID	172.181	594.50	744.53	2	1.0	8.2
799	C8H12O4	DIETHYL MALEATE	172.181	16.16	437.00	2	1.1	7.7
800	C8H14O2	n-BUTYL METHACRYLATE	142.198	-----	321.53	1	2.0	8.0
801	C8H14O3	BUTYRIC ANHYDRIDE	158.197	-99.94	383.00	1	1.1	7.6
802	C8H14O4	DIETHYL SUCCINATE	174.197	-5.44	421.70	2	1.1	6.5
803	C8H16	CYCLOOCTANE	112.214	58.01	304.07	2	0.9	6.0
804	C8H16	1,1-DIMETHYLCYCLOHEXANE	112.215	-28.28	247.19	2	0.9	6.1
805	C8H16	cis-1,2-DIMETHYLCYCLOHEXANE	112.215	-57.98	265.62	2	0.9	6.5
806	C8H16	trans-1,2-DIMETHYLCYCLOHEXANE	112.215	-126.69	254.17	2	0.9	6.5
807	C8H16	cis-1,3-DIMETHYLCYCLOHEXANE	112.215	-104.03	248.16	2	0.9	6.5
808	C8H16	trans-1,3-DIMETHYLCYCLOHEXANE	112.215	-130.14	256.03	2	0.9	6.5
809	C8H16	cis-1,4-DIMETHYLCYCLOHEXANE	112.215	-125.37	255.78	2	0.9	6.5
810	C8H16	trans-1,4-DIMETHYLCYCLOHEXANE	112.215	-34.49	246.85	2	0.9	6.5
811	C8H16	ETHYLCYCLOHEXANE	112.215	-168.36	269.24	1	0.9	6.6
812	C8H16	2-ETHYL-1-HEXENE	112.215	-----	248.00	2	0.9	6.9
813	C8H16	1-METHYL-1-ETHYLCYCLOPENTANE	112.215	-226.84	250.74	2	0.9	6.1
814	C8H16	1-OCTENE	112.215	-151.06	250.32	2	0.9	7.1
815	C8H16	trans-2-OCTENE	112.215	-125.86	257.00	2	0.9	6.9
816	C8H16	trans-3-OCTENE	112.215	-166.00	253.94	2	0.9	6.9
817	C8H16	trans-4-OCTENE	112.215	-136.80	252.07	2	0.9	6.9
818	C8H16	n-PROPYLCYCLOPENTANE	112.215	-179.19	267.73	1	0.9	6.4
819	C8H16	2,4,4-TRIMETHYL-1-PENTENE	112.215	-136.21	214.59	2	0.9	6.7
820	C8H16	2,4,4-TRIMETHYL-2-PENTENE	112.215	-159.36	220.84	2	0.9	6.4
821	C8H16O	2-ETHYLHEXANAL	128.214	-----	321.17	1	0.9	7.2
822	C8H16O	1-OCTANAL	128.214	-16.87	345.20	2	1.0	6.4
823	C8H16O	2-OCTANONE	128.214	-4.54	342.68	2	1.0	6.1
824	C8H16O2	n-BUTYL n-BUTYRATE	144.214	-133.60	329.00	2	1.0	6.1
825	C8H16O2	n-HEXYL ACETATE	144.214	-113.62	340.70	2	1.0	6.1
826	C8H16O2	ISOBUTYL ISOBUTYRATE	144.214	-113.26	297.50	1	1.0	7.6
827	C8H16O2	n-OCTANOIC ACID	144.214	61.70	463.82	2	1.0	6.4
828	C8H16O4	DIETHYLENE GLYCOL ETHYL ETHER ACETATE	176.213	-13.00	423.32	1	1.0	19.4
829	C8H18	2,2-DIMETHYLHEXANE	114.231	-186.12	224.31	2	0.9	5.5
830	C8H18	2,3-DIMETHYLHEXANE	114.231	-----	240.10	2	0.9	5.9
831	C8H18	2,4-DIMETHYLHEXANE	114.231	-----	228.97	2	0.9	5.9
832	C8H18	2,5-DIMETHYLHEXANE	114.231	-132.07	228.40	2	0.9	5.9
833	C8H18	3,3-DIMETHYLHEXANE	114.231	-194.98	233.55	2	0.9	5.5
834	C8H18	3,4-DIMETHYLHEXANE	114.231	-----	243.91	2	0.9	5.9
835	C8H18	3-ETHYLHEXANE	114.231	-----	245.37	2	0.9	5.8
836	C8H18	3-ETHYL-2-METHYLPENTANE	114.230	-174.91	240.19	2	0.9	5.8
837	C8H18	3-METHYL-3-ETHYLPENTANE	114.231	-131.57	244.89	2	0.9	5.5
838	C8H18	2-METHYLHEPTANE	114.231	-164.18	243.77	2	1.0	5.8
839	C8H18	3-METHYLHEPTANE	114.231	-184.99	246.07	2	1.0	5.8
840	C8H18	4-METHYLHEPTANE	114.231	-185.71	243.88	2	1.0	5.8
841	C8H18	n-OCTANE	114.231	-70.19	258.22	1	0.8	6.5
842	C8H18	2,2,3-TRIMETHYLPENTANE	114.231	-170.07	229.73	2	1.0	5.6
843	C8H18	2,2,4-TRIMETHYLPENTANE	114.231	-161.27	210.63	1	1.1	6.0
844	C8H18	2,3,3-TRIMETHYLPENTANE	114.231	-149.67	238.59	2	1.0	5.6
845	C8H18	2,3,4-TRIMETHYLPENTANE	114.231	-164.56	236.25	2	1.0	6.0
846	C8H18	2,2,3,3-TETRAMETHYLBUTANE	114.230	-149.22	223.61	2	0.9	5.8
847	C8H18O	DI-n-BUTYL ETHER	130.230	-139.36	284.52	1	1.5	7.6
848	C8H18O	DI-sec-BUTYL ETHER	130.230	-148.00	249.89	2	0.9	7.4
849	C8H18O	DI-tert-BUTYL ETHER	130.230	-108.67	225.05	2	0.9	6.8
850	C8H18O	2-ETHYL-1-HEXANOL	130.230	-94.00	364.28	1	0.9	9.7
851	C8H18O	1-OCTANOL	130.230	4.10	383.36	2	0.9	6.4
852	C8H18O	2-OCTANOL	130.230	-24.88	355.64	1	0.8	6.5
853	C8H18O2	DI-t-BUTYL PEROXIDE	146.230	-40.00	231.80	2	0.9	8.2
854	C8H18O2S	DI-n-BUTYL SULFONE	178.296	112.73	555.53	2	0.8	--
855	C8H18O3	DIETHYLENE GLYCOL DIETHYL ETHER	162.229	-47.74	372.20	2	0.9	10.1

LEL - Lower Explosive Limit
UEL - Upper Explosive Limit

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	LEL vol %	UEL vol %
856	C8H18O3	DIETHYLENE GLYCOL MONOBUTYL EHTER	162.229	-90.40	447.80	1	0.9	24.6
857	C8H18O4	TRIETHYLENE GLYCOL DIMETHYL ETHER	178.229	-46.84	420.80	2	1.0	11.4
858	C8H18O5	TETRAETHYLENE GLYCOL	194.228	23.00	586.13	2	1.0	11.0
859	C8H18S	n-OCTYL MERCAPTAN	146.297	-56.56	390.27	2	0.8	--
860	C8H18S	tert-OCTYL MERCAPTAN	146.297	-101.47	312.53	-	--	--
861	C8H18S	BUTYL-SULFIDE	146.290	-81.92	359.60	-	--	--
862	C8H18S	ETHYL-HEXYL-SULFIDE	146.290	-81.92	383.02	-	--	--
863	C8H18S	HEPTYL-METHYL-SULFIDE	146.290	-81.92	383.02	-	--	--
864	C8H18S	PENTYL-PROPYL-SULFIDE	146.290	-81.92	383.02	-	--	--
865	C8H18S2	BUTYL-DISULFIDE	178.350	-95.78	448.18	-	--	--
866	C8H19N	DI-n-BUTYLAMINE	129.246	-79.60	317.93	1	1.1	6.1
867	C8H19N	DIISOBUTYLAMINE	129.246	-94.00	282.38	2	0.9	6.3
868	C8H19N	n-OCTYLAMINE	129.246	31.28	355.28	2	0.9	6.4
869	C8H23N5	TETRAETHYLENEPENTAMINE	189.304	-22.27	631.40	2	0.8	4.6
870	C8H24O4Si4	OCTAMETHYLCYCLOTETRASILOXANE	296.618	63.77	347.00	1	0.8	7.4
871	C9H4O5	TRIMELLITIC ANHYDRIDE	192.128	329.00	733.73	2	1.3	9.5
872	C9H6N2O2	TOLUENE DIISOCYANATE	174.159	57.00	482.00	1	0.9	9.5
873	C9H7N	ISOQUINOLINE	129.161	79.34	469.85	2	1.0	7.8
874	C9H7N	QUINOLINE	129.161	5.18	459.68	2	1.0	7.8
875	C9H7NO	8-HYDROXYQUINOLINE	145.161	163.13	512.33	2	1.0	7.0
876	C9H8	INDENE	116.163	29.39	360.72	2	1.0	7.2
877	C9H8O	2-METHYLBENZOFURAN	132.162	-----	387.50	2	1.0	8.6
878	C9H10	INDANE	118.178	-60.54	352.35	2	1.0	6.1
879	C9H10	cis-PROPENYLBENZENE	118.178	-79.02	338.02	2	1.0	6.3
880	C9H10	trans-PROPENYLBENZENE	118.178	-20.79	338.02	2	1.0	6.3
881	C9H10	alpha-METHYLSTYRENE	118.178	-9.76	329.90	1	1.9	6.1
882	C9H10	m-METHYLSTYRENE	118.178	-123.41	340.88	1	0.7	11.0
883	C9H10	o-METHYLSTYRENE	118.178	-91.43	337.66	2	1.0	6.7
884	C9H10	p-METHYLSTYRENE	118.178	-29.43	343.00	1	1.9	6.1
885	C9H10O2	BENZYL ACETATE	150.177	-60.70	416.30	2	1.0	6.1
886	C9H10O2	ETHYL BENZOATE	150.177	-30.46	416.12	2	1.0	6.1
887	C9H10O3	ETHYL VANILLIN	166.177	171.50	560.93	2	1.0	7.8
888	C9H11NO	p-DIMETHYLAMINOBENZALDEHYDE	149.192	166.73	598.73	2	1.0	6.1
889	C9H12	CUMENE	120.194	-140.82	306.34	1	0.9	6.5
890	C9H12	m-ETHYLTOLUENE	120.194	-139.97	322.39	2	0.9	5.5
891	C9H12	o-ETHYLTOLUENE	120.194	-113.44	329.32	2	0.9	5.5
892	C9H12	p-ETHYLTOLUENE	120.194	-80.18	323.62	2	0.9	5.5
893	C9H12	MESITYLENE	120.194	-48.44	328.53	2	0.9	5.2
894	C9H12	n-PROPYLBENZENE	120.194	-147.06	318.63	2	0.9	5.7
895	C9H12	1,2,3-TRIMETHYLBENZENE	120.194	-13.65	349.02	2	0.9	5.2
896	C9H12	1,2,4-TRIMETHYLBENZENE	120.194	-46.79	336.88	2	0.9	5.2
897	C9H12O	BENZYL ETHYL ETHER	136.194	36.50	365.00	2	0.9	6.7
898	C9H12O	2-PHENYL-2-PROPANOL	136.194	96.80	395.60	2	1.0	6.1
899	C9H12O2	CUMENE HYDROPEROXIDE	152.193	16.00	337.19	1	0.9	6.5
900	C9H14O	ISOPHORONE	138.210	17.42	419.36	1	0.8	3.8
901	C9H14O6	GLYCERYL TRIACETATE	218.207	39.38	498.20	1	1.0	6.4
902	C9H16	1-NONYNE	124.225	-57.98	303.46	2	0.9	5.6
903	C9H16O4	AZELAIC ACID	188.224	223.70	680.38	2	0.9	6.5
904	C9H18	BUTYLCYCLOPENTANE	126.241	-162.35	313.90	2	0.8	5.4
905	C9H18	cis,cis-1,3,5-TRIMETHYLCYCLOHEXANE	126.241	-57.44	281.32	2	0.8	5.4
906	C9H18	cis,trans-1,3,5-TRIMETHYLCYCLOHEXANE	126.241	-119.90	284.99	2	0.8	5.4
907	C9H18	ISOPROPYLCYCLOHEXANE	126.242	-128.90	310.57	2	0.8	5.9
908	C9H18	1-NONENE	126.242	-114.47	296.37	2	0.8	6.4
909	C9H18	n-PROPYLCYCLOHEXANE	126.242	-138.77	314.15	2	0.9	5.9
910	C9H18O	DIISOBUTYL KETONE	142.241	-50.76	334.87	1	0.8	6.2
911	C9H18O	1-NONANAL	142.241	-0.40	383.00	2	0.8	5.8
912	C9H18O2	n-BUTYL VALERATE	158.241	-135.04	367.70	2	0.9	5.6
913	C9H18O2	n-NONANOIC ACID	158.241	54.32	492.08	2	0.9	5.9
914	C9H18O2	n-OCTYL FORMATE	158.241	-38.38	389.84	2	0.9	5.8
915	C9H20	3,3-DIETHYLPENTANE	128.258	-27.45	295.14	1	0.7	5.7
916	C9H20	2,2-DIMETHYL-3-ETHYLPENTANE	128.258	-147.05	272.91	2	0.8	5.2
917	C9H20	3-ETHYL-2,3-DIMETHYLPENTANE	128.257	-147.06	292.48	2	0.8	5.2
918	C9H20	2,4-DIMETHYL-3-ETHYLPENTANE	128.258	-188.25	278.10	2	0.8	5.5
919	C9H20	2,2-DIMETHYLHEPTANE	128.258	-171.40	270.84	2	0.8	5.1
920	C9H20	2,6-DIMETHYLHEPTANE	128.258	-153.22	275.38	2	0.8	5.4
921	C9H20	3-ETHYLHEPTANE	128.258	-174.82	289.76	2	0.8	5.4

LEL - Lower Explosive Limit
UEL - Upper Explosive Limit

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	LEL vol %	UEL vol %
922	C9H20	4-ETHYLHEPTANE	128.257	-171.74	286.18	2	0.8	5.2
923	C9H20	2,3-DIMETHYLHEPTANE	128.257	-171.38	284.92	2	0.8	5.2
924	C9H20	2,4-DIMETHYLHEPTANE	128.257	-171.38	271.22	2	0.8	5.2
925	C9H20	2,5-DIMETHYLHEPTANE	128.257	-171.38	276.82	2	0.8	5.2
926	C9H20	3,4-DIMETHYLHEPTANE	128.257	-153.20	285.10	2	0.8	5.2
927	C9H20	3,5-DIMETHYLHEPTANE	128.257	-153.20	276.82	2	0.8	5.2
928	C9H20	4,4-DIMETHYLHEPTANE	128.257	-153.20	275.38	2	0.8	5.2
929	C9H20	3-ETHYL-2-METHYLHEXANE	128.257	-171.38	280.42	2	0.8	5.2
930	C9H20	4-ETHYL-2-METHYLHEXANE	128.257	-171.38	272.86	2	0.8	5.2
931	C9H20	3-ETHYL-3-METHYLHEXANE	128.257	-171.38	285.10	2	0.8	5.2
932	C9H20	3-ETHYL-4-METHYLHEXANE	128.257	-171.38	284.74	2	0.8	5.2
933	C9H20	2,2,3-TRIMETHYLHEXANE	128.257	-183.98	272.48	2	0.8	5.2
934	C9H20	2,2,4-TRIMETHYLHEXANE	128.257	-184.27	259.77	2	0.8	5.2
935	C9H20	2,3,3-TRIMETHYLHEXANE	128.257	-178.22	279.84	2	0.8	5.2
936	C9H20	2,3,4-TRIMETHYLHEXANE	128.257	-178.22	282.29	2	0.8	5.2
937	C9H20	2,3,5-TRIMETHYLHEXANE	128.257	-198.02	268.43	2	0.8	5.2
938	C9H20	2,4,4-TRIMETHYLHEXANE	128.257	-172.07	267.19	2	0.8	5.2
939	C9H20	3,3,4-TRIMETHYLHEXANE	128.257	-150.14	284.85	2	0.8	5.2
940	C9H20	2-METHYLOCTANE	128.258	-112.67	289.90	2	0.9	5.4
941	C9H20	3-METHYLOCTANE	128.258	-161.68	291.61	2	0.9	5.4
942	C9H20	4-METHYLOCTANE	128.258	-171.76	288.39	2	0.9	5.4
943	C9H20	n-NONANE	128.258	-64.34	303.48	1	0.7	5.6
944	C9H20	2,2,3,3-TETRAMETHYLPENTANE	128.258	14.20	284.52	1	0.8	4.9
945	C9H20	2,2,3,4-TETRAMETHYLPENTANE	128.258	-185.96	271.45	2	0.9	5.3
946	C9H20	2,2,4,4-TETRAMETHYLPENTANE	128.258	-87.16	252.12	2	0.9	5.0
947	C9H20	2,3,3,4-TETRAMETHYLPENTANE	128.257	-151.69	286.83	2	0.8	5.2
948	C9H20	2,2,5-TRIMETHYLHEXANE	128.258	-158.37	255.36	2	0.8	5.2
949	C9H20O	2,6-DIMETHYL-4-HEPTANOL	144.257	-85.27	352.13	2	0.8	5.7
950	C9H20O	1-NONANOL	144.257	23.00	415.58	1	0.8	6.1
951	C9H20O	2-NONANOL	144.257	-31.00	389.30	2	0.8	5.9
952	C9H20S	n-NONYL MERCAPTAN	160.324	-4.18	427.64	2	0.7	--
953	C9H20S	BUTYL-PENTYL-SULFIDE	160.317	-43.58	424.42	-	--	--
954	C9H20S	ETHYL-HEPTYL-SULFIDE	160.317	-43.58	424.42	-	--	--
955	C9H20S	HEXYL-PROPYL-SULFIDE	160.317	-43.58	424.42	-	--	--
956	C9H20S	METHYL-OCTYL-SULFIDE	160.317	-43.58	424.42	-	--	--
957	C9H21N	n-NONYLAMINE	143.272	32.00	395.96	2	0.8	5.9
958	C9H21N	TRIPROPYLAMINE	143.272	-136.30	313.70	2	0.8	5.4
959	C10H6O8	PYROMELLITIC ACID	254.153	537.53	839.93	2	1.2	7.8
960	C10H7Br	1-BROMONAPHTHALENE	207.070	43.16	537.98	2	--	7.8
961	C10H7Cl	1-CHLORONAPHTHALENE	162.618	24.80	498.74	1	1.0	5.7
962	C10H8	NAPHTHALENE	128.174	176.50	424.38	1	0.9	5.9
963	C10H8	AZULENE	128.173	-147.08	467.62	2	0.9	6.0
964	C10H9N	QUINALDINE	143.188	30.20	475.88	2	0.9	6.8
965	C10H10	m-DIVINYLBENZENE	130.189	-88.42	391.10	1	0.3	6.9
966	C10H10	1-METHYLINDENE	130.189	-----	389.30	2	0.9	6.6
967	C10H10	2-METHYLINDENE	130.189	176.00	364.73	2	0.9	6.4
968	C10H10O4	DIMETHYL PHTHALATE	194.187	30.20	542.66	1	0.9	5.8
969	C10H10O4	DIMETHYL TEREPHTHALATE	194.187	285.17	550.40	1	--	5.5
970	C10H12	DICYCLOPENTADIENE	132.205	92.93	337.73	1	1.0	8.3
971	C10H12	1,2,3,4-TETRAHYDRONAPHTHALENE	132.205	-32.35	405.72	1	0.8	5.0
972	C10H12O	ANETHOLE	148.205	70.43	455.54	2	0.9	7.2
973	C10H12O4	DIALLYL MALEATE	196.203	-52.60	476.33	2	0.9	7.9
974	C10H14	n-BUTYLBENZENE	134.221	-126.13	361.96	1	0.8	5.8
975	C10H14	sec-BUTYLBENZENE	134.221	-103.77	343.99	1	0.8	6.9
976	C10H14	tert-BUTYLBENZENE	134.221	-72.18	336.47	1	0.7	5.7
977	C10H14	1,2,3,4-TETRAMETHYLBENZENE	134.221	20.77	401.18	2	0.8	5.4
978	C10H14	m-CYMENE	134.221	-82.68	347.14	2	0.8	5.2
979	C10H14	o-CYMENE	134.221	-96.72	352.72	2	0.8	5.2
980	C10H14	p-CYMENE	134.221	-90.22	350.83	1	0.7	5.6
981	C10H14	m-DIETHYLBENZENE	134.221	-119.00	358.05	2	0.8	5.1
982	C10H14	o-DIETHYLBENZENE	134.221	-24.20	362.23	2	0.8	5.1
983	C10H14	p-DIETHYLBENZENE	134.221	-45.09	362.82	1	0.8	6.1
984	C10H14	2-ETHYL-m-XYLENE	134.221	2.73	374.07	2	0.8	4.9
985	C10H14	2-ETHYL-p-XYLENE	134.221	-64.53	368.29	2	0.8	4.9
986	C10H14	3-ETHYL-o-XYLENE	134.221	-57.12	381.13	2	0.8	4.9
987	C10H14	4-ETHYL-m-XYLENE	134.221	-81.18	371.19	2	0.8	4.9

LEL - Lower Explosive Limit
UEL - Upper Explosive Limit

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	LEL vol %	UEL vol %
988	C10H14	4-ETHYL-o-XYLENE	134.221	-88.47	373.60	2	0.8	4.9
989	C10H14	5-ETHYL-m-XYLENE	134.221	-119.79	362.80	2	0.8	4.9
990	C10H14	ISOBUTYLBENZENE	134.221	-60.61	343.02	1	0.8	6.0
991	C10H14	1,2,3,5-TETRAMETHYLBENZENE	134.221	-10.64	388.40	2	0.8	4.6
992	C10H14	1,2,4,5-TETRAMETHYLBENZENE	134.221	174.61	386.31	2	0.8	4.6
993	C10H14O	p-tert-BUTYLPHENOL	150.221	209.14	463.51	2	0.8	5.5
994	C10H14O2	p-tert-BUTYLCATECHOL	166.220	125.33	544.73	2	0.9	5.8
995	C10H15N	N,N-DIETYHLANILINE	149.236	-36.40	421.29	1	1.6	9.5
996	C10H15N	2,6-DIETHYLANILINE	149.236	38.30	455.90	2	0.8	5.4
997	C10H16	CAMPHENE	136.237	116.60	320.90	2	0.8	6.7
998	C10H16	D-LIMONENE	136.237	-101.47	349.70	1	0.7	6.1
999	C10H16	alpha-PHELLANDRENE	136.237	-----	347.00	2	0.8	7.1
1000	C10H16	beta-PHELLANDRENE	136.237	-----	345.20	2	0.8	7.1
1001	C10H16	alpha-PINENE	136.237	-83.20	313.05	2	0.8	6.6
1002	C10H16	beta-PINENE	136.237	-78.77	330.87	2	0.8	6.7
1003	C10H16	alpha-TERPINENE	136.237	-----	350.96	2	0.8	6.8
1004	C10H16	gamma-TERPINENE	136.237	-----	361.40	2	0.8	6.8
1005	C10H16	TERPINOLENE	136.237	-----	365.00	2	0.8	6.8
1006	C10H16O	CAMPHOR	152.236	356.18	405.36	1	0.6	3.5
1007	C10H18	1-DECYNE	138.252	-47.18	345.22	2	0.8	5.0
1008	C10H18	cis-DECAHYDRONANPHTALENE	138.253	-45.31	384.48	1	0.7	4.9
1009	C10H18	trans-DECAHYDRONAPHTHALENE	138.253	-22.65	369.16	1	0.7	4.9
1010	C10H18O4	SEBACIC ACID	202.251	274.10	696.09	2	0.8	6.0
1011	C10H20	n-BUTYLCYCLOHEXANE	140.269	-102.51	357.76	2	0.9	5.5
1012	C10H20	1-CYCLOPENTYLPENTANE	140.268	-117.38	357.10	2	0.8	4.8
1013	C10H20	1-DECENE	140.269	-87.27	339.08	2	0.7	5.9
1014	C10H20O	1-DECANAL	156.268	21.20	419.00	2	0.8	5.4
1015	C10H20O2	n-DECANOIC ACID	172.268	88.88	518.00	2	0.8	5.5
1016	C10H20O2	2-ETHYLHEXYL ACETATE	172.268	-135.40	389.48	1	0.8	8.1
1017	C10H20O2	ISOPENTYL ISOVALERATE	172.268	-72.67	381.20	2	0.8	5.4
1018	C10H22	n-DECANE	142.285	-21.39	345.47	1	0.8	5.4
1019	C10H22	2-METHYLNONANE	142.285	-102.37	332.60	2	0.7	5.0
1020	C10H22	3-METHYLNONANE	142.285	-120.64	334.04	2	0.7	5.0
1021	C10H22	4-METHYLNONANE	142.285	-145.66	330.26	2	0.7	5.0
1022	C10H22	5-METHYLNONANE	142.285	-125.86	329.27	2	0.7	5.0
1023	C10H22	3-ETHYLOCTANE	142.284	-125.84	331.72	2	0.7	4.7
1024	C10H22	4-ETHYLOCTANE	142.284	-125.84	326.57	2	0.7	4.7
1025	C10H22	2,2-DIMETHYLOCTANE	142.285	-----	314.42	2	0.7	4.8
1026	C10H22	2,3-DIMETHYLOCTANE	142.284	-65.18	327.78	2	0.7	4.7
1027	C10H22	2,4-DIMETHYLOCTANE	142.284	-65.18	312.64	2	0.7	4.7
1028	C10H22	2,5-DIMETHYLOCTANE	142.284	-65.18	317.32	2	0.7	4.7
1029	C10H22	2,6-DIMETHYLOCTANE	142.284	-65.18	320.70	2	0.7	4.7
1030	C10H22	2,7-DIMETHYLOCTANE	142.284	-65.18	319.78	2	0.7	4.7
1031	C10H22	3,3-DIMETHYLOCTANE	142.284	-65.18	322.18	2	0.7	4.7
1032	C10H22	3,4-DIMETHYLOCTANE	142.284	-65.18	326.14	2	0.7	4.7
1033	C10H22	3,5-DIMETHYLOCTANE	142.284	-65.18	318.94	2	0.7	4.7
1034	C10H22	3,6-DIMETHYLOCTANE	142.284	-65.18	321.46	2	0.7	4.7
1035	C10H22	4,4-DIMETHYLOCTANE	142.284	-65.18	315.52	2	0.7	4.7
1036	C10H22	4,5-DIMETHYLOCTANE	142.284	-65.18	323.85	2	0.7	4.7
1037	C10H22	4-PROPYLHEPTANE	142.284	-65.18	315.52	2	0.7	4.7
1038	C10H22	4-ISOPROPYLHEPTANE	142.284	-65.18	318.04	2	0.7	4.7
1039	C10H22	3-ETHYL-2-METHYLHEPTANE	142.284	-65.18	322.18	2	0.7	4.7
1040	C10H22	4-ETHYL-2-METHYLHEPTANE	142.284	-65.18	313.18	2	0.7	4.7
1041	C10H22	5-ETHYL-2-METHYLHEPTANE	142.284	-65.18	319.48	2	0.7	4.7
1042	C10H22	3-ETHYL-3-METHYLHEPTANE	142.284	-65.18	326.86	2	0.7	4.7
1043	C10H22	4-ETHYL-3-METHYLHEPTANE	142.284	-65.18	323.98	2	0.7	4.7
1044	C10H22	3-ETHYL-5-METHYLHEPTANE	142.284	-65.18	316.78	2	0.7	4.7
1045	C10H22	3-ETHYL-4-METHYLHEPTANE	142.284	-65.18	325.42	2	0.7	4.7
1046	C10H22	4-ETHYL-4-METHYLHEPTANE	142.284	-65.18	321.46	2	0.7	4.7
1047	C10H22	2,2,3-TRIMETHYLHEPTANE	142.284	-65.18	315.70	2	0.7	4.7
1048	C10H22	2,2,4-TRIMETHYLHEPTANE	142.284	-65.18	298.96	2	0.7	4.7
1049	C10H22	2,2,5-TRIMETHYLHEPTANE	142.284	-65.18	303.46	2	0.7	4.7
1050	C10H22	2,2,6-TRIMETHYLHEPTANE	142.284	-65.18	300.09	2	0.7	4.7
1051	C10H22	2,3,3-TRIMETHYLHEPTANE	142.284	-65.18	320.38	2	0.7	4.7
1052	C10H22	2,3,4-TRIMETHYLHEPTANE	142.284	-65.18	319.84	2	0.7	4.7
1053	C10H22	2,3,5-TRIMETHYLHEPTANE	142.284	-65.18	321.28	2	0.7	4.7

LEL - Lower Explosive Limit
UEL - Upper Explosive Limit

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	LEL vol %	UEL vol %
1054	C10H22	2,3,6-TRIMETHYLHEPTANE	142.284	-65.18	312.82	2	0.7	4.7
1055	C10H22	2,4,4-TRIMETHYLHEPTANE	142.284	-65.18	303.82	2	0.7	4.7
1056	C10H22	2,4,5-TRIMETHYLHEPTANE	142.284	-65.18	313.72	2	0.7	4.7
1057	C10H22	2,4,6-TRIMETHYLHEPTANE	142.284	-65.18	297.70	2	0.7	4.7
1058	C10H22	2,5,5-TRIMETHYLHEPTANE	142.284	-65.18	307.06	2	0.7	4.7
1059	C10H22	3,3,4-TRIMETHYLHEPTANE	142.284	-65.18	323.44	2	0.7	4.7
1060	C10H22	3,3,5-TRIMETHYLHEPTANE	142.284	-65.18	312.26	2	0.7	4.7
1061	C10H22	3,4,4-TRIMETHYLHEPTANE	142.284	-65.18	322.00	2	0.7	4.7
1062	C10H22	3,4,5-TRIMETHYLHEPTANE	142.284	-65.18	324.52	2	0.7	4.7
1063	C10H22	3-ISOPROPYL-2-METHYLHEXANE	142.284	-65.18	332.08	2	0.7	4.7
1064	C10H22	3,3-DIETHYLHEXANE	142.284	-65.18	331.36	2	0.7	4.7
1065	C10H22	3,4-DIETHYLHEXANE	142.284	-65.18	327.04	2	0.7	4.7
1066	C10H22	3-ETHYL-2,2-DIMETHYLHEXANE	142.284	-65.18	313.00	2	0.7	4.7
1067	C10H22	4-ETHYL-2,2-DIMETHYLHEXANE	142.284	-65.18	296.62	2	0.7	4.7
1068	C10H22	3-ETHYL-2,3-DIMETHYLHEXANE	142.284	-65.18	326.68	2	0.7	4.7
1069	C10H22	4-ETHYL-2,3-DIMETHYLHEXANE	142.284	-65.18	321.64	2	0.7	4.7
1070	C10H22	3-ETHYL-2,4-DIMETHYLHEXANE	142.284	-65.18	320.20	2	0.7	4.7
1071	C10H22	4-ETHYL-2,4-DIMETHYLHEXANE	142.284	-65.18	322.00	2	0.7	4.7
1072	C10H22	3-ETHYL-2,5-DIMETHYLHEXANE	142.284	-65.18	309.40	2	0.7	4.7
1073	C10H22	4-ETHYL-3,3-DIMETHYLHEXANE	142.284	-65.18	325.24	2	0.7	4.7
1074	C10H22	3-ETHYL-3,4-DIMETHYLHEXANE	142.284	-65.18	323.80	2	0.7	4.7
1075	C10H22	2,2,3,3-TETRAMETHYLHEXANE	142.284	-65.18	320.59	2	0.7	4.7
1076	C10H22	2,2,3,4-TETRAMETHYLHEXANE	142.284	-65.18	317.86	2	0.7	4.7
1077	C10H22	2,2,3,5-TETRAMETHYLHEXANE	142.284	-65.18	299.14	2	0.7	4.7
1078	C10H22	2,2,4,4-TETRAMETHYLHEXANE	142.284	-65.18	308.86	2	0.7	4.7
1079	C10H22	2,2,4,5-TETRAMETHYLHEXANE	142.284	-65.18	298.20	2	0.7	4.7
1080	C10H22	2,2,5,5-TETRAMETHYLHEXANE	142.284	9.34	279.46	2	0.7	4.7
1081	C10H22	2,3,3,4-TETRAMETHYLHEXANE	142.284	9.34	328.28	2	0.7	4.7
1082	C10H22	2,3,3,5-TETRAMETHYLHEXANE	142.284	9.34	307.60	2	0.7	4.7
1083	C10H22	2,3,4,4-TETRAMETHYLHEXANE	142.284	9.34	322.90	2	0.7	4.7
1084	C10H22	2,3,4,5-TETRAMETHYLHEXANE	142.284	9.34	313.18	2	0.7	4.7
1085	C10H22	3,3,4,4-TETRAMETHYLHEXANE	142.284	9.34	338.02	2	0.7	4.7
1086	C10H22	2,4-DIMETHYL-3-ISOPROPYLPENTANE	142.284	-115.04	314.69	2	0.7	4.7
1087	C10H22	3,3-DIETHYL-2-METHYLPENTANE	142.284	-115.04	337.48	2	0.7	4.7
1088	C10H22	3-ETHYL-2,2,3-TRIMETHYLPENTANE	142.284	-115.04	337.12	2	0.7	4.7
1089	C10H22	3-ETHYL-2,2,4-TRIMETHYLPENTANE	142.284	-115.04	311.56	2	0.7	4.7
1090	C10H22	3-ETHYL-2,3,4-TRIMETHYLPENTANE	142.284	-115.04	337.01	2	0.7	4.7
1091	C10H22	2,2,3,3,4-PENTAMETHYLPENTANE	142.284	-33.59	330.91	2	0.7	4.7
1092	C10H22	2,2,3,4,4-PENTAMETHYLPENTANE	142.284	-37.73	318.74	2	0.7	4.7
1093	C10H22O	1-DECANOL	158.284	44.42	446.36	2	0.7	5.5
1094	C10H22O	DI-n-PENTYL ETHER	158.284	-92.97	368.15	2	0.7	6.0
1095	C10H22O	ISODECANOL	158.284	-76.00	427.73	2	0.7	5.5
1096	C10H22O5	TETRAETHYLENE GLYCOL DIMETHYL ETHER	222.282	-21.46	528.44	2	0.8	9.9
1097	C10H22S	n-DECYL MERCAPTAN	174.351	-14.06	462.56	2	0.6	--
1098	C10H22S	BUTYL-HEXYL-SULFIDE	174.344	-30.98	464.02	-	--	--
1099	C10H22S	ETHYL-OCTYL-SULFIDE	174.344	-30.98	464.02	-	--	--
1100	C10H22S	HEPTYL-PROPYL-SULFIDE	174.344	-30.98	464.02	-	--	--
1101	C10H22S	METHYL-NONYL-SULFIDE	174.344	-30.98	464.02	-	--	--
1102	C10H22S	PENTYL-SULFIDE	174.344	-30.98	464.02	-	--	--
1103	C10H22S2	PENTYL-DISULFIDE	206.404	-74.18	507.04	-	--	--
1104	C10H23N	n-DECYLAMINE	157.299	60.26	428.90	2	0.7	5.5
1105	C11H10	1-METHYLNAPHTHALENE	142.200	-22.86	472.42	2	0.8	5.3
1106	C11H10	2-METHYLNAPHTHALENE	142.200	94.24	465.89	2	0.8	5.3
1107	C11H14O2	n-BUTYL BENZOATE	178.231	-6.70	482.00	2	0.8	5.4
1108	C11H16	n-PENTYLBENZENE	148.248	-103.00	401.83	2	0.7	5.1
1109	C11H16O	p-tert-AMYLPHENOL	164.247	199.13	503.60	2	0.8	5.2
1110	C11H20	1-UNDECYNE	152.279	-12.98	383.02	2	0.7	4.5
1111	C11H20O2	2-ETHYLHEXYL ACRYLATE	184.279	-130.00	420.80	1	0.7	8.2
1112	C11H22	1-UNDECENE	154.296	-56.49	378.81	2	0.7	5.6
1113	C11H22	1-CYCLOPENTYLHEXANE	154.295	-99.38	397.60	2	0.7	4.4
1114	C11H22	PENTYLCYCLOHEXANE	154.295	-71.48	398.70	2	0.7	4.4
1115	C11H22O	1-UNDECANAL	170.295	32.00	451.40	2	0.7	5.2
1116	C11H24	n-UNDECANE	156.312	-14.04	384.67	2	0.7	4.8
1117	C11H24O	1-UNDECANOL	172.311	60.62	473.00	2	0.7	5.2
1118	C11H24S	UNDECYL MERCAPTAN	188.378	26.60	495.32	2	0.6	--
1119	C11H24S	BUTYL-HEPTYL-SULFIDE	188.371	-1.28	500.02	-	--	--

LEL - Lower Explosive Limit
UEL - Upper Explosive Limit

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	LEL vol %	UEL vol %
1120	C11H24S	DECYL-METHYL-SULFIDE	188.371	-1.28	500.02	-	--	--
1121	C11H24S	ETHYL-NONYL-SULFIDE	188.371	-1.28	500.02	-	--	--
1122	C11H24S	OCTYL-PROPYL-SULFIDE	188.371	-1.28	500.02	-	--	--
1123	C12H8O	DIBENZOFURAN	168.195	180.50	544.48	2	0.8	6.4
1124	C12H9N	DIBENZOPYRROLE	167.210	472.64	670.48	2	--	5.5
1125	C12H10	ACENAPHTHENE	154.211	200.14	531.30	2	0.8	6.7
1126	C12H10	BIPHENYL	154.211	156.60	491.00	1	0.6	5.8
1127	C12H10O	DIPHENYL ETHER	170.211	80.37	496.96	1	0.8	1.5
1128	C12H11N	p-AMINODIPHENYL	169.226	127.13	575.33	2	0.7	5.5
1129	C12H11N	DIPHENYLAMINE	169.226	127.40	575.60	2	0.7	5.4
1130	C12H11N3	p-AMINOAZOBENZENE	197.240	262.13	679.73	2	0.7	--
1131	C12H11N3	1,3-DIPHENYLTRIAZENE	197.240	209.93	638.33	-	--	--
1132	C12H12	1,2-DIMETHYLNAPHTHALENE	156.227	30.22	511.36	2	0.8	4.8
1133	C12H12	1,3-DIMETHYLNAPHTHALENE	156.227	24.82	509.38	2	0.8	4.8
1134	C12H12	1,4-DIMETHYLNAPHTHALENE	156.227	45.81	513.16	2	0.8	4.8
1135	C12H12	1,5-DIMETHYLNAPHTHALENE	156.227	179.62	509.02	2	0.8	4.8
1136	C12H12	1,6-DIMETHYLNAPHTHALENE	156.227	6.82	505.42	2	0.8	4.8
1137	C12H12	1,7-DIMETHYLNAPHTHALENE	156.227	8.62	505.42	2	0.8	4.8
1138	C12H12	2,3-DIMETHYLNAPHTHALENE	156.227	221.02	514.42	2	0.8	4.8
1139	C12H12	2,6-DIMETHYLNAPHTHALENE	156.227	232.52	503.60	2	0.7	5.0
1140	C12H12	2,7-DIMETHYLNAPHTHALENE	156.227	206.60	505.40	2	0.7	5.0
1141	C12H12	1-ETHYLNAPHTHALENE	156.227	7.14	496.99	2	0.7	5.2
1142	C12H12	2-ETHYLNAPHTHALENE	156.227	18.70	497.01	2	0.8	4.8
1143	C12H12N2	p-AMINODIPHENYLAMINE	184.241	154.40	669.20	2	0.7	5.5
1144	C12H12N2	HYDRAZOBENZENE	184.241	267.80	571.73	2	0.7	5.5
1145	C12H14	1,2,3-TRIMETHYLINDENE	158.243	160.70	456.53	2	0.7	5.7
1146	C12H14O4	DIETHYL PHTHALATE	222.241	24.80	561.20	1	0.7	5.3
1147	C12H16	CYCLOHEXYLBENZENE	160.259	44.58	464.22	2	0.7	5.4
1148	C12H18	m-DIISOPROPYLBENZENE	162.275	-81.63	397.72	2	0.7	4.9
1149	C12H18	p-DIISOPROPYLBENZENE	162.275	1.27	410.90	2	0.7	4.9
1150	C12H18	n-HEXYLBENZENE	162.275	-78.07	439.00	2	0.7	5.0
1151	C12H18	1,2,3-TRIETHYLBENZENE	162.274	-87.68	423.52	2	0.7	4.4
1152	C12H18	1,2,4-TRIETHYLBENZENE	162.274	-87.68	423.52	2	0.7	4.4
1153	C12H18	1,3,5-TRIETHYLBENZENE	162.274	-87.68	420.82	2	0.7	4.4
1154	C12H18	HEXAMETHYLBENZENE	162.274	329.92	506.21	2	0.7	4.4
1155	C12H20O4	DIBUTYL MALEATE	228.288	-121.00	536.00	2	0.7	5.7
1156	C12H22	BICYCLOHEXYL	166.307	38.53	462.27	1	0.7	5.1
1157	C12H22	1-DODECYNE	166.306	-2.18	419.02	2	0.7	4.2
1158	C12H23N	DICYCLOHEXYLAMINE	181.321	31.82	492.53	2	0.6	5.6
1159	C12H24	1-DODECENE	168.323	-31.40	416.03	2	0.6	5.4
1160	C12H24	1-CYCLOPENTYLHEPTANE	168.322	-63.67	435.47	2	0.6	4.0
1161	C12H24	1-CYCLOHEXYLHEXANE	168.322	14.81	436.48	2	0.6	4.0
1162	C12H24O	1-DODECANAL	184.322	53.60	482.00	2	0.6	5.0
1163	C12H24O2	n-DODECANOIC ACID	200.321	111.20	569.66	2	0.6	8.4
1164	C12H26	n-DODECANE	170.338	14.76	421.38	1	0.6	4.7
1165	C12H26O	DI-n-HEXYL ETHER	186.338	-45.40	438.26	2	0.6	5.5
1166	C12H26O	1-DODECANOL	186.338	74.84	503.33	2	0.6	5.1
1167	C12H26O3	DIETHYLENE GLYCOL DI-n-BUTYL ETHER	218.337	-76.36	492.80	2	0.6	7.0
1168	C12H26S	n-DODECYL MERCAPTAN	202.404	17.60	526.28	-	--	--
1169	C12H26S	BUTYL-OCTYL-SULFIDE	202.397	6.82	534.22	-	--	--
1170	C12H26S	DECYL-ETHYL-SULFIDE	202.397	6.82	534.22	-	--	--
1171	C12H26S	HEXYL-SULFIDE	202.397	6.82	534.22	-	--	--
1172	C12H26S	METHYL-UNDECYL-SULFIDE	202.397	6.82	534.22	-	--	--
1173	C12H26S	NONYL-PROPYL-SULFIDE	202.397	6.82	534.22	-	--	--
1174	C12H26S2	HEXYL-DISULFIDE	234.457	-54.38	560.32	-	--	--
1175	C12H27BO3	TRI-n-BUTYL BORATE	230.156	-94.00	452.30	-	--	--
1176	C12H27N	DODECYLAMINE	185.353	82.98	498.56	2	0.6	5.1
1177	C12H27N	TRI-n-BUTYLAMINE	185.353	-94.27	417.20	2	0.6	4.9
1178	C13H10	FLUORENE	166.222	238.62	567.12	2	0.7	5.5
1179	C13H10O	BENZOPHENONE	182.222	118.76	582.96	2	0.7	5.4
1180	C13H12	DIPHENYLMETHANE	168.238	77.43	507.69	2	0.7	5.2
1181	C13H14	1-PROPYLNAPHTHALENE	170.254	16.77	523.06	2	0.7	4.4
1182	C13H14	2-PROPYLNAPHTHALENE	170.254	26.62	524.32	2	0.7	4.4
1183	C13H14	2ETHYL-3-METHYLNAPHTHALENE	170.254	159.82	530.62	2	0.7	4.4
1184	C13H14	2ETHYL-6-METHYLNAPHTHALENE	170.254	113.02	518.02	2	0.7	4.4
1185	C13H14	2ETHYL-7-METHYLNAPHTHALENE	170.254	113.02	518.02	2	0.7	4.4

LEL - Lower Explosive Limit
UEL - Upper Explosive Limit

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	LEL vol %	UEL vol %
1186	C13H20	n-HEPTYLBENZENE	176.302	-54.40	474.98	2	0.6	4.9
1187	C13H24	1-TRIDECYNE	180.333	23.02	453.22	2	0.6	3.8
1188	C13H26	1-TRIDECENE	182.349	-9.53	451.00	2	0.6	5.4
1189	C13H26	1-CYCLOPENTYLOCTANE	182.348	-47.18	470.68	2	0.6	3.7
1190	C13H26	1-CYCLOHEXYLHEPTANE	182.348	-22.88	472.84	2	0.6	3.7
1191	C13H26O	1-TRIDECANAL	198.349	59.00	512.60	2	0.6	5.0
1192	C13H26O2	n-BUTYL NONANOATE	214.348	-36.40	445.73	2	0.6	4.9
1193	C13H26O2	METHYL DODECANOATE	214.348	41.00	512.33	2	0.6	4.9
1194	C13H28	n-TRIDECANE	184.365	22.30	455.85	2	0.6	4.7
1195	C13H28O	1-TRIDECANOL	200.365	87.08	525.20	2	0.6	5.0
1196	C13H28S	BUTYL-NONYL-SULFIDE	216.424	28.42	566.62	-	--	--
1197	C13H28S	DECYL-PROPYL-SULFIDE	216.424	28.42	566.62	-	--	--
1198	C13H28S	DODECYL-METHYL-SULFIDE	216.424	28.42	566.62	-	--	--
1199	C13H28S	ETHYL-UNDECYL-SULFIDE	216.424	28.42	566.62	-	--	--
1200	C13H28S	1-TRIDECANETHIOL	216.424	48.00	555.46	-	--	--
1201	C14H8O2	ANTHRAQUINONE	208.216	546.80	715.82	2	0.8	4.8
1202	C14H10	ANTHRACENE	178.233	420.98	647.65	1	0.6	5.3
1203	C14H10	DIPHENYLACETYLENE	178.233	144.50	571.73	2	0.7	5.3
1204	C14H10	PHENANTHRENE	178.233	210.61	644.54	2	0.7	5.2
1205	C14H12	cis-STILBENE	180.249	23.01	503.33	2	0.7	4.3
1206	C14H12	trans-STILBENE	180.249	255.56	583.70	2	0.7	4.3
1207	C14H12O2	BENZYL BENZOATE	212.248	66.92	614.30	2	0.7	4.5
1208	C14H14	1,1-DIPHENYLETHANE	182.265	-0.31	522.73	2	0.6	4.2
1209	C14H14	1,2-DIPHENYLETHANE	182.265	124.14	536.90	2	0.6	4.2
1210	C14H14O	DIBENZYL ETHER	198.265	38.48	550.94	2	0.6	6.0
1211	C14H16	1-n-BUTYLNAPHTHALENE	184.281	-3.50	552.90	2	0.6	5.2
1212	C14H16	2-BUTYLNAPHTHALENE	184.280	23.02	552.22	2	0.6	4.0
1213	C14H22	n-OCTYLBENZENE	190.329	-32.80	507.92	2	0.6	4.9
1214	C14H22	1,2,3,4-TETRAETHYLBENZENE	190.328	53.26	483.82	2	0.6	3.7
1215	C14H22	1,2,3,5-TETRAETHYLBENZENE	190.328	51.82	482.92	2	0.6	3.7
1216	C14H22	1,2,4,5-TETRAETHYLBENZENE	190.328	50.02	482.02	2	0.6	3.7
1217	C14H22O	p-tert-OCTYLPHENOL	206.328	185.72	554.81	2	0.6	5.0
1218	C14H28	1-TETRADECENE	196.376	8.87	483.98	2	0.5	5.4
1219	C14H28	1-CYCLOPENTYLNONANE	196.375	-20.18	503.80	2	0.5	3.5
1220	C14H28	1-CYCLOHEXYLOCTANE	196.375	-3.44	506.50	2	0.5	3.5
1221	C14H28O2	n-TETRADECANOIC ACID	228.375	129.92	619.16	2	0.5	5.8
1222	C14H30	n-TETRADECANE	198.392	42.55	488.44	1	0.5	4.7
1223	C14H30O	1-TETRADECANOL	214.392	99.50	548.60	2	0.5	3.5
1224	C14H30S	BUTYL-DECYL-SULFIDE	230.451	37.42	597.22	-	--	--
1225	C14H30S	DODECYL-ETHYL-SULFIDE	230.451	37.42	597.22	-	--	--
1226	C14H30S	HEPTYL-SULFIDE	230.451	37.42	597.22	-	--	--
1227	C14H30S	METHYL-TRIDECYL-SULFIDE	230.451	37.42	597.22	-	--	--
1228	C14H30S	PROPYL-UNDECYL-SULFIDE	230.451	37.42	597.22	-	--	--
1229	C14H30S	1-TETRADECANETHIOL	230.451	43.00	583.18	-	--	--
1230	C14H30S2	HEPTYL-DISULFIDE	262.511	-36.38	609.28	-	--	--
1231	C14H31N	TETRADECYLAMINE	213.407	100.74	556.34	2	0.5	--
1232	C15H10N2O2	DIPHENYLMETHANE-4,4'-DIISOCYANATE	250.257	100.49	636.53	2	0.6	--
1233	C15H16O	p-CUMYLPHENOL	212.291	163.13	635.00	2	0.6	3.9
1234	C15H16O2	BISPHENOL A	228.291	307.40	680.90	2	0.6	4.0
1235	C15H18	1-PENTYLNAPHTHALENE	198.307	-7.58	584.62	2	0.6	3.7
1236	C15H18	2-PENTYLNAPHTHALENE	198.307	24.82	590.02	2	0.6	3.7
1237	C15H24	n-NONYLBENZENE	204.356	-11.47	539.69	2	0.5	4.9
1238	C15H24O	2,6-DI-tert-BUTYL-p-CRESOL	220.355	159.53	508.73	2	0.5	4.9
1239	C15H24O	NONYLPHENOL	220.355	-----	586.13	1	1.0	5.0
1240	C15H28	1-PENTADECYNE	208.386	50.02	514.42	2	0.5	3.3
1241	C15H30	1-PENTADECENE	210.403	25.29	515.23	2	0.4	5.4
1242	C15H30	1-CYCLOPENTYLDECANE	210.402	-7.82	534.90	2	0.5	3.2
1243	C15H30	1-CYCLOHEXYLNONANE	210.402	13.66	538.72	2	0.5	3.2
1244	C15H30O2	PENTADECANOIC ACID	242.402	126.55	642.02	2	0.5	3.3
1245	C15H32	n-PENTADECANE	212.419	49.93	519.22	2	0.5	4.7
1246	C15H32O	1-PENTADECANOL	228.417	111.00	580.75	2	0.5	3.2
1247	C15H32S	BUTYL-UNDECYL-SULFIDE	244.478	51.82	626.02	-	--	--
1248	C15H32S	DODECYL-PROPYL-SULFIDE	244.478	51.82	626.02	-	--	--
1249	C15H32S	ETHYL-TRIDECYL-SULFIDE	244.478	51.82	626.02	-	--	--
1250	C15H32S	METHYL-TETRADECYL-SULFIDE	244.478	51.82	626.02	-	--	--
1251	C15H32S	1-PENTADECANETHIOL	244.478	64.00	609.28	-	--	--

LEL - Lower Explosive Limit
UEL - Upper Explosive Limit

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	LEL vol %	UEL vol %
1252	C16H10	FLUORANTHENE	202.255	230.32	721.04	2	0.6	3.9
1253	C16H10	PYRENE	202.255	303.19	742.64	2	0.6	3.9
1254	C16H12	1-PHENYLNAPHTHALENE	204.271	113.00	633.20	2	0.6	3.8
1255	C16H20	1-n-HEXYLNAPHTHALENE	212.335	-0.40	611.60	2	0.5	5.2
1256	C16H2204	DIBUTYL PHTHALATE	278.348	-31.00	644.00	1	0.5	--
1257	C16H26	n-DECYLBENZENE	218.382	6.12	568.20	2	0.5	3.2
1258	C16H26	PENTAETHYLBENZENE	218.381	130.12	530.62	2	0.5	3.2
1259	C16H30	1-HEXADECYNE	222.413	59.02	543.22	2	0.5	3.1
1260	C16H32	n-DECYLCYCLOHEXANE	224.430	28.89	567.68	2	0.5	4.7
1261	C16H32	1-CYCLOPENTYLUNDECANE	224.429	14.02	564.10	2	0.5	3.0
1262	C16H32	1-HEXADECENE	224.430	39.85	544.77	2	0.5	3.0
1263	C16H3202	n-HEXADECANOIC ACID	256.429	145.04	663.80	2	0.5	4.9
1264	C16H34	n-HEXADECANE	226.446	64.74	548.35	2	0.5	4.7
1265	C16H34O	DI-n-OCTYL ETHER	242.445	18.32	547.70	2	0.5	5.5
1266	C16H34O	1-HEXADECANOL	242.445	120.56	593.60	2	0.5	3.0
1267	C16H34S	BUTYL-DODECYL-SULFIDE	258.505	59.02	653.02	-	--	--
1268	C16H34S	ETHYL-TETRADECYL-SULFIDE	258.505	59.02	653.02	-	--	--
1269	C16H34S	METHYL-PENTADECYL-SULFIDE	258.505	59.02	653.02	-	--	--
1270	C16H34S	OCTYL-SULFIDE	258.505	59.02	653.02	-	--	--
1271	C16H34S	PROPYL-TRIDECYL-SULFIDE	258.505	59.02	653.02	-	--	--
1272	C16H34S	1-HEXADECANETHIOL	258.505	64.00	633.22	-	--	--
1273	C16H34S2	OCTYL-DISULFIDE	290.565	-20.18	654.82	-	--	--
1274	C17H28	n-UNDECYLBENZENE	232.409	22.73	595.85	2	0.5	4.9
1275	C17H32	1-HEPTADECYNE	236.440	71.62	570.22	2	0.5	2.9
1276	C17H34	1-CYCLOPENTYLDODECANE	238.456	23.02	591.64	2	0.4	2.9
1277	C17H34	1-CYCLOHEXYLUNDECANE	238.456	42.46	595.60	2	0.4	2.9
1278	C17H34	1-HEPTADECENE	238.457	52.25	572.59	2	0.4	5.4
1279	C17H36	n-HEPTADECANE	240.473	71.56	575.87	2	0.4	2.8
1280	C17H36O	1-HEPTADECANOL	256.472	129.02	615.20	2	0.4	2.9
1281	C17H36S	BUTYL-TRIDECYL-SULFIDE	272.531	69.82	678.22	-	--	--
1282	C17H36S	ETHYL-PENTADECYL-SULFIDE	272.531	69.82	678.22	-	--	--
1283	C17H36S	HEXADECYL-METHYL-SULFIDE	272.531	69.82	678.22	-	--	--
1284	C17H36S	PROPYL-TETRADECYL-SULFIDE	272.531	69.82	678.22	-	--	--
1285	C17H36S	1-HEPTADECANETHIOL	272.531	81.00	658.42	-	--	--
1286	C18H12	CHRYSENE	228.293	496.40	825.80	2	0.5	3.5
1287	C18H14	m-TERPHENYL	230.309	188.33	710.33	2	0.5	3.4
1288	C18H14	o-TERPHENYL	230.309	133.16	636.53	2	0.5	3.4
1289	C18H14	p-TERPHENYL	230.309	413.33	708.80	2	0.5	3.4
1290	C18H15P	TRIPHENYLPHOSPHINE	262.291	178.25	710.60	2	0.5	--
1291	C18H15O4P	TRIPHENYL PHOSPHATE	326.288	122.00	776.30	2	0.5	--
1292	C18H16N2	N,N'-DIPHENYL-p-PHENYLENEDIAMINE	260.339	276.53	778.73	2	0.5	--
1293	C18H22	2,3-DIMETHYL-2,3-DIPHENYLBUTANE	238.373	246.20	600.53	2	0.5	5.2
1294	C18H2202	DICUMYL PEROXIDE	270.371	100.40	744.53	2	0.5	3.2
1295	C18H30	n-DODECYLBENZENE	246.436	37.00	621.70	2	0.4	2.9
1296	C18H30	HEXAETHYLBENZENE	246.435	262.42	568.42	2	0.4	2.9
1297	C18H3202	LINOLEIC ACID	280.451	23.00	670.73	2	0.4	2.9
1298	C18H34	1-OCTADECYNE	250.467	80.62	595.42	2	0.4	2.8
1299	C18H3402	OLEIC ACID	282.467	56.08	679.73	2	0.4	2.9
1300	C18H3404	DIBUTYL SEBACATE	314.466	15.44	660.20	1	0.4	5.1
1301	C18H3404	DIHEXYL ADIPATE	314.466	7.16	658.40	2	0.4	3.0
1302	C18H36	1-CYCOPENTYLTRIDECANE	252.482	41.02	617.74	2	0.4	2.7
1303	C18H36	1-CYCLOHEXYLDODECANE	252.482	54.52	621.88	2	0.4	2.7
1304	C18H36	1-OCTADECENE	252.484	63.70	598.68	2	0.4	2.7
1305	C18H3602	STEARIC ACID	284.483	157.28	707.36	2	0.4	4.9
1306	C18H38	n-OCTADECANE	254.500	82.72	602.08	2	0.4	2.7
1307	C18H38O	DINONYL ETHER	270.499	-----	604.13	2	0.4	2.7
1308	C18H38O	1-OCTADECANOL	270.499	136.22	635.00	2	0.4	2.7
1309	C18H38S	BUTYL-TETRADECYL-SULFIDE	286.558	77.02	703.42	-	--	--
1310	C18H38S	ETHYL-HEXADECYL-SULFIDE	286.558	77.02	703.42	-	--	--
1311	C18H38S	HEPTADECYL-METHYL-SULFIDE	286.558	77.02	703.42	-	--	--
1312	C18H38S	NONYL-SULFIDE	286.558	77.02	703.42	-	--	--
1313	C18H38S	PENTADECYL-PROPYL-SULFIDE	286.558	77.02	703.42	-	--	--
1314	C18H38S	1-OCTADECANETHIOL	286.558	82.00	680.02	-	--	--
1315	C18H38S2	NONYL-DISULFIDE	318.618	-5.78	696.22	-	--	--
1316	C19H26	1-n-NONYLNAPHTHALENE	254.415	51.80	690.53	2	0.4	2.9
1317	C19H32	n-TRIDECYLBENZENE	260.463	50.00	646.30	2	0.4	2.7

LEL - Lower Explosive Limit
UEL - Upper Explosive Limit

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	LEL vol %	UEL vol %
1318	C19H36	1-NONADECYNE	264.493	91.42	620.62	2	0.4	2.6
1319	C19H36O2	METHYL OLEATE	296.494	67.82	650.93	2	0.4	7.8
1320	C19H38	1-CYCLOPENTYLTETRADECANE	266.509	47.93	642.22	2	0.4	2.6
1321	C19H38	1-CYCLOHEXYLTRIDECANE	266.509	65.32	646.72	2	0.4	2.6
1322	C19H38	1-NONADECENE	266.511	74.12	624.24	2	0.4	5.4
1323	C19H38O2	NONADECANOIC ACID	298.510	154.54	726.80	2	0.4	4.9
1324	C19H40	n-NONADECANE	268.527	89.92	625.82	2	0.4	2.5
1325	C19H40O	1-NONADECANOL	284.524	143.10	676.13	2	0.4	2.6
1326	C19H40S	BUTYL-PENTADECYL-SULFIDE	300.585	86.02	726.82	-	--	--
1327	C19H40S	ETHYL-HEPTADECYL-SULFIDE	300.585	86.02	726.82	-	--	--
1328	C19H40S	HEXADECYL-PROPYL-SULFIDE	300.585	86.02	726.82	-	--	--
1329	C19H40S	METHYL-OCTADECYL-SULFIDE	300.585	86.02	726.82	-	--	--
1330	C19H40S	1-NONADECANETHIOL	300.585	93.00	701.62	-	--	--
1331	C20H16	TRIPHENYLETHYLENE	256.347	156.20	744.53	2	0.4	5.3
1332	C20H28	1-n-DECYLNAPHTHALENE	268.442	59.00	713.93	2	0.4	2.7
1333	C20H30O2	ABIETIC ACID	302.457	344.30	709.79	2	0.4	2.8
1334	C20H31N	DEHYDROABIETYLAMINE	285.473	112.10	728.33	2	0.4	--
1335	C20H34	1-PHENYLTETRADECANE	274.489	60.82	669.22	2	0.4	2.6
1336	C20H38	1-EICOSYNE	278.520	96.82	644.02	2	0.4	2.5
1337	C20H40	1-CYCLOPENTYLPENTADECANE	280.536	62.33	665.33	2	0.4	2.4
1338	C20H40	1-CYCLOHEXYLTETRADECANE	280.536	75.22	669.22	2	0.4	2.4
1339	C20H40	1-EICOSENE	280.538	83.50	648.30	2	0.4	2.4
1340	C20H42	n-EICOSANE	282.553	97.59	650.80	2	0.4	2.4
1341	C20H42O	1-EICOSANOL	298.553	149.72	672.80	2	0.4	2.4
1342	C20H42S	BUTYL-HEXADECYL-SULFIDE	314.612	95.02	748.42	-	--	--
1343	C20H42S	DECYL-SULFIDE	314.612	95.02	748.42	-	--	--
1344	C20H42S	ETHYL-OCTADECYL-SULFIDE	314.612	95.02	748.42	-	--	--
1345	C20H42S	HEPTADECYL-PROPYL-SULFIDE	314.612	95.02	748.42	-	--	--
1346	C20H42S	METHYL-NONADECYL-SULFIDE	314.612	95.02	748.42	-	--	--
1347	C20H42S	1-EICOSANETHIOL	314.612	99.00	721.42	-	--	--
1348	C20H42S2	DECYL-DISULFIDE	346.672	6.82	734.02	-	--	--
1349	C21H21O4P	TRI-o-CRESYL PHOSPHATE	368.369	-27.40	-----	2	0.4	--
1350	C21H36	1-PHENYLPENTADECANE	288.515	71.62	690.82	2	0.4	2.4
1351	C21H42	1-CYCLOPENTYLHEXADECANE	294.563	69.82	687.22	2	0.4	2.3
1352	C21H42	1-CYCLOHEXYLPENTADECANE	294.563	84.22	692.62	2	0.4	2.3
1353	C22H38	1-PHENYLHEXADECANE	302.542	80.62	712.42	2	0.4	2.3
1354	C22H44	1-CYCLOHEXYLHEXADECANE	308.590	92.50	714.22	2	0.3	2.2
1355	C22H44O2	n-BUTYL STEARATE	340.590	79.34	662.00	2	0.3	2.3
1356	C24H38O4	DIISOOCTYL PHTHALATE	390.563	-----	789.53	2	0.3	5.3
1357	C24H38O4	DIOCTYL PHTHALATE	390.563	-58.00	723.20	1	0.3	5.3
1358	C24H42O	DINONYLPHENOL	346.597	-----	839.93	2	0.3	2.1
1359	C26H20	TETRAPHENYLETHYLENE	332.445	433.40	908.33	2	0.3	5.3
1360	C28H46O4	DIISODECYL PHTHALATE	446.671	-50.01	841.73	1	0.3	--

CODE 1 - experimental
2 - estimated

Table 3-2 EXAMPLES

Example 1 A process vessel contains n-pentane (C5H12) at a concentration of 2 vol % in air.

Are the contents of the vessel flammable?

Inspection of the table discloses that LEL = 1.4 vol % for n-pentane. Since the vessel contents exceed the LEL for n-pentane, the contents are flammable. This is shown below:

Vessel contents of 2 vol % > LEL of 1.4 vol %

Vessel contents are flammable.

Example 2 Estimate the lower (LEL) and upper (UEL) explosive limits in air for the gas mixture below:

	vol %	y_i (combustible basis)	LEL_i	UEL_i
Methane	1	0.2	5.0	15.0
Ethane	2	0.4	3.0	12.5
Propane	2	0.4	2.1	9.5
Air	95	---	---	---

Substitution of y_i, LEL_i and UEL_i into the equations for gas mixtures provides:

$$LEL_{mixture} = 1 / \Sigma(y_i/LEL_i) = 1/(0.2/5 + 0.4/3 + 0.4/2.1)$$

$$\underline{LEL_{mixture} = 2.75 \text{ vol } \%}$$

$$UEL_{mixture} = 1 / \Sigma(y_i/UEL_i) = 1/(0.2/15 + 0.4/12.5 + 0.4/9.5)$$

$$\underline{UEL_{mixture} = 11.4 \text{ vol } \%}$$

Table 3-3 COMPUTER PROGRAM RESULTS

```
EXPLOSIVE LIMITS IN AIR
-------------------------------------------------------

1. Number.............................   38
2. Formula............................  CH4
3. Name...............................  METHANE
4. Molecular Weight.................. = 16.043
5. Freezing Point.................. F = -296.46
6. Boiling Point.................... F = -258.68
7. CODE.............................. = 1
8. Lower Explosive Limit, LEL... vol % = 5.0
9. Upper Explosive Limit, UEL... vol % = 15.0

-------------------------------------------------------
CODE   1 - experimental,  2 - estimated
```

Chapter 4

FLASH POINT AND AUTOIGNITION TEMPERATURES

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ABSTRACT

Results for flash point and autoignition temperatures are presented for major organic chemical compounds. The organic chemicals encompass hydrocarbon, oxygen, nitrogen, halogen, silicon, sulfur and other chemical type compounds. The results are displayed in an easy-to-use table which is especially applicable for rapid engineering usage.

FLASH POINT AND AUTOIGNITION TEMPERATURES

The results for flash point and autoignition temperatures are given in Table 4-1. The flash point represents the temperature at which the liquid gives off enough vapor to flash (combust) when exposed to an external ignition source. The autoignition temperature is the temperature at which the substance will automatically ignite (combust) without an external ignition source. Freezing and boiling point temperatures are also provided in the tabulation to help in determining whether the substance is a gas, liquid or solid at ambient conditions. The tabulation is based on both experimental data and estimated values.

A comparison of estimates and data is shown in Figure 4-1 for normal alkanes. The graph discloses favorable agreement.

In the data collection, a literature search was conducted to identify data source publications (1-86). The publications were screened and copies of appropriate data were made. These data were then keyed into the computer to provide a data base for which experimental data are available. The data base also served as a basis to check the accuracy of the estimation methods.

Upon completion of data collection, estimation of values for the remaining compounds was performed. The estimates are primarily based on the methods of Shebeko (22), Gmehling and Rasmussen (23) and vapor pressure methods. The vapor pressure method is based on determining the temperature at which the vapor pressure will provide an equilibrium concentration that is equal to the lower explosive limit (LEL) concentration in air. The equations are briefly given below:

$$y_i = P_i/P = LEL_i/100 \tag{4-1}$$

where
y_i = vapor concentration of component i, mole fraction
P_i = vapor pressure of component i, atm
P = total pressure, atm
P_i/P = equilibrium concentration of component i, mole fraction
$LEL_i/100$ = lower explosive limit concentration of component i, mole fraction

Evaluation of the vapor pressure method with normal alkanes disclosed favorable agreement of estimates and data for small, intermediate and large size molecules. Evaluation with other compound types was not performed. If the lower explosive limit (LEL) used in the calculations is estimated, the estimates for flash point should be considered as rough values.

EXAMPLES

The tabulated values maybe used in engineering applications involving pure components in air. Examples are shown in Table 4-2.

COMPUTER PROGRAM

A computer program, containing the data for all compounds, is available for a nominal fee (Carl L. Yaws, Box 10053, Lamar University, Beaumont, TX 77710, phone/FAX 409-880-8787). The computer program (random data file) is in ASCII which can be accessed by other software.

Computer program results for a representative compound are shown in Table 4-3.

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Figure 4-1 AUTOIGNITION TEMPERATURE FOR NORMAL ALKANES

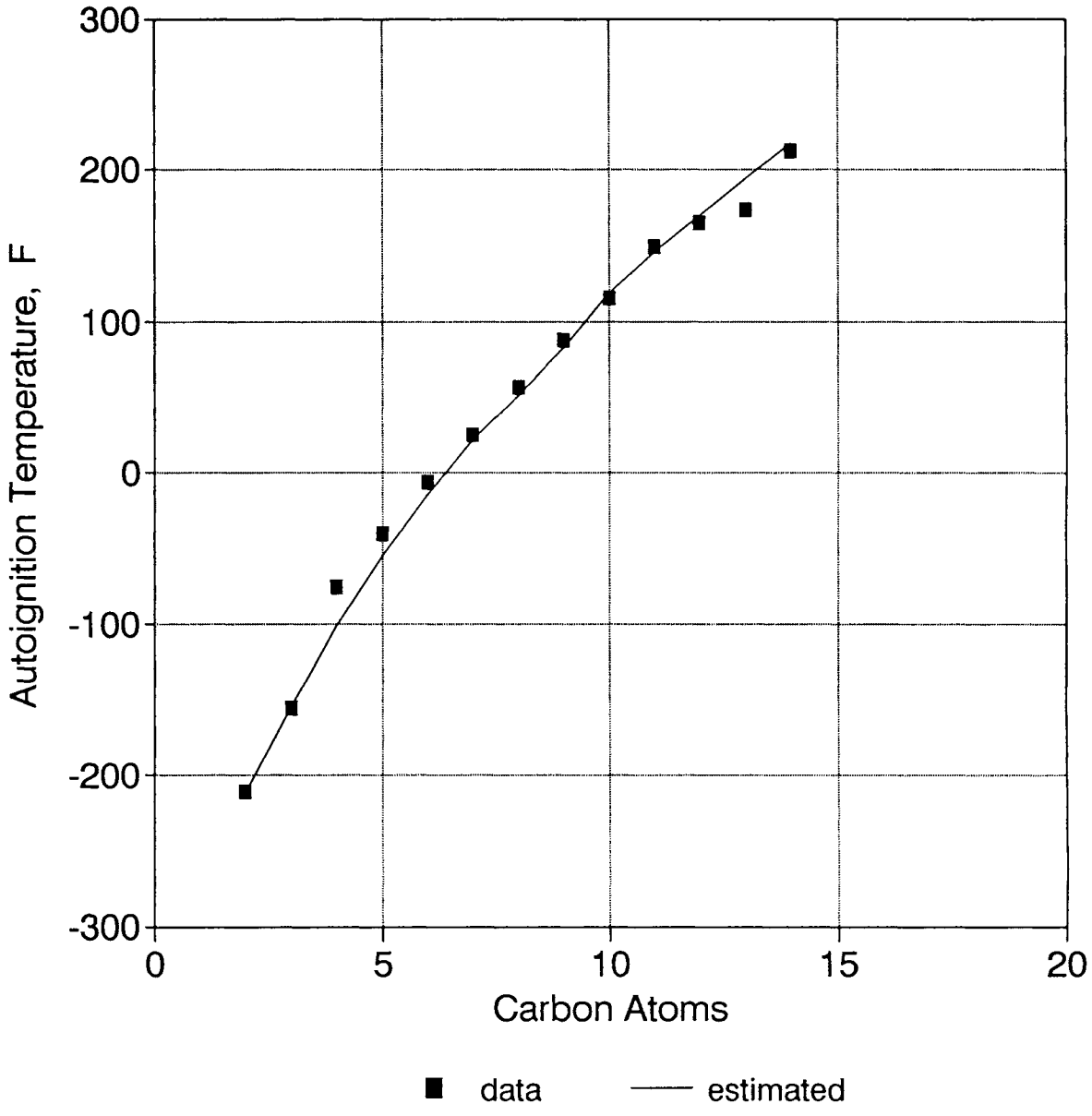

Table 4-1 FLASH POINT AND AUTOIGNITION TEMPERATURES

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	FLASH POINT F	CODE	AUTO-IGNITION F
1	CBrClF2	BROMOCHLORODIFLUOROMETHANE	165.365	-255.10	24.78	-	--	-	--
2	CBrCl3	BROMOTRICHLOROMETHANE	198.273	-5.80	220.82	-	--	-	--
3	CBrF3	BROMOTRIFLUOROMETHANE	148.910	-270.40	-72.20	-	--	-	--
4	CBr2F2	DIBROMODIFLUOROMETHANE	209.816	-166.18	73.02	-	--	-	--
5	CClF3	CHLOROTRIFLUOROMETHANE	104.459	-293.80	-114.54	-	--	-	--
6	CClN	CYANOGEN CHLORIDE	61.470	20.30	55.13	-	--	-	--
7	CCl2F2	DICHLORODIFLUOROMETHANE	120.913	-252.40	-21.62	-	--	-	--
8	CCl2O	PHOSGENE	98.916	-198.00	45.61	-	--	-	--
9	CCl3F	TRICHLOROFLUOROMETHANE	137.368	-168.00	74.88	-	--	-	--
10	CCl4	CARBON TETRACHLORIDE	153.822	-9.08	169.95	-	--	-	--
11	CF2O	CARBONYL FLUORIDE	66.007	-168.27	-120.23	-	--	-	--
12	CF4	CARBON TETRAFLUORIDE	88.005	-298.46	-198.51	-	--	-	--
13	CHBr3	TRIBROMOMETHANE	252.731	46.49	300.56	2	181	-	--
14	CHClF2	CHLORODIFLUOROMETHANE	86.468	-251.36	-41.49	2	-109	1	1170
15	CHCl2F	DICHLOROFLUOROMETHANE	102.923	-211.00	48.02	2	-33	1	1026
16	CHCl3	CHLOROFORM	119.377	-82.34	142.12	-	--	-	--
17	CHF3	TRIFLUOROMETHANE	70.014	-247.32	-115.89	2	-170	-	--
18	CHI3	TRIIODOMETHANE	393.732	253.42	424.42	-	--	-	--
19	CHN	HYDROGEN CYANIDE	27.026	8.17	78.26	-	--	1	1000
20	CHNS	ISOTHIOCYANIC-ACID	59.086	-----	-----	-	--	-	--
21	CH2BrCl	BROMOCHLOROMETHANE	129.384	-126.31	154.49	2	52	-	--
22	CH2Br2	DIBROMOMETHANE	173.835	-62.59	206.51	2	93	-	--
23	CH2ClF	CHLOROFLUOROMETHANE	68.478	-207.38	15.64	-	--	-	--
24	CH2Cl2	DICHLOROMETHANE	84.932	-139.25	103.55	2	25	1	1224
25	CH2F2	DIFLUOROMETHANE	52.024	-213.07	-60.97	2	-128	-	--
26	CH2I2	DIIODOMETHANE	267.836	42.98	359.60	2	219	-	--
27	CH2O	FORMALDEHYDE	30.026	-133.60	-2.38	2	-64	1	806
28	CH2O2	FORMIC ACID	46.026	47.12	213.01	1	156	1	1114
29	CH3Br	METHYL BROMIDE	94.939	-136.48	38.41	2	-47	1	999
30	CH3Cl	METHYL CHLORIDE	50.488	-143.86	-11.60	2	-87	1	1170
31	CH3Cl3Si	METHYL TRICHLOROSILANE	149.478	-108.04	151.52	1	5	-	--
32	CH3F	METHYL FLUORIDE	34.033	-223.24	-108.99	-	--	-	--
33	CH3I	METHYL IODIDE	141.939	-87.61	108.37	2	1	-	--
34	CH3NO	FORMAMIDE	45.041	36.59	427.73	1	347	-	--
35	CH3NO2	NITROMETHANE	61.040	-19.39	214.16	1	95	1	714
36	CH3NO2	METHYL-NITRITE	61.040	1.42	10.42	-	--	-	--
37	CH3NO3	METHYL-NITRATE	77.040	-116.12	150.82	-	--	-	--
38	CH4	METHANE	16.043	-296.46	-258.68	1	-306	1	1112
39	CH4Cl2Si	METHYL DICHLOROSILANE	115.034	-131.08	106.79	1	-26	1	446
40	CH4O	METHANOL	32.042	-143.82	148.46	1	52	1	867
41	CH4O3S	METHANESULFONIC ACID	96.107	67.39	550.13	-	--	-	--
42	CH4S	METHYL MERCAPTAN	48.109	-189.35	42.73	2	-64	-	--
43	CH5ClSi	METHYL CHLOROSILANE	80.589	-209.38	47.66	2	-58	-	--
44	CH5N	METHYLAMINE	31.057	-136.23	20.61	2	-72	1	806
45	CH6Si	METHYL SILANE	46.144	-250.26	-70.42	2	-162	1	266
46	CN4O8	TETRANITROMETHANE	196.033	57.02	258.26	-	--	-	--
47	CO	CARBON MONOXIDE	28.010	-337.00	-312.61	-	--	1	1128
48	COS	CARBONYL SULFIDE	60.076	-217.84	-58.27	2	-125	-	--
49	CO2	CARBON DIOXIDE	44.010	-69.83	-109.26	-	--	-	--
50	CS2	CARBON DISULFIDE	76.143	-168.83	115.20	1	-22	1	194
51	C2BrF3	BROMOTRIFLUOROETHYLENE	160.921	-----	27.50	2	-71	-	--
52	C2Br2F4	1,2-DIBROMOTETRAFLUOROETHANE	259.824	-166.90	117.07	-	--	-	--
53	C2ClF3	CHLOROTRIFLUOROETHYLENE	116.470	-252.67	-18.13	2	-100	-	--
54	C2ClF5	CHLOROPENTAFLUOROETHANE	154.467	-146.99	-38.40	-	--	-	--
55	C2Cl2F4	1,2-DICHLOROTETRAFLUOROETHANE	170.921	-137.20	38.79	-	--	-	--
56	C2Cl3F3	1,1,2-TRICHLOROTRIFLUOROETHANE	187.375	-31.00	117.68	-	--	-	--
57	C2Cl4	TETRACHLOROETHYLENE	165.833	-8.23	250.25	2	113	-	--
58	C2Cl4F2	1,1,2,2-TETRACHLORODIFLUOROETHANE	203.830	78.80	199.13	-	--	-	--
59	C2Cl4O	TRICHLOROACETYL CHLORIDE	181.832	-----	244.40	-	--	-	--
60	C2Cl6	HEXACHLOROETHANE	236.738	368.24	368.33	-	--	-	--
61	C2F4	TETRAFLUOROETHYLENE	100.016	-204.07	-104.15	2	-163	1	392
62	C2F6	HEXAFLUOROETHANE	138.012	-149.26	-108.76	-	--	-	--
63	C2HBrClF3	HALOTHANE	197.382	-----	122.36	-	--	-	--

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	FLASH POINT F	CODE	AUTO-IGNITION F
64	C2HClF2	2-CHLORO-1,1-DIFLUOROETHYLENE	98.479	-217.30	-1.48	-	--	-	--
65	C2HCl3	TRICHLOROETHYLENE	131.388	-120.55	188.51	1	90	1	770
66	C2HCl3O	DICHLOROACETYL CHLORIDE	147.387	-459.67	228.20	1	151	-	--
67	C2HCl3O	TRICHLOROACETALDEHYDE	147.387	-70.87	207.86	2	91	-	--
68	C2HCl5	PENTACHLOROETHANE	202.293	-20.20	319.78	-	--	-	--
69	C2HF3	TRIFLUOROETHENE	82.025	-289.52	-61.85	-	--	-	--
70	C2HF3O2	TRIFLUOROACETIC ACID	114.024	4.55	161.24	2	70	-	--
71	C2HF5	PENTAFLUOROETHANE	120.022	-153.40	-54.40	-	--	-	--
72	C2H2	ACETYLENE	26.038	-113.35	-119.47	-	--	1	581
73	C2H2Br4	1,1,2,2-TETRABROMOETHANE	345.654	32.00	470.30	2	287	1	635
74	C2H2Cl2	1,1-DICHLOROETHYLENE	96.943	-188.50	88.81	1	-1	1	1058
75	C2H2Cl2	cis-1,2-DICHLOROETHYLENE	96.943	-112.00	140.90	1	39	2	860
76	C2H2Cl2	trans-1,2-DICHLOROETHYLENE	96.943	-57.64	117.86	1	35	1	860
77	C2H2Cl2O	CHLOROACETYL CHLORIDE	112.943	-7.60	222.80	2	98	-	--
78	C2H2Cl2O	DICHLOROACETALDEHYDE	112.943	-58.27	191.93	1	140	-	--
79	C2H2Cl2O2	DICHLOROACETIC ACID	128.942	56.12	381.20	1	230	-	--
80	C2H2Cl3F	1,1,1-TRICHLOROFLUOROETHANE	151.394	-----	199.13	2	61	-	--
81	C2H2Cl4	1,1,1,2-TETRACHLOROETHANE	167.849	-94.38	266.90	2	116	-	--
82	C2H2Cl4	1,1,2,2-TETRACHLOROETHANE	167.849	-46.84	293.18	2	143	-	--
83	C2H2F2	1,1-DIFLUOROETHYLENE	64.035	-227.20	-122.17	2	-195	1	1184
84	C2H2F2	cis-1,2-DIFLUOROETHENE	64.035	-265.45	-13.52	-	--	-	--
85	C2H2F2	trans-1,2-DIFLUOROETHENE	64.035	-265.45	-13.52	-	--	-	--
86	C2H2F4	1,1,1,2-TETRAFLUOROETHANE	102.031	-149.80	-14.80	2	-110	-	--
87	C2H2O	KETENE	42.037	-240.07	-57.66	-	--	-	--
88	C2H2O4	OXALIC ACID	90.036	373.10	564.53	2	431	-	--
89	C2H3Br	VINYL BROMIDE	106.950	-216.04	60.44	2	-60	-	--
90	C2H3Cl	VINYL CHLORIDE	62.499	-244.82	7.93	1	-108	1	882
91	C2H3ClF2	1-CHLORO-1,1-DIFLUOROETHANE	100.495	-203.44	13.98	2	-85	1	1169
92	C2H3ClO	ACETYL CHLORIDE	78.498	-171.13	123.35	1	40	1	734
93	C2H3ClO	CHLOROACETALDEHYDE	78.498	-----	184.73	-	--	-	--
94	C2H3ClO2	CHLOROACETIC ACID	94.497	140.00	372.83	-	--	-	--
95	C2H3ClO2	METHYL CHLOROFORMATE	94.497	-----	159.53	1	54	1	939
96	C2H3Cl3	1,1,1-TRICHLOROETHANE	133.404	-22.72	165.34	2	30	1	999
97	C2H3Cl3	1,1,2-TRICHLOROETHANE	133.404	-33.97	236.93	2	89	1	860
98	C2H3F	VINYL FLUORIDE	46.044	-256.90	-97.96	2	-194	1	725
99	C2H3F3	1,1,1-TRIFLUOROETHANE	84.041	-168.34	-53.32	-	--	-	--
100	C2H3N	ACETONITRILE	41.053	-46.89	178.88	1	42	1	975
101	C2H3NO	METHYL ISOCYANATE	57.052	1.40	101.93	1	19	1	993
102	C2H4	ETHYLENE	28.054	-272.45	-154.62	1	-213	1	842
103	C2H4Br2	1,1-DIBROMOETHANE	187.862	-81.40	226.40	2	82	-	--
104	C2H4Br2	1,2-DIBROMOETHANE	187.862	49.62	268.45	-	--	-	--
105	C2H4Cl2	1,1-DICHLOROETHANE	98.959	-142.53	135.14	1	10	1	856
106	C2H4Cl2	1,2-DICHLOROETHANE	98.959	-32.19	182.19	1	56	1	775
107	C2H4Cl2O	BIS(CHLOROMETHYL)ETHER	114.959	-42.70	220.73	2	95	-	--
108	C2H4F2	1,1-DIFLUOROETHANE	66.051	-178.60	-14.44	2	-114	-	--
109	C2H4F2	1,2-DIFLUOROETHANE	66.051	-----	86.90	2	-35	-	--
110	C2H4I2	1,2-DIIODOETHANE	281.863	181.42	392.02	-	--	-	--
111	C2H4O	ACETALDEHYDE	44.053	-189.40	68.72	1	-36	1	365
112	C2H4O	ETHYLENE OXIDE	44.053	-169.06	51.26	2	-67	1	804
113	C2H4OS	THIOACETIC-ACID	76.113	-189.38	188.62	-	--	-	--
114	C2H4O2	ACETIC ACID	60.053	61.99	244.22	1	109	1	800
115	C2H4O2	METHYL FORMATE	60.053	-146.20	89.15	1	-2	1	853
116	C2H4S	THIACYCLOPROPANE	60.114	-162.00	130.86	-	--	-	--
117	C2H5Br	BROMOETHANE	108.966	-181.48	101.03	2	-28	1	952
118	C2H5Cl	ETHYL CHLORIDE	64.514	-213.52	54.09	1	-58	1	966
119	C2H5ClO	2-CHLOROETHANOL	80.514	-89.50	263.48	1	105	1	797
120	C2H5F	ETHYL FLUORIDE	48.060	-225.76	-35.86	-	--	-	--
121	C2H5I	ETHYL IODIDE	155.966	-167.98	162.14	-	--	-	--
122	C2H5N	ETHYLENEIMINE	43.068	-108.31	132.53	1	12	1	608
123	C2H5NO	ACETAMIDE	59.068	177.80	430.07	2	259	-	--
124	C2H5NO	N-METHYLFORMAMIDE	59.068	25.16	391.12	2	217	-	--
125	C2H5NO2	NITROETHANE	75.067	-129.14	237.33	1	82	1	680
126	C2H5NO3	ETHYL-NITRATE	91.066	-138.26	188.98	-	--	-	--
127	C2H6	ETHANE	30.070	-297.04	-127.48	1	-211	1	959
128	C2H6AlCl	DIMETHYLALUMINUM CHLORIDE	92.054	-5.80	258.80	-	--	-	--
129	C2H6O	DIMETHYL ETHER	46.069	-222.68	-12.71	1	-42	1	662

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130	C2H6O	ETHANOL	46.069	-173.38	172.92	1	55	1	793
131	C2H6OS	DIMETHYL SULFOXIDE	78.135	65.34	372.20	1	190	1	419
132	C2H6O2	ETHYLENE GLYCOL	62.068	8.60	387.14	1	232	1	752
133	C2H6O4S	DIMETHYL SULFATE	126.133	-25.24	371.84	1	181	1	370
134	C2H6S	DIMETHYL SULFIDE	62.136	-144.89	99.19	1	-29	1	403
135	C2H6S	ETHYL MERCAPTAN	62.136	-234.20	95.00	2	-55	1	570
136	C2H6S2	DIMETHYL DISULFIDE	94.202	-120.48	229.55	1	44	-	--
137	C2H7N	DIMETHYLAMINE	45.084	-133.94	44.38	1	-58	1	752
138	C2H7N	ETHYLAMINE	45.084	-113.80	61.84	2	-51	1	723
139	C2H7NO	MONOETHANOLAMINE	61.084	50.90	339.80	1	185	3	--
140	C2H8N2	ETHYLENEDIAMINE	60.099	52.05	243.07	1	93	1	725
141	C2H8Si	DIMETHYL SILANE	60.171	-238.40	-3.28	2	-119	1	446
142	C2N2	CYANOGEN	52.036	-18.22	-6.07	-	--	-	--
143	C3F6	HEXAFLUOROPROPYLENE	150.023	-249.70	-21.28	-	--	-	--
144	C3F6O	HEXAFLUOROACETONE	166.023	-187.60	-17.09	-	--	-	--
145	C3F8	OCTAFLUOROPROPANE	188.020	-233.84	-34.15	-	--	-	--
146	C3H2N2	MALONONITRILE	66.062	89.15	425.03	1	234	-	--
147	C3H3Cl	PROPARGYL CHLORIDE	74.510	-----	136.13	1	64	-	--
148	C3H3N	ACRYLONITRILE	53.064	-118.34	171.23	1	32	1	898
149	C3H3NO	OXAZOLE	69.063	-----	157.10	1	66	-	--
150	C3H4	METHYLACETYLENE	40.065	-152.86	-9.78	2	-125	-	--
151	C3H4	PROPADIENE	40.065	-213.30	-30.10	2	-140	-	--
152	C3H4Cl2	2,3-DICHLOROPROPENE	110.970	-114.97	198.68	1	50	-	--
153	C3H4O	ACROLEIN	56.064	-125.86	126.84	1	-15	1	453
154	C3H4O	PROPARGYL ALCOHOL	56.064	-61.24	236.48	1	97	1	239
155	C3H4O2	ACRYLIC ACID	72.064	56.30	285.80	1	123	1	820
156	C3H4O2	beta-PROPIOLACTONE	72.064	-28.12	323.60	1	165	-	--
157	C3H4O2	VINYL FORMATE	72.064	-----	116.33	2	-2	-	--
158	C3H4O3	ETHYLENE CARBONATE	88.063	97.52	460.40	1	305	-	--
159	C3H4O3	PYRUVIC ACID	88.063	56.48	329.00	1	183	-	--
160	C3H5Br	3-BROMO-1-PROPENE	120.977	-182.90	158.02	-	--	-	--
161	C3H5Cl	2-CHLOROPROPENE	76.525	-215.32	72.77	1	25	-	--
162	C3H5Cl	3-CHLOROPROPENE	76.525	-210.10	112.93	1	-26	1	905
163	C3H5ClO	alpha-EPICHLOROHYDRIN	92.525	-70.96	241.00	1	88	1	781
164	C3H5ClO2	METHYL CHLOROACETATE	108.524	-25.82	265.68	1	125	-	--
165	C3H5ClO2	ETHYL CHLOROFORMATE	108.524	-114.07	199.13	1	36	1	932
166	C3H5Cl3	1,2,3-TRICHLOROPROPANE	147.431	5.54	314.33	1	165	1	579
167	C3H5I	3-IODO-1-PROPENE	167.977	-146.72	215.62	-	--	-	--
168	C3H5N	PROPIONITRILE	55.079	-135.20	207.23	1	36	2	953
169	C3H5NO	ACRYLAMIDE	71.079	184.10	378.68	2	252	-	--
170	C3H5NO	HYDRACRYLONITRILE	71.079	-50.80	429.80	1	265	1	922
171	C3H5NO	LACTONITRILE	71.079	-40.27	362.93	1	171	-	--
172	C3H5N3O9	NITROGLYCERINE	227.088	55.40	481.73	-	--	1	518
173	C3H6	CYCLOPROPANE	42.081	-197.36	-27.00	2	-138	1	928
174	C3H6	PROPYLENE	42.081	-301.45	-53.90	1	-162	1	851
175	C3H6Br2	1,2-DIBROMOPROPANE	201.888	-67.34	284.02	-	--	-	--
176	C3H6Cl2	1,1-DICHLOROPROPANE	112.986	-----	190.58	1	70	2	1034
177	C3H6Cl2	1,2-DICHLOROPROPANE	112.986	-148.79	205.47	1	60	1	1035
178	C3H6Cl2	1,3-DICHLOROPROPANE	112.987	-147.10	248.72	1	70	-	--
179	C3H6Cl2	2,2-DICHLOROPROPANE	112.986	-28.82	156.76	-	--	-	--
180	C3H6I2	1,2-DIIODOPROPANE	295.889	-3.98	440.62	-	--	-	--
181	C3H6O	ACETONE	58.080	-138.46	133.32	1	-0	1	1000
182	C3H6O	ALLYL ALCOHOL	58.080	-200.20	206.74	1	70	1	713
183	C3H6O	METHYL VINYL ETHER	58.080	-187.60	41.90	1	-69	1	549
184	C3H6O	n-PROPIONALDEHYDE	58.080	-112.00	118.40	1	-22	1	405
185	C3H6O	1,2-PROPYLENE OXIDE	58.080	-169.47	93.02	1	-35	1	869
186	C3H6O	1,3-PROPYLENE OXIDE	58.080	-----	118.13	2	-19	-	--
187	C3H6O2	ETHYL FORMATE	74.079	-111.28	129.76	1	25	1	851
188	C3H6O2	METHYL ACETATE	74.079	-144.40	134.49	1	14	1	935
189	C3H6O2	PROPIONIC ACID	74.079	-5.26	286.11	1	131	1	887
190	C3H6O2S	3-MERCAPTOPROPIONIC ACID	106.145	63.50	442.13	1	199	-	--
191	C3H6O3	LACTIC ACID	90.079	64.40	344.93	2	209	-	--
192	C3H6O3	METHOXYACETIC ACID	90.079	46.13	401.20	2	241	-	--
193	C3H6O3	TRIOXANE	90.079	142.70	238.10	1	113	1	777
194	C3H6S	THIACYCLOBUTANE	74.140	-99.74	202.96	-	--	-	--
195	C3H7Br	1-BROMOPROPANE	122.993	-166.00	159.80	2	7	1	914

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196	C3H7Br	2-BROMOPROPANE	122.993	-128.20	138.94	2	-11	-	--
197	C3H7Cl	ISOPROPYL CHLORIDE	78.541	-178.92	96.26	1	-26	1	1100
198	C3H7Cl	n-PROPYL CHLORIDE	78.541	-189.04	115.74	1	-24	1	968
199	C3H7F	1-FLUOROPROPANE	62.087	-254.18	26.24	-	--	-	--
200	C3H7F	2-FLUOROPROPANE	62.087	-208.03	15.19	-	--	-	--
201	C3H7I	ISOPROPYL IODIDE	169.993	-130.00	193.10	2	28	-	--
202	C3H7I	n-PROPYL IODIDE	169.993	-150.34	216.41	2	46	-	--
203	C3H7N	ALLYAMINE	57.095	-126.76	127.94	1	-20	1	705
204	C3H7N	PROPYLENEIMINE	57.095	-47.47	141.53	1	14	-	--
205	C3H7NO	N,N-DIMETHYLFORMAMIDE	73.095	-76.77	307.40	1	136	1	833
206	C3H7NO	N-METHYLACETAMIDE	73.095	82.40	401.00	1	226	-	--
207	C3H7NO2	1-NITROPROPANE	89.094	-155.18	268.12	1	97	1	790
208	C3H7NO2	2-NITROPROPANE	89.094	-132.38	248.45	1	75	1	802
209	C3H7NO3	PROPYL-NITRATE	105.093	-147.98	230.02	2	63	-	--
210	C3H7NO3	ISOPROPYL-NITRATE	105.093	-147.98	212.92	-	--	-	--
211	C3H8	PROPANE	44.096	-305.84	-43.67	1	-156	1	842
212	C3H8O	ISOPROPANOL	60.096	-126.17	180.07	1	53	1	750
213	C3H8O	METHYL ETHYL ETHER	60.096	-171.67	45.23	1	-35	1	374
214	C3H8O	n-PROPANOL	60.096	-195.16	206.96	1	59	1	700
215	C3H8O2	2-METHOXYETHANOL	76.095	-121.18	255.92	1	102	1	545
216	C3H8O2	METHYLAL	76.095	-156.64	107.33	1	-0	1	459
217	C3H8O2	1,2-PROPYLENE GLYCOL	76.095	-76.00	369.68	1	210	1	790
218	C3H8O2	1,3-PROPYLENE GLYCOL	76.095	-16.06	417.92	2	251	2	712
219	C3H8O3	GLYCEROL	92.095	64.72	554.00	1	320	1	739
220	C3H8S	n-PROPYLMERCAPTAN	76.163	-171.76	153.90	1	-4	-	--
221	C3H8S	ISOPROPYL MERCAPTAN	76.163	-202.97	126.61	1	-31	-	--
222	C3H8S	ETHYL-METHYL-SULFIDE	76.156	-158.71	152.60	-	--	-	--
223	C3H9N	n-PROPYLAMINE	59.111	-117.40	119.30	1	10	1	604
224	C3H9N	ISOPROPYLAMINE	59.111	-139.36	90.32	1	-35	1	756
225	C3H9N	TRIMETHYLAMINE	59.111	-178.73	37.17	1	20	1	374
226	C3H9NO	1-AMINO-2-PROPANOL	75.111	35.13	319.03	1	165	1	705
227	C3H9NO	3-AMINO-1-PROPANOL	75.111	51.80	369.50	1	175	-	--
228	C3H9NO	METHYLETHANOLAMINE	75.111	23.90	316.40	1	162	1	662
229	C3H9O4P	TRIMETHYL PHOSPHATE	140.076	-51.07	378.86	-	--	-	--
230	C3H10N2	1,2-PROPANEDIAMINE	74.126	-33.92	246.74	1	91	-	--
231	C3H10Si	TRIMETHYL SILANE	74.198	-212.60	44.06	2	-92	1	608
232	C4Cl4S	TETRACHLOROTHIOPHENE	221.921	83.88	452.11	2	241	-	--
233	C4Cl6	HEXACHLORO-1,3-BUTADIENE	260.760	-5.80	419.00	2	217	1	1130
234	C4F8	OCTAFLUORO-2-BUTENE	200.031	-211.00	26.98	-	--	-	--
235	C4F8	OCTAFLUOROCYCLOBUTANE	200.031	-40.34	21.24	-	--	-	--
236	C4F10	DECAFLUOROBUTANE	238.028	-198.76	28.40	-	--	-	--
237	C4H2	BUTADIYNE(BIACETYLENE)	50.060	-32.78	50.56	2	-68	-	--
238	C4H2O3	MALEIC ANHYDRIDE	98.058	127.13	395.60	1	216	1	890
239	C4H4	VINYLACETYLENE	52.076	-----	41.18	2	-82	-	--
240	C4H4N2	SUCCINONITRILE	80.089	136.67	512.60	1	270	-	--
241	C4H4O	FURAN	68.075	-122.08	88.43	1	-32	-	--
242	C4H4O2	DIKETENE	84.075	20.30	258.89	1	93	1	590
243	C4H4O3	SUCCINIC ANHYDRIDE	100.074	247.73	506.17	2	304	-	--
244	C4H4O4	FUMARIC ACID	116.073	548.60	554.00	-	--	-	1364
245	C4H4O4	MALEIC ACID	116.073	266.54	557.33	-	--	-	--
246	C4H4S	THIOPHENE	84.142	-36.78	183.49	1	30	-	--
247	C4H5Cl	CHLOROPRENE	88.536	-202.00	138.92	1	-4	-	--
248	C4H5N	trans-CROTONITRILE	67.090	-60.07	250.21	2	73	-	--
249	C4H5N	cis-CROTONITRILE	67.090	-98.68	225.41	2	53	-	--
250	C4H5N	METHACRYLONITRILE	67.090	-32.44	194.54	1	55	-	--
251	C4H5N	PYRROLE	67.090	-10.14	265.73	1	102	-	--
252	C4H5N	VINYLACETONITRILE	67.090	-124.60	245.34	1	73	-	--
253	C4H5NO2	METHYL CYANOACETATE	99.089	8.47	401.16	1	230	-	--
254	C4H6	CYCLOBUTENE	54.091	-182.90	36.68	2	-95	-	--
255	C4H6	1,2-BUTADIENE	54.092	-213.16	51.53	2	-105	-	--
256	C4H6	1,3-BUTADIENE	54.092	-164.02	24.06	1	-105	1	804
257	C4H6	DIMETHYLACETYLENE	54.092	-26.03	80.56	2	-56	-	--
258	C4H6	ETHYLACETYLENE	54.092	-194.30	46.53	2	-81	-	--
259	C4H6Cl2	1,3-DICHLORO-trans-2-BUTENE	124.997	-----	263.93	1	81	-	--
260	C4H6Cl2	1,4-DICHLORO-cis-2-BUTENE	124.997	-54.40	306.50	1	131	-	--
261	C4H6Cl2	1,4-DICHLORO-trans-2-BUTENE	124.997	33.80	313.00	2	124	-	--

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	FLASH POINT F	CODE	AUTO-IGNITION F
262	C4H6Cl2	3,4-DICHLORO-1-BUTENE	124.997	-78.07	238.73	1	82	-	--
263	C4H6O	trans-CROTONALDEHYDE	70.091	-105.70	219.38	1	55	1	450
264	C4H6O	2,5-DIHYDROFURAN	70.091	-----	150.53	1	3	-	--
265	C4H6O	DIVINYL ETHER	70.091	-149.98	82.94	1	-53	1	680
266	C4H6O	METHACROLEIN	70.091	-113.80	154.40	1	36	1	453
267	C4H6O2	2-BUTYNE-1,4-DIOL	86.090	136.13	460.40	2	305	-	--
268	C4H6O2	gamma-BUTYROLACTONE	86.090	-46.07	399.20	1	209	-	--
269	C4H6O2	cis-CROTONIC ACID	86.090	59.90	341.42	2	178	2	745
270	C4H6O2	trans-CROTONIC ACID	86.090	160.52	365.00	1	202	1	745
271	C4H6O2	METHACRYLIC ACID	86.090	59.00	321.80	1	171	-	--
272	C4H6O2	METHYL ACRYLATE	86.090	-106.29	176.36	1	26	1	874
273	C4H6O2	VINYL ACETATE	86.090	-135.04	162.50	1	17	1	800
274	C4H6O3	ACETIC ANHYDRIDE	102.090	-99.40	281.53	1	129	1	734
275	C4H6O4	SUCCINIC ACID	118.089	370.40	604.13	2	411	-	--
276	C4H6O5	DIGLYCOLIC ACID	134.089	298.40	638.33	1	440	1	446
277	C4H6O5	MALIC ACID	134.089	266.00	623.93	2	473	-	--
278	C4H6O6	TARTARIC ACID	150.088	402.80	728.33	1	410	1	802
279	C4H7N	n-BUTYRONITRILE	69.106	-169.42	243.68	1	79	1	935
280	C4H7N	ISOBUTYRONITRILE	69.106	-96.61	218.50	1	47	-	--
281	C4H7NO	ACETONE CYANOHYDRIN	85.106	-4.00	373.73	1	165	1	1270
282	C4H7NO	2-METHACRYLAMIDE	85.106	230.90	418.73	2	217	-	--
283	C4H7NO	3-METHOXYPROPIONITRILE	85.106	-81.45	330.53	1	149	-	--
284	C4H7NO	2-PYRROLIDONE	85.106	77.00	473.00	1	265	-	--
285	C4H8	1-BUTENE	56.107	-301.63	20.75	1	-110	1	723
286	C4H8	cis-2-BUTENE	56.107	-218.00	38.70	1	-100	1	617
287	C4H8	trans-2-BUTENE	56.107	-157.95	33.58	1	-100	1	615
288	C4H8	CYCLOBUTANE	56.107	-131.21	54.52	2	-83	2	800
289	C4H8	ISOBUTENE	56.107	-220.61	19.58	1	-105	1	869
290	C4H8Br2	1,2-DIBROMOBUTANE	215.915	-85.70	331.36	-	--	-	--
291	C4H8Br2	2,3-DIBROMOBUTANE	215.915	-30.08	321.82	-	--	-	--
292	C4H8Cl2	1,4-DICHLOROBUTANE	127.013	-35.14	309.02	1	126	-	--
293	C4H8I2	1,2-DIIODOBUTANE	309.916	42.64	398.50	-	--	-	--
294	C4H8O	n-BUTYRALDEHYDE	72.107	-141.52	166.64	1	20	1	446
295	C4H8O	ISOBUTYRALDEHYDE	72.107	-85.00	147.38	1	19	1	490
296	C4H8O	1,2-EPOXYBUTANE	72.107	-238.00	146.16	1	5	1	822
297	C4H8O	METHYL ETHYL KETONE	72.107	-124.01	175.35	1	21	1	960
298	C4H8O	ETHYL VINYL ETHER	72.107	-176.44	95.99	1	-50	1	395
299	C4H8O	TETRAHYDROFURAN	72.107	-163.30	148.73	1	6	1	610
300	C4H8O2	cis-2-BUTENE-1,4-DIOL	88.106	51.80	455.00	1	262	-	--
301	C4H8O2	trans-2-BUTENE-1,4-DIOL	88.106	81.14	458.33	2	278	-	--
302	C4H8O2	ISOBUTYRIC ACID	88.106	-50.80	310.46	1	170	1	935
303	C4H8O2	n-BUTYRIC ACID	88.106	22.64	325.89	1	161	1	846
304	C4H8O2	1,4-DIOXANE	88.106	53.24	214.38	1	54	1	356
305	C4H8O2	ETHYL ACETATE	88.106	-118.39	170.71	1	25	1	800
306	C4H8O2	METHYL PROPIONATE	88.106	-125.50	175.01	1	28	1	876
307	C4H8O2	n-PROPYL FORMATE	88.106	-135.22	177.48	1	27	1	851
308	C4H8O2S	SULFOLANE	120.172	81.68	545.00	1	350	-	--
309	C4H8S	TETRAHYDROTHIOPHENE	88.173	-141.09	250.02	1	65	-	--
310	C4H9Br	1-BROMOBUTANE	137.019	-170.32	214.88	1	64	1	509
311	C4H9Br	2-BROMOBUTANE	137.019	-169.42	196.20	1	70	-	--
312	C4H9Cl	n-BUTYL CHLORIDE	92.568	-189.58	173.17	1	-18	1	860
313	C4H9Cl	sec-BUTYL CHLORIDE	92.568	-204.34	154.58	1	-20	-	--
314	C4H9Cl	tert-BUTYL CHLORIDE	92.568	-13.72	123.08	1	23	-	--
315	C4H9I	2-IODO-2-METHYLPROPANE	184.020	-36.74	212.02	-	--	-	--
316	C4H9N	PYRROLIDINE	71.122	-72.11	187.83	1	37	-	--
317	C4H9NO	N,N-DIMETHYLACETAMIDE	87.122	-4.00	330.98	1	145	1	669
318	C4H9NO	MORPHOLINE	87.122	26.42	262.40	1	100	1	590
319	C4H9NO2	1-NITROBUTANE	103.121	-114.38	307.22	-	--	-	--
320	C4H9NO2	2-NITROBUTANE	103.121	-205.58	283.46	-	--	-	--
321	C4H10	n-BUTANE	58.123	-216.92	31.10	1	-76	1	761
322	C4H10	ISOBUTANE	58.123	-255.30	10.90	1	-117	1	860
323	C4H10N2	PIPERAZINE	86.137	222.80	294.80	1	178	1	851
324	C4H10O	n-BUTANOL	74.123	-128.74	243.79	1	84	1	650
325	C4H10O	sec-BUTANOL	74.123	-174.46	211.19	1	75	1	763
326	C4H10O	tert-BUTANOL	74.123	78.48	180.36	1	52	1	892
327	C4H10O	DIETHYL ETHER	74.123	-177.34	93.97	1	-49	1	356

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	FLASH POINT F	CODE	AUTO-IGNITION F
328	C4H10O	METHYL-PROPYL-ETHER	74.122	-177.30	101.43	-	--	-	--
329	C4H10O	METHYL ISOPROPYL ETHER	74.123	-229.40	87.39	2	-53	-	--
330	C4H10O	ISOBUTANOL	74.123	-162.40	225.79	1	82	1	800
331	C4H10O2	1,3-BUTANEDIOL	90.122	-106.60	404.60	1	228	1	741
332	C4H10O2	1,4-BUTANEDIOL	90.122	67.82	442.40	1	273	2	674
333	C4H10O2	2,3-BUTANEDIOL	90.122	45.68	357.26	1	185	1	756
334	C4H10O2	t-BUTYL HYDROPEROXIDE	90.122	39.74	270.23	1	80	-	--
335	C4H10O2	1,2-DIMETHOXYETHANE	90.122	-72.40	183.29	1	29	1	395
336	C4H10O2	2-ETHOXYETHANOL	90.122	-----	275.00	1	110	1	455
337	C4H10O3	DIETHYLENE GLYCOL	106.122	13.19	473.00	1	255	1	444
338	C4H10O4S	DIETHYL SULFATE	154.187	-13.27	409.73	1	219	1	817
339	C4H10S	n-BUTYL MERCAPTAN	90.189	-176.24	209.23	1	35	-	--
340	C4H10S	ISOBUTYL MERCAPTAN	90.189	-228.71	191.28	1	16	-	--
341	C4H10S	sec-BUTYL MERCAPTAN	90.189	-220.23	184.96	1	-9	-	--
342	C4H10S	tert-BUTYL MERCAPTAN	90.189	34.00	147.60	1	-15	-	--
343	C4H10S	DIETHYL SULFIDE	90.189	-155.11	197.78	1	14	-	--
344	C4H10S	ISOPROPYL-METHYL-SULFIDE	90.183	-150.70	184.55	-	--	-	--
345	C4H10S	METHYL-PROPYL-SULFIDE	90.183	-171.33	204.01	-	--	-	--
346	C4H10S2	DIETHYL DISULFIDE	122.255	-150.74	309.16	2	102	-	--
347	C4H11N	n-BUTYLAMINE	73.138	-56.38	171.32	1	10	1	594
348	C4H11N	ISOBUTYLAMINE	73.138	-120.28	153.91	1	-0	1	712
349	C4H11N	sec-BUTYLAMINE	73.138	-156.10	145.40	1	-20	2	712
350	C4H11N	tert-BUTYLAMINE	73.138	-88.53	111.92	1	16	-	--
351	C4H11N	DIETHYLAMINE	73.138	-57.64	131.81	1	-15	1	594
352	C4H11NO	DIMETHYLETHANOLAMINE	89.137	-74.20	273.20	1	106	1	563
353	C4H11NO2	DIETHANOLAMINE	105.137	82.40	516.00	1	305	1	1224
354	C4H11NO2	2-AMINOETHOXYETHANOL	105.137	-----	465.53	2	282	-	--
355	C4H12N2O	N-AMINOETHYL ETHANOLAMINE	104.152	-----	470.93	1	215	1	694
356	C4H12Si	TETRAMETHYLSILANE	88.225	-146.34	79.97	1	-17	1	350
357	C4H13N3	DIETHYLENE TRIAMINE	103.167	-38.20	404.78	1	210	1	676
358	C5Cl6	HEXACHLOROCYCLOPENTADIENE	272.771	52.41	462.20	-	--	-	--
359	C5H4O2	FURFURAL	96.086	-33.70	323.06	1	140	1	600
360	C5H5N	PYRIDINE	79.101	-42.92	239.47	1	68	1	900
361	C5H6	CYCLOPENTADIENE	66.103	-121.00	106.70	2	-51	1	1184
362	C5H6	2-METHYL-1-BUTENE-3-YNE	66.103	-171.40	90.05	2	-62	-	--
363	C5H6	1-PENTENE-3-YNE	66.103	-----	138.65	2	-22	-	--
364	C5H6	1-PENTENE-4-YNE	66.103	-----	108.50	2	-47	-	--
365	C5H6N2	GLUTARONITRILE	94.116	-20.09	546.80	2	278	-	--
366	C5H6O2	FURFURYL ALCOHOL	98.101	5.67	338.00	1	149	1	736
367	C5H6O3	GLUTARIC ANHYDRIDE	114.101	130.73	553.17	1	235	-	--
368	C5H6O4	CITRACONIC ACID	130.100	181.40	632.93	2	428	-	--
369	C5H6O4	ITACONIC ACID	130.100	330.08	622.13	2	419	-	--
370	C5H6S	2-METHYLTHIOPHENE	98.162	-82.08	234.61	-	--	-	--
371	C5H6S	3-METHYLTHIOPHENE	98.162	-92.15	239.81	-	--	-	--
372	C5H7N	N-METHYLPYRROLE	81.117	-69.23	234.93	1	59	1	1094
373	C5H7NO2	ETHYL CYANOACETATE	113.116	-8.50	402.80	1	230	-	--
374	C5H8	CYCLOPENTENE	68.118	-211.04	111.61	1	-20	1	743
375	C5H8	ISOPRENE	68.118	-230.58	93.31	1	-65	1	428
376	C5H8	3-METHYL-1,2-BUTADIENE	68.118	-172.52	105.53	2	-46	-	--
377	C5H8	2-METHYL-1,3-BUTADIENE	68.118	-230.71	93.33	-	--	-	--
378	C5H8	1,2-PENTADIENE	68.118	-215.07	112.75	2	-40	-	--
379	C5H8	cis-1,3-PENTADIENE	68.118	-221.44	111.33	2	-42	-	--
380	C5H8	trans-1,3-PENTADIENE	68.118	-125.39	107.64	2	-46	-	--
381	C5H8	1,4-PENTADIENE	68.118	-234.92	78.73	2	-67	-	--
382	C5H8	2,3-PENTADIENE	68.118	-194.17	118.85	2	-35	-	--
383	C5H8	1-PENTYNE	68.118	-158.26	104.32	1	-29	-	--
384	C5H8	2-PENTYNE	68.118	-164.72	132.93	2	-22	-	--
385	C5H8	3-METHYL-1-BUTYNE	68.118	-129.46	84.20	2	-62	-	--
386	C5H8	SPIROPENTANE	68.118	-160.67	102.27	-	--	-	--
387	C5H8N4O12	PENTAERYTHRITOL TETRANITRATE	316.138	284.90	517.73	-	--	-	--
388	C5H8O	CYCLOPENTANONE	84.118	-60.34	267.17	1	79	-	--
389	C5H8O	METHYL ISOPROPENYL KETONE	84.118	-64.48	208.40	1	70	-	--
390	C5H8O2	ACETYLACETONE	100.117	-10.30	284.72	1	93	1	644
391	C5H8O2	ALLYL ACETATE	100.117	-211.27	219.20	1	72	1	705
392	C5H8O2	ETHYL ACRYLATE	100.117	-96.16	211.10	1	60	1	721
393	C5H8O2	METHYL METHACRYLATE	100.117	-54.76	212.54	1	52	-	--

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	FLASH POINT F	CODE	AUTO-IGNITION F
394	C5H8O2	VINYL PROPIONATE	100.117	-459.67	196.16	1	34	-	--
395	C5H8O3	2-HYDROXYETHYL ACRYLATE	116.117	-76.27	411.53	1	208	-	--
396	C5H8O3	LEVULINIC ACID	116.117	95.00	474.44	2	278	-	--
397	C5H8O3	METHYL ACETOACETATE	116.117	-112.00	341.06	1	170	1	536
398	C5H8O4	GLUTARIC ACID	132.116	207.50	612.30	2	408	-	--
399	C5H9N	VALERONITRILE	83.133	-141.16	286.34	2	89	-	--
400	C5H9NO	n-BUTYL ISOCYANATE	99.133	-----	239.00	2	64	-	--
401	C5H9NO	N-METHYL-2-PYRROLIDONE	99.133	-11.20	395.60	1	204	1	655
402	C5H9NO4	L-GLUTAMIC ACID	147.131	435.20	746.33	2	520	-	--
403	C5H10	CYCLOPENTANE	70.134	-136.91	120.65	2	-38	1	682
404	C5H10	2-METHYL-1-BUTENE	70.134	-215.63	88.07	1	20	2	689
405	C5H10	2-METHYL-2-BUTENE	70.134	-208.77	101.41	1	20	-	--
406	C5H10	3-METHYL-1-BUTENE	70.134	-271.28	68.11	2	-80	2	689
407	C5H10	1-PENTENE	70.134	-265.40	85.93	1	-0	1	523
408	C5H10	cis-2-PENTENE	70.134	-240.52	98.47	2	-50	2	550
409	C5H10	trans-2-PENTENE	70.134	-220.47	97.41	2	-55	2	545
410	C5H10Br2	2,3-DIBROMO-2-METHYLBUTANE	229.942	58.73	339.55	-	--	-	--
411	C5H10Cl2	1,5-DICHLOROPENTANE	141.040	-99.04	356.00	2	145	-	--
412	C5H10O	METHYL ISOPROPYL KETONE	86.134	-133.60	201.92	2	32	-	--
413	C5H10O	2-PENTANONE	86.134	-106.35	216.16	1	45	1	846
414	C5H10O	DIETHYL KETONE	86.134	-38.15	215.58	1	55	1	846
415	C5H10O	VALERALDEHYDE	86.134	-132.07	217.40	1	54	1	432
416	C5H10O2	n-BUTYL FORMATE	102.133	-133.42	222.98	1	64	1	612
417	C5H10O2	ETHYL PROPIONATE	102.133	-101.02	210.38	1	54	1	890
418	C5H10O2	ISOBUTYL FORMATE	102.133	-140.44	208.53	2	39	1	608
419	C5H10O2	ISOPROPYL ACETATE	102.133	-100.12	191.30	1	36	2	894
420	C5H10O2	n-PROPYL ACETATE	102.133	-139.00	214.70	1	59	1	842
421	C5H10O2	METHYL n-BUTYRATE	102.133	-122.44	216.95	1	57	-	--
422	C5H10O2	2-METHYLBUTYRIC ACID	102.133	-----	350.60	2	167	-	--
423	C5H10O2	ISOVALERIC ACID	102.133	-20.74	347.18	2	167	1	781
424	C5H10O2	VALERIC ACID	102.133	-29.20	365.90	1	205	1	752
425	C5H10O2	TETRAHYDROFURFURYL ALCOHOL	102.133	-----	352.40	1	183	1	540
426	C5H10O2S	3-METHYL SULFOLANE	134.199	32.90	528.80	2	284	-	--
427	C5H10O3	DIETHYL CARBONATE	118.133	-45.40	260.24	1	77	-	--
428	C5H10O3	ETHYL LACTATE	118.133	-14.80	310.10	1	115	1	752
429	C5H10S	THIACYCLOHEXANE	102.194	66.18	287.15	-	--	-	--
430	C5H10S	CYCLOPENTANETHIOL	102.194	-179.97	269.92	-	--	-	--
431	C5H11Br	1-BROMOPENTANE	151.046	-126.20	265.26	-	--	-	--
432	C5H11Cl	1-CHLOROPENTANE	106.595	-146.20	227.10	1	55	1	500
433	C5H11Cl	1-CHLORO-3-METHYLBUTANE	106.595	-155.90	209.32	-	--	-	--
434	C5H11Cl	2-CHLORO-2-METHYLBUTANE	106.595	-100.28	186.10	-	--	-	--
435	C5H11N	N-METHYLPYRROLIDINE	85.149	-130.00	174.47	1	7	-	--
436	C5H11N	PIPERIDINE	85.149	13.10	223.52	1	37	-	--
437	C5H11NO	tert-BUTYLFORMAMIDE	101.148	60.80	395.60	1	203	-	--
438	C5H12	ISOPENTANE	72.150	-255.82	82.11	2	-71	1	788
439	C5H12	NEOPENTANE	72.150	2.17	49.10	1	-85	1	842
440	C5H12	n-PENTANE	72.150	-201.51	96.93	1	-40	1	500
441	C5H12O	2,2-DIMETHYL-1-PROPANOL	88.150	129.20	235.58	2	99	-	--
442	C5H12O	tert-PENTYL-ALCOHOL	88.149	128.93	235.67	-	--	-	--
443	C5H12O	2-METHYL-1-BUTANOL	88.150	-----	263.66	1	122	1	725
444	C5H12O	2-METHYL-2-BUTANOL	88.150	16.16	215.60	1	105	1	819
445	C5H12O	3-METHYL-1-BUTANOL	88.150	-178.96	268.16	1	109	1	662
446	C5H12O	3-METHYL-2-BUTANOL	88.150	-----	232.70	1	103	2	818
447	C5H12O	1-PENTANOL	88.150	-107.66	280.04	1	91	1	572
448	C5H12O	2-PENTANOL	88.150	-99.67	246.20	1	94	1	650
449	C5H12O	3-PENTANOL	88.150	-92.20	239.54	1	105	1	815
450	C5H12O	METHYL sec-BUTYL ETHER	88.150	-----	138.20	2	-20	-	--
451	C5H12O	METHYL tert-BUTYL ETHER	88.150	-163.48	131.36	1	-18	-	--
452	C5H12O	METHYL ISOBUTYL ETHER	88.150	-----	137.39	2	-20	-	--
453	C5H12O	ETHYL PROPYL ETHER	88.150	-197.50	146.95	2	-13	-	--
454	C5H12O2	ETHYLENE GLYCOL MONOPROPYL ETHER	104.149	-130.00	304.43	1	120	1	455
455	C5H12O2	NEOPENTYL GLYCOL	104.149	260.33	409.73	1	264	1	750
456	C5H12O2	1,5-PENTANEDIOL	104.149	3.20	462.20	1	265	1	635
457	C5H12O3	2-(2-METHOXYETHOXY)ETHANOL	120.148	-104.80	380.48	1	205	1	379
458	C5H12O4	PENTAERYTHRITOL	136.148	501.80	676.13	2	500	-	--
459	C5H12S	n-PENTYL MERCAPTAN	104.216	-104.26	259.95	1	64	-	--

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	FLASH POINT F	CODE	AUTO-IGNITION F
460	C5H12S	BUTYL-METHYL-SULFIDE	104.210	-144.08	254.17	-	--	-	--
461	C5H12S	ETHYL-PROPYL-SULFIDE	104.210	-178.60	245.30	-	--	-	--
462	C5H12S	2-METHYL-2-BUTANETHIOL	104.210	-154.79	210.43	-	--	-	--
463	C5H13N	n-PENTYLAMINE	87.165	-67.00	220.10	1	45	-	--
464	C5H13NO2	METHYL DIETHANOLAMINE	119.164	-5.80	476.60	1	260	-	--
465	C6Cl6	HEXACHLOROBENZENE	284.782	443.39	588.92	1	467	-	--
466	C6F6	HEXAFLUOROBENZENE	186.056	41.18	176.47	1	50	-	--
467	C6H3ClN2O4	1-CHLORO-2,4-DINITROBENZENE	202.554	128.12	598.73	1	381	1	810
468	C6H3Cl2NO2	1,2-DICHLORO-4-NITROBENZENE	192.001	108.50	492.53	2	278	-	--
469	C6H3Cl3	1,2,4-TRICHLOROBENZENE	181.448	62.60	415.40	1	222	1	1060
470	C6H3N3O6	1,3,5-TRINITROBENZENE	213.106	257.45	886.73	-	--	-	--
471	C6H4Br2	m-DIBROMOBENZENE	235.906	19.58	424.40	1	199	-	--
472	C6H4ClNO2	m-CHLORONITROBENZENE	157.556	112.10	456.08	1	261	-	--
473	C6H4ClNO2	o-CHLORONITROBENZENE	157.556	91.40	474.53	1	261	-	--
474	C6H4ClNO2	p-CHLORONITROBENZENE	157.556	182.30	467.60	1	261	-	--
475	C6H4Cl2	m-DICHLOROBENZENE	147.003	-12.57	343.54	1	161	2	1196
476	C6H4Cl2	o-DICHLOROBENZENE	147.003	1.40	356.76	1	151	1	1198
477	C6H4Cl2	p-DICHLOROBENZENE	147.003	127.38	345.31	1	151	2	1196
478	C6H4F2	m-DIFLUOROBENZENE	114.094	-11.18	194.92	-	--	-	--
479	C6H4F2	o-DIFLUOROBENZENE	114.094	-29.18	196.72	-	--	-	--
480	C6H4F2	p-DIFLUOROBENZENE	114.094	8.62	191.93	-	--	-	--
481	C6H4N2O4	m-DINITROBENZENE	168.109	195.53	571.73	1	302	-	--
482	C6H4N2O4	o-DINITROBENZENE	168.109	242.47	605.93	1	302	-	--
483	C6H4N2O4	p-DINITROBENZENE	168.109	344.21	569.93	2	347	-	--
484	C6H5Br	BROMOBENZENE	157.010	-23.30	312.96	1	124	1	1049
485	C6H5Cl	MONOCHLOROBENZENE	112.558	-49.36	269.10	1	90	1	1180
486	C6H5ClO	m-CHLOROPHENOL	128.558	91.13	416.93	2	194	-	--
487	C6H5ClO	o-CHLOROPHENOL	128.558	47.93	345.88	1	147	-	--
488	C6H5ClO	p-CHLOROPHENOL	128.558	109.13	427.93	1	241	-	--
489	C6H5Cl2N	3,4-DICHLOROANILINE	162.018	160.70	521.33	1	331	1	509
490	C6H5F	FLUOROBENZENE	96.104	-43.98	184.51	1	5	-	--
491	C6H5I	IODOBENZENE	204.010	-24.38	371.21	2	151	-	--
492	C6H5NO2	NITROBENZENE	123.111	42.37	411.44	1	190	1	899
493	C6H6	BENZENE	78.114	41.95	176.16	1	12	1	1044
494	C6H6ClN	m-CHLOROANILINE	127.573	13.28	443.30	2	221	-	--
495	C6H6ClN	o-CHLOROANILINE	127.573	407.91	407.91	1	195	-	--
496	C6H6ClN	p-CHLOROANILINE	127.573	157.82	446.90	1	235	-	--
497	C6H6N2	cis-DICYANO-1-BUTENE	106.127	-11.47	442.13	2	232	-	--
498	C6H6N2	trans-DICYANO-1-BUTENE	106.127	8.33	438.53	2	228	-	--
499	C6H6N2	1,4-DICYANO-2-BUTENE	106.127	168.53	524.93	2	295	-	--
500	C6H6N2O2	m-NITROANILINE	138.126	237.20	582.53	1	390	2	1070
501	C6H6N2O2	o-NITROANILINE	138.126	160.70	544.73	1	334	1	970
502	C6H6N2O2	p-NITROANILINE	138.126	297.50	636.80	1	390	2	1070
503	C6H6O	PHENOL	94.113	105.64	359.31	1	175	1	1319
504	C6H6O2	1,2-BENZENEDIOL	110.112	220.01	473.90	1	260	2	1052
505	C6H6O2	1,3-BENZENEDIOL	110.112	227.93	529.70	1	260	1	1052
506	C6H6O2	p-HYDROQUINONE	110.112	340.70	545.00	1	329	1	960
507	C6H6O3	1,2,3-BENZENETRIOL	126.112	272.93	587.66	2	365	-	--
508	C6H6S	PHENYL MERCAPTAN	110.180	5.20	336.45	1	163	-	--
509	C6H7N	ANILINE	93.128	21.16	364.01	1	158	1	1143
510	C6H7N	2-METHYLPYRIDINE	93.128	-88.08	264.92	1	102	1	1000
511	C6H7N	3-METHYLPYRIDINE	93.128	-0.65	291.45	2	102	2	998
512	C6H7N	4-METHYLPYRIDINE	93.128	38.44	293.63	1	135	2	998
513	C6H8	1,3-CYCLOHEXADIENE	80.130	-169.87	176.61	2	3	-	--
514	C6H8	METHYLCYCLOPENTADIENE	80.130	-----	163.00	1	120	1	835
515	C6H8N2	ADIPONITRILE	108.143	36.48	563.00	1	199	1	1022
516	C6H8N2	METHYLGLUTARONITRILE	108.143	-49.00	505.40	1	208	-	--
517	C6H8N2	m-PHENYLENEDIAMINE	108.143	141.53	548.33	1	280	-	--
518	C6H8N2	o-PHENYLENEDIAMINE	108.143	218.84	485.33	1	313	-	--
519	C6H8N2	p-PHENYLENEDIAMINE	108.143	283.73	512.33	1	312	-	--
520	C6H8N2	PHENYLHYDRAZINE	108.143	66.56	470.30	1	192	1	345
521	C6H8N2O	BIS(CYANOETHYL)ETHER	124.142	-15.34	582.53	2	343	-	--
522	C6H8O4	DIMETHYL MALEATE	144.127	-2.20	401.00	1	235	-	--
523	C6H8O6	ASCORBIC ACID	176.126	377.60	686.93	2	529	-	--
524	C6H8O7	CITRIC ACID	192.125	307.40	726.53	2	547	-	1850
525	C6H10	1-METHYLCYCLOPENTENE	82.145	-196.94	168.44	-	--	-	--

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	FLASH POINT F	CODE	AUTO-IGNITION F
526	C6H10	3-METHYLCYCLOPENTENE	82.145	-225.38	158.02	-	--	-	--
527	C6H10	4-METHYLCYCLOPENTENE	82.145	-257.51	167.29	-	--	-	--
528	C6H10	CYCLOHEXENE	82.145	-154.26	181.35	1	20	1	509
529	C6H10	2,3-DIMETHYL-1,3-BUTADIENE	82.145	-104.80	155.80	1	-8	-	--
530	C6H10	1,5-HEXADIENE	82.145	-221.22	139.03	1	-51	-	--
531	C6H10	cis,trans-2,4-HEXADIENE	82.145	-140.98	182.30	1	19	-	--
532	C6H10	trans,trans-2,4-HEXADIENE	82.145	-48.82	179.42	1	19	-	--
533	C6H10	1-HEXYNE	82.145	-205.42	160.39	1	-6	-	--
534	C6H10	2-HEXYNE	82.145	-129.10	184.14	1	12	-	--
535	C6H10	3-HEXYNE	82.145	-153.58	178.16	2	1	-	--
536	C6H10O	CYCLOHEXANONE	98.145	-24.07	312.35	1	111	1	788
537	C6H10O	MESITYL OXIDE	98.145	-63.40	265.64	1	83	1	652
538	C6H10O2	epsilon-CAPROLACTONE	114.144	29.66	465.53	1	228	1	640
539	C6H10O2	ETHYL METHACRYLATE	114.144	-----	242.60	1	70	-	--
540	C6H10O2	n-PROPYL ACRYLATE	114.144	-----	246.20	2	68	2	647
541	C6H10O3	ETHYLACETOACETATE	130.144	-38.20	357.44	1	135	1	563
542	C6H10O3	PROPIONIC ANHYDRIDE	130.144	-49.00	336.20	1	145	1	545
543	C6H10O4	ADIPIC ACID	146.143	306.23	640.13	1	325	1	792
544	C6H10O4	DIETHYL OXALATE	146.143	-41.08	366.26	2	252	-	--
545	C6H10O4	ETHYLENE GLYCOL DIACETATE	146.143	-23.80	374.90	1	190	1	900
546	C6H10O4	ETHYLIDENE DIACETATE	146.143	65.93	336.20	1	151	-	--
547	C6H11N	HEXANENITRILE	97.160	-112.54	326.48	2	116	-	--
548	C6H11NO	epsilon-CAPROLACTAM	113.159	156.58	518.00	2	257	-	--
549	C6H11NO	CYCLOHEXANONE OXIME	113.159	194.00	406.40	2	192	-	--
550	C6H12	CYCLOHEXANE	84.161	43.77	177.30	1	-4	1	500
551	C6H12	2,3-DIMETHYL-1-BUTENE	84.161	-251.07	132.10	2	-35	1	680
552	C6H12	2,3-DIMETHYL-2-BUTENE	84.161	-101.79	163.76	2	-10	1	753
553	C6H12	3,3-DIMETHYL-1-BUTENE	84.161	-175.36	106.25	1	-19	-	--
554	C6H12	2-ETHYL-1-BUTENE	84.161	-204.77	148.41	2	-22	1	599
555	C6H12	trans-3-METHYL-2-PENTENE	84.161	-217.21	158.81	-	--	-	--
556	C6H12	1-HEXENE	84.161	-219.57	146.26	2	-24	1	487
557	C6H12	cis-2-HEXENE	84.161	-222.07	155.98	2	-17	1	487
558	C6H12	trans-2-HEXENE	84.161	-207.36	154.17	2	-17	1	473
559	C6H12	cis-3-HEXENE	84.161	-216.08	151.61	2	-19	2	539
560	C6H12	trans-3-HEXENE	84.161	-172.16	152.76	1	10	2	529
561	C6H12	METHYLCYCLOPENTANE	84.161	-224.36	161.26	1	-17	1	624
562	C6H12	2-METHYL-1-PENTENE	84.161	-212.31	143.78	2	-26	1	572
563	C6H12	2-METHYL-2-PENTENE	84.161	-211.14	153.14	2	-17	-	--
564	C6H12	3-METHYL-1-PENTENE	84.161	-243.31	129.52	1	-18	-	--
565	C6H12	3-METHYL-cis-2-PENTENE	84.161	-210.71	153.86	2	-19	-	--
566	C6H12	4-METHYL-1-PENTENE	84.161	-244.55	128.95	2	-38	1	572
567	C6H12	4-METHYL-cis-2-PENTENE	84.161	-210.73	133.48	2	-33	-	--
568	C6H12	4-METHYL-trans-2-PENTENE	84.161	-221.44	137.48	2	-29	-	--
569	C6H12N2	TRIETHYLENEDIAMINE	112.175	321.98	345.20	2	143	-	--
570	C6H12O	BUTYL VINYL ETHER	100.161	-133.42	200.88	1	30	1	437
571	C6H12O	CYCLOHEXANOL	100.161	74.21	321.53	1	154	1	572
572	C6H12O	1-HEXANAL	100.161	-68.80	262.94	1	80	-	--
573	C6H12O	ETHYL ISOPROPYL KETONE	100.161	-----	236.12	2	61	-	--
574	C6H12O	2-HEXANONE	100.161	-68.44	261.86	1	77	1	795
575	C6H12O	3-HEXANONE	100.161	-68.17	254.30	1	57	-	--
576	C6H12O	METHYL ISOBUTYL KETONE	100.161	-119.20	241.70	1	60	1	858
577	C6H12O2	n-PENTYL FORMATE	116.160	-100.30	272.21	2	91	-	--
578	C6H12O2	n-BUTYL ACETATE	116.160	-100.30	258.80	1	71	1	790
579	C6H12O2	sec-BUTYL ACETATE	116.160	-146.20	233.60	1	60	2	791
580	C6H12O2	tert-BUTYL ACETATE	116.160	-----	204.80	1	61	-	--
581	C6H12O2	ETHYL n-BUTYRATE	116.160	-144.40	250.70	1	78	1	865
582	C6H12O2	ETHYL ISOBUTYRATE	116.160	-126.67	229.73	1	57	-	--
583	C6H12O2	ISOBUTYL ACETATE	116.160	-145.93	241.97	1	64	1	793
584	C6H12O2	n-PROPYL PROPIONATE	116.160	-104.62	252.50	1	175	2	831
585	C6H12O2	CYCLOHEXYL PEROXIDE	116.160	-4.00	422.33	2	228	-	--
586	C6H12O2	DIACETONE ALCOHOL	116.160	-47.20	334.13	1	116	1	1118
587	C6H12O2	2-ETHYL BUTYRIC ACID	116.160	5.00	380.84	1	188	1	752
588	C6H12O2	n-HEXANOIC ACID	116.160	26.60	402.26	1	215	1	716
589	C6H12O3	2-ETHOXYETHYL ACETATE	132.159	-79.06	313.34	1	130	1	715
590	C6H12O3	HYDROXYCAPROIC ACID	132.159	141.53	577.13	2	372	-	--
591	C6H12O3	PARALDEHYDE	132.159	54.68	255.38	1	96	1	460

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	FLASH POINT F	CODE	AUTO-IGNITION F
592	C6H12O3	sec-BUTYL GLYCOLATE	132.160	-459.67	351.50	-	--	-	--
593	C6H12S	THIACYCLOHEPTANE	116.221	66.18	287.15	-	--	-	--
594	C6H13N	CYCLOHEXYLAMINE	99.176	0.14	274.10	1	88	1	559
595	C6H13N	HEXAMETHYLENEIMINE	99.176	-34.60	269.06	1	99	1	626
596	C6H14	2,2-DIMETHYLBUTANE	86.177	-145.97	121.51	1	-54	1	797
597	C6H14	2,3-DIMETHYLBUTANE	86.177	-198.33	136.36	1	-20	1	788
598	C6H14	n-HEXANE	86.177	-139.56	155.71	1	-7	1	453
599	C6H14	2-METHYLPENTANE	86.177	-244.48	140.47	1	-31	1	583
600	C6H14	3-METHYLPENTANE	86.177	-261.22	145.89	2	-26	1	532
601	C6H14N2O2	LYSINE	146.189	409.73	647.33	2	412	-	--
602	C6H14O	2-ETHYL-1-BUTANOL	102.177	-173.92	295.70	1	135	-	--
603	C6H14O	1-HEXANOL	102.177	-48.28	314.60	1	145	2	545
604	C6H14O	2-HEXANOL	102.177	-58.27	283.80	1	106	-	--
605	C6H14O	2-METHYL-1-PENTANOL	102.177	-----	298.40	1	124	-	--
606	C6H14O	4-METHYL-2-PENTANOL	102.177	-----	269.06	1	106	-	--
607	C6H14O	n-BUTYL ETHYL ETHER	102.177	-153.40	197.96	1	39	-	--
608	C6H14O	DIISOPROPYL ETHER	102.177	-121.90	154.94	1	-18	1	830
609	C6H14O	DI-n-PROPYL ETHER	102.177	-189.76	193.35	1	70	1	419
610	C6H14O	METHYL tert-PENTYL ETHER	102.177	-----	187.34	2	8	-	--
611	C6H14O2	ACETAL	118.176	-148.00	218.48	1	-5	1	446
612	C6H14O2	2-BUTOXYETHANOL	118.176	-94.00	340.38	1	157	1	460
613	C6H14O2	1,6-HEXANEDIOL	118.176	107.60	469.40	1	210	-	--
614	C6H14O2	HEXYLENE GLYCOL	118.176	-58.00	387.50	1	199	2	583
615	C6H14O2S	DI-n-PROPYL SULFONE	150.242	85.73	517.73	1	259	-	--
616	C6H14O3	DIETHYLENE GLYCOL DIMETHYL ETHER	134.175	-94.00	319.57	1	145	1	392
617	C6H14O3	DIPROPYLENE GLYCOL	134.175	-40.27	449.24	1	244	-	--
618	C6H14O3	2-(2-ETHOXYETHOXY)ETHANOL	134.175	-108.40	395.60	1	182	1	399
619	C6H14O3	TRIMETHYLOLPROPANE	134.175	136.40	552.00	1	355	-	--
620	C6H14O4	TRIETHYLENE GLYCOL	150.175	18.75	532.13	1	350	1	700
621	C6H14O6	SORBITOL	182.174	207.86	938.93	2	725	-	--
622	C6H14S	n-HEXYLMERCAPTAN	118.243	-112.95	306.79	1	68	-	--
623	C6H14S	BUTYL-ETHYL-SULFIDE	118.237	-139.22	291.67	-	--	-	--
624	C6H14S	ISOPROPYL-SULFIDE	118.237	-152.86	248.07	-	--	-	--
625	C6H14S	METHYL-PENTYL-SULFIDE	118.237	-137.18	262.42	-	--	-	--
626	C6H14S	PROPYL-SULFIDE	118.237	-152.86	289.13	-	--	-	--
627	C6H14S2	PROPYL-DISULFIDE	150.297	-121.85	376.70	-	--	-	--
628	C6H15Al	TRIETHYL ALUMINUN	114.167	-62.50	365.00	-	--	-	--
629	C6H15Al2Cl3	ETHYL ALUMINUM SESQUICHLORIDE	247.506	-4.00	408.20	1	-4	-	--
630	C6H15N	DIISOPROPYLAMINE	101.192	-141.34	183.02	1	19	1	600
631	C6H15N	DI-n-PROPYLAMINE	101.192	-81.40	227.93	1	63	1	570
632	C6H15N	n-HEXYLAMINE	101.192	-6.34	268.70	1	85	-	--
633	C6H15N	TRIETHYLAMINE	101.192	-174.46	191.79	1	10	-	--
634	C6H15NO	6-AMINOHEXANOL	117.191	136.13	454.73	2	251	-	--
635	C6H15NO2	DIISOPROPANOLAMINE	133.191	113.00	479.75	1	255	1	705
636	C6H15NO3	TRIETHANOLAMINE	149.190	70.16	643.73	1	355	-	--
637	C6H15N3	N-AMINOETHYL PIPERAZINE	129.205	-2.20	428.72	1	199	-	--
638	C6H15O4P	TRIETHYL PHOSPHATE	182.156	-70.87	411.80	1	210	1	851
639	C6H16N2	HEXAMETHYLENEDIAMINE	116.207	105.44	395.40	1	200	-	--
640	C6H18N3OP	HEXAMETHYL PHOSPHORAMIDE	179.202	44.60	451.40	1	222	-	--
641	C6H18N4	TRIETHYLENE TETRAMINE	146.236	53.60	511.70	1	275	1	640
642	C6H18OSi2	HEXAMETHYLDISILOXANE	162.379	-90.80	212.94	1	28	1	646
643	C6H18O3Si3	HEXAMETHYLCYCLOTRISILOXANE	222.464	147.20	275.20	1	95	-	--
644	C6H19NSi2	HEXAMETHYLDISILAZANE	161.395	-----	258.80	1	46	-	--
645	C7H3ClF3NO2	4-CHLORO-3-NITROBENZOTRIFLUORIDE	225.554	-----	431.60	1	214	-	--
646	C7H3Cl2F3	2,4-DICHLOROBENZOTRIFLUORIDE	215.001	-14.08	351.50	-	--	-	--
647	C7H3Cl2NO	3,4-DICHLOROPHENYL ISOCYANATE	188.012	109.40	442.13	1	288	-	--
648	C7H4ClF3	p-CHLOROBENZOTRIFLUORIDE	180.557	-32.80	282.20	1	109	-	--
649	C7H4Cl2O	m-CHLOROBENZOYL CHLORIDE	175.014	44.33	436.73	2	208	-	--
650	C7H4F3NO2	3-NITROBENZOTRIFLUORIDE	191.110	29.93	397.00	1	190	-	--
651	C7H5ClO	BENZOYL CHLORIDE	140.569	31.10	386.60	1	162	1	185
652	C7H5ClO2	o-CHLOROBENZOIC ACID	156.568	287.60	548.60	2	322	-	--
653	C7H5Cl3	BENZOTRICHLORIDE	195.475	23.45	416.30	2	174	-	--
654	C7H5F3	BENZOTRIFLUORIDE	146.112	-20.22	215.69	1	54	-	--
655	C7H5N	BENZONITRILE	103.123	9.05	375.80	1	167	-	--
656	C7H5NO	PHENYL ISOCYANATE	119.123	-22.00	330.08	1	132	-	--
657	C7H5N3O6	2,4,6-TRINITROTOLUENE	227.133	177.53	571.73	-	--	-	--

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	FLASH POINT F	CODE	AUTO-IGNITION F
658	C7H6Cl2	BENZYL DICHLORIDE	161.030	2.93	416.93	2	172	-	--
659	C7H6Cl2	2,4-DICHLOROTOLUENE	161.030	7.70	393.98	1	205	-	--
660	C7H6N2O4	2,4-DINITROTOLUENE	182.136	157.73	602.33	1	405	-	--
661	C7H6N2O4	2,5-DINITROTOLUENE	182.136	126.50	602.33	2	365	-	--
662	C7H6N2O4	2,6-DINITROTOLUENE	182.136	150.53	544.73	2	318	-	--
663	C7H6N2O4	3,4-DINITROTOLUENE	182.136	137.93	638.33	1	404	-	--
664	C7H6N2O4	3,5-DINITROTOLUENE	182.136	198.50	598.73	2	340	-	--
665	C7H6O	BENZALDEHYDE	106.124	-14.80	353.75	1	148	1	377
666	C7H6O2	BENZOIC ACID	122.123	252.27	480.65	1	250	1	1065
667	C7H6O2	p-HYDROXYBENZALDEHYDE	122.123	242.60	590.00	2	341	-	--
668	C7H6O2	SALICYLALDEHYDE	122.123	19.40	385.70	1	172	-	--
669	C7H6O3	SALICYLIC ACID	138.123	317.48	492.53	1	315	1	1013
670	C7H7Br	p-BROMOTOLUENE	171.037	80.24	363.83	1	185	-	--
671	C7H7Cl	BENZYL CHLORIDE	126.585	-38.20	354.92	1	140	1	1085
672	C7H7Cl	o-CHLOROTOLUENE	126.585	-33.70	318.47	1	124	-	--
673	C7H7Cl	p-CHLOROTOLUENE	126.585	45.50	324.50	1	125	-	--
674	C7H7F	p-FLUOROTOLUENE	110.131	-70.22	241.90	-	--	-	--
675	C7H7NO	FORMANILIDE	121.139	122.00	519.80	-	--	-	--
676	C7H7NO2	m-NITROTOLUENE	137.138	60.89	449.33	1	215	2	734
677	C7H7NO2	o-NITROTOLUENE	137.138	26.29	432.48	1	223	1	581
678	C7H7NO2	p-NITROTOLUENE	137.138	124.88	461.30	1	223	1	734
679	C7H7NO3	o-NITROANISOLE	153.138	50.81	523.40	2	223	-	--
680	C7H8	TOLUENE	92.141	-138.95	231.13	1	40	1	997
681	C7H8	1,3,5-CYCLOHEPTATRIENE	92.140	-111.08	239.90	2	49	-	--
682	C7H8O	ANISOLE	108.140	-35.50	308.44	1	126	-	--
683	C7H8O	BENZYL ALCOHOL	108.140	4.46	400.46	1	199	1	817
684	C7H8O	m-CRESOL	108.140	54.03	396.10	1	202	1	1038
685	C7H8O	o-CRESOL	108.140	87.87	375.80	1	178	1	1110
686	C7H8O	p-CRESOL	108.140	94.60	395.56	1	202	1	1038
687	C7H8O2	GUAIACOL	124.139	88.70	401.00	1	179	-	--
688	C7H8O2	p-METHOXYPHENOL	124.139	132.53	469.13	1	257	-	--
689	C7H9N	BENZYLAMINE	107.155	-50.80	364.10	1	140	-	--
690	C7H9N	2,6-DIMETHYLPYRIDINE	107.155	20.93	291.29	1	91	-	--
691	C7H9N	N-METHYLANILINE	107.155	-70.60	384.57	1	172	-	--
692	C7H9N	m-TOLUIDINE	107.155	-22.72	398.12	1	187	1	900
693	C7H9N	o-TOLUIDINE	107.155	-10.62	392.72	1	185	1	900
694	C7H9N	p-TOLUIDINE	107.155	110.75	392.45	1	188	1	900
695	C7H10	2-NORBORNENE	94.156	115.25	203.90	1	5	1	941
696	C7H10N2	TOLUENEDIAMINE	122.170	208.58	543.20	1	300	-	--
697	C7H11NO	CYCLOHEXYL ISOCYANATE	125.170	-----	336.20	1	120	-	--
698	C7H12	1-HEPTYNE	96.172	-113.60	211.48	-	--	-	--
699	C7H12O2	n-BUTYL ACRYLATE	128.171	-84.28	298.13	1	102	1	559
700	C7H12O2	ISOBUTYL ACRYLATE	128.171	-78.07	269.60	1	88	1	644
701	C7H12O2	n-PROPYL METHACRYLATE	128.171	-----	285.53	2	88	-	--
702	C7H12O4	DIETHYL MALONATE	160.170	-56.02	390.02	1	199	-	--
703	C7H14	CYCLOHEPTANE	98.188	17.60	245.82	2	44	-	--
704	C7H14	1,1-DIMETYLCYCLOPENTANE	98.188	-93.62	190.13	2	3	-	--
705	C7H14	cis-1,2-DIMETHYLCYCLOPENTANE	98.188	-65.00	211.15	2	25	-	--
706	C7H14	trans-1,2-DIMETHYLCYCLOPENTANE	98.188	-179.63	197.37	2	14	-	--
707	C7H14	cis-1,3-DIMETHYLCYCLOPENTANE	98.188	-208.66	195.39	2	7	-	--
708	C7H14	trans-1,3-DIMETHYLCYCLOPENTANE	98.188	-209.15	197.11	2	8	-	--
709	C7H14	ETHYLCYCLOPENTANE	98.188	-217.19	218.25	2	25	1	500
710	C7H14	2-ETHYL-1-PENTENE	98.188	-157.27	201.20	2	14	-	--
711	C7H14	3-ETHYL-1-PENTENE	98.188	-197.46	183.40	2	1	-	--
712	C7H14	1-HEPTENE	98.188	-181.98	200.55	1	32	1	505
713	C7H14	cis-2-HEPTENE	98.188	-164.47	209.14	2	17	-	--
714	C7H14	trans-2-HEPTENE	98.188	-165.06	208.31	1	30	-	--
715	C7H14	cis-3-HEPTENE	98.188	-213.95	204.35	2	16	-	--
716	C7H14	trans-3-HEPTENE	98.188	-213.93	204.21	1	21	-	--
717	C7H14	METHYLCYCLOHEXANE	98.188	-195.83	213.67	1	25	1	545
718	C7H14	2-METHYL-1-HEXENE	98.188	-153.17	197.31	1	21	-	--
719	C7H14	3-METHYL-1-HEXENE	98.188	-198.67	183.02	1	21	-	--
720	C7H14	4-METHYL-1-HEXENE	98.188	-222.61	188.11	2	5	-	--
721	C7H14	2,3,3-TRIMETHYL-1-BUTENE	98.188	-165.73	172.20	1	1	1	219
722	C7H14O	DIISOPROPYL KETONE	114.188	-91.01	255.92	1	59	-	--
723	C7H14O	2-HEPTANONE	114.188	-31.00	303.62	1	102	1	739

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724	C7H14O	1-HEPTANAL	114.188	-45.40	307.04	1	100	-	--
725	C7H14O	1-METHYLCYCLOHEXANOL	114.188	78.80	314.60	2	129	-	--
726	C7H14O	cis-2-METHYLCYCLOHEXANOL	114.188	44.60	329.00	2	127	1	565
727	C7H14O	trans-2-METHYLCYCLOHEXANOL	114.188	24.80	331.70	2	131	1	565
728	C7H14O	cis-3-METHYLCYCLOHEXANOL	114.188	22.10	334.40	2	147	-	--
729	C7H14O	trans-3-METHYLCYCLOHEXANOL	114.188	31.10	334.40	2	145	-	--
730	C7H14O	cis-4-METHYLCYCLOHEXANOL	114.188	-----	339.80	2	154	1	567
731	C7H14O	trans-4-METHYLCYCLOHEXANOL	114.188	-----	339.80	2	158	1	567
732	C7H14O	5-METHYL-2-HEXANONE	114.188	-101.02	292.64	1	97	1	376
733	C7H14O2	n-BUTYL PROPIONATE	130.187	-129.14	295.88	1	90	1	800
734	C7H14O2	ETHYL ISOVALERATE	130.187	-146.74	273.74	1	95	-	--
735	C7H14O2	ISOPENTYL ACETATE	130.187	-109.30	287.78	1	77	1	680
736	C7H14O2	n-PENTYL ACETATE	130.187	-95.44	300.20	1	77	2	674
737	C7H14O2	n-PROPYL n-BUTYRATE	130.187	-139.36	289.94	2	88	-	--
738	C7H14O2	n-HEPTANOIC ACID	130.187	18.82	433.40	2	230	2	710
739	C7H14O3	ETHYL-3-ETHOXYPROPIONATE	146.186	-----	329.00	1	136	1	711
740	C7H15Br	1-BROMOHEPTANE	179.100	-68.98	354.02	2	129	-	--
741	C7H15N	N-METHYLCYCLOHEXYLAMINE	113.203	16.70	299.93	1	84	-	--
742	C7H16	2,2-DIMETHYLPENTANE	100.204	-190.86	174.54	2	-10	2	638
743	C7H16	2,3-DIMETHYLPENTANE	100.204	-----	193.60	2	5	1	639
744	C7H16	2,4-DIMETHYLPENTANE	100.204	-182.63	176.88	1	10	2	638
745	C7H16	3,3-DIMETHYLPENTANE	100.204	-210.01	186.91	2	-2	2	638
746	C7H16	3-ETHYLPENTANE	100.204	-181.48	200.25	2	10	-	--
747	C7H16	n-HEPTANE	100.204	-131.04	209.17	1	25	1	433
748	C7H16	2-METHYLHEXANE	100.204	-180.85	194.09	1	25	1	536
749	C7H16	3-METHYLHEXANE	100.204	-182.92	197.33	1	25	1	536
750	C7H16	2,2,3-TRIMETHYLBUTANE	100.204	-12.24	177.58	2	-11	1	842
751	C7H16O	1-HEPTANOL	116.203	-29.20	349.34	1	170	2	539
752	C7H16O	2-HEPTANOL	116.203	-22.27	318.56	1	160	-	--
753	C7H16O	5-METHYL-1-HEXANOL	116.203	-----	341.60	2	151	-	--
754	C7H16O	ISOPROPYL-TERT-BUTYL-ETHER	116.203	-139.63	221.92	-	--	-	--
755	C7H16S	n-HEPTYL MERCAPTAN	132.270	-45.81	350.49	1	115	-	--
756	C7H16S	BUTYL-PROPYL-SULFIDE	132.263	-87.68	339.82	-	--	-	--
757	C7H16S	ETHYL-PENTYL-SULFIDE	132.263	-87.68	339.82	-	--	-	--
758	C7H16S	HEXYL-METHYL-SULFIDE	132.263	-87.68	339.82	-	--	-	--
759	C7H17N	1-AMINOHEPTANE	115.219	-2.20	314.42	1	131	-	--
760	C8H4Cl2O2	ISOPHTHALOYL CHLORIDE	203.024	110.93	528.53	1	356	-	--
761	C8H4O3	PHTHALIC ANHYDRIDE	148.118	268.00	544.10	1	305	1	-441
762	C8H6	ETHYNYLBENZENE	102.135	-23.12	293.38	-	--	-	--
763	C8H6O4	ISOPHTHALIC ACID	166.133	654.80	895.73	2	624	2	925
764	C8H6O4	PHTHALIC ACID	166.133	375.80	616.73	2	401	2	925
765	C8H6O4	TEREPHTHALIC ACID	166.133	800.60	1037.93	-	--	1	925
766	C8H6S	BENZOTHIOPHENE	134.202	88.43	427.82	-	--	-	--
767	C8H7N	INDOLE	117.150	32.95	487.40	-	--	-	--
768	C8H8	STYRENE	104.152	-23.10	293.29	1	90	1	914
769	C8H8	1,3,5,7-CYCLOOCTATETRAENE	104.151	19.42	284.02	2	79	-	--
770	C8H8O	ACETOPHENONE	120.151	68.90	395.60	1	180	1	1060
771	C8H8O	p-TOLUALDEHYDE	120.151	-----	399.20	2	178	-	--
772	C8H8O2	METHYL BENZOATE	136.150	9.68	391.10	1	181	-	--
773	C8H8O2	o-TOLUIC ACID	136.150	218.66	497.93	2	273	-	--
774	C8H8O2	p-TOLUIC ACID	136.150	355.28	527.00	2	273	-	--
775	C8H8O3	METHYL SALICYLATE	152.150	17.60	428.90	1	205	1	851
776	C8H8O3	VANILLIN	152.150	179.33	544.73	2	318	-	--
777	C8H9NO	ACETANILIDE	135.166	236.30	578.84	1	343	1	986
778	C8H10	ETHYLBENZENE	106.167	-138.91	277.16	1	59	1	810
779	C8H10	m-XYLENE	106.167	-54.13	282.42	1	77	1	982
780	C8H10	o-XYLENE	106.167	-13.31	291.97	1	63	1	867
781	C8H10	p-XYLENE	106.167	55.87	281.05	1	77	1	984
782	C8H10O	m-ETHYLPHENOL	122.167	-----	400.12	2	77	-	--
783	C8H10O	p-ETHYLPHENOL	122.167	113.14	424.38	1	219	-	--
784	C8H10O	PHENETOLE	122.167	-21.14	338.00	2	125	-	--
785	C8H10O	2-PHENYLETHANOL	122.167	-15.07	426.02	1	205	-	--
786	C8H10O	2,3-XYLENOL	122.167	162.61	422.46	2	199	2	1110
787	C8H10O	2,4-XYLENOL	122.167	76.15	411.76	2	192	2	1110
788	C8H10O	2,5-XYLENOL	122.167	166.71	412.12	2	192	2	1110
789	C8H10O	2,6-XYLENOL	122.167	114.10	393.93	1	186	1	1110

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790	C8H10O	3,4-XYLENOL	122.167	149.18	440.60	2	219	2	1110
791	C8H10O	3,5-XYLENOL	122.167	146.19	431.13	2	212	2	1110
792	C8H11N	N,N-DIMETHYLANILINE	121.182	36.41	380.37	1	145	1	700
793	C8H11N	o-ETHYLANILINE	121.182	-51.88	409.10	1	207	-	--
794	C8H11N	2,4,6-TRIMETHYLPYRIDINE	121.182	-47.47	339.53	1	135	-	--
795	C8H11NO	p-PHENETIDINE	137.181	38.93	490.73	1	241	-	--
796	C8H12	1,5-CYCLOOCTADIENE	108.183	-92.51	302.22	1	95	-	--
797	C8H12	VINYLCYCLOHEXENE	108.183	-164.47	262.13	1	61	1	518
798	C8H12O4	1,4-CYCLOHEXANEDICARBOXYLIC ACID	172.181	594.50	744.53	2	489	-	--
799	C8H12O4	DIETHYL MALEATE	172.181	16.16	437.00	1	199	1	662
800	C8H14O2	n-BUTYL METHACRYLATE	142.198	-----	321.53	1	126	-	--
801	C8H14O3	BUTYRIC ANHYDRIDE	158.197	-99.94	383.00	1	180	1	535
802	C8H14O4	DIETHYL SUCCINATE	174.197	-5.44	421.70	1	194	-	--
803	C8H16	CYCLOOCTANE	112.214	58.01	304.07	-	--	-	--
804	C8H16	1,1-DIMETHYLCYCLOHEXANE	112.215	-28.28	247.19	2	37	2	579
805	C8H16	cis-1,2-DIMETHYLCYCLOHEXANE	112.215	-57.98	265.62	2	71	1	579
806	C8H16	trans-1,2-DIMETHYLCYCLOHEXANE	112.215	-126.69	254.17	2	62	1	579
807	C8H16	cis-1,3-DIMETHYLCYCLOHEXANE	112.215	-104.03	248.16	2	59	1	583
808	C8H16	trans-1,3-DIMETHYLCYCLOHEXANE	112.215	-130.14	256.03	2	46	1	583
809	C8H16	cis-1,4-DIMETHYLCYCLOHEXANE	112.215	-125.37	255.78	2	61	1	579
810	C8H16	trans-1,4-DIMETHYLCYCLOHEXANE	112.215	-34.49	246.85	2	53	1	579
811	C8H16	ETHYLCYCLOHEXANE	112.215	-168.36	269.24	1	95	1	504
812	C8H16	2-ETHYL-1-HEXENE	112.215	-----	248.00	2	43	-	--
813	C8H16	1-METHYL-1-ETHYLCYCLOPENTANE	112.215	-226.84	250.74	2	43	-	--
814	C8H16	1-OCTENE	112.215	-151.06	250.32	1	70	1	446
815	C8H16	trans-2-OCTENE	112.215	-125.86	257.00	1	70	-	--
816	C8H16	trans-3-OCTENE	112.215	-166.00	253.94	2	48	-	--
817	C8H16	trans-4-OCTENE	112.215	-136.80	252.07	2	46	-	--
818	C8H16	n-PROPYLCYCLOPENTANE	112.215	-179.19	267.73	2	61	1	516
819	C8H16	2,4,4-TRIMETHYL-1-PENTENE	112.215	-136.21	214.59	2	1	1	788
820	C8H16	2,4,4-TRIMETHYL-2-PENTENE	112.215	-159.36	220.84	1	1	1	586
821	C8H16O	2-ETHYLHEXANAL	128.214	-----	321.17	1	111	1	374
822	C8H16O	1-OCTANAL	128.214	-16.87	345.20	1	125	-	--
823	C8H16O	2-OCTANONE	128.214	-4.54	342.68	1	160	-	--
824	C8H16O2	n-BUTYL n-BUTYRATE	144.214	-133.60	329.00	1	128	-	--
825	C8H16O2	n-HEXYL ACETATE	144.214	-113.62	340.70	1	138	-	--
826	C8H16O2	ISOBUTYL ISOBUTYRATE	144.214	-113.26	297.50	1	100	1	810
827	C8H16O2	n-OCTANOIC ACID	144.214	61.70	463.82	2	248	2	710
828	C8H16O4	DIETHYLENE GLYCOL ETHYL ETHER ACETATE	176.213	-13.00	423.32	1	224	1	680
829	C8H18	2,2-DIMETHYLHEXANE	114.231	-186.12	224.31	2	25	2	818
830	C8H18	2,3-DIMETHYLHEXANE	114.231	-----	240.10	1	42	1	820
831	C8H18	2,4-DIMETHYLHEXANE	114.231	-----	228.97	1	50	2	818
832	C8H18	2,5-DIMETHYLHEXANE	114.231	-132.07	228.40	2	28	2	818
833	C8H18	3,3-DIMETHYLHEXANE	114.231	-194.98	233.55	2	30	2	818
834	C8H18	3,4-DIMETHYLHEXANE	114.231	-----	243.91	2	39	2	818
835	C8H18	3-ETHYLHEXANE	114.231	-----	245.37	2	43	-	--
836	C8H18	3-ETHYL-2-METHYLPENTANE	114.230	-174.91	240.19	2	37	-	--
837	C8H18	3-METHYL-3-ETHYLPENTANE	114.231	-131.57	244.89	2	37	-	--
838	C8H18	2-METHYLHEPTANE	114.231	-164.18	243.77	2	41	2	476
839	C8H18	3-METHYLHEPTANE	114.231	-184.99	246.07	2	43	2	462
840	C8H18	4-METHYLHEPTANE	114.231	-185.71	243.88	2	41	-	--
841	C8H18	n-OCTANE	114.231	-70.19	258.22	1	56	1	428
842	C8H18	2,2,3-TRIMETHYLPENTANE	114.231	-170.07	229.73	2	26	1	806
843	C8H18	2,2,4-TRIMETHYLPENTANE	114.231	-161.27	210.63	1	10	1	784
844	C8H18	2,3,3-TRIMETHYLPENTANE	114.231	-149.67	238.59	2	32	1	806
845	C8H18	2,3,4-TRIMETHYLPENTANE	114.231	-164.56	236.25	2	32	2	800
846	C8H18	2,2,3,3-TETRAMETHYLBUTANE	114.230	-149.22	223.61	2	32	-	--
847	C8H18O	DI-n-BUTYL ETHER	130.230	-139.36	284.52	1	77	1	382
848	C8H18O	DI-sec-BUTYL ETHER	130.230	-148.00	249.89	1	59	-	--
849	C8H18O	DI-tert-BUTYL ETHER	130.230	-108.67	225.05	2	26	-	--
850	C8H18O	2-ETHYL-1-HEXANOL	130.230	-94.00	364.28	1	164	1	550
851	C8H18O	1-OCTANOL	130.230	4.10	383.36	1	178	2	539
852	C8H18O	2-OCTANOL	130.230	-24.88	355.64	1	140	-	--
853	C8H18O2	DI-t-BUTYL PEROXIDE	146.230	-40.00	231.80	1	64	-	--
854	C8H18O2S	DI-n-BUTYL SULFONE	178.296	112.73	555.53	1	289	-	--
855	C8H18O3	DIETHYLENE GLYCOL DIETHYL ETHER	162.229	-47.74	372.20	1	180	1	421

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	FLASH POINT F	CODE	AUTO-IGNITION F
856	C8H18O3	DIETHYLENE GLYCOL MONOBUTYL EHTER	162.229	-90.40	447.80	1	172	1	400
857	C8H18O4	TRIETHYLENE GLYCOL DIMETHYL ETHER	178.229	-46.84	420.80	1	230	1	376
858	C8H18O5	TETRAETHYLENE GLYCOL	194.228	23.00	586.13	1	385	-	--
859	C8H18S	n-OCTYL MERCAPTAN	146.297	-56.56	390.27	1	154	-	--
860	C8H18S	tert-OCTYL MERCAPTAN	146.297	-101.47	312.53	1	88	-	--
861	C8H18S	BUTYL-SULFIDE	146.290	-81.92	359.60	-	--	-	--
862	C8H18S	ETHYL-HEXYL-SULFIDE	146.290	-81.92	383.02	-	--	-	--
863	C8H18S	HEPTYL-METHYL-SULFIDE	146.290	-81.92	383.02	-	--	-	--
864	C8H18S	PENTYL-PROPYL-SULFIDE	146.290	-81.92	383.02	-	--	-	--
865	C8H18S2	BUTYL-DISULFIDE	178.350	-95.78	448.18	-	--	-	--
866	C8H19N	DI-n-BUTYLAMINE	129.246	-79.60	317.93	1	117	-	--
867	C8H19N	DIISOBUTYLAMINE	129.246	-94.00	282.38	1	70	-	--
868	C8H19N	n-OCTYLAMINE	129.246	31.28	355.28	1	140	-	--
869	C8H23N5	TETRAETHYLENEPENTAMINE	189.304	-22.27	631.40	1	325	1	572
870	C8H24O4Si4	OCTAMETHYLCYCLOTETRASILOXANE	296.618	63.77	347.00	1	135	1	752
871	C9H4O5	TRIMELLITIC ANHYDRIDE	192.128	329.00	733.73	2	493	-	--
872	C9H6N2O2	TOLUENE DIISOCYANATE	174.159	57.00	482.00	1	261	-	--
873	C9H7N	ISOQUINOLINE	129.161	79.34	469.85	1	225	-	--
874	C9H7N	QUINOLINE	129.161	5.18	459.68	1	214	1	896
875	C9H7NO	8-HYDROXYQUINOLINE	145.161	163.13	512.33	2	268	-	--
876	C9H8	INDENE	116.163	29.39	360.72	2	131	-	--
877	C9H8O	2-METHYLBENZOFURAN	132.162	-----	387.50	2	154	-	--
878	C9H10	INDANE	118.178	-60.54	352.35	1	122	-	--
879	C9H10	cis-PROPENYLBENZENE	118.178	-79.02	338.02	2	125	-	--
880	C9H10	trans-PROPENYLBENZENE	118.178	-20.79	338.02	-	--	-	--
881	C9H10	alpha-METHYLSTYRENE	118.178	-9.76	329.90	1	129	1	1066
882	C9H10	m-METHYLSTYRENE	118.178	-123.41	340.88	1	124	2	912
883	C9H10	o-METHYLSTYRENE	118.178	-91.43	337.66	1	117	-	--
884	C9H10	p-METHYLSTYRENE	118.178	-29.43	343.00	1	115	1	1067
885	C9H10O2	BENZYL ACETATE	150.177	-60.70	416.30	1	215	1	862
886	C9H10O2	ETHYL BENZOATE	150.177	-30.46	416.12	1	190	1	914
887	C9H10O3	ETHYL VANILLIN	166.177	171.50	560.93	2	341	-	--
888	C9H11NO	p-DIMETHYLAMINOBENZALDEHYDE	149.192	166.73	598.73	1	297	-	--
889	C9H12	CUMENE	120.194	-140.82	306.34	1	111	1	795
890	C9H12	m-ETHYLTOLUENE	120.194	-139.97	322.39	2	100	1	896
891	C9H12	o-ETHYLTOLUENE	120.194	-113.44	329.32	2	106	1	824
892	C9H12	p-ETHYLTOLUENE	120.194	-80.18	323.62	2	108	1	887
893	C9H12	MESITYLENE	120.194	-48.44	328.53	1	112	1	1022
894	C9H12	n-PROPYLBENZENE	120.194	-147.06	318.63	1	86	1	853
895	C9H12	1,2,3-TRIMETHYLBENZENE	120.194	-13.65	349.02	1	124	1	878
896	C9H12	1,2,4-TRIMETHYLBENZENE	120.194	-46.79	336.88	1	114	1	959
897	C9H12O	BENZYL ETHYL ETHER	136.194	36.50	365.00	2	138	-	--
898	C9H12O	2-PHENYL-2-PROPANOL	136.194	96.80	395.60	2	174	-	--
899	C9H12O2	CUMENE HYDROPEROXIDE	152.193	16.00	337.19	1	120	1	300
900	C9H14O	ISOPHORONE	138.210	17.42	419.36	1	183	1	860
901	C9H14O6	GLYCERYL TRIACETATE	218.207	39.38	498.20	1	280	1	811
902	C9H16	1-NONYNE	124.225	-57.98	303.46	-	--	-	--
903	C9H16O4	AZELAIC ACID	188.224	223.70	680.38	2	426	-	--
904	C9H18	BUTYLCYCLOPENTANE	126.241	-162.35	313.90	-	--	-	--
905	C9H18	cis,cis-1,3,5-TRIMETHYLCYCLOHEXANE	126.241	-57.44	281.32	-	--	-	--
906	C9H18	cis,trans-1,3,5-TRIMETHYLCYCLOHEXANE	126.241	-119.90	284.99	-	--	-	--
907	C9H18	ISOPROPYLCYCLOHEXANE	126.242	-128.90	310.57	1	95	1	541
908	C9H18	1-NONENE	126.242	-114.47	296.37	2	80	2	458
909	C9H18	n-PROPYLCYCLOHEXANE	126.242	-138.77	314.15	2	88	1	478
910	C9H18O	DIISOBUTYL KETONE	142.241	-50.76	334.87	1	120	1	745
911	C9H18O	1-NONANAL	142.241	-0.40	383.00	2	152	-	--
912	C9H18O2	n-BUTYL VALERATE	158.241	-135.04	367.70	2	145	-	--
913	C9H18O2	n-NONANOIC ACID	158.241	54.32	492.08	2	262	2	710
914	C9H18O2	n-OCTYL FORMATE	158.241	-38.38	389.84	2	147	-	--
915	C9H20	3,3-DIETHYLPENTANE	128.258	-27.45	295.14	2	70	1	554
916	C9H20	2,2-DIMETHYL-3-ETHYLPENTANE	128.258	-147.05	272.91	2	55	-	--
917	C9H20	3-ETHYL-2,3-DIMETHYLPENTANE	128.257	-147.06	292.48	2	59	-	--
918	C9H20	2,4-DIMETHYL-3-ETHYLPENTANE	128.258	-188.25	278.10	2	59	1	734
919	C9H20	2,2-DIMETHYLHEPTANE	128.258	-171.40	270.84	1	75	-	--
920	C9H20	2,6-DIMETHYLHEPTANE	128.258	-153.22	275.38	1	79	-	--
921	C9H20	3-ETHYLHEPTANE	128.258	-174.82	289.76	2	71	-	--

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922	C9H20	4-ETHYLHEPTANE	128.257	-171.74	286.18	2	59	-	--
923	C9H20	2,3-DIMETHYLHEPTANE	128.257	-171.38	284.92	2	59	-	--
924	C9H20	2,4-DIMETHYLHEPTANE	128.257	-171.38	271.22	2	59	-	--
925	C9H20	2,5-DIMETHYLHEPTANE	128.257	-171.38	276.82	2	59	-	--
926	C9H20	3,4-DIMETHYLHEPTANE	128.257	-153.20	285.10	2	59	-	--
927	C9H20	3,5-DIMETHYLHEPTANE	128.257	-153.20	276.82	2	59	-	--
928	C9H20	4,4-DIMETHYLHEPTANE	128.257	-153.20	275.38	2	59	-	--
929	C9H20	3-ETHYL-2-METHYLHEXANE	128.257	-171.38	280.42	2	59	-	--
930	C9H20	4-ETHYL-2-METHYLHEXANE	128.257	-171.38	272.86	2	59	-	--
931	C9H20	3-ETHYL-3-METHYLHEXANE	128.257	-171.38	285.10	2	59	-	--
932	C9H20	3-ETHYL-4-METHYLHEXANE	128.257	-171.38	284.74	2	59	-	--
933	C9H20	2,2,3-TRIMETHYLHEXANE	128.257	-183.98	272.48	2	59	-	--
934	C9H20	2,2,4-TRIMETHYLHEXANE	128.257	-184.27	259.77	2	59	-	--
935	C9H20	2,3,3-TRIMETHYLHEXANE	128.257	-178.22	279.84	2	59	-	--
936	C9H20	2,3,4-TRIMETHYLHEXANE	128.257	-178.22	282.29	2	59	-	--
937	C9H20	2,3,5-TRIMETHYLHEXANE	128.257	-198.02	268.43	2	59	-	--
938	C9H20	2,4,4-TRIMETHYLHEXANE	128.257	-172.07	267.19	2	59	-	--
939	C9H20	3,3,4-TRIMETHYLHEXANE	128.257	-150.14	284.85	2	59	-	--
940	C9H20	2-METHYLOCTANE	128.258	-112.67	289.90	2	75	1	428
941	C9H20	3-METHYLOCTANE	128.258	-161.68	291.61	2	75	1	428
942	C9H20	4-METHYLOCTANE	128.258	-171.76	288.39	2	71	1	428
943	C9H20	n-NONANE	128.258	-64.34	303.48	1	88	1	403
944	C9H20	2,2,3,3-TETRAMETHYLPENTANE	128.258	14.20	284.52	2	61	1	806
945	C9H20	2,2,3,4-TETRAMETHYLPENTANE	128.258	-185.96	271.45	2	52	2	806
946	C9H20	2,2,4,4-TETRAMETHYLPENTANE	128.258	-87.16	252.12	2	37	2	806
947	C9H20	2,3,3,4-TETRAMETHYLPENTANE	128.257	-151.69	286.83	2	52	-	--
948	C9H20	2,2,5-TRIMETHYLHEXANE	128.258	-158.37	255.36	1	55	-	--
949	C9H20O	2,6-DIMETHYL-4-HEPTANOL	144.257	-85.27	352.13	2	151	-	--
950	C9H20O	1-NONANOL	144.257	23.00	415.58	1	165	2	530
951	C9H20O	2-NONANOL	144.257	-31.00	389.30	1	179	-	--
952	C9H20S	n-NONYL MERCAPTAN	160.324	-4.18	427.64	1	172	-	--
953	C9H20S	BUTYL-PENTYL-SULFIDE	160.317	-43.58	424.42	-	--	-	--
954	C9H20S	ETHYL-HEPTYL-SULFIDE	160.317	-43.58	424.42	-	--	-	--
955	C9H20S	HEXYL-PROPYL-SULFIDE	160.317	-43.58	424.42	-	--	-	--
956	C9H20S	METHYL-OCTYL-SULFIDE	160.317	-43.58	424.42	-	--	-	--
957	C9H21N	n-NONYLAMINE	143.272	32.00	395.96	2	160	-	--
958	C9H21N	TRIPROPYLAMINE	143.272	-136.30	313.70	1	84	-	--
959	C10H6O8	PYROMELLITIC ACID	254.153	537.53	839.93	2	617	-	--
960	C10H7Br	1-BROMONAPHTHALENE	207.070	43.16	537.98	2	264	-	--
961	C10H7Cl	1-CHLORONAPHTHALENE	162.618	24.80	498.74	1	250	-	--
962	C10H8	NAPHTHALENE	128.174	176.50	424.38	1	176	1	1089
963	C10H8	AZULENE	128.173	-147.08	467.62	-	--	-	--
964	C10H9N	QUINALDINE	143.188	30.20	475.88	1	175	-	--
965	C10H10	m-DIVINYLBENZENE	130.189	-88.42	391.10	2	149	-	--
966	C10H10	1-METHYLINDENE	130.189	-----	389.30	2	149	-	--
967	C10H10	2-METHYLINDENE	130.189	176.00	364.73	2	149	-	--
968	C10H10O4	DIMETHYL PHTHALATE	194.187	30.20	542.66	1	295	1	1033
969	C10H10O4	DIMETHYL TEREPHTHALATE	194.187	285.17	550.40	1	313	1	1058
970	C10H12	DICYCLOPENTADIENE	132.205	92.93	337.73	1	90	1	950
971	C10H12	1,2,3,4-TETRAHYDRONAPHTHALENE	132.205	-32.35	405.72	1	160	1	723
972	C10H12O	ANETHOLE	148.205	70.43	455.54	1	192	-	--
973	C10H12O4	DIALLYL MALEATE	196.203	-52.60	476.33	2	248	-	--
974	C10H14	n-BUTYLBENZENE	134.221	-126.13	361.96	1	160	1	774
975	C10H14	sec-BUTYLBENZENE	134.221	-103.77	343.99	1	126	1	784
976	C10H14	tert-BUTYLBENZENE	134.221	-72.18	336.47	1	140	1	842
977	C10H14	1,2,3,4-TETRAMETHYLBENZENE	134.221	20.77	401.18	-	--	-	--
978	C10H14	m-CYMENE	134.221	-82.68	347.14	2	122	2	817
979	C10H14	o-CYMENE	134.221	-96.72	352.72	2	127	2	710
980	C10H14	p-CYMENE	134.221	-90.22	350.83	1	117	1	817
981	C10H14	m-DIETHYLBENZENE	134.221	-119.00	358.05	1	133	1	842
982	C10H14	o-DIETHYLBENZENE	134.221	-24.20	362.23	1	135	1	743
983	C10H14	p-DIETHYLBENZENE	134.221	-45.09	362.82	1	134	1	806
984	C10H14	2-ETHYL-m-XYLENE	134.221	2.73	374.07	2	136	-	--
985	C10H14	2-ETHYL-p-XYLENE	134.221	-64.53	368.29	2	133	-	--
986	C10H14	3-ETHYL-o-XYLENE	134.221	-57.12	381.13	2	149	-	--
987	C10H14	4-ETHYL-m-XYLENE	134.221	-81.18	371.19	2	134	-	--

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988	C10H14	4-ETHYL-o-XYLENE	134.221	-88.47	373.60	2	136	-	--
989	C10H14	5-ETHYL-m-XYLENE	134.221	-119.79	362.80	2	127	-	--
990	C10H14	ISOBUTYLBENZENE	134.221	-60.61	343.02	1	131	1	802
991	C10H14	1,2,3,5-TETRAMETHYLBENZENE	134.221	-10.64	388.40	1	146	2	801
992	C10H14	1,2,4,5-TETRAMETHYLBENZENE	134.221	174.61	386.31	1	130	-	--
993	C10H14O	p-tert-BUTYLPHENOL	150.221	209.14	463.51	1	235	-	--
994	C10H14O2	p-tert-BUTYLCATECHOL	166.220	125.33	544.73	1	266	-	--
995	C10H15N	N,N-DIETYHLANILINE	149.236	-36.40	421.29	1	185	1	630
996	C10H15N	2,6-DIETHYLANILINE	149.236	38.30	455.90	2	242	-	--
997	C10H16	CAMPHENE	136.237	116.60	320.90	1	97	-	--
998	C10H16	D-LIMONENE	136.237	-101.47	349.70	1	113	1	458
999	C10H16	alpha-PHELLANDRENE	136.237	-----	347.00	2	116	-	--
1000	C10H16	beta-PHELLANDRENE	136.237	-----	345.20	1	120	-	--
1001	C10H16	alpha-PINENE	136.237	-83.20	313.05	1	91	1	491
1002	C10H16	beta-PINENE	136.237	-78.77	330.87	1	103	2	491
1003	C10H16	alpha-TERPINENE	136.237	-----	350.96	1	115	-	--
1004	C10H16	gamma-TERPINENE	136.237	-----	361.40	1	124	-	--
1005	C10H16	TERPINOLENE	136.237	-----	365.00	1	100	-	--
1006	C10H16O	CAMPHOR	152.236	356.18	405.36	1	150	1	871
1007	C10H18	1-DECYNE	138.252	-47.18	345.22	-	--	-	--
1008	C10H18	cis-DECAHYDRONANPHTALENE	138.253	-45.31	384.48	1	136	1	482
1009	C10H18	trans-DECAHYDRONAPHTHALENE	138.253	-22.65	369.16	1	136	1	482
1010	C10H18O4	SEBACIC ACID	202.251	274.10	696.09	2	433	-	--
1011	C10H20	n-BUTYLCYCLOHEXANE	140.269	-102.51	357.76	2	118	1	475
1012	C10H20	1-CYCLOPENTYLPENTANE	140.268	-117.38	357.10	-	--	-	--
1013	C10H20	1-DECENE	140.269	-87.27	339.08	1	128	1	455
1014	C10H20O	1-DECANAL	156.268	21.20	419.00	1	185	-	--
1015	C10H20O2	n-DECANOIC ACID	172.268	88.88	518.00	2	287	2	710
1016	C10H20O2	2-ETHYLHEXYL ACETATE	172.268	-135.40	389.48	1	190	-	--
1017	C10H20O2	ISOPENTYL ISOVALERATE	172.268	-72.67	381.20	2	136	-	--
1018	C10H22	n-DECANE	142.285	-21.39	345.47	1	115	1	406
1019	C10H22	2,2-DIMETHYLOCTANE	142.285	-102.37	332.60	2	106	-	--
1020	C10H22	2-METHYLNONANE	142.285	-120.64	334.04	1	106	1	417
1021	C10H22	3-ETHYLOCTANE	142.285	-145.66	330.26	2	101	-	--
1022	C10H22	4-ETHYLOCTANE	142.285	-125.86	329.27	2	102	-	--
1023	C10H22	2,3-DIMETHYLOCTANE	142.284	-125.84	331.72	2	106	-	--
1024	C10H22	2,4-DIMETHYLOCTANE	142.284	-125.84	326.57	2	106	-	--
1025	C10H22	2,5-DIMETHYLOCTANE	142.285	-----	314.42	2	88	-	--
1026	C10H22	2,6-DIMETHYLOCTANE	142.284	-65.18	327.78	2	106	-	--
1027	C10H22	2,7-DIMETHYLOCTANE	142.284	-65.18	312.64	2	106	-	--
1028	C10H22	3,3-DIMETHYLOCTANE	142.284	-65.18	317.32	2	106	-	--
1029	C10H22	3,4-DIMETHYLOCTANE	142.284	-65.18	320.70	2	106	-	--
1030	C10H22	3,5-DIMETHYLOCTANE	142.284	-65.18	319.78	2	106	-	--
1031	C10H22	3,6-DIMETHYLOCTANE	142.284	-65.18	322.18	2	106	-	--
1032	C10H22	4,4-DIMETHYLOCTANE	142.284	-65.18	326.14	2	106	-	--
1033	C10H22	4,5-DIMETHYLOCTANE	142.284	-65.18	318.94	2	106	-	--
1034	C10H22	4-PROPYLHEPTANE	142.284	-65.18	321.46	2	106	-	--
1035	C10H22	4-ISOPROPYLHEPTANE	142.284	-65.18	315.52	2	106	-	--
1036	C10H22	3-ETHYL-2-METHYLHEPTANE	142.284	-65.18	323.85	2	106	-	--
1037	C10H22	4-ETHYL-2-METHYLHEPTANE	142.284	-65.18	315.52	2	106	-	--
1038	C10H22	5-ETHYL-2-METHYLHEPTANE	142.284	-65.18	318.04	2	106	-	--
1039	C10H22	3-ETHYL-3-METHYLHEPTANE	142.284	-65.18	322.18	2	106	-	--
1040	C10H22	4-ETHYL-3-METHYLHEPTANE	142.284	-65.18	313.18	2	106	-	--
1041	C10H22	3-ETHYL-5-METHYLHEPTANE	142.284	-65.18	319.48	2	106	-	--
1042	C10H22	3-ETHYL-4-METHYLHEPTANE	142.284	-65.18	326.86	2	106	-	--
1043	C10H22	4-ETHYL-4-METHYLHEPTANE	142.284	-65.18	323.98	2	106	-	--
1044	C10H22	2,2,3-TRIMETHYLHEPTANE	142.284	-65.18	316.78	2	88	-	--
1045	C10H22	2,2,4-TRIMETHYLHEPTANE	142.284	-65.18	325.42	2	88	-	--
1046	C10H22	3-METHYLNONANE	142.284	-65.18	321.46	1	100	2	413
1047	C10H22	2,2,5-TRIMETHYLHEPTANE	142.284	-65.18	315.70	2	88	-	--
1048	C10H22	2,2,6-TRIMETHYLHEPTANE	142.284	-65.18	298.96	2	88	-	--
1049	C10H22	2,3,3-TRIMETHYLHEPTANE	142.284	-65.18	303.46	2	88	-	--
1050	C10H22	2,3,4-TRIMETHYLHEPTANE	142.284	-65.18	300.09	2	88	-	--
1051	C10H22	2,3,5-TRIMETHYLHEPTANE	142.284	-65.18	320.38	2	88	-	--
1052	C10H22	2,3,6-TRIMETHYLHEPTANE	142.284	-65.18	319.84	2	88	-	--
1053	C10H22	2,4,4-TRIMETHYLHEPTANE	142.284	-65.18	321.28	2	88	-	--

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	FLASH POINT F	CODE	AUTO-IGNITION F
1054	C10H22	2,4,5-TRIMETHYLHEPTANE	142.284	-65.18	312.82	2	88	-	--
1055	C10H22	2,4,6-TRIMETHYLHEPTANE	142.284	-65.18	303.82	2	88	-	--
1056	C10H22	2,5,5-TRIMETHYLHEPTANE	142.284	-65.18	313.72	2	88	-	--
1057	C10H22	3,3,4-TRIMETHYLHEPTANE	142.284	-65.18	297.70	2	88	-	--
1058	C10H22	3,3,5-TRIMETHYLHEPTANE	142.284	-65.18	307.06	2	88	-	--
1059	C10H22	3,4,4-TRIMETHYLHEPTANE	142.284	-65.18	323.44	2	88	-	--
1060	C10H22	3,4,5-TRIMETHYLHEPTANE	142.284	-65.18	312.26	2	88	-	--
1061	C10H22	3-ISOPROPYL-2-METHYLHEXANE	142.284	-65.18	322.00	2	88	-	--
1062	C10H22	3,3-DIETHYLHEXANE	142.284	-65.18	324.52	2	88	-	--
1063	C10H22	3,4-DIETHYLHEXANE	142.284	-65.18	332.08	2	88	-	--
1064	C10H22	3-ETHYL-2,2-DIMETHYLHEXANE	142.284	-65.18	331.36	2	100	-	--
1065	C10H22	4-ETHYL-2,2-DIMETHYLHEXANE	142.284	-65.18	327.04	2	100	-	--
1066	C10H22	3-ETHYL-2,3-DIMETHYLHEXANE	142.284	-65.18	313.00	2	100	-	--
1067	C10H22	4-ETHYL-2,3-DIMETHYLHEXANE	142.284	-65.18	296.62	2	100	-	--
1068	C10H22	3-ETHYL-2,4-DIMETHYLHEXANE	142.284	-65.18	326.68	2	100	-	--
1069	C10H22	4-ETHYL-2,4-DIMETHYLHEXANE	142.284	-65.18	321.64	2	100	-	--
1070	C10H22	3-ETHYL-2,5-DIMETHYLHEXANE	142.284	-65.18	320.20	2	100	-	--
1071	C10H22	4-ETHYL-3,3-DIMETHYLHEXANE	142.284	-65.18	322.00	2	100	-	--
1072	C10H22	3-ETHYL-3,4-DIMETHYLHEXANE	142.284	-65.18	309.40	2	100	-	--
1073	C10H22	4-METHYLNONANE	142.284	-65.18	325.24	2	100	2	413
1074	C10H22	2,2,3,3-TETRAMETHYLHEXANE	142.284	-65.18	323.80	2	88	-	--
1075	C10H22	2,2,3,4-TETRAMETHYLHEXANE	142.284	-65.18	320.59	2	88	-	--
1076	C10H22	2,2,3,5-TETRAMETHYLHEXANE	142.284	-65.18	317.86	2	88	-	--
1077	C10H22	2,2,4,4-TETRAMETHYLHEXANE	142.284	-65.18	299.14	2	88	-	--
1078	C10H22	2,2,4,5-TETRAMETHYLHEXANE	142.284	-65.18	308.86	2	88	-	--
1079	C10H22	2,2,5,5-TETRAMETHYLHEXANE	142.284	-65.18	298.20	2	88	-	--
1080	C10H22	2,3,3,4-TETRAMETHYLHEXANE	142.284	9.34	279.46	2	88	-	--
1081	C10H22	2,3,3,5-TETRAMETHYLHEXANE	142.284	9.34	328.28	2	88	-	--
1082	C10H22	2,3,4,4-TETRAMETHYLHEXANE	142.284	9.34	307.60	2	88	-	--
1083	C10H22	2,3,4,5-TETRAMETHYLHEXANE	142.284	9.34	322.90	2	88	-	--
1084	C10H22	3,3,4,4-TETRAMETHYLHEXANE	142.284	9.34	313.18	2	88	-	--
1085	C10H22	2,4-DIMETHYL-3-ISOPROPYLPENTANE	142.284	9.34	338.02	2	88	-	--
1086	C10H22	3,3-DIETHYL-2-METHYLPENTANE	142.284	-115.04	314.69	2	88	-	--
1087	C10H22	3-ETHYL-2,2,3-TRIMETHYLPENTANE	142.284	-115.04	337.48	2	88	-	--
1088	C10H22	3-ETHYL-2,2,4-TRIMETHYLPENTANE	142.284	-115.04	337.12	2	88	-	--
1089	C10H22	3-ETHYL-2,3,4-TRIMETHYLPENTANE	142.284	-115.04	311.56	2	88	-	--
1090	C10H22	2,2,3,3,4-PENTAMETHYLPENTANE	142.284	-115.04	337.01	2	88	-	--
1091	C10H22	2,2,3,4,4-PENTAMETHYLPENTANE	142.284	-33.59	330.91	2	88	-	--
1092	C10H22	5-METHYLNONANE	142.284	-37.73	318.74	2	100	2	413
1093	C10H22O	1-DECANOL	158.284	44.42	446.36	1	180	1	550
1094	C10H22O	DI-n-PENTYL ETHER	158.284	-92.97	368.15	1	135	1	340
1095	C10H22O	ISODECANOL	158.284	-76.00	427.73	1	220	-	--
1096	C10H22O5	TETRAETHYLENE GLYCOL DIMETHYL ETHER	222.282	-21.46	528.44	1	286	-	--
1097	C10H22S	n-DECYL MERCAPTAN	174.351	-14.06	462.56	2	203	-	--
1098	C10H22S	BUTYL-HEXYL-SULFIDE	174.344	-30.98	464.02	-	--	-	--
1099	C10H22S	ETHYL-OCTYL-SULFIDE	174.344	-30.98	464.02	-	--	-	--
1100	C10H22S	HEPTYL-PROPYL-SULFIDE	174.344	-30.98	464.02	-	--	-	--
1101	C10H22S	METHYL-NONYL-SULFIDE	174.344	-30.98	464.02	-	--	-	--
1102	C10H22S	PENTYL-SULFIDE	174.344	-30.98	464.02	-	--	-	--
1103	C10H22S2	PENTYL-DISULFIDE	206.404	-74.18	507.04	-	--	-	--
1104	C10H23N	n-DECYLAMINE	157.299	60.26	428.90	1	210	-	--
1105	C11H10	1-METHYLNAPHTHALENE	142.200	-22.86	472.42	2	206	1	984
1106	C11H10	2-METHYLNAPHTHALENE	142.200	94.24	465.89	2	203	2	984
1107	C11H14O2	n-BUTYL BENZOATE	178.231	-6.70	482.00	1	223	-	--
1108	C11H16	n-PENTYLBENZENE	148.248	-103.00	401.83	1	151	-	--
1109	C11H16O	p-tert-AMYLPHENOL	164.247	199.13	503.60	1	232	-	--
1110	C11H20	1-UNDECYNE	152.279	-12.98	383.02	-	--	-	--
1111	C11H20O2	2-ETHYLHEXYL ACRYLATE	184.279	-130.00	420.80	1	160	1	496
1112	C11H22	1-UNDECENE	154.296	-56.49	378.81	1	160	2	458
1113	C11H22	1-CYCLOPENTYLHEXANE	154.295	-99.38	397.60	-	--	-	--
1114	C11H22	PENTYLCYCLOHEXANE	154.295	-71.48	398.70	-	--	-	--
1115	C11H22O	1-UNDECANAL	170.295	32.00	451.40	2	199	-	--
1116	C11H24	n-UNDECANE	156.312	-14.04	384.67	1	149	2	395
1117	C11H24O	1-UNDECANOL	172.311	60.62	473.00	1	200	2	530
1118	C11H24S	UNDECYL MERCAPTAN	188.378	26.60	495.32	2	228	-	--
1119	C11H24S	BUTYL-HEPTYL-SULFIDE	188.371	-1.28	500.02	-	--	-	--

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	FLASH POINT F	CODE	AUTO-IGNITION F
1120	C11H24S	DECYL-METHYL-SULFIDE	188.371	-1.28	500.02	-	--	-	--
1121	C11H24S	ETHYL-NONYL-SULFIDE	188.371	-1.28	500.02	-	--	-	--
1122	C11H24S	OCTYL-PROPYL-SULFIDE	188.371	-1.28	500.02	-	--	-	--
1123	C12H8O	DIBENZOFURAN	168.195	180.50	544.48	2	233	-	--
1124	C12H9N	DIBENZOPYRROLE	167.210	472.64	670.48	-	--	-	--
1125	C12H10	ACENAPHTHENE	154.211	200.14	531.30	2	248	-	--
1126	C12H10	BIPHENYL	154.211	156.60	491.00	1	235	1	1004
1127	C12H10O	DIPHENYL ETHER	170.211	80.37	496.96	1	239	1	1144
1128	C12H11N	p-AMINODIPHENYL	169.226	127.13	575.33	2	296	1	842
1129	C12H11N	DIPHENYLAMINE	169.226	127.40	575.60	1	307	1	1173
1130	C12H11N3	p-AMINOAZOBENZENE	197.240	262.13	679.73	2	379	-	--
1131	C12H11N3	1,3-DIPHENYLTRIAZENE	197.240	209.93	638.33	-	--	-	--
1132	C12H12	1,2-DIMETHYLNAPHTHALENE	156.227	30.22	511.36	-	--	-	--
1133	C12H12	1,3-DIMETHYLNAPHTHALENE	156.227	24.82	509.38	-	--	-	--
1134	C12H12	1,4-DIMETHYLNAPHTHALENE	156.227	45.81	513.16	-	--	-	--
1135	C12H12	1,5-DIMETHYLNAPHTHALENE	156.227	179.62	509.02	-	--	-	--
1136	C12H12	1,6-DIMETHYLNAPHTHALENE	156.227	6.82	505.42	-	--	-	--
1137	C12H12	1,7-DIMETHYLNAPHTHALENE	156.227	8.62	505.42	-	--	-	--
1138	C12H12	2,3-DIMETHYLNAPHTHALENE	156.227	221.02	514.42	-	--	-	--
1139	C12H12	2,6-DIMETHYLNAPHTHALENE	156.227	232.52	503.60	2	228	-	--
1140	C12H12	2,7-DIMETHYLNAPHTHALENE	156.227	206.60	505.40	2	228	-	--
1141	C12H12	1-ETHYLNAPHTHALENE	156.227	7.14	496.99	2	224	1	896
1142	C12H12	2-ETHYLNAPHTHALENE	156.227	18.70	497.01	-	--	-	--
1143	C12H12N2	p-AMINODIPHENYLAMINE	184.241	154.40	669.20	1	380	-	--
1144	C12H12N2	HYDRAZOBENZENE	184.241	267.80	571.73	2	305	-	--
1145	C12H14	1,2,3-TRIMETHYLINDENE	158.243	160.70	456.53	1	187	-	--
1146	C12H14O4	DIETHYL PHTHALATE	222.241	24.80	561.20	1	322	1	855
1147	C12H16	CYCLOHEXYLBENZENE	160.259	44.58	464.22	1	210	-	--
1148	C12H18	m-DIISOPROPYLBENZENE	162.275	-81.63	397.72	2	170	1	170
1149	C12H18	p-DIISOPROPYLBENZENE	162.275	1.27	410.90	2	178	1	170
1150	C12H18	n-HEXYLBENZENE	162.275	-78.07	439.00	2	181	-	--
1151	C12H18	1,2,3-TRIETHYLBENZENE	162.274	-87.68	423.52	-	--	-	--
1152	C12H18	1,2,4-TRIETHYLBENZENE	162.274	-87.68	423.52	2	168	-	--
1153	C12H18	1,3,5-TRIETHYLBENZENE	162.274	-87.68	420.82	-	--	-	--
1154	C12H18	HEXAMETHYLBENZENE	162.274	329.92	506.21	-	--	-	--
1155	C12H20O4	DIBUTYL MALEATE	228.288	-121.00	536.00	1	284	-	--
1156	C12H22	BICYCLOHEXYL	166.307	38.53	462.27	1	165	1	473
1157	C12H22	1-DODECYNE	166.306	-2.18	419.02	-	--	-	--
1158	C12H23N	DICYCLOHEXYLAMINE	181.321	31.82	492.53	1	219	-	--
1159	C12H24	1-DODECENE	168.323	-31.40	416.03	1	120	1	491
1160	C12H24	1-CYCLOPENTYLHEPTANE	168.322	-63.67	435.47	-	--	-	--
1161	C12H24	1-CYCLOHEXYLHEXANE	168.322	14.81	436.48	-	--	-	--
1162	C12H24O	1-DODECANAL	184.322	53.60	482.00	2	221	-	--
1163	C12H24O2	n-DODECANOIC ACID	200.321	111.20	569.66	2	314	2	710
1164	C12H26	n-DODECANE	170.338	14.76	421.38	1	165	1	399
1165	C12H26O	DI-n-HEXYL ETHER	186.338	-45.40	438.26	1	171	1	365
1166	C12H26O	1-DODECANOL	186.338	74.84	503.33	1	260	1	527
1167	C12H26O3	DIETHYLENE GLYCOL DI-n-BUTYL ETHER	218.337	-76.36	492.80	1	244	1	397
1168	C12H26S	n-DODECYL MERCAPTAN	202.404	17.60	526.28	1	262	-	--
1169	C12H26S	BUTYL-OCTYL-SULFIDE	202.397	6.82	534.22	-	--	-	--
1170	C12H26S	DECYL-ETHYL-SULFIDE	202.397	6.82	534.22	-	--	-	--
1171	C12H26S	HEXYL-SULFIDE	202.397	6.82	534.22	-	--	-	--
1172	C12H26S	METHYL-UNDECYL-SULFIDE	202.397	6.82	534.22	-	--	-	--
1173	C12H26S	NONYL-PROPYL-SULFIDE	202.397	6.82	534.22	-	--	-	--
1174	C12H26S2	HEXYL-DISULFIDE	234.457	-54.38	560.32	-	--	-	--
1175	C12H27BO3	TRI-n-BUTYL BORATE	230.156	-94.00	452.30	1	199	-	--
1176	C12H27N	DODECYLAMINE	185.353	82.98	498.56	2	232	-	--
1177	C12H27N	TRI-n-BUTYLAMINE	185.353	-94.27	417.20	1	187	-	--
1178	C13H10	FLUORENE	166.222	238.62	567.12	2	274	-	--
1179	C13H10O	BENZOPHENONE	182.222	118.76	582.96	2	289	-	--
1180	C13H12	DIPHENYLMETHANE	168.238	77.43	507.69	1	266	1	905
1181	C13H14	1-PROPYLNAPHTHALENE	170.254	16.77	523.06	-	--	-	--
1182	C13H14	2-PROPYLNAPHTHALENE	170.254	26.62	524.32	-	--	-	--
1183	C13H14	2ETHYL-3-METHYLNAPHTHALENE	170.254	159.82	530.62	-	--	-	--
1184	C13H14	2ETHYL-6-METHYLNAPHTHALENE	170.254	113.02	518.02	-	--	-	--
1185	C13H14	2ETHYL-7-METHYLNAPHTHALENE	170.254	113.02	518.02	-	--	-	--

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	FLASH POINT F	CODE	AUTO-IGNITION F
1186	C13H20	n-HEPTYLBENZENE	176.302	-54.40	474.98	1	203	-	--
1187	C13H24	1-TRIDECYNE	180.333	23.02	453.22	-	--	-	--
1188	C13H26	1-TRIDECENE	182.349	-9.53	451.00	2	175	2	458
1189	C13H26	1-CYCLOPENTYLOCTANE	182.348	-47.18	470.68	-	--	-	--
1190	C13H26	1-CYCLOHEXYLHEPTANE	182.348	-22.88	472.84	-	--	-	--
1191	C13H26O	1-TRIDECANAL	198.349	59.00	512.60	2	242	-	--
1192	C13H26O2	n-BUTYL NONANOATE	214.348	-36.40	445.73	2	205	-	--
1193	C13H26O2	METHYL DODECANOATE	214.348	41.00	512.33	2	244	-	--
1194	C13H28	n-TRIDECANE	184.365	22.30	455.85	1	174	2	395
1195	C13H28O	1-TRIDECANOL	200.365	87.08	525.20	1	250	-	--
1196	C13H28S	BUTYL-NONYL-SULFIDE	216.424	28.42	566.62	-	--	-	--
1197	C13H28S	DECYL-PROPYL-SULFIDE	216.424	28.42	566.62	-	--	-	--
1198	C13H28S	DODECYL-METHYL-SULFIDE	216.424	28.42	566.62	-	--	-	--
1199	C13H28S	ETHYL-UNDECYL-SULFIDE	216.424	28.42	566.62	-	--	-	--
1200	C13H28S	1-TRIDECANETHIOL	216.424	48.00	555.46	-	--	-	--
1201	C14H8O2	ANTHRAQUINONE	208.216	546.80	715.82	1	365	-	--
1202	C14H10	ANTHRACENE	178.233	420.98	647.65	1	250	1	1004
1203	C14H10	DIPHENYLACETYLENE	178.233	144.50	571.73	2	269	-	--
1204	C14H10	PHENANTHRENE	178.233	210.61	644.54	1	340	-	--
1205	C14H12	cis-STILBENE	180.249	23.01	503.33	2	251	-	--
1206	C14H12	trans-STILBENE	180.249	255.56	583.70	2	293	-	--
1207	C14H12O2	BENZYL BENZOATE	212.248	66.92	614.30	1	311	1	896
1208	C14H14	1,1-DIPHENYLETHANE	182.265	-0.31	522.73	1	264	1	824
1209	C14H14	1,2-DIPHENYLETHANE	182.265	124.14	536.90	1	264	1	896
1210	C14H14O	DIBENZYL ETHER	198.265	38.48	550.94	1	275	-	--
1211	C14H16	1-n-BUTYLNAPHTHALENE	184.281	-3.50	552.90	2	262	2	680
1212	C14H16	2-BUTYLNAPHTHALENE	184.280	23.02	552.22	-	--	-	--
1213	C14H22	n-OCTYLBENZENE	190.329	-32.80	507.92	1	225	-	--
1214	C14H22	1,2,3,4-TETRAETHYLBENZENE	190.328	53.26	483.82	2	202	-	--
1215	C14H22	1,2,3,5-TETRAETHYLBENZENE	190.328	51.82	482.92	-	--	-	--
1216	C14H22	1,2,4,5-TETRAETHYLBENZENE	190.328	50.02	482.02	-	--	-	--
1217	C14H22O	p-tert-OCTYLPHENOL	206.328	185.72	554.81	2	271	-	--
1218	C14H28	1-TETRADECENE	196.376	8.87	483.98	1	230	1	455
1219	C14H28	1-CYCLOPENTYLNONANE	196.375	-20.18	503.80	-	--	-	--
1220	C14H28	1-CYCLOHEXYLOCTANE	196.375	-3.44	506.50	-	--	-	--
1221	C14H28O2	n-TETRADECANOIC ACID	228.375	129.92	619.16	2	341	2	710
1222	C14H30	n-TETRADECANE	198.392	42.55	488.44	1	212	1	392
1223	C14H30O	1-TETRADECANOL	214.392	99.50	548.60	1	286	-	--
1224	C14H30S	BUTYL-DECYL-SULFIDE	230.451	37.42	597.22	-	--	-	--
1225	C14H30S	DODECYL-ETHYL-SULFIDE	230.451	37.42	597.22	-	--	-	--
1226	C14H30S	HEPTYL-SULFIDE	230.451	37.42	597.22	-	--	-	--
1227	C14H30S	METHYL-TRIDECYL-SULFIDE	230.451	37.42	597.22	-	--	-	--
1228	C14H30S	PROPYL-UNDECYL-SULFIDE	230.451	37.42	597.22	-	--	-	--
1229	C14H30S	1-TETRADECANETHIOL	230.451	43.00	583.18	-	--	-	--
1230	C14H30S2	HEPTYL-DISULFIDE	262.511	-36.38	609.28	-	--	-	--
1231	C14H31N	TETRADECYLAMINE	213.407	100.74	556.34	2	271	-	--
1232	C15H10N2O2	DIPHENYLMETHANE-4,4'-DIISOCYANATE	250.257	100.49	636.53	1	394	-	--
1233	C15H16O	p-CUMYLPHENOL	212.291	163.13	635.00	2	320	-	--
1234	C15H16O2	BISPHENOL A	228.291	307.40	680.90	1	415	-	--
1235	C15H18	1-PENTYLNAPHTHALENE	198.307	-7.58	584.62	-	--	-	--
1236	C15H18	2-PENTYLNAPHTHALENE	198.307	24.82	590.02	-	--	-	--
1237	C15H24	n-NONYLBENZENE	204.356	-11.47	539.69	2	250	-	--
1238	C15H24O	2,6-DI-tert-BUTYL-p-CRESOL	220.355	159.53	508.73	2	241	-	--
1239	C15H24O	NONYLPHENOL	220.355	-----	586.13	1	280	-	--
1240	C15H28	1-PENTADECYNE	208.386	50.02	514.42	-	--	-	--
1241	C15H30	1-PENTADECENE	210.403	25.29	515.23	2	235	2	458
1242	C15H30	1-CYCLOPENTYLDECANE	210.402	-7.82	534.90	-	--	-	--
1243	C15H30	1-CYCLOHEXYLNONANE	210.402	13.66	538.72	-	--	-	--
1244	C15H30O2	PENTADECANOIC ACID	242.402	126.55	642.02	2	359	2	710
1245	C15H32	n-PENTADECANE	212.419	49.93	519.22	2	239	2	395
1246	C15H32O	1-PENTADECANOL	228.417	111.00	580.75	-	--	-	--
1247	C15H32S	BUTYL-UNDECYL-SULFIDE	244.478	51.82	626.02	-	--	-	--
1248	C15H32S	DODECYL-PROPYL-SULFIDE	244.478	51.82	626.02	-	--	-	--
1249	C15H32S	ETHYL-TRIDECYL-SULFIDE	244.478	51.82	626.02	-	--	-	--
1250	C15H32S	METHYL-TETRADECYL-SULFIDE	244.478	51.82	626.02	-	--	-	--
1251	C15H32S	1-PENTADECANETHIOL	244.478	64.00	609.28	-	--	-	--

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	FLASH POINT F	CODE	AUTO-IGNITION F
1252	C16H10	FLUORANTHENE	202.255	230.32	721.04	2	363	-	--
1253	C16H10	PYRENE	202.255	303.19	742.64	1	390	-	--
1254	C16H12	1-PHENYLNAPHTHALENE	204.271	113.00	633.20	2	323	-	--
1255	C16H20	1-n-HEXYLNAPHTHALENE	212.335	-0.40	611.60	2	305	-	--
1256	C16H2204	DIBUTYL PHTHALATE	278.348	-31.00	644.00	1	315	1	756
1257	C16H26	n-DECYLBENZENE	218.382	6.12	568.20	1	225	-	--
1258	C16H26	PENTAETHYLBENZENE	218.381	130.12	530.62	2	236	-	--
1259	C16H30	1-HEXADECYNE	222.413	59.02	543.22	-	--	-	--
1260	C16H32	n-DECYLCYCLOHEXANE	224.430	28.89	567.68	2	268	-	--
1261	C16H32	1-CYCLOPENTYLUNDECANE	224.429	14.02	564.10	-	--	-	--
1262	C16H32	1-HEXADECENE	224.430	39.85	544.77	2	255	1	464
1263	C16H3202	n-HEXADECANOIC ACID	256.429	145.04	663.80	2	356	2	710
1264	C16H34	n-HEXADECANE	226.446	64.74	548.35	2	259	1	396
1265	C16H34O	DI-n-OCTYL ETHER	242.445	18.32	547.70	1	234	1	401
1266	C16H34O	1-HEXADECANOL	242.445	120.56	593.60	2	311	-	--
1267	C16H34S	BUTYL-DODECYL-SULFIDE	258.505	59.02	653.02	-	--	-	--
1268	C16H34S	ETHYL-TETRADECYL-SULFIDE	258.505	59.02	653.02	-	--	-	--
1269	C16H34S	METHYL-PENTADECYL-SULFIDE	258.505	59.02	653.02	-	--	-	--
1270	C16H34S	OCTYL-SULFIDE	258.505	59.02	653.02	-	--	-	--
1271	C16H34S	PROPYL-TRIDECYL-SULFIDE	258.505	59.02	653.02	-	--	-	--
1272	C16H34S	1-HEXADECANETHIOL	258.505	64.00	633.22	-	--	-	--
1273	C16H34S2	OCTYL-DISULFIDE	290.565	-20.18	654.82	-	--	-	--
1274	C17H28	n-UNDECYLBENZENE	232.409	22.73	595.85	2	293	-	--
1275	C17H32	1-HEPTADECYNE	236.440	71.62	570.22	-	--	-	--
1276	C17H34	1-CYCLOPENTYLDODECANE	238.456	23.02	591.64	-	--	-	--
1277	C17H34	1-CYCLOHEXYLUNDECANE	238.456	42.46	595.60	-	--	-	--
1278	C17H34	1-HEPTADECENE	238.457	52.25	572.59	2	275	2	458
1279	C17H36	n-HEPTADECANE	240.473	71.56	575.87	2	277	2	395
1280	C17H36O	1-HEPTADECANOL	256.472	129.02	615.20	1	310	-	--
1281	C17H36S	BUTYL-TRIDECYL-SULFIDE	272.531	69.82	678.22	-	--	-	--
1282	C17H36S	ETHYL-PENTADECYL-SULFIDE	272.531	69.82	678.22	-	--	-	--
1283	C17H36S	HEXADECYL-METHYL-SULFIDE	272.531	69.82	678.22	-	--	-	--
1284	C17H36S	PROPYL-TETRADECYL-SULFIDE	272.531	69.82	678.22	-	--	-	--
1285	C17H36S	1-HEPTADECANETHIOL	272.531	81.00	658.42	-	--	-	--
1286	C18H12	CHRYSENE	228.293	496.40	825.80	-	--	-	--
1287	C18H14	m-TERPHENYL	230.309	188.33	710.33	1	375	-	--
1288	C18H14	o-TERPHENYL	230.309	133.16	636.53	1	325	-	--
1289	C18H14	p-TERPHENYL	230.309	413.33	708.80	1	405	-	--
1290	C18H15P	TRIPHENYLPHOSPHINE	262.291	178.25	710.60	1	356	-	--
1291	C18H1504P	TRIPHENYL PHOSPHATE	326.288	122.00	776.30	1	428	-	--
1292	C18H16N2	N,N'-DIPHENYL-p-PHENYLENEDIAMINE	260.339	276.53	778.73	1	450	-	--
1293	C18H22	2,3-DIMETHYL-2,3-DIPHENYLBUTANE	238.373	246.20	600.53	2	282	-	--
1294	C18H2202	DICUMYL PEROXIDE	270.371	100.40	744.53	1	261	-	--
1295	C18H30	n-DODECYLBENZENE	246.436	37.00	621.70	1	285	-	--
1296	C18H30	HEXAETHYLBENZENE	246.435	262.42	568.42	-	--	-	--
1297	C18H3202	LINOLEIC ACID	280.451	23.00	670.73	2	381	-	--
1298	C18H34	1-OCTADECYNE	250.467	80.62	595.42	-	--	-	--
1299	C18H3402	OLEIC ACID	282.467	56.08	679.73	1	372	1	685
1300	C18H3404	DIBUTYL SEBACATE	314.466	15.44	660.20	1	352	1	689
1301	C18H3404	DIHEXYL ADIPATE	314.466	7.16	658.40	1	376	-	--
1302	C18H36	1-CYCOPENTYLTRIDECANE	252.482	41.02	617.74	-	--	-	--
1303	C18H36	1-CYCLOHEXYLDODECANE	252.482	54.52	621.88	-	--	-	--
1304	C18H36	1-OCTADECENE	252.484	63.70	598.68	2	295	1	482
1305	C18H3602	STEARIC ACID	284.483	157.28	707.36	1	385	1	743
1306	C18H38	n-OCTADECANE	254.500	82.72	602.08	2	296	1	455
1307	C18H38O	DINONYL ETHER	270.499	-----	604.13	2	314	-	--
1308	C18H38O	1-OCTADECANOL	270.499	136.22	635.00	2	350	-	--
1309	C18H38S	BUTYL-TETRADECYL-SULFIDE	286.558	77.02	703.42	-	--	-	--
1310	C18H38S	ETHYL-HEXADECYL-SULFIDE	286.558	77.02	703.42	-	--	-	--
1311	C18H38S	HEPTADECYL-METHYL-SULFIDE	286.558	77.02	703.42	-	--	-	--
1312	C18H38S	NONYL-SULFIDE	286.558	77.02	703.42	-	--	-	--
1313	C18H38S	PENTADECYL-PROPYL-SULFIDE	286.558	77.02	703.42	-	--	-	--
1314	C18H38S	1-OCTADECANETHIOL	286.558	82.00	680.02	-	--	-	--
1315	C18H38S2	NONYL-DISULFIDE	318.618	-5.78	696.22	-	--	-	--
1316	C19H26	1-n-NONYLNAPHTHALENE	254.415	51.80	690.53	2	349	-	--
1317	C19H32	n-TRIDECYLBENZENE	260.463	50.00	646.30	2	331	-	--

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	CODE	FLASH POINT F	CODE	AUTO-IGNITION F
1318	C19H36	1-NONADECYNE	264.493	91.42	620.62	-	--	-	--
1319	C19H3602	METHYL OLEATE	296.494	67.82	650.93	2	350	-	--
1320	C19H38	1-CYCLOPENTYLTETRADECANE	266.509	47.93	642.22	-	--	-	--
1321	C19H38	1-CYCLOHEXYLTRIDECANE	266.509	65.32	646.72	-	--	-	--
1322	C19H38	1-NONADECENE	266.511	74.12	624.24	2	314	2	458
1323	C19H3802	NONADECANOIC ACID	298.510	154.54	726.80	2	415	2	710
1324	C19H40	n-NONADECANE	268.527	89.92	625.82	2	313	1	446
1325	C19H400	1-NONADECANOL	284.524	143.10	676.13	-	--	-	--
1326	C19H40S	BUTYL-PENTADECYL-SULFIDE	300.585	86.02	726.82	-	--	-	--
1327	C19H40S	ETHYL-HEPTADECYL-SULFIDE	300.585	86.02	726.82	-	--	-	--
1328	C19H40S	HEXADECYL-PROPYL-SULFIDE	300.585	86.02	726.82	-	--	-	--
1329	C19H40S	METHYL-OCTADECYL-SULFIDE	300.585	86.02	726.82	-	--	-	--
1330	C19H40S	1-NONADECANETHIOL	300.585	93.00	701.62	-	--	-	--
1331	C20H16	TRIPHENYLETHYLENE	256.347	156.20	744.53	2	394	-	--
1332	C20H28	1-n-DECYLNAPHTHALENE	268.442	59.00	713.93	2	365	-	--
1333	C20H3002	ABIETIC ACID	302.457	344.30	709.79	2	435	-	--
1334	C20H31N	DEHYDROABIETYLAMINE	285.473	112.10	728.33	1	376	1	430
1335	C20H34	1-PHENYLTETRADECANE	274.489	60.82	669.22	-	--	-	--
1336	C20H38	1-EICOSYNE	278.520	96.82	644.02	-	--	-	--
1337	C20H40	1-CYCLOPENTYLPENTADECANE	280.536	62.33	665.33	-	--	-	--
1338	C20H40	1-CYCLOHEXYLTETRADECANE	280.536	75.22	669.22	-	--	-	--
1339	C20H40	1-EICOSENE	280.538	83.50	648.30	2	331	2	458
1340	C20H42	n-EICOSANE	282.553	97.59	650.80	2	336	2	395
1341	C20H420	1-EICOSANOL	298.553	149.72	672.80	2	377	-	--
1342	C20H42S	BUTYL-HEXADECYL-SULFIDE	314.612	95.02	748.42	-	--	-	--
1343	C20H42S	DECYL-SULFIDE	314.612	95.02	748.42	-	--	-	--
1344	C20H42S	ETHYL-OCTADECYL-SULFIDE	314.612	95.02	748.42	-	--	-	--
1345	C20H42S	HEPTADECYL-PROPYL-SULFIDE	314.612	95.02	748.42	-	--	-	--
1346	C20H42S	METHYL-NONADECYL-SULFIDE	314.612	95.02	748.42	-	--	-	--
1347	C20H42S	1-EICOSANETHIOL	314.612	99.00	721.42	-	--	-	--
1348	C20H42S2	DECYL-DISULFIDE	346.672	6.82	734.02	-	--	-	--
1349	C21H2104P	TRI-o-CRESYL PHOSPHATE	368.369	-27.40	-----	1	437	1	725
1350	C21H36	1-PHENYLPENTADECANE	288.515	71.62	690.82	-	--	-	--
1351	C21H42	1-CYCLOPENTYLHEXADECANE	294.563	69.82	687.22	-	--	-	--
1352	C21H42	1-CYCLOHEXYLPENTADECANE	294.563	84.22	692.62	-	--	-	--
1353	C22H38	1-PHENYLHEXADECANE	302.542	80.62	712.42	-	--	-	--
1354	C22H44	1-CYCLOHEXYLHEXADECANE	308.590	92.50	714.22	-	--	-	--
1355	C22H4402	n-BUTYL STEARATE	340.590	79.34	662.00	1	320	1	671
1356	C24H3804	DIISOOCTYL PHTHALATE	390.563	-----	789.53	2	448	-	--
1357	C24H3804	DIOCTYL PHTHALATE	390.563	-58.00	723.20	1	421	1	736
1358	C24H420	DINONYLPHENOL	346.597	-----	839.93	2	487	-	--
1359	C26H20	TETRAPHENYLETHYLENE	332.445	433.40	908.33	2	509	-	--
1360	C28H4604	DIISODECYL PHTHALATE	446.671	-50.01	841.73	1	450	1	755

CODE 1 - experimental
2 - estimated

Table 4-2 EXAMPLES

Example 1 A process vessel at a temperature of 80 F contains liquid toluene (C7H8) in contact with air.

Is the vapor in the process vessel flammable?

Inspection of the table discloses that the flash point is 40 F for toluene. Since the temperature of the process vessel contents exceeds the flash point for toluene, the vapor is flammable. This is shown below:

Vessel temperature of 80 F > Flash point of 40 F

Vapor in vessel is flammable.

Example 2 A small quantity of residual n-tetradecane (C14H30) is in the piston bore of a piston-type compressor. If air at ambient conditions is compressed to 570 psia and 420 F, will the n-tetradecane undergo autoignition?

Inspection of the table discloses that the autoignition temperature of n-tetradecane is 392 F. Since the temperature of 420 F at the end of the compression exceeds the autoignition temperature, autoignition of the n-tetradecane will occur. This is shown below:

Compressor temp. of 420 F > Autoignition temp. of 392 F

Autoignition of n-tetradecane will occur.

Table 4-3 COMPUTER PROGRAM RESULTS

FLASH POINT AND AUTOIGNITION TEMPERATURES

---

1. Number..... 680
2. Formula..... C7H8
3. Name..... TOLUENE
4. Molecular Weight..... = 92.141
5. Freezing Point..... F = -138.95
6. Boiling Point..... F = 231.13
7. Code for Flash Point..... = 1
8. Flash Point..... F = 40
9. Code for Autoignition Temperature.. = 1
10. Autoignition Temperature..... F = 997

Code 1 - experimental, 2 - estimated

Chapter 5

ENTHALPY OF COMBUSTION

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ABSTRACT

Results for enthalpy of combustion are presented for major organic chemical compounds. The results are displayed in an easy-to-use table which is especially applicable for rapid engineering usage. The organic chemicals encompass hydrocarbon, oxygen, nitrogen, halogen, silicon, sulfur and other chemical type compounds.

ENTHALPY OF COMBUSTION

The enthalpy of combustion is the net increase in heat content when a substance in its standard state at ambient conditions (77 F, 1 atm) undergoes complete oxidation. The results for enthalpy of combustion are presented in Table 5-1. The tabulated values are the negative of the enthalpy of combustion. A positive value as shown means that heat is released in the combustion. A negative value means that heat is required for the combustion. For substances in the table, the products of combustion are CO2 (gas), H2O (gas), F2 (gas), Cl2 (gas), Br2 (gas), I2 (gas), N2 (gas), SO2 (gas), H3PO4 (solid) and SiO2 (crystobalite). The tabulation also provides the freezing and boiling point temperatures which are helpful in determining whether the substance is a gas, liquid or solid at ambient and near ambient conditions.

In the data collection, a literature search was conducted to identify data source publications (1-95) for the table. The publications were screened and copies of appropriate data were made. These data were then keyed into the computer to provide a data base for use in preparing the table.

EXAMPLES

The tabulated values maybe used in engineering applications involving combustion. Examples are shown in Table 5-2.

COMPUTER PROGRAM

A computer program, containing the data for all compounds, is available for a nominal fee (Carl L. Yaws, Box 10053, Lamar University, Beaumont, TX 77710, phone/FAX 409-880-8787). The computer program (random data file) is in ASCII which can be accessed by other software.

Computer program results for a representative compound are shown in Table 5-3.

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Table 5-1 ENTHALPY OF COMBUSTION

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ F	$T_{boiling}$ F	state	$-\Delta H_{combustion}$ @ 77 F kjoule/mol	kjoule/kg	BTU/lb
1	CBrClF2	BROMOCHLORODIFLUOROMETHANE	165.365	-255.10	24.78	gas	-53.3	-322.3	-138.6
2	CBrCl3	BROMOTRICHLOROMETHANE	198.273	-5.80	220.82	liquid	303.0	1528.2	657.1
3	CBrF3	BROMOTRIFLUOROMETHANE	148.910	-270.40	-72.20	gas	-270.9	-1819.0	-782.2
4	CBr2F2	DIBROMODIFLUOROMETHANE	209.816	-166.18	73.02	gas	-34.4	-164.0	-70.5
5	CClF3	CHLOROTRIFLUOROMETHANE	104.459	-293.80	-114.54	gas	-314.4	-3010.0	-1294.3
6	CClN	CYANOGEN CHLORIDE	61.470	20.30	55.13	gas	531.0	8638.4	3714.5
7	CCl2F2	DICHLORODIFLUOROMETHANE	120.913	-252.40	-21.62	gas	-98.1	-811.4	-348.9
8	CCl2O	PHOSGENE	98.916	-198.00	45.61	gas	174.9	1768.1	760.3
9	CCl3F	TRICHLOROFLUOROMETHANE	137.368	-168.00	74.88	gas	104.8	763.1	328.1
10	CCl4	CARBON TETRACHLORIDE	153.822	-9.08	169.95	liquid	258.1	1677.7	721.4
11	CF2O	CARBONYL FLUORIDE	66.007	-168.27	-120.23	gas	-245.0	-3711.7	-1596.0
12	CF4	CARBON TETRAFLUORIDE	88.005	-298.46	-198.51	gas	-539.7	-6132.5	-2637.0
13	CHBr3	TRIBROMOMETHANE	252.731	46.49	300.56	liquid	439.7	1740.0	748.2
14	CHClF2	CHLORODIFLUOROMETHANE	86.468	-251.36	-41.49	gas	65.7	759.9	326.7
15	CHCl2F	DICHLOROFLUOROMETHANE	102.923	-211.00	48.02	gas	231.2	2246.0	965.8
16	CHCl3	CHLOROFORM	119.377	-82.34	142.12	liquid	380.0	3182.8	1368.6
17	CHF3	TRIFLUOROMETHANE	70.014	-247.32	-115.89	gas	-178.9	-2554.5	-1098.4
18	CHI3	TRIIODOMETHANE	393.732	253.42	424.42	solid	-----	-----	-----
19	CHN	HYDROGEN CYANIDE	27.026	8.17	78.26	liquid	623.3	23062.6	9916.9
20	CHNS	ISOTHIOCYANIC-ACID	59.086	-----	-----	gas	940.1	15911.1	6841.8
21	CH2BrCl	BROMOCHLOROMETHANE	129.384	-126.31	154.49	liquid	544.0	4204.5	1808.0
22	CH2Br2	DIBROMOMETHANE	173.835	-62.59	206.51	liquid	-----	-----	-----
23	CH2ClF	CHLOROFLUOROMETHANE	68.478	-207.38	15.64	gas	371.5	5424.6	2332.6
24	CH2Cl2	DICHLOROMETHANE	84.932	-139.25	103.55	liquid	513.9	6050.5	2601.7
25	CH2F2	DIFLUOROMETHANE	52.024	-213.07	-60.97	gas	182.6	3510.5	1509.5
26	CH2I2	DIIODOMETHANE	267.836	42.98	359.60	liquid	639.7	2388.5	1027.1
27	CH2O	FORMALDEHYDE	30.026	-133.60	-2.38	gas	519.4	17299.7	7438.9
28	CH2O2	FORMIC ACID	46.026	47.12	213.01	liquid	211.5	4594.4	1975.6
29	CH3Br	METHYL BROMIDE	94.939	-136.48	38.41	gas	705.4	7430.2	3195.0
30	CH3Cl	METHYL CHLORIDE	50.488	-143.86	-11.60	gas	675.4	13377.0	5752.1
31	CH3Cl3Si	METHYL TRICHLOROSILANE	149.478	-108.04	151.52	liquid	1064.0	7118.1	3060.8
32	CH3F	METHYL FLUORIDE	34.033	-223.24	-108.99	gas	521.9	15336.3	6594.6
33	CH3I	METHYL IODIDE	141.939	-87.61	108.37	liquid	709.6	4999.4	2149.7
34	CH3NO	FORMAMIDE	45.041	36.59	427.73	liquid	506.0	11235.1	4831.1
35	CH3NO2	NITROMETHANE	61.040	-19.39	214.16	liquid	643.2	10536.7	4530.8
36	CH3NO2	METHYL-NITRITE	61.040	1.42	10.42	gas	693.1	11354.4	4882.4
37	CH3NO3	METHYL-NITRATE	77.040	-116.12	150.82	liquid	636.6	8263.1	3553.1
38	CH4	METHANE	16.043	-296.46	-258.68	gas	802.3	50009.3	21504.0
39	CH4Cl2Si	METHYL DICHLOROSILANE	115.034	-131.08	106.79	liquid	1357.0	11796.5	5072.5
40	CH4O	METHANOL	32.042	-143.82	148.46	liquid	638.1	19914.5	8563.2
41	CH4O3S	METHANESULFONIC ACID	96.107	67.39	550.13	liquid	591.0	6149.4	2644.2
42	CH4S	METHYL MERCAPTAN	48.109	-189.35	42.73	gas	1151.7	23939.4	10293.9
43	CH5ClSi	METHYL CHLOROSILANE	80.589	-209.38	47.66	gas	1693.0	21007.8	9033.4
44	CH5N	METHYLAMINE	31.057	-136.23	20.61	gas	975.1	31396.5	13500.5
45	CH6Si	METHYL SILANE	46.144	-250.26	-70.42	gas	1999.0	43320.9	18628.0
46	CN4O8	TETRANITROMETHANE	196.033	57.02	258.26	liquid	431.8	2202.7	947.2
47	CO	CARBON MONOXIDE	28.010	-337.00	-312.61	gas	283.0	10103.9	4344.7
48	COS	CARBONYL SULFIDE	60.076	-217.84	-58.27	gas	548.3	9126.3	3924.3
49	CO2	CARBON DIOXIDE	44.010	-69.83	-109.26	gas	0.0	0.0	0.0
50	CS2	CARBON DISULFIDE	76.143	-168.83	115.20	liquid	1104.2	14501.7	6235.7
51	C2BrF3	BROMOTRIFLUOROETHYLENE	160.921	-----	27.50	gas	316.6	1967.2	845.9
52	C2Br2F4	1,2-DIBROMOTETRAFLUOROETHANE	259.824	-166.90	117.07	liquid	194.9	750.1	322.5
53	C2ClF3	CHLOROTRIFLUOROETHYLENE	116.470	-252.67	-18.13	gas	214.0	1837.4	790.1
54	C2ClF5	CHLOROPENTAFLUOROETHANE	154.467	-146.99	-38.40	gas	-322.0	-2084.6	-896.4
55	C2Cl2F4	1,2-DICHLOROTETRAFLUOROETHANE	170.921	-137.20	38.79	gas	-100.4	-587.4	-252.6
56	C2Cl3F3	1,1,2-TRICHLOROTRIFLUOROETHANE	187.375	-31.00	117.68	liquid	64.8	346.0	148.8
57	C2Cl4	TETRACHLOROETHYLENE	165.833	-8.23	250.25	liquid	735.5	4435.0	1907.1
58	C2Cl4F2	1,1,2,2-TETRACHLORODIFLUOROETHANE	203.830	78.80	199.13	solid	51.6	253.2	108.9
59	C2Cl4O	TRICHLOROACETYL CHLORIDE	181.832	-----	244.40	liquid	445.1	2448.0	1052.7
60	C2Cl6	HEXACHLOROETHANE	236.738	368.24	368.33	solid	580.3	2451.3	1054.1
61	C2F4	TETRAFLUOROETHYLENE	100.016	-204.07	-104.15	gas	128.0	1279.8	550.3
62	C2F6	HEXAFLUOROETHANE	138.012	-149.26	-108.76	gas	-557.0	-4035.9	-1735.4
63	C2HBrClF3	HALOTHANE	197.382	-----	122.36	liquid	158.5	803.0	345.3

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ F	$T_{boiling}$ F	state	$-\Delta H_{combustion}$ @ 77 F kjoule/mol	kjoule/kg	BTU/lb
64	C2HClF2	2-CHLORO-1,1-DIFLUOROETHYLENE	98.479	-217.30	-1.48	gas	579.0	5879.4	2528.2
65	C2HCl3	TRICHLOROETHYLENE	131.388	-120.55	188.51	liquid	864.1	6576.8	2828.0
66	C2HCl3O	DICHLOROACETYL CHLORIDE	147.387	-459.67	228.20	liquid	627.1	4254.8	1829.6
67	C2HCl3O	TRICHLOROACETALDEHYDE	147.387	-70.87	207.86	liquid	672.0	4559.4	1960.6
68	C2HCl5	PENTACHLOROETHANE	202.293	-20.20	319.78	liquid	720.0	3559.4	1530.5
69	C2HF3	TRIFLUOROETHENE	82.025	-289.52	-61.85	gas	417.4	5089.0	2188.3
70	C2HF3O2	TRIFLUOROACETIC ACID	114.024	4.55	161.24	liquid	-152.0	-1333.1	-573.2
71	C2HF5	PENTAFLUOROETHANE	120.022	-153.40	-54.40	gas	-196.6	-1638.0	-704.4
72	C2H2	ACETYLENE	26.038	-113.35	-119.47	gas	1255.6	48221.8	20735.4
73	C2H2Br4	1,1,2,2-TETRABROMOETHANE	345.654	32.00	470.30	liquid	911.0	2635.6	1133.3
74	C2H2Cl2	1,1-DICHLOROETHYLENE	96.943	-188.50	88.81	liquid	1003.7	10353.5	4452.0
75	C2H2Cl2	cis-1,2-DICHLOROETHYLENE	96.943	-112.00	140.90	liquid	994.5	10258.5	4411.2
76	C2H2Cl2	trans-1,2-DICHLOROETHYLENE	96.943	-57.64	117.86	liquid	999.1	10306.5	4431.8
77	C2H2Cl2O	CHLOROACETYL CHLORIDE	112.943	-7.60	222.80	liquid	744.3	6590.4	2833.9
78	C2H2Cl2O	DICHLOROACETALDEHYDE	112.943	-58.27	191.93	liquid	790.0	6994.7	3007.7
79	C2H2Cl2O2	DICHLOROACETIC ACID	128.942	56.12	381.20	liquid	530.9	4117.4	1770.5
80	C2H2Cl3F	1,1,1-TRICHLOROFLUOROETHANE	151.394	-----	199.13	liquid	692.0	4570.9	1965.5
81	C2H2Cl4	1,1,1,2-TETRACHLOROETHANE	167.849	-94.38	266.90	liquid	837.8	4991.6	2146.4
82	C2H2Cl4	1,1,2,2-TETRACHLOROETHANE	167.849	-46.84	293.18	liquid	834.6	4972.6	2138.2
83	C2H2F2	1,1-DIFLUOROETHYLENE	64.035	-227.20	-122.17	gas	692.0	10806.6	4646.8
84	C2H2F2	cis-1,2-DIFLUOROETHENE	64.035	-265.45	-13.52	gas	707.2	11044.5	4749.1
85	C2H2F2	trans-1,2-DIFLUOROETHENE	64.035	-265.45	-13.52	gas	707.2	11044.5	4749.1
86	C2H2F4	1,1,1,2-TETRAFLUOROETHANE	102.031	-149.80	-14.80	gas	133.1	1304.0	560.7
87	C2H2O	KETENE	42.037	-240.07	-57.66	gas	967.8	23021.6	9899.3
88	C2H2O4	OXALIC ACID	90.036	373.10	564.53	solid	199.0	2210.2	950.4
89	C2H3Br	VINYL BROMIDE	106.950	-216.04	60.44	gas	1212.7	11338.9	4875.7
90	C2H3Cl	VINYL CHLORIDE	62.499	-244.82	7.93	gas	1158.0	18528.3	7967.2
91	C2H3ClF2	1-CHLORO-1,1-DIFLUOROETHANE	100.495	-203.44	13.98	gas	663.0	6597.3	2836.9
92	C2H3ClO	ACETYL CHLORIDE	78.498	-171.13	123.35	liquid	876.9	11170.3	4803.2
93	C2H3ClO	CHLOROACETALDEHYDE	78.498	-----	184.73	liquid	921.0	11732.8	5045.1
94	C2H3ClO2	CHLOROACETIC ACID	94.497	140.00	372.83	solid	663.0	7016.1	3016.9
95	C2H3ClO2	METHYL CHLOROFORMATE	94.497	-----	159.53	liquid	689.0	7291.2	3135.2
96	C2H3Cl3	1,1,1-TRICHLOROETHANE	133.404	-22.72	165.34	liquid	975.0	7308.3	3142.5
97	C2H3Cl3	1,1,2-TRICHLOROETHANE	133.404	-33.97	236.93	liquid	963.9	7225.0	3106.8
98	C2H3F	VINYL FLUORIDE	46.044	-256.90	-97.96	gas	1011.7	21972.2	9448.0
99	C2H3F3	1,1,1-TRIFLUOROETHANE	84.041	-168.34	-53.32	gas	404.0	4807.2	2067.1
100	C2H3N	ACETONITRILE	41.053	-46.89	178.88	liquid	1190.4	28996.7	12468.6
101	C2H3NO	METHYL ISOCYANATE	57.052	1.40	101.93	liquid	1064.5	18658.4	8023.1
102	C2H4	ETHYLENE	28.054	-272.45	-154.62	gas	1322.6	47144.8	20272.3
103	C2H4Br2	1,1-DIBROMOETHANE	187.862	-81.40	226.40	liquid	1160.0	6174.7	2655.1
104	C2H4Br2	1,2-DIBROMOETHANE	187.862	49.62	268.45	liquid	1176.9	6264.7	2693.8
105	C2H4Cl2	1,1-DICHLOROETHANE	98.959	-142.53	135.14	liquid	1109.7	11213.7	4821.9
106	C2H4Cl2	1,2-DICHLOROETHANE	98.959	-32.19	182.19	liquid	1105.0	11166.2	4801.5
107	C2H4Cl2O	BIS(CHLOROMETHYL)ETHER	114.959	-42.70	220.73	liquid	990.0	8611.8	3703.1
108	C2H4F2	1,1-DIFLUOROETHANE	66.051	-178.60	-14.44	gas	758.5	11483.6	4937.9
109	C2H4F2	1,2-DIFLUOROETHANE	66.051	-----	86.90	liquid	813.0	12308.7	5292.7
110	C2H4I2	1,2-DIIODOETHANE	281.863	181.42	392.02	solid	-----	-----	-----
111	C2H4O	ACETALDEHYDE	44.053	-189.40	68.72	gas	1104.6	25074.3	10782.0
112	C2H4O	ETHYLENE OXIDE	44.053	-169.06	51.26	gas	1218.0	27648.5	11888.9
113	C2H4OS	THIOACETIC-ACID	76.113	-189.38	188.62	liquid	1353.2	17778.5	7644.8
114	C2H4O2	ACETIC ACID	60.053	61.99	244.22	liquid	786.4	13095.6	5631.1
115	C2H4O2	METHYL FORMATE	60.053	-146.20	89.15	liquid	920.9	15334.8	6594.0
116	C2H4S	THIACYCLOPROPANE	60.114	-162.00	130.86	liquid	1622.6	26992.2	11606.7
117	C2H5Br	BROMOETHANE	108.966	-181.48	101.03	liquid	1284.4	11787.2	5068.5
118	C2H5Cl	ETHYL CHLORIDE	64.514	-213.52	54.09	gas	1284.9	19916.6	8564.1
119	C2H5ClO	2-CHLOROETHANOL	80.514	-89.50	263.48	liquid	1080.0	13413.8	5767.9
120	C2H5F	ETHYL FLUORIDE	48.060	-225.76	-35.86	gas	1110.0	23096.1	9931.3
121	C2H5I	ETHYL IODIDE	155.966	-167.98	162.14	liquid	1356.1	8694.8	3738.8
122	C2H5N	ETHYLENEIMINE	43.068	-108.31	132.53	liquid	1481.0	34387.5	14786.6
123	C2H5NO	ACETAMIDE	59.068	177.80	430.07	solid	1074.1	18184.1	7819.2
124	C2H5NO	N-METHYLFORMAMIDE	59.068	25.16	391.12	liquid	1149.6	19462.3	8368.8
125	C2H5NO2	NITROETHANE	75.067	-129.14	237.33	liquid	1249.8	16649.1	7159.1
126	C2H5NO3	ETHYL-NITRATE	91.066	-138.26	188.98	liquid	1239.0	13605.7	5850.4
127	C2H6	ETHANE	30.070	-297.04	-127.48	gas	1428.6	47509.1	20428.9
128	C2H6AlCl	DIMETHYLALUMINUM CHLORIDE	92.054	-5.80	258.80	liquid	-----	-----	-----
129	C2H6O	DIMETHYL ETHER	46.069	-222.68	-12.71	gas	1328.4	28835.0	12399.1

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ F	$T_{boiling}$ F	state	$-\Delta H_{combustion}$ @ 77 F kjoule/mol	kjoule/kg	BTU/lb
130	C2H6O	ETHANOL	46.069	-173.38	172.92	liquid	1235.5	26818.5	11531.9
131	C2H6OS	DIMETHYL SULFOXIDE	78.135	65.34	372.20	liquid	1547.3	19802.9	8515.2
132	C2H6O2	ETHYLENE GLYCOL	62.068	8.60	387.14	liquid	1057.6	17039.4	7326.9
133	C2H6O4S	DIMETHYL SULFATE	126.133	-25.24	371.84	liquid	1070.0	8483.1	3647.7
134	C2H6S	DIMETHYL SULFIDE	62.136	-144.89	99.19	liquid	1744.0	28067.5	12069.0
135	C2H6S	ETHYL MERCAPTAN	62.136	-234.20	95.00	liquid	1735.7	27933.9	12011.6
136	C2H6S2	DIMETHYL DISULFIDE	94.202	-120.48	229.55	liquid	2043.8	21695.9	9329.2
137	C2H7N	DIMETHYLAMINE	45.084	-133.94	44.38	gas	1614.6	35813.1	15399.7
138	C2H7N	ETHYLAMINE	45.084	-113.80	61.84	gas	1587.4	35209.8	15140.2
139	C2H7NO	MONOETHANOLAMINE	61.084	50.90	339.80	liquid	1363.1	22315.2	9595.5
140	C2H8N2	ETHYLENEDIAMINE	60.099	52.05	243.07	liquid	1691.0	28136.9	12098.9
141	C2H8Si	DIMETHYL SILANE	60.171	-238.40	-3.28	gas	2569.0	42695.0	18358.8
142	C2N2	CYANOGEN	52.036	-18.22	-6.07	gas	1096.1	21064.3	9057.6
143	C3F6	HEXAFLUOROPROPYLENE	150.023	-249.70	-21.28	gas	100.0	666.6	286.6
144	C3F6O	HEXAFLUOROACETONE	166.023	-187.60	-17.09	gas	-279.0	-1680.5	-722.6
145	C3F8	OCTAFLUOROPROPANE	188.020	-233.84	-34.15	gas	-523.0	-2781.6	-1196.1
146	C3H2N2	MALONONITRILE	66.062	89.15	425.03	solid	1609.0	24355.9	10473.0
147	C3H3Cl	PROPARGYL CHLORIDE	74.510	-----	136.13	liquid	1670.0	22413.1	9637.6
148	C3H3N	ACRYLONITRILE	53.064	-118.34	171.23	liquid	1690.0	31848.3	13694.8
149	C3H3NO	OXAZOLE	69.063	-----	157.10	liquid	1495.2	21649.8	9309.4
150	C3H4	METHYLACETYLENE	40.065	-152.86	-9.78	gas	1849.6	46165.0	19850.9
151	C3H4	PROPADIENE	40.065	-213.30	-30.10	gas	1856.3	46332.2	19922.9
152	C3H4Cl2	2,3-DICHLOROPROPENE	110.970	-114.97	198.68	liquid	1580.0	14238.1	6122.4
153	C3H4O	ACROLEIN	56.064	-125.86	126.84	liquid	1553.6	27711.2	11915.8
154	C3H4O	PROPARGYL ALCOHOL	56.064	-61.24	236.48	liquid	1656.9	29553.7	12708.1
155	C3H4O2	ACRYLIC ACID	72.064	56.30	285.80	liquid	1280.2	17764.8	7638.8
156	C3H4O2	beta-PROPIOLACTONE	72.064	-28.12	323.60	liquid	1329.0	18441.9	7930.0
157	C3H4O2	VINYL FORMATE	72.064	-----	116.33	liquid	1370.0	19010.9	8174.7
158	C3H4O3	ETHYLENE CARBONATE	88.063	97.52	460.40	solid	1083.0	12298.0	5288.1
159	C3H4O3	PYRUVIC ACID	88.063	56.48	329.00	liquid	987.0	11207.9	4819.4
160	C3H5Br	3-BROMO-1-PROPENE	120.977	-182.90	158.02	liquid	-----	-----	-----
161	C3H5Cl	2-CHLOROPROPENE	76.525	-215.32	72.77	gas	1760.0	22999.0	9889.6
162	C3H5Cl	3-CHLOROPROPENE	76.525	-210.10	112.93	liquid	1760.0	22999.0	9889.6
163	C3H5ClO	alpha-EPICHLOROHYDRIN	92.525	-70.96	241.00	liquid	1660.5	17946.5	7717.0
164	C3H5ClO2	METHYL CHLOROACETATE	108.524	-25.82	265.68	liquid	1290.0	11886.8	5111.3
165	C3H5ClO2	ETHYL CHLOROFORMATE	108.524	-114.07	199.13	liquid	1280.0	11794.6	5071.7
166	C3H5Cl3	1,2,3-TRICHLOROPROPANE	147.431	5.54	314.33	liquid	1553.6	10537.8	4531.3
167	C3H5I	3-IODO-1-PROPENE	167.977	-146.72	215.62	liquid	-----	-----	-----
168	C3H5N	PROPIONITRILE	55.079	-135.20	207.23	liquid	1800.7	32693.0	14058.0
169	C3H5NO	ACRYLAMIDE	71.079	184.10	378.68	solid	1620.0	22791.5	9800.4
170	C3H5NO	HYDRACRYLONITRILE	71.079	-50.80	429.80	liquid	1628.8	22915.3	9853.6
171	C3H5NO	LACTONITRILE	71.079	-40.27	362.93	liquid	1650.0	23213.6	9981.9
172	C3H5N3O9	NITROGLYCERINE	227.088	55.40	481.73	liquid	1422.0	6261.9	2692.6
173	C3H6	CYCLOPROPANE	42.081	-197.36	-27.00	gas	1959.3	46560.2	20020.9
174	C3H6	PROPYLENE	42.081	-301.45	-53.90	gas	1925.7	45761.7	19677.6
175	C3H6Br2	1,2-DIBROMOPROPANE	201.888	-67.34	284.02	liquid	-----	-----	-----
176	C3H6Cl2	1,1-DICHLOROPROPANE	112.986	-----	190.58	liquid	1720.0	15223.1	6545.9
177	C3H6Cl2	1,2-DICHLOROPROPANE	112.986	-148.79	205.47	liquid	1704.6	15086.8	6487.3
178	C3H6Cl2	1,3-DICHLOROPROPANE	112.987	-147.10	248.72	liquid	1744.0	15435.4	6637.2
179	C3H6Cl2	2,2-DICHLOROPROPANE	112.986	-28.82	156.76	liquid	1702.7	15069.7	6480.0
180	C3H6I2	1,2-DIIODOPROPANE	295.889	-3.98	440.62	liquid	-----	-----	-----
181	C3H6O	ACETONE	58.080	-138.46	133.32	liquid	1659.2	28567.5	12284.0
182	C3H6O	ALLYL ALCOHOL	58.080	-200.20	206.74	liquid	1731.9	29819.2	12822.3
183	C3H6O	METHYL VINYL ETHER	58.080	-187.60	41.90	gas	1774.3	30549.2	13136.2
184	C3H6O	n-PROPIONALDEHYDE	58.080	-112.00	118.40	liquid	1685.7	29023.8	12480.2
185	C3H6O	1,2-PROPYLENE OXIDE	58.080	-169.47	93.02	liquid	1785.3	30738.6	13217.6
186	C3H6O	1,3-PROPYLENE OXIDE	58.080	-----	118.13	liquid	1801.1	31010.7	13334.6
187	C3H6O2	ETHYL FORMATE	74.079	-111.28	129.76	liquid	1507.0	20343.1	8747.6
188	C3H6O2	METHYL ACETATE	74.079	-144.40	134.49	liquid	1461.0	19722.2	8480.5
189	C3H6O2	PROPIONIC ACID	74.079	-5.26	286.11	liquid	1395.0	18831.2	8097.4
190	C3H6O2S	3-MERCAPTOPROPIONIC ACID	106.145	63.50	442.13	liquid	1734.5	16340.9	7026.6
191	C3H6O3	LACTIC ACID	90.079	64.40	344.93	liquid	1235.0	13710.2	5895.4
192	C3H6O3	METHOXYACETIC ACID	90.079	46.13	401.20	liquid	1270.0	14098.7	6062.5
193	C3H6O3	TRIOXANE	90.079	142.70	238.10	solid	1383.8	15362.1	6605.7
194	C3H6S	THIACYCLOBUTANE	74.140	-99.74	202.96	liquid	2234.4	30137.7	12959.2
195	C3H7Br	1-BROMOPROPANE	122.993	-166.00	159.80	liquid	1891.2	15376.5	6611.9

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ F	$T_{boiling}$ F	state	$-\Delta H_{combustion}$ @ 77 F kjoule/mol	kjoule/kg	BTU/lb
196	C3H7Br	2-BROMOPROPANE	122.993	-128.20	138.94	liquid	1886.1	15335.0	6594.1
197	C3H7Cl	ISOPROPYL CHLORIDE	78.541	-178.92	96.26	liquid	1854.8	23615.7	10154.7
198	C3H7Cl	n-PROPYL CHLORIDE	78.541	-189.04	115.74	liquid	1864.6	23740.5	10208.4
199	C3H7F	1-FLUOROPROPANE	62.087	-254.18	26.24	gas	1747.7	28149.5	12104.3
200	C3H7F	2-FLUOROPROPANE	62.087	-208.03	15.19	gas	1740.2	28028.2	12052.1
201	C3H7I	ISOPROPYL IODIDE	169.993	-130.00	193.10	liquid	1919.7	11292.8	4855.9
202	C3H7I	n-PROPYL IODIDE	169.993	-150.34	216.41	liquid	1929.8	11352.2	4881.5
203	C3H7N	ALLYAMINE	57.095	-126.76	127.94	liquid	2050.0	35905.1	15439.2
204	C3H7N	PROPYLENEIMINE	57.095	-47.47	141.53	liquid	2080.0	36430.5	15665.1
205	C3H7NO	N,N-DIMETHYLFORMAMIDE	73.095	-76.77	307.40	liquid	1788.7	24470.9	10522.5
206	C3H7NO	N-METHYLACETAMIDE	73.095	82.40	401.00	solid	1710.0	23394.2	10059.5
207	C3H7NO2	1-NITROPROPANE	89.094	-155.18	268.12	liquid	1858.9	20864.5	8971.7
208	C3H7NO2	2-NITROPROPANE	89.094	-132.38	248.45	liquid	1845.6	20715.2	8907.5
209	C3H7NO3	PROPYL-NITRATE	105.093	-147.98	230.02	liquid	1854.8	17649.4	7589.2
210	C3H7NO3	ISOPROPYL-NITRATE	105.093	-147.98	212.92	liquid	1837.9	17488.1	7519.9
211	C3H8	PROPANE	44.096	-305.84	-43.67	gas	2043.1	46333.0	19923.2
212	C3H8O	ISOPROPANOL	60.096	-126.17	180.07	liquid	1830.0	30451.3	13094.0
213	C3H8O	METHYL ETHYL ETHER	60.096	-171.67	45.23	gas	1931.4	32138.6	13819.6
214	C3H8O	n-PROPANOL	60.096	-195.16	206.96	liquid	1843.8	30680.9	13192.8
215	C3H8O2	2-METHOXYETHANOL	76.095	-121.18	255.92	liquid	1670.0	21946.3	9436.9
216	C3H8O2	METHYLAL	76.095	-156.64	107.33	liquid	1799.8	23652.0	10170.4
217	C3H8O2	1,2-PROPYLENE GLYCOL	76.095	-76.00	369.68	liquid	1647.6	21651.9	9310.3
218	C3H8O2	1,3-PROPYLENE GLYCOL	76.095	-16.06	417.92	liquid	1683.1	22118.4	9510.9
219	C3H8O3	GLYCEROL	92.095	64.72	554.00	liquid	1477.0	16037.8	6896.2
220	C3H8S	n-PROPYLMERCAPTAN	76.163	-171.76	153.90	liquid	2345.0	30789.2	13239.4
221	C3H8S	ISOPROPYL MERCAPTAN	76.163	-202.97	126.61	liquid	2339.8	30721.0	13210.0
222	C3H8S	ETHYL-METHYL-SULFIDE	76.156	-158.71	152.60	liquid	2358.8	30972.8	13318.3
223	C3H9N	n-PROPYLAMINE	59.111	-117.40	119.30	liquid	2164.8	36622.6	15747.7
224	C3H9N	ISOPROPYLAMINE	59.111	-139.36	90.32	liquid	2156.6	36483.9	15688.1
225	C3H9N	TRIMETHYLAMINE	59.111	-178.73	37.17	gas	2244.9	37977.7	16330.4
226	C3H9NO	1-AMINO-2-PROPANOL	75.111	35.13	319.03	liquid	1970.0	26227.8	11278.0
227	C3H9NO	3-AMINO-1-PROPANOL	75.111	51.80	369.50	liquid	1980.0	26361.0	11335.2
228	C3H9NO	METHYLETHANOLAMINE	75.111	23.90	316.40	liquid	2010.0	26760.4	11507.0
229	C3H9O4P	TRIMETHYL PHOSPHATE	140.076	-51.07	378.86	liquid	2200.0	15705.8	6753.5
230	C3H10N2	1,2-PROPANEDIAMINE	74.126	-33.92	246.74	liquid	2290.0	30893.3	13284.1
231	C3H10Si	TRIMETHYL SILANE	74.198	-212.60	44.06	gas	3142.5	42352.9	18211.7
232	C4Cl4S	TETRACHLOROTHIOPHENE	221.921	83.88	452.11	solid	-----	-----	-----
233	C4Cl6	HEXACHLORO-1,3-BUTADIENE	260.760	-5.80	419.00	liquid	1477.4	5665.7	2436.3
234	C4F8	OCTAFLUORO-2-BUTENE	200.031	-211.00	26.98	gas	-75.9	-379.4	-163.2
235	C4F8	OCTAFLUOROCYCLOBUTANE	200.031	-40.34	21.24	gas	46.1	230.5	99.1
236	C4F10	DECAFLUOROBUTANE	238.028	-198.76	28.40	gas	-570.0	-2394.7	-1029.7
237	C4H2	BUTADIYNE(BIACETYLENE)	50.060	-32.78	50.56	gas	2289.2	45729.2	19663.5
238	C4H2O3	MALEIC ANHYDRIDE	98.058	127.13	395.60	solid	1389.5	14170.2	6093.2
239	C4H4	VINYLACETYLENE	52.076	-----	41.18	gas	2362.0	45356.8	19503.4
240	C4H4N2	SUCCINONITRILE	80.089	136.67	512.60	solid	2197.4	27437.0	11797.9
241	C4H4O	FURAN	68.075	-122.08	88.43	liquid	1995.9	29319.1	12607.2
242	C4H4O2	DIKETENE	84.075	20.30	258.89	liquid	1824.0	21694.9	9328.8
243	C4H4O3	SUCCINIC ANHYDRIDE	100.074	247.73	506.17	solid	1460.0	14589.2	6273.4
244	C4H4O4	FUMARIC ACID	116.073	548.60	554.00	solid	1247.0	10743.2	4619.6
245	C4H4O4	MALEIC ACID	116.073	266.54	557.33	solid	1268.4	10927.6	4698.9
246	C4H4S	THIOPHENE	84.142	-36.78	183.49	liquid	2435.2	28941.6	12444.9
247	C4H5Cl	CHLOROPRENE	88.536	-202.00	138.92	liquid	2222.1	25098.3	10792.3
248	C4H5N	trans-CROTONITRILE	67.090	-60.07	250.21	liquid	2279.0	33969.3	14606.8
249	C4H5N	cis-CROTONITRILE	67.090	-98.68	225.41	liquid	2283.0	34028.9	14632.4
250	C4H5N	METHACRYLONITRILE	67.090	-32.44	194.54	liquid	2243.0	33432.7	14376.1
251	C4H5N	PYRROLE	67.090	-10.14	265.73	liquid	2241.8	33414.8	14368.4
252	C4H5N	VINYLACETONITRILE	67.090	-124.60	245.34	liquid	2296.0	34222.7	14715.8
253	C4H5NO2	METHYL CYANOACETATE	99.089	8.47	401.16	liquid	1881.0	18982.9	8162.7
254	C4H6	CYCLOBUTENE	54.091	-182.90	36.68	gas	2430.9	44940.8	19324.6
255	C4H6	1,2-BUTADIENE	54.092	-213.16	51.53	gas	2461.7	45509.5	19569.1
256	C4H6	1,3-BUTADIENE	54.092	-164.02	24.06	gas	2409.7	44548.2	19155.7
257	C4H6	DIMETHYLACETYLENE	54.092	-26.03	80.56	liquid	2418.9	44718.3	19228.9
258	C4H6	ETHYLACETYLENE	54.092	-194.30	46.53	gas	2464.7	45565.0	19592.9
259	C4H6Cl2	1,3-DICHLORO-trans-2-BUTENE	124.997	-----	263.93	liquid	2180.0	17440.4	7499.4
260	C4H6Cl2	1,4-DICHLORO-cis-2-BUTENE	124.997	-54.40	306.50	liquid	2332.0	18656.4	8022.3
261	C4H6Cl2	1,4-DICHLORO-trans-2-BUTENE	124.997	33.80	313.00	liquid	2187.0	17496.4	7523.5

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ F	$T_{boiling}$ F	state	$-\Delta H_{combustion}$ @ 77 F kjoule/mol	kjoule/kg	BTU/lb
262	C4H6Cl2	3,4-DICHLORO-1-BUTENE	124.997	-78.07	238.73	liquid	2200.0	17600.4	7568.2
263	C4H6O	trans-CROTONALDEHYDE	70.091	-105.70	219.38	liquid	2155.5	30752.9	13223.7
264	C4H6O	2,5-DIHYDROFURAN	70.091	-----	150.53	liquid	2160.0	30817.1	13251.3
265	C4H6O	DIVINYL ETHER	70.091	-149.98	82.94	liquid	2260.0	32243.8	13864.8
266	C4H6O	METHACROLEIN	70.091	-113.80	154.40	liquid	2150.0	30674.4	13190.0
267	C4H6O2	2-BUTYNE-1,4-DIOL	86.090	136.13	460.40	solid	2050.0	23812.3	10239.3
268	C4H6O2	gamma-BUTYROLACTONE	86.090	-46.07	399.20	liquid	1867.9	21697.1	9329.7
269	C4H6O2	cis-CROTONIC ACID	86.090	59.90	341.42	liquid	1952.0	22673.9	9749.8
270	C4H6O2	trans-CROTONIC ACID	86.090	160.52	365.00	solid	1884.3	21887.6	9411.7
271	C4H6O2	METHACRYLIC ACID	86.090	59.00	321.80	liquid	1931.6	22437.0	9647.9
272	C4H6O2	METHYL ACRYLATE	86.090	-106.29	176.36	liquid	1937.4	22504.4	9676.9
273	C4H6O2	VINYL ACETATE	86.090	-135.04	162.50	liquid	1949.0	22639.1	9734.8
274	C4H6O3	ACETIC ANHYDRIDE	102.090	-99.40	281.53	liquid	1675.4	16411.0	7056.7
275	C4H6O4	SUCCINIC ACID	118.089	370.40	604.13	solid	1359.1	11509.1	4948.9
276	C4H6O5	DIGLYCOLIC ACID	134.089	298.40	638.33	solid	1354.8	10103.7	4344.6
277	C4H6O5	MALIC ACID	134.089	266.00	623.93	solid	1190.0	8874.7	3816.1
278	C4H6O6	TARTARIC ACID	150.088	402.80	728.33	solid	1009.0	6722.7	2890.8
279	C4H7N	n-BUTYRONITRILE	69.106	-169.42	243.68	liquid	2414.8	34943.4	15025.7
280	C4H7N	ISOBUTYRONITRILE	69.106	-96.61	218.50	liquid	2408.4	34850.8	14985.8
281	C4H7NO	ACETONE CYANOHYDRIN	85.106	-4.00	373.73	liquid	2239.1	26309.5	11313.1
282	C4H7NO	2-METHACRYLAMIDE	85.106	230.90	418.73	solid	1850.0	21737.6	9347.2
283	C4H7NO	3-METHOXYPROPIONITRILE	85.106	-81.45	330.53	liquid	2290.0	26907.6	11570.3
284	C4H7NO	2-PYRROLIDONE	85.106	77.00	473.00	liquid	2156.9	25343.7	10897.8
285	C4H8	1-BUTENE	56.107	-301.63	20.75	gas	2541.2	45292.0	19475.6
286	C4H8	cis-2-BUTENE	56.107	-218.00	38.70	gas	2534.4	45170.8	19423.5
287	C4H8	trans-2-BUTENE	56.107	-157.95	33.58	gas	2528.7	45069.2	19379.8
288	C4H8	CYCLOBUTANE	56.107	-131.21	54.52	gas	2567.8	45766.1	19679.4
289	C4H8	ISOBUTENE	56.107	-220.61	19.58	gas	2524.0	44985.5	19343.8
290	C4H8Br2	1,2-DIBROMOBUTANE	215.915	-85.70	331.36	liquid	-----	-----	-----
291	C4H8Br2	2,3-DIBROMOBUTANE	215.915	-30.08	321.82	liquid	-----	-----	-----
292	C4H8Cl2	1,4-DICHLOROBUTANE	127.013	-35.14	309.02	liquid	2320.0	18265.8	7854.3
293	C4H8I2	1,2-DIIODOBUTANE	309.916	42.64	398.50	liquid	-----	-----	-----
294	C4H8O	n-BUTYRALDEHYDE	72.107	-141.52	166.64	liquid	2303.5	31945.6	13736.6
295	C4H8O	ISOBUTYRALDEHYDE	72.107	-85.00	147.38	liquid	2291.3	31776.4	13663.8
296	C4H8O	1,2-EPOXYBUTANE	72.107	-238.00	146.16	liquid	2400.1	33285.3	14312.7
297	C4H8O	METHYL ETHYL KETONE	72.107	-124.01	175.35	liquid	2261.6	31364.5	13486.7
298	C4H8O	ETHYL VINYL ETHER	72.107	-176.44	95.99	liquid	2372.9	32908.0	14150.5
299	C4H8O	TETRAHYDROFURAN	72.107	-163.30	148.73	liquid	2325.0	32243.7	13864.8
300	C4H8O2	cis-2-BUTENE-1,4-DIOL	88.106	51.80	455.00	liquid	2170.0	24629.4	10590.7
301	C4H8O2	trans-2-BUTENE-1,4-DIOL	88.106	81.14	458.33	solid	2170.0	24629.4	10590.7
302	C4H8O2	ISOBUTYRIC ACID	88.106	-50.80	310.46	liquid	2000.1	22701.1	9761.5
303	C4H8O2	n-BUTYRIC ACID	88.106	22.64	325.89	liquid	2006.2	22770.3	9791.2
304	C4H8O2	1,4-DIOXANE	88.106	53.24	214.38	liquid	2187.8	24831.5	10677.5
305	C4H8O2	ETHYL ACETATE	88.106	-118.39	170.71	liquid	2061.0	23392.3	10058.7
306	C4H8O2	METHYL PROPIONATE	88.106	-125.50	175.01	liquid	2078.0	23585.2	10141.6
307	C4H8O2	n-PROPYL FORMATE	88.106	-135.22	177.48	liquid	2041.0	23165.3	9961.1
308	C4H8O2S	SULFOLANE	120.172	81.68	545.00	solid	2380.0	19804.9	8516.1
309	C4H8S	TETRAHYDROTHIOPHENE	88.173	-141.09	250.02	liquid	2764.6	31354.3	13482.3
310	C4H9Br	1-BROMOBUTANE	137.019	-170.32	214.88	liquid	2500.3	18247.8	7846.6
311	C4H9Br	2-BROMOBUTANE	137.019	-169.42	196.20	liquid	2507.3	18298.9	7868.5
312	C4H9Cl	n-BUTYL CHLORIDE	92.568	-189.58	173.17	liquid	2474.2	26728.5	11493.2
313	C4H9Cl	sec-BUTYL CHLORIDE	92.568	-204.34	154.58	liquid	2465.2	26631.2	11451.4
314	C4H9Cl	tert-BUTYL CHLORIDE	92.568	-13.72	123.08	liquid	2449.1	26457.3	11376.6
315	C4H9I	2-IODO-2-METHYLPROPANE	184.020	-36.74	212.02	liquid	2560.8	13915.6	5983.7
316	C4H9N	PYRROLIDINE	71.122	-72.11	187.83	liquid	2621.4	36857.8	15848.9
317	C4H9NO	N,N-DIMETHYLACETAMIDE	87.122	-4.00	330.98	liquid	2380.0	27318.0	11746.7
318	C4H9NO	MORPHOLINE	87.122	26.42	262.40	liquid	2460.0	28236.3	12141.6
319	C4H9NO2	1-NITROBUTANE	103.121	-114.38	307.22	liquid	2481.9	24068.2	10349.3
320	C4H9NO2	2-NITROBUTANE	103.121	-205.58	283.46	liquid	2464.4	23897.8	10276.0
321	C4H10	n-BUTANE	58.123	-216.92	31.10	gas	2657.5	45722.0	19660.5
322	C4H10	ISOBUTANE	58.123	-255.30	10.90	gas	2649.0	45575.8	19597.6
323	C4H10N2	PIPERAZINE	86.137	222.80	294.80	solid	2738.0	31786.6	13668.2
324	C4H10O	n-BUTANOL	74.123	-128.74	243.79	liquid	2456.0	33134.1	14247.7
325	C4H10O	sec-BUTANOL	74.123	-174.46	211.19	liquid	2440.5	32925.0	14157.8
326	C4H10O	tert-BUTANOL	74.123	78.48	180.36	solid	2423.9	32701.1	14061.5
327	C4H10O	DIETHYL ETHER	74.123	-177.34	93.97	liquid	2503.5	33774.9	14523.2

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ F	$T_{boiling}$ F	state	$-\Delta H_{combustion}$ @ 77 F kjoule/mol	kjoule/kg	BTU/lb
328	C4H10O	METHYL-PROPYL-ETHER	74.122	-177.30	101.43	liquid	2517.2	33960.7	14603.1
329	C4H10O	METHYL ISOPROPYL ETHER	74.123	-229.40	87.39	liquid	2531.1	34147.3	14683.3
330	C4H10O	ISOBUTANOL	74.123	-162.40	225.79	liquid	2449.0	33039.7	14207.1
331	C4H10O2	1,3-BUTANEDIOL	90.122	-106.60	404.60	liquid	2268.4	25170.3	10823.2
332	C4H10O2	1,4-BUTANEDIOL	90.122	67.82	442.40	liquid	2280.0	25299.0	10878.6
333	C4H10O2	2,3-BUTANEDIOL	90.122	45.68	357.26	liquid	2237.0	24821.9	10673.4
334	C4H10O2	t-BUTYL HYDROPEROXIDE	90.122	39.74	270.23	liquid	2736.3	30362.2	13055.7
335	C4H10O2	1,2-DIMETHOXYETHANE	90.122	-72.40	183.29	liquid	2401.9	26651.6	11460.2
336	C4H10O2	2-ETHOXYETHANOL	90.122	-----	275.00	liquid	2340.0	25964.8	11164.9
337	C4H10O3	DIETHYLENE GLYCOL	106.122	13.19	473.00	liquid	2155.0	20306.8	8731.9
338	C4H10O4S	DIETHYL SULFATE	154.187	-13.27	409.73	liquid	2270.0	14722.4	6330.6
339	C4H10S	n-BUTYL MERCAPTAN	90.189	-176.24	209.23	liquid	2955.4	32769.0	14090.7
340	C4H10S	ISOBUTYL MERCAPTAN	90.189	-228.71	191.28	liquid	2949.0	32698.0	14060.1
341	C4H10S	sec-BUTYL MERCAPTAN	90.189	-220.23	184.96	liquid	2950.0	32709.1	14064.9
342	C4H10S	tert-BUTYL MERCAPTAN	90.189	34.00	147.60	liquid	2939.5	32592.7	14014.8
343	C4H10S	DIETHYL SULFIDE	90.189	-155.11	197.78	liquid	2960.7	32827.7	14115.9
344	C4H10S	ISOPROPYL-METHYL-SULFIDE	90.183	-150.70	184.55	liquid	2962.7	32851.7	14126.2
345	C4H10S	METHYL-PROPYL-SULFIDE	90.183	-171.33	204.01	liquid	2969.9	32932.4	14161.0
346	C4H10S2	DIETHYL DISULFIDE	122.255	-150.74	309.16	liquid	3257.0	26641.0	11455.6
347	C4H11N	n-BUTYLAMINE	73.138	-56.38	171.32	liquid	2776.3	37959.7	16322.7
348	C4H11N	ISOBUTYLAMINE	73.138	-120.28	153.91	liquid	2771.7	37896.9	16295.6
349	C4H11N	sec-BUTYLAMINE	73.138	-156.10	145.40	liquid	2766.5	37825.8	16265.1
350	C4H11N	tert-BUTYLAMINE	73.138	-88.53	111.92	liquid	2753.6	37649.4	16189.2
351	C4H11N	DIETHYLAMINE	73.138	-57.64	131.81	liquid	2800.3	38287.9	16463.8
352	C4H11NO	DIMETHYLETHANOLAMINE	89.137	-74.20	273.20	liquid	2650.0	29729.5	12783.7
353	C4H11NO2	DIETHANOLAMINE	105.137	82.40	516.00	solid	2410.5	22927.2	9858.7
354	C4H11NO2	2-AMINOETHOXYETHANOL	105.137	-----	465.53	liquid	2450.0	23302.9	10020.3
355	C4H12N2O	N-AMINOETHYL ETHANOLAMINE	104.152	-----	470.93	liquid	2740.0	26307.7	11312.3
356	C4H12Si	TETRAMETHYLSILANE	88.225	-146.34	79.97	liquid	3680.0	41711.5	17936.0
357	C4H13N3	DIETHYLENE TRIAMINE	103.167	-38.20	404.78	liquid	3080.0	29854.5	12837.4
358	C5Cl6	HEXACHLOROCYCLOPENTADIENE	272.771	52.41	462.20	liquid	1800.0	6598.9	2837.5
359	C5H4O2	FURFURAL	96.086	-33.70	323.06	liquid	2249.7	23413.4	10067.8
360	C5H5N	PYRIDINE	79.101	-42.92	239.47	liquid	2672.1	33780.9	14525.8
361	C5H6	CYCLOPENTADIENE	66.103	-121.00	106.70	liquid	2795.4	42288.5	18184.1
362	C5H6	2-METHYL-1-BUTENE-3-YNE	66.103	-171.40	90.05	liquid	2930.0	44324.8	19059.6
363	C5H6	1-PENTENE-3-YNE	66.103	-----	138.65	liquid	2910.0	44022.2	18929.5
364	C5H6	1-PENTENE-4-YNE	66.103	-----	108.50	liquid	2930.0	44324.8	19059.6
365	C5H6N2	GLUTARONITRILE	94.116	-20.09	546.80	liquid	2800.0	29750.5	12792.7
366	C5H6O2	FURFURYL ALCOHOL	98.101	5.67	338.00	liquid	2416.8	24635.8	10593.4
367	C5H6O3	GLUTARIC ANHYDRIDE	114.101	130.73	553.17	solid	2270.0	19894.7	8554.7
368	C5H6O4	CITRACONIC ACID	130.100	181.40	632.93	solid	1870.0	14373.6	6180.6
369	C5H6O4	ITACONIC ACID	130.100	330.08	622.13	solid	1853.2	14244.4	6125.1
370	C5H6S	2-METHYLTHIOPHENE	98.162	-82.08	234.61	liquid	3042.3	30992.5	13326.8
371	C5H6S	3-METHYLTHIOPHENE	98.162	-92.15	239.81	liquid	3041.1	30980.0	13321.4
372	C5H7N	N-METHYLPYRROLE	81.117	-69.23	234.93	liquid	2876.0	35455.0	15245.6
373	C5H7NO2	ETHYL CYANOACETATE	113.116	-8.50	402.80	liquid	2415.9	21357.7	9183.8
374	C5H8	CYCLOPENTENE	68.118	-211.04	111.61	liquid	2939.1	43147.2	18553.3
375	C5H8	ISOPRENE	68.118	-230.58	93.31	liquid	2984.2	43809.3	18838.0
376	C5H8	3-METHYL-1,2-BUTADIENE	68.118	-172.52	105.53	liquid	3032.0	44511.0	19139.7
377	C5H8	2-METHYL-1,3-BUTADIENE	68.118	-230.71	93.33	liquid	2986.8	43846.7	18854.1
378	C5H8	1,2-PENTADIENE	68.118	-215.07	112.75	liquid	3046.7	44726.8	19232.5
379	C5H8	cis-1,3-PENTADIENE	68.118	-221.44	111.33	liquid	2989.1	43881.2	18868.9
380	C5H8	trans-1,3-PENTADIENE	68.118	-125.39	107.64	liquid	2982.7	43787.3	18828.5
381	C5H8	1,4-PENTADIENE	68.118	-234.92	78.73	liquid	3015.7	44271.7	19036.8
382	C5H8	2,3-PENTADIENE	68.118	-194.17	118.85	liquid	3038.0	44599.1	19177.6
383	C5H8	1-PENTYNE	68.118	-158.26	104.32	liquid	3051.0	44789.9	19259.7
384	C5H8	2-PENTYNE	68.118	-164.72	132.93	liquid	3036.7	44580.1	19169.4
385	C5H8	3-METHYL-1-BUTYNE	68.118	-129.46	84.20	liquid	3046.0	44716.5	19228.1
386	C5H8	SPIROPENTANE	68.118	-160.67	102.27	liquid	3095.6	45444.3	19541.1
387	C5H8N4O12	PENTAERYTHRITOL TETRANITRATE	316.138	284.90	517.73	solid	2348.0	7427.1	3193.7
388	C5H8O	CYCLOPENTANONE	84.118	-60.34	267.17	liquid	2698.0	32074.0	13791.8
389	C5H8O	METHYL ISOPROPENYL KETONE	84.118	-64.48	208.40	liquid	2720.0	32335.5	13904.3
390	C5H8O2	ACETYLACETONE	100.117	-10.30	284.72	liquid	2511.0	25080.7	10784.7
391	C5H8O2	ALLYL ACETATE	100.117	-211.27	219.20	liquid	2561.7	25587.1	11002.4
392	C5H8O2	ETHYL ACRYLATE	100.117	-96.16	211.10	liquid	2550.6	25476.2	10954.8
393	C5H8O2	METHYL METHACRYLATE	100.117	-54.76	212.54	liquid	2546.8	25438.2	10938.4

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ F	$T_{boiling}$ F	state	$-\Delta H_{combustion}$ @ 77 F kjoule/mol	kjoule/kg	BTU/lb
394	C5H8O2	VINYL PROPIONATE	100.117	-459.67	196.16	liquid	2587.5	25844.8	11113.2
395	C5H8O3	2-HYDROXYETHYL ACRYLATE	116.117	-76.27	411.53	liquid	2370.0	20410.4	8776.5
396	C5H8O3	LEVULINIC ACID	116.117	95.00	474.44	solid	2238.0	19273.7	8287.7
397	C5H8O3	METHYL ACETOACETATE	116.117	-112.00	341.06	liquid	2310.0	19893.7	8554.3
398	C5H8O4	GLUTARIC ACID	132.116	207.50	612.30	solid	1975.3	14951.3	6429.0
399	C5H9N	VALERONITRILE	83.133	-141.16	286.34	liquid	3022.9	36362.2	15635.8
400	C5H9NO	n-BUTYL ISOCYANATE	99.133	-----	239.00	liquid	2890.0	29152.8	12535.7
401	C5H9NO	N-METHYL-2-PYRROLIDONE	99.133	-11.20	395.60	liquid	2805.1	28296.3	12167.4
402	C5H9NO4	L-GLUTAMIC ACID	147.131	435.20	746.33	solid	1848.4	12563.0	5402.1
403	C5H10	CYCLOPENTANE	70.134	-136.91	120.65	liquid	3070.9	43786.2	18828.1
404	C5H10	2-METHYL-1-BUTENE	70.134	-215.63	88.07	liquid	3114.9	44413.6	19097.8
405	C5H10	2-METHYL-2-BUTENE	70.134	-208.77	101.41	liquid	3107.6	44309.5	19053.1
406	C5H10	3-METHYL-1-BUTENE	70.134	-271.28	68.11	gas	3124.1	44544.7	19154.2
407	C5H10	1-PENTENE	70.134	-265.40	85.93	liquid	3129.7	44624.6	19188.6
408	C5H10	cis-2-PENTENE	70.134	-240.52	98.47	liquid	3122.4	44520.5	19143.8
409	C5H10	trans-2-PENTENE	70.134	-220.47	97.41	liquid	3118.0	44457.8	19116.8
410	C5H10Br2	2,3-DIBROMO-2-METHYLBUTANE	229.942	58.73	339.55	liquid	-----	-----	-----
411	C5H10Cl2	1,5-DICHLOROPENTANE	141.040	-99.04	356.00	liquid	2926.1	20746.6	8921.0
412	C5H10O	METHYL ISOPROPYL KETONE	86.134	-133.60	201.92	liquid	2877.0	33401.4	14362.6
413	C5H10O	2-PENTANONE	86.134	-106.35	216.16	liquid	2880.0	33436.3	14377.6
414	C5H10O	DIETHYL KETONE	86.134	-38.15	215.58	liquid	2880.4	33440.9	14379.6
415	C5H10O	VALERALDEHYDE	86.134	-132.07	217.40	liquid	2910.5	33790.4	14529.9
416	C5H10O2	n-BUTYL FORMATE	102.133	-133.42	222.98	liquid	2803.9	27453.4	11805.0
417	C5H10O2	ETHYL PROPIONATE	102.133	-101.02	210.38	liquid	2674.0	26181.5	11258.1
418	C5H10O2	ISOBUTYL FORMATE	102.133	-140.44	208.53	liquid	2700.8	26444.0	11370.9
419	C5H10O2	ISOPROPYL ACETATE	102.133	-100.12	191.30	liquid	2658.1	26025.9	11191.1
420	C5H10O2	n-PROPYL ACETATE	102.133	-139.00	214.70	liquid	2672.0	26162.0	11249.6
421	C5H10O2	METHYL n-BUTYRATE	102.133	-122.44	216.95	liquid	2690.0	26338.2	11325.4
422	C5H10O2	2-METHYLBUTYRIC ACID	102.133	-----	350.60	liquid	2680.0	26240.3	11283.3
423	C5H10O2	ISOVALERIC ACID	102.133	-20.74	347.18	liquid	2615.3	25606.8	11010.9
424	C5H10O2	VALERIC ACID	102.133	-29.20	365.90	liquid	2616.5	25618.6	11016.0
425	C5H10O2	TETRAHYDROFURFURYL ALCOHOL	102.133	-----	352.40	liquid	2741.2	26839.5	11541.0
426	C5H10O2S	3-METHYL SULFOLANE	134.199	32.90	528.80	liquid	2990.0	22280.3	9580.5
427	C5H10O3	DIETHYL CARBONATE	118.133	-45.40	260.24	liquid	2495.4	21123.6	9083.2
428	C5H10O3	ETHYL LACTATE	118.133	-14.80	310.10	liquid	2481.6	21006.8	9032.9
429	C5H10S	THIACYCLOHEXANE	102.194	66.18	287.15	liquid	3378.0	33055.2	14213.7
430	C5H10S	CYCLOPENTANETHIOL	102.194	-179.97	269.92	liquid	3394.1	33211.9	14281.1
431	C5H11Br	1-BROMOPENTANE	151.046	-126.20	265.26	liquid	-----	-----	-----
432	C5H11Cl	1-CHLOROPENTANE	106.595	-146.20	227.10	liquid	3085.2	28943.2	12445.6
433	C5H11Cl	1-CHLORO-3-METHYLBUTANE	106.595	-155.90	209.32	liquid	3088.5	28974.0	12458.8
434	C5H11Cl	2-CHLORO-2-METHYLBUTANE	106.595	-100.28	186.10	liquid	3068.5	28787.0	12378.4
435	C5H11N	N-METHYLPYRROLIDINE	85.149	-130.00	174.47	liquid	3256.5	38244.7	16445.2
436	C5H11N	PIPERIDINE	85.149	13.10	223.52	liquid	3211.0	37710.4	16215.5
437	C5H11NO	tert-BUTYLFORMAMIDE	101.148	60.80	395.60	liquid	2960.0	29264.0	12583.5
438	C5H12	ISOPENTANE	72.150	-255.82	82.11	liquid	3240.3	44910.6	19311.6
439	C5H12	NEOPENTANE	72.150	2.17	49.10	gas	3250.4	45050.6	19371.8
440	C5H12	n-PENTANE	72.150	-201.51	96.93	liquid	3245.0	44975.7	19339.6
441	C5H12O	2,2-DIMETHYL-1-PROPANOL	88.150	129.20	235.58	solid	3099.5	35161.7	15119.5
442	C5H12O	tert-PENTYL-ALCOHOL	88.149	128.93	235.67	solid	3049.7	34597.1	14876.8
443	C5H12O	2-METHYL-1-BUTANOL	88.150	-----	263.66	liquid	3062.0	34736.2	14936.6
444	C5H12O	2-METHYL-2-BUTANOL	88.150	16.16	215.60	liquid	3039.1	34476.5	14824.9
445	C5H12O	3-METHYL-1-BUTANOL	88.150	-178.96	268.16	liquid	3062.3	34739.6	14938.0
446	C5H12O	3-METHYL-2-BUTANOL	88.150	-----	232.70	liquid	3052.0	34622.8	14887.8
447	C5H12O	1-PENTANOL	88.150	-107.66	280.04	liquid	3060.5	34719.2	14929.3
448	C5H12O	2-PENTANOL	88.150	-99.67	246.20	liquid	3051.5	34617.1	14885.4
449	C5H12O	3-PENTANOL	88.150	-92.20	239.54	liquid	3048.3	34580.8	14869.8
450	C5H12O	METHYL sec-BUTYL ETHER	88.150	-----	138.20	liquid	3110.0	35280.8	15170.7
451	C5H12O	METHYL tert-BUTYL ETHER	88.150	-163.48	131.36	liquid	3099.9	35166.2	15121.5
452	C5H12O	METHYL ISOBUTYL ETHER	88.150	-----	137.39	liquid	3122.0	35416.9	15229.3
453	C5H12O	ETHYL PROPYL ETHER	88.150	-197.50	146.95	liquid	3120.0	35394.2	15219.5
454	C5H12O2	ETHYLENE GLYCOL MONOPROPYL ETHER	104.149	-130.00	304.43	liquid	2949.0	28315.2	12175.5
455	C5H12O2	NEOPENTYL GLYCOL	104.149	260.33	409.73	solid	2868.0	27537.5	11841.1
456	C5H12O2	1,5-PENTANEDIOL	104.149	3.20	462.20	liquid	2887.3	27722.8	11920.8
457	C5H12O3	2-(2-METHOXYETHOXY)ETHANOL	120.148	-104.80	380.48	liquid	2790.0	23221.4	9985.2
458	C5H12O4	PENTAERYTHRITOL	136.148	501.80	676.13	solid	2498.1	18348.4	7889.8
459	C5H12S	n-PENTYL MERCAPTAN	104.216	-104.26	259.95	liquid	3565.7	34214.5	14712.2

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ F	$T_{boiling}$ F	state	$-\Delta H_{combustion}$ @ 77 F kjoule/mol	kjoule/kg	BTU/lb
460	C5H12S	BUTYL-METHYL-SULFIDE	104.210	-144.08	254.17	liquid	3583.2	34384.4	14785.3
461	C5H12S	ETHYL-PROPYL-SULFIDE	104.210	-178.60	245.30	liquid	3580.3	34357.1	14773.5
462	C5H12S	2-METHYL-2-BUTANETHIOL	104.210	-154.79	210.43	liquid	3561.3	34174.1	14694.9
463	C5H13N	n-PENTYLAMINE	87.165	-67.00	220.10	liquid	3387.0	38857.3	16708.7
464	C5H13NO2	METHYL DIETHANOLAMINE	119.164	-5.80	476.60	liquid	3060.0	25678.9	11041.9
465	C6Cl6	HEXACHLOROBENZENE	284.782	443.39	588.92	solid	2200.0	7725.2	3321.8
466	C6F6	HEXAFLUOROBENZENE	186.056	41.18	176.47	liquid	1369.4	7360.1	3164.9
467	C6H3ClN2O4	1-CHLORO-2,4-DINITROBENZENE	202.554	128.12	598.73	solid	2760.0	13626.0	5859.2
468	C6H3Cl2NO2	1,2-DICHLORO-4-NITROBENZENE	192.001	108.50	492.53	solid	2740.0	14270.8	6136.4
469	C6H3Cl3	1,2,4-TRICHLOROBENZENE	181.448	62.60	415.40	liquid	2656.3	14639.5	6295.0
470	C6H3N3O6	1,3,5-TRINITROBENZENE	213.106	257.45	886.73	solid	2679.9	12575.4	5407.4
471	C6H4Br2	m-DIBROMOBENZENE	235.906	19.58	424.40	liquid	2886.3	12235.0	5261.0
472	C6H4ClNO2	m-CHLORONITROBENZENE	157.556	112.10	456.08	solid	2820.0	17898.4	7696.3
473	C6H4ClNO2	o-CHLORONITROBENZENE	157.556	91.40	474.53	solid	2820.0	17898.4	7696.3
474	C6H4ClNO2	p-CHLORONITROBENZENE	157.556	182.30	467.60	solid	2820.0	17898.4	7696.3
475	C6H4Cl2	m-DICHLOROBENZENE	147.003	-12.57	343.54	liquid	2825.0	19217.3	8263.4
476	C6H4Cl2	o-DICHLOROBENZENE	147.003	1.40	356.76	liquid	2826.0	19224.1	8266.4
477	C6H4Cl2	p-DICHLOROBENZENE	147.003	127.38	345.31	solid	2802.0	19060.8	8196.2
478	C6H4F2	m-DIFLUOROBENZENE	114.094	-11.18	194.92	liquid	2503.1	21939.3	9433.9
479	C6H4F2	o-DIFLUOROBENZENE	114.094	-29.18	196.72	liquid	2519.1	22079.0	9494.0
480	C6H4F2	p-DIFLUOROBENZENE	114.094	8.62	191.93	liquid	2505.9	21963.5	9444.3
481	C6H4N2O4	m-DINITROBENZENE	168.109	195.53	571.73	solid	2813.5	16736.2	7196.6
482	C6H4N2O4	o-DINITROBENZENE	168.109	242.47	605.93	solid	2843.0	16911.6	7272.0
483	C6H4N2O4	p-DINITROBENZENE	168.109	344.21	569.93	solid	2806.2	16692.7	7177.9
484	C6H5Br	BROMOBENZENE	157.010	-23.30	312.96	liquid	3019.2	19229.3	8268.6
485	C6H5Cl	MONOCHLOROBENZENE	112.558	-49.36	269.10	liquid	2976.1	26440.6	11369.5
486	C6H5ClO	m-CHLOROPHENOL	128.558	91.13	416.93	solid	2760.0	21468.9	9231.6
487	C6H5ClO	o-CHLOROPHENOL	128.558	47.93	345.88	liquid	2790.0	21702.3	9332.0
488	C6H5ClO	p-CHLOROPHENOL	128.558	109.13	427.93	solid	2780.0	21624.5	9298.5
489	C6H5Cl2N	3,4-DICHLOROANILINE	162.018	160.70	521.33	solid	3000.0	18516.5	7962.1
490	C6H5F	FLUOROBENZENE	96.104	-43.98	184.51	liquid	2814.5	29286.0	12593.0
491	C6H5I	IODOBENZENE	204.010	-24.38	371.21	liquid	3047.7	14939.0	6423.8
492	C6H5NO2	NITROBENZENE	123.111	42.37	411.44	liquid	2978.2	24191.2	10402.2
493	C6H6	BENZENE	78.114	41.95	176.16	liquid	3135.6	40141.3	17260.8
494	C6H6ClN	m-CHLOROANILINE	127.573	13.28	443.30	liquid	3079.1	24136.0	10378.5
495	C6H6ClN	o-CHLOROANILINE	127.573	407.91	407.91	solid	3086.5	24194.0	10403.4
496	C6H6ClN	p-CHLOROANILINE	127.573	157.82	446.90	solid	3060.0	23986.3	10314.1
497	C6H6N2	cis-DICYANO-1-BUTENE	106.127	-11.47	442.13	liquid	3290.0	31000.6	13330.3
498	C6H6N2	trans-DICYANO-1-BUTENE	106.127	8.33	438.53	liquid	3290.0	31000.6	13330.3
499	C6H6N2	1,4-DICYANO-2-BUTENE	106.127	168.53	524.93	solid	3350.0	31566.0	13573.4
500	C6H6N2O2	m-NITROANILINE	138.126	237.20	582.53	solid	3060.0	22153.7	9526.1
501	C6H6N2O2	o-NITROANILINE	138.126	160.70	544.73	solid	3060.0	22153.7	9526.1
502	C6H6N2O2	p-NITROANILINE	138.126	297.50	636.80	solid	3050.0	22081.3	9495.0
503	C6H6O	PHENOL	94.113	105.64	359.31	solid	2921.4	31041.4	13347.8
504	C6H6O2	1,2-BENZENEDIOL	110.112	220.01	473.90	solid	2733.0	24820.2	10672.7
505	C6H6O2	1,3-BENZENEDIOL	110.112	227.93	529.70	solid	2719.0	24693.0	10618.0
506	C6H6O2	p-HYDROQUINONE	110.112	340.70	545.00	solid	2740.0	24883.8	10700.0
507	C6H6O3	1,2,3-BENZENETRIOL	126.112	272.93	587.66	solid	2540.0	20140.8	8660.6
508	C6H6S	PHENYL MERCAPTAN	110.180	5.20	336.45	liquid	3447.4	31288.8	13454.2
509	C6H7N	ANILINE	93.128	21.16	364.01	liquid	3238.5	34774.7	14953.1
510	C6H7N	2-METHYLPYRIDINE	93.128	-88.08	264.92	liquid	3263.9	35047.5	15070.4
511	C6H7N	3-METHYLPYRIDINE	93.128	-0.65	291.45	liquid	3269.1	35103.3	15094.4
512	C6H7N	4-METHYLPYRIDINE	93.128	38.44	293.63	liquid	3265.3	35062.5	15076.9
513	C6H8	1,3-CYCLOHEXADIENE	80.130	-169.87	176.61	liquid	3399.9	42429.8	18244.8
514	C6H8	METHYLCYCLOPENTADIENE	80.130	-----	163.00	liquid	3400.0	42431.0	18245.4
515	C6H8N2	ADIPONITRILE	108.143	36.48	563.00	liquid	3413.6	31565.6	13573.2
516	C6H8N2	METHYLGLUTARONITRILE	108.143	-49.00	505.40	liquid	3400.0	31439.9	13519.1
517	C6H8N2	m-PHENYLENEDIAMINE	108.143	141.53	548.33	solid	3320.0	30700.1	13201.0
518	C6H8N2	o-PHENYLENEDIAMINE	108.143	218.84	485.33	solid	3330.0	30792.6	13240.8
519	C6H8N2	p-PHENYLENEDIAMINE	108.143	283.73	512.33	solid	3330.0	30792.6	13240.8
520	C6H8N2	PHENYLHYDRAZINE	108.143	66.56	470.30	liquid	3470.9	32095.5	13801.1
521	C6H8N2O	BIS(CYANOETHYL)ETHER	124.142	-15.34	582.53	liquid	3260.0	26260.3	11291.9
522	C6H8O4	DIMETHYL MALEATE	144.127	-2.20	401.00	liquid	2647.5	18369.2	7898.8
523	C6H8O6	ASCORBIC ACID	176.126	377.60	686.93	solid	2163.9	12286.1	5283.0
524	C6H8O7	CITRIC ACID	192.125	307.40	726.53	solid	1784.0	9285.6	3992.8
525	C6H10	1-METHYLCYCLOPENTENE	82.145	-196.94	168.44	liquid	3538.5	43076.1	18522.7

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ F	$T_{boiling}$ F	state	$-\Delta H_{combustion}$ @ 77 F kjoule/mol	kjoule/kg	BTU/lb
526	C6H10	3-METHYLCYCLOPENTENE	82.145	-225.38	158.02	liquid	3552.8	43250.0	18597.5
527	C6H10	4-METHYLCYCLOPENTENE	82.145	-257.51	167.29	liquid	3558.4	43319.1	18627.2
528	C6H10	CYCLOHEXENE	82.145	-154.26	181.35	liquid	3531.4	42989.8	18485.6
529	C6H10	2,3-DIMETHYL-1,3-BUTADIENE	82.145	-104.80	155.80	liquid	3584.0	43630.2	18761.0
530	C6H10	1,5-HEXADIENE	82.145	-221.22	139.03	liquid	3620.0	44068.4	18949.4
531	C6H10	cis,trans-2,4-HEXADIENE	82.145	-140.98	182.30	liquid	3488.0	42461.5	18258.4
532	C6H10	trans,trans-2,4-HEXADIENE	82.145	-48.82	179.42	liquid	3580.0	43581.5	18740.0
533	C6H10	1-HEXYNE	82.145	-205.42	160.39	liquid	3661.0	44567.5	19164.0
534	C6H10	2-HEXYNE	82.145	-129.10	184.14	liquid	3640.0	44311.9	19054.1
535	C6H10	3-HEXYNE	82.145	-153.58	178.16	liquid	3640.0	44311.9	19054.1
536	C6H10O	CYCLOHEXANONE	98.145	-24.07	312.35	liquid	3298.8	33611.5	14452.9
537	C6H10O	MESITYL OXIDE	98.145	-63.40	265.64	liquid	3331.0	33939.6	14594.0
538	C6H10O2	epsilon-CAPROLACTONE	114.144	29.66	465.53	liquid	3083.8	27016.8	11617.2
539	C6H10O2	ETHYL METHACRYLATE	114.144	-----	242.60	liquid	3150.0	27596.7	11866.6
540	C6H10O2	n-PROPYL ACRYLATE	114.144	-----	246.20	liquid	3160.0	27684.3	11904.3
541	C6H10O3	ETHYLACETOACETATE	130.144	-38.20	357.44	liquid	2960.0	22744.0	9779.9
542	C6H10O3	PROPIONIC ANHYDRIDE	130.144	-49.00	336.20	liquid	2891.1	22214.6	9552.3
543	C6H10O4	ADIPIC ACID	146.143	306.23	640.13	solid	2580.0	17653.9	7591.2
544	C6H10O4	DIETHYL OXALATE	146.143	-41.08	366.26	liquid	2723.0	18632.4	8011.9
545	C6H10O4	ETHYLENE GLYCOL DIACETATE	146.143	-23.80	374.90	liquid	2704.7	18507.2	7958.1
546	C6H10O4	ETHYLIDENE DIACETATE	146.143	65.93	336.20	liquid	2700.0	18475.1	7944.3
547	C6H11N	HEXANENITRILE	97.160	-112.54	326.48	liquid	3637.0	37433.1	16096.2
548	C6H11NO	epsilon-CAPROLACTAM	113.159	156.58	518.00	solid	3362.1	29711.3	12775.9
549	C6H11NO	CYCLOHEXANONE OXIME	113.159	194.00	406.40	solid	3610.0	31902.0	13717.9
550	C6H12	CYCLOHEXANE	84.161	43.77	177.30	liquid	3655.8	43438.2	18678.4
551	C6H12	2,3-DIMETHYL-1-BUTENE	84.161	-251.07	132.10	liquid	3717.9	44176.0	18995.7
552	C6H12	2,3-DIMETHYL-2-BUTENE	84.161	-101.79	163.76	liquid	3710.6	44089.3	18958.4
553	C6H12	3,3-DIMETHYL-1-BUTENE	84.161	-175.36	106.25	liquid	3725.0	44260.4	19032.0
554	C6H12	2-ETHYL-1-BUTENE	84.161	-204.77	148.41	liquid	3724.9	44259.2	19031.5
555	C6H12	trans-3-METHYL-2-PENTENE	84.161	-217.21	158.81	liquid	3727.4	44289.2	19044.4
556	C6H12	1-HEXENE	84.161	-219.57	146.26	liquid	3739.4	44431.5	19105.5
557	C6H12	cis-2-HEXENE	84.161	-222.07	155.98	liquid	3728.1	44297.2	19047.8
558	C6H12	trans-2-HEXENE	84.161	-207.36	154.17	liquid	3726.5	44278.2	19039.6
559	C6H12	cis-3-HEXENE	84.161	-216.08	151.61	liquid	3733.0	44355.5	19072.8
560	C6H12	trans-3-HEXENE	84.161	-172.16	152.76	liquid	3726.0	44272.3	19037.1
561	C6H12	METHYLCYCLOPENTANE	84.161	-224.36	161.26	liquid	3673.7	43650.9	18769.9
562	C6H12	2-METHYL-1-PENTENE	84.161	-212.31	143.78	liquid	3722.1	44225.9	19017.2
563	C6H12	2-METHYL-2-PENTENE	84.161	-211.14	153.14	liquid	3713.5	44123.8	18973.2
564	C6H12	3-METHYL-1-PENTENE	84.161	-243.31	129.52	liquid	3734.0	44367.3	19078.0
565	C6H12	3-METHYL-cis-2-PENTENE	84.161	-210.71	153.86	liquid	3718.0	44177.2	18996.2
566	C6H12	4-METHYL-1-PENTENE	84.161	-244.55	128.95	liquid	3732.0	44343.6	19067.7
567	C6H12	4-METHYL-cis-2-PENTENE	84.161	-210.73	133.48	liquid	3725.0	44260.4	19032.0
568	C6H12	4-METHYL-trans-2-PENTENE	84.161	-221.44	137.48	liquid	3720.5	44206.9	19009.0
569	C6H12N2	TRIETHYLENEDIAMINE	112.175	321.98	345.20	solid	3760.0	33519.1	14413.2
570	C6H12O	BUTYL VINYL ETHER	100.161	-133.42	200.88	liquid	3591.4	35856.3	15418.2
571	C6H12O	CYCLOHEXANOL	100.161	74.21	321.53	liquid	3463.8	34582.3	14870.4
572	C6H12O	1-HEXANAL	100.161	-68.80	262.94	liquid	3521.8	35161.4	15119.4
573	C6H12O	ETHYL ISOPROPYL KETONE	100.161	-----	236.12	liquid	3486.0	34804.0	14965.7
574	C6H12O	2-HEXANONE	100.161	-68.44	261.86	liquid	3490.0	34843.9	14982.9
575	C6H12O	3-HEXANONE	100.161	-68.17	254.30	liquid	3492.0	34863.9	14991.5
576	C6H12O	METHYL ISOBUTYL KETONE	100.161	-119.20	241.70	liquid	3487.2	34815.9	14970.9
577	C6H12O2	n-PENTYL FORMATE	116.160	-100.30	272.21	liquid	3314.0	28529.6	12267.7
578	C6H12O2	n-BUTYL ACETATE	116.160	-100.30	258.80	liquid	3283.0	28262.7	12153.0
579	C6H12O2	sec-BUTYL ACETATE	116.160	-146.20	233.60	liquid	3267.1	28125.9	12094.1
580	C6H12O2	tert-BUTYL ACETATE	116.160	-----	204.80	liquid	3250.0	27978.7	12030.8
581	C6H12O2	ETHYL n-BUTYRATE	116.160	-144.40	250.70	liquid	3284.5	28275.7	12158.5
582	C6H12O2	ETHYL ISOBUTYRATE	116.160	-126.67	229.73	liquid	3270.0	28150.8	12104.9
583	C6H12O2	ISOBUTYL ACETATE	116.160	-145.93	241.97	liquid	3276.0	28202.5	12127.1
584	C6H12O2	n-PROPYL PROPIONATE	116.160	-104.62	252.50	liquid	3280.0	28236.9	12141.9
585	C6H12O2	CYCLOHEXYL PEROXIDE	116.160	-4.00	422.33	liquid	3540.0	30475.2	13104.3
586	C6H12O2	DIACETONE ALCOHOL	116.160	-47.20	334.13	liquid	3219.0	27711.8	11916.1
587	C6H12O2	2-ETHYL BUTYRIC ACID	116.160	5.00	380.84	liquid	3295.9	28373.8	12200.7
588	C6H12O2	n-HEXANOIC ACID	116.160	26.60	402.26	liquid	3228.7	27795.3	11952.0
589	C6H12O3	2-ETHOXYETHYL ACETATE	132.159	-79.06	313.34	liquid	3150.0	23834.9	10249.0
590	C6H12O3	HYDROXYCAPROIC ACID	132.159	141.53	577.13	solid	3130.0	23683.6	10183.9
591	C6H12O3	PARALDEHYDE	132.159	54.68	255.38	liquid	3125.2	23647.3	10168.3

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ F	$T_{boiling}$ F	state	$-\Delta H_{combustion}$ @ 77 F kjoule/mol	kjoule/kg	BTU/lb
592	C6H12O3	sec-BUTYL GLYCOLATE	132.160	-459.67	351.50	liquid	-----	-----	-----
593	C6H12S	THIACYCLOHEPTANE	116.221	66.18	287.15	liquid	3717.0	31982.5	13752.5
594	C6H13N	CYCLOHEXYLAMINE	99.176	0.14	274.10	liquid	3785.5	38169.5	16412.9
595	C6H13N	HEXAMETHYLENEIMINE	99.176	-34.60	269.06	liquid	3853.9	38859.2	16709.5
596	C6H14	2,2-DIMETHYLBUTANE	86.177	-145.97	121.51	liquid	3842.0	44582.7	19170.5
597	C6H14	2,3-DIMETHYLBUTANE	86.177	-198.33	136.36	liquid	3848.7	44660.4	19204.0
598	C6H14	n-HEXANE	86.177	-139.56	155.71	liquid	3855.2	44735.8	19236.4
599	C6H14	2-METHYLPENTANE	86.177	-244.48	140.47	liquid	3849.1	44665.0	19206.0
600	C6H14	3-METHYLPENTANE	86.177	-261.22	145.89	liquid	3851.4	44691.7	19217.4
601	C6H14N2O2	LYSINE	146.189	409.73	647.33	solid	3590.0	24557.3	10559.6
602	C6H14O	2-ETHYL-1-BUTANOL	102.177	-173.92	295.70	liquid	3671.4	35931.8	15450.7
603	C6H14O	1-HEXANOL	102.177	-48.28	314.60	liquid	3674.4	35961.1	15463.3
604	C6H14O	2-HEXANOL	102.177	-58.27	283.80	liquid	3666.0	35878.9	15427.9
605	C6H14O	2-METHYL-1-PENTANOL	102.177	-----	298.40	liquid	3673.4	35951.3	15459.1
606	C6H14O	4-METHYL-2-PENTANOL	102.177	-----	269.06	liquid	3661.3	35832.9	15408.2
607	C6H14O	n-BUTYL ETHYL ETHER	102.177	-153.40	197.96	liquid	3725.1	36457.3	15676.6
608	C6H14O	DIISOPROPYL ETHER	102.177	-121.90	154.94	liquid	3702.3	36234.2	15580.7
609	C6H14O	DI-n-PROPYL ETHER	102.177	-189.76	193.35	liquid	3725.0	36456.3	15676.2
610	C6H14O	METHYL tert-PENTYL ETHER	102.177	-----	187.34	liquid	3710.0	36309.5	15613.1
611	C6H14O2	ACETAL	118.176	-148.00	218.48	liquid	3562.7	30147.4	12963.4
612	C6H14O2	2-BUTOXYETHANOL	118.176	-94.00	340.38	liquid	3550.0	30039.9	12917.2
613	C6H14O2	1,6-HEXANEDIOL	118.176	107.60	469.40	solid	3487.5	29511.1	12689.8
614	C6H14O2	HEXYLENE GLYCOL	118.176	-58.00	387.50	liquid	3435.6	29071.9	12500.9
615	C6H14O2S	DI-n-PROPYL SULFONE	150.242	85.73	517.73	solid	3800.0	25292.5	10875.8
616	C6H14O3	DIETHYLENE GLYCOL DIMETHYL ETHER	134.175	-94.00	319.57	liquid	3489.0	26003.4	11181.4
617	C6H14O3	DIPROPYLENE GLYCOL	134.175	-40.27	449.24	liquid	3340.0	24892.9	10703.9
618	C6H14O3	2-(2-ETHOXYETHOXY)ETHANOL	134.175	-108.40	395.60	liquid	3420.0	25489.1	10960.3
619	C6H14O3	TRIMETHYLOLPROPANE	134.175	136.40	552.00	solid	3413.7	25442.1	10940.1
620	C6H14O4	TRIETHYLENE GLYCOL	150.175	18.75	532.13	liquid	3249.8	21640.1	9305.2
621	C6H14O6	SORBITOL	182.174	207.86	938.93	solid	2914.7	15999.5	6879.8
622	C6H14S	n-HEXYLMERCAPTAN	118.243	-112.95	306.79	liquid	4176.0	35317.1	15186.4
623	C6H14S	BUTYL-ETHYL-SULFIDE	118.237	-139.22	291.67	liquid	4193.6	35468.2	15251.3
624	C6H14S	ISOPROPYL-SULFIDE	118.237	-152.86	248.07	liquid	4179.1	35345.0	15198.4
625	C6H14S	METHYL-PENTYL-SULFIDE	118.237	-137.18	262.42	liquid	4196.9	35495.5	15263.0
626	C6H14S	PROPYL-SULFIDE	118.237	-152.86	289.13	liquid	4193.6	35467.5	15251.0
627	C6H14S2	PROPYL-DISULFIDE	150.297	-121.85	376.70	liquid	4494.3	29902.5	12858.1
628	C6H15Al	TRIETHYL ALUMINUN	114.167	-62.50	365.00	liquid	4820.2	42220.6	18154.9
629	C6H15Al2Cl3	ETHYL ALUMINUM SESQUICHLORIDE	247.506	-4.00	408.20	liquid	-----	-----	-----
630	C6H15N	DIISOPROPYLAMINE	101.192	-141.34	183.02	liquid	3990.0	39430.0	16954.9
631	C6H15N	DI-n-PROPYLAMINE	101.192	-81.40	227.93	liquid	4018.9	39715.6	17077.7
632	C6H15N	n-HEXYLAMINE	101.192	-6.34	268.70	liquid	4000.0	39528.8	16997.4
633	C6H15N	TRIETHYLAMINE	101.192	-174.46	191.79	liquid	4040.5	39929.0	17169.5
634	C6H15NO	6-AMINOHEXANOL	117.191	136.13	454.73	solid	3850.0	32852.4	14126.5
635	C6H15NO2	DIISOPROPANOLAMINE	133.191	113.00	479.75	solid	3720.0	27929.8	12009.8
636	C6H15NO3	TRIETHANOLAMINE	149.190	70.16	643.73	liquid	3510.8	23532.4	10118.9
637	C6H15N3	N-AMINOETHYL PIPERAZINE	129.205	-2.20	428.72	liquid	4135.0	32003.4	13761.5
638	C6H15O4P	TRIETHYL PHOSPHATE	182.156	-70.87	411.80	liquid	3848.6	21128.0	9085.1
639	C6H16N2	HEXAMETHYLENEDIAMINE	116.207	105.44	395.40	solid	4196.9	36115.7	15529.8
640	C6H18N3OP	HEXAMETHYL PHOSPHORAMIDE	179.202	44.60	451.40	liquid	4920.0	27455.1	11805.7
641	C6H18N4	TRIETHYLENE TETRAMINE	146.236	53.60	511.70	liquid	4450.0	30430.3	13085.0
642	C6H18OSi2	HEXAMETHYLDISILOXANE	162.379	-90.80	212.94	liquid	5542.4	34132.5	14677.0
643	C6H18O3Si3	HEXAMETHYLCYCLOTRISILOXANE	222.464	147.20	275.20	solid	5490.0	24678.2	10611.6
644	C6H19NSi2	HEXAMETHYLDISILAZANE	161.395	-----	258.80	liquid	5960.0	36928.0	15879.1
645	C7H3ClF3NO2	4-CHLORO-3-NITROBENZOTRIFLUORIDE	225.554	-----	431.60	liquid	2418.7	10723.4	4611.1
646	C7H3Cl2F3	2,4-DICHLOROBENZOTRIFLUORIDE	215.001	-14.08	351.50	liquid	2414.7	11231.1	4829.4
647	C7H3Cl2NO	3,4-DICHLOROPHENYL ISOCYANATE	188.012	109.40	442.13	solid	3110.0	16541.5	7112.8
648	C7H4ClF3	p-CHLOROBENZOTRIFLUORIDE	180.557	-32.80	282.20	liquid	2574.9	14260.9	6132.2
649	C7H4Cl2O	m-CHLOROBENZOYL CHLORIDE	175.014	44.33	436.73	liquid	3413.7	19505.3	8387.3
650	C7H4F3NO2	3-NITROBENZOTRIFLUORIDE	191.110	29.93	397.00	liquid	2580.0	13500.1	5805.0
651	C7H5ClO	BENZOYL CHLORIDE	140.569	31.10	386.60	liquid	3203.8	22791.7	9800.4
652	C7H5ClO2	o-CHLOROBENZOIC ACID	156.568	287.60	548.60	solid	3037.1	19398.0	8341.1
653	C7H5Cl3	BENZOTRICHLORIDE	195.475	23.45	416.30	liquid	3291.8	16840.0	7241.2
654	C7H5F3	BENZOTRIFLUORIDE	146.112	-20.22	215.69	liquid	2741.2	18761.0	8067.2
655	C7H5N	BENZONITRILE	103.123	9.05	375.80	liquid	3522.4	34157.3	14687.6
656	C7H5NO	PHENYL ISOCYANATE	119.123	-22.00	330.08	liquid	3360.0	28206.1	12128.6
657	C7H5N3O6	2,4,6-TRINITROTOLUENE	227.133	177.53	571.73	solid	3291.9	14493.3	6232.1

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ F	$T_{boiling}$ F	state	$-\Delta H_{combustion}$ @ 77 F kjoule/mol	kjoule/kg	BTU/lb
658	C7H6Cl2	BENZYL DICHLORIDE	161.030	2.93	416.93	liquid	3440.0	21362.5	9185.9
659	C7H6Cl2	2,4-DICHLOROTOLUENE	161.030	7.70	393.98	liquid	3413.4	21197.3	9114.8
660	C7H6N2O4	2,4-DINITROTOLUENE	182.136	157.73	602.33	solid	3416.0	18755.2	8064.7
661	C7H6N2O4	2,5-DINITROTOLUENE	182.136	126.50	602.33	solid	3446.0	18919.9	8135.6
662	C7H6N2O4	2,6-DINITROTOLUENE	182.136	150.53	544.73	solid	3429.0	18826.6	8095.4
663	C7H6N2O4	3,4-DINITROTOLUENE	182.136	137.93	638.33	solid	3466.0	19029.7	8182.8
664	C7H6N2O4	3,5-DINITROTOLUENE	182.136	198.50	598.73	solid	3437.0	18870.5	8114.3
665	C7H6O	BENZALDEHYDE	106.124	-14.80	353.75	liquid	3393.1	31973.0	13748.4
666	C7H6O2	BENZOIC ACID	122.123	252.27	480.65	solid	3095.1	25344.1	10898.0
667	C7H6O2	p-HYDROXYBENZALDEHYDE	122.123	242.60	590.00	solid	3317.0	27161.1	11679.3
668	C7H6O2	SALICYLALDEHYDE	122.123	19.40	385.70	liquid	3200.2	26204.7	11268.0
669	C7H6O3	SALICYLIC ACID	138.123	317.48	492.53	solid	2894.7	20957.4	9011.7
670	C7H7Br	p-BROMOTOLUENE	171.037	80.24	363.83	solid	3620.0	21165.0	9101.0
671	C7H7Cl	BENZYL CHLORIDE	126.585	-38.20	354.92	liquid	3570.4	28205.6	12128.4
672	C7H7Cl	o-CHLOROTOLUENE	126.585	-33.70	318.47	liquid	3570.0	28202.4	12127.0
673	C7H7Cl	p-CHLOROTOLUENE	126.585	45.50	324.50	liquid	3570.0	28202.4	12127.0
674	C7H7F	p-FLUOROTOLUENE	110.131	-70.22	241.90	liquid	3416.2	31019.1	13338.2
675	C7H7NO	FORMANILIDE	121.139	122.00	519.80	solid	3450.0	28479.7	12246.3
676	C7H7NO2	m-NITROTOLUENE	137.138	60.89	449.33	liquid	3570.0	26032.2	11193.8
677	C7H7NO2	o-NITROTOLUENE	137.138	26.29	432.48	liquid	3590.0	26178.0	11256.5
678	C7H7NO2	p-NITROTOLUENE	137.138	124.88	461.30	solid	3550.0	25886.3	11131.1
679	C7H7NO3	o-NITROANISOLE	153.138	50.81	523.40	liquid	3440.0	22463.4	9659.3
680	C7H8	TOLUENE	92.141	-138.95	231.13	liquid	3733.9	40523.8	17425.2
681	C7H8	1,3,5-CYCLOHEPTATRIENE	92.140	-111.08	239.90	liquid	3870.7	42008.4	18063.6
682	C7H8O	ANISOLE	108.140	-35.50	308.44	liquid	3601.8	33306.8	14321.9
683	C7H8O	BENZYL ALCOHOL	108.140	4.46	400.46	liquid	3561.3	32932.3	14160.9
684	C7H8O	m-CRESOL	108.140	54.03	396.10	liquid	3527.8	32622.5	14027.7
685	C7H8O	o-CRESOL	108.140	87.87	375.80	solid	3517.4	32526.4	13986.3
686	C7H8O	p-CRESOL	108.140	94.60	395.56	solid	3522.6	32574.4	14007.0
687	C7H8O2	GUAIACOL	124.139	88.70	401.00	solid	3470.0	27952.5	12019.6
688	C7H8O2	p-METHOXYPHENOL	124.139	132.53	469.13	solid	3400.0	27388.7	11777.1
689	C7H9N	BENZYLAMINE	107.155	-50.80	364.10	liquid	3850.0	35929.3	15449.6
690	C7H9N	2,6-DIMETHYLPYRIDINE	107.155	20.93	291.29	liquid	3855.6	35981.5	15472.1
691	C7H9N	N-METHYLANILINE	107.155	-70.60	384.57	liquid	3900.0	36395.9	15650.2
692	C7H9N	m-TOLUIDINE	107.155	-22.72	398.12	liquid	3840.0	35835.9	15409.5
693	C7H9N	o-TOLUIDINE	107.155	-10.62	392.72	liquid	3840.0	35835.9	15409.5
694	C7H9N	p-TOLUIDINE	107.155	110.75	392.45	solid	3830.0	35742.6	15369.3
695	C7H10	2-NORBORNENE	94.156	115.25	203.90	solid	4020.0	42695.1	18358.9
696	C7H10N2	TOLUENEDIAMINE	122.170	208.58	543.20	solid	4022.1	32922.2	14156.5
697	C7H11NO	CYCLOHEXYL ISOCYANATE	125.170	-----	336.20	liquid	3850.0	30758.2	13226.0
698	C7H12	1-HEPTYNE	96.172	-113.60	211.48	liquid	4280.0	44503.7	19136.6
699	C7H12O2	n-BUTYL ACRYLATE	128.171	-84.28	298.13	liquid	3766.3	29385.0	12635.5
700	C7H12O2	ISOBUTYL ACRYLATE	128.171	-78.07	269.60	liquid	3770.0	29413.8	12647.9
701	C7H12O2	n-PROPYL METHACRYLATE	128.171	-----	285.53	liquid	3760.0	29335.8	12614.4
702	C7H12O4	DIETHYL MALONATE	160.170	-56.02	390.02	liquid	3362.0	20990.2	9025.8
703	C7H14	CYCLOHEPTANE	98.188	17.60	245.82	liquid	4289.7	43688.6	18786.1
704	C7H14	1,1-DIMETYLCYCLOPENTANE	98.188	-93.62	190.13	liquid	4275.2	43541.0	18722.6
705	C7H14	cis-1,2-DIMETHYLCYCLOPENTANE	98.188	-65.00	211.15	liquid	4282.0	43610.2	18752.4
706	C7H14	trans-1,2-DIMETHYLCYCLOPENTANE	98.188	-179.63	197.37	liquid	4276.1	43550.1	18726.6
707	C7H14	cis-1,3-DIMETHYLCYCLOPENTANE	98.188	-208.66	195.39	liquid	4277.1	43560.3	18730.9
708	C7H14	trans-1,3-DIMETHYLCYCLOPENTANE	98.188	-209.15	197.11	liquid	4279.0	43579.7	18739.3
709	C7H14	ETHYLCYCLOPENTANE	98.188	-217.19	218.25	liquid	4283.9	43629.6	18760.7
710	C7H14	2-ETHYL-1-PENTENE	98.188	-157.27	201.20	liquid	4337.0	44170.4	18993.3
711	C7H14	3-ETHYL-1-PENTENE	98.188	-197.46	183.40	liquid	4349.0	44292.6	19045.8
712	C7H14	1-HEPTENE	98.188	-181.98	200.55	liquid	4349.5	44297.7	19048.0
713	C7H14	cis-2-HEPTENE	98.188	-164.47	209.14	liquid	4342.4	44225.4	19016.9
714	C7H14	trans-2-HEPTENE	98.188	-165.06	208.31	liquid	4340.0	44200.9	19006.4
715	C7H14	cis-3-HEPTENE	98.188	-213.95	204.35	liquid	4343.3	44234.5	19020.8
716	C7H14	trans-3-HEPTENE	98.188	-213.93	204.21	liquid	4340.0	44200.9	19006.4
717	C7H14	METHYLCYCLOHEXANE	98.188	-195.83	213.67	liquid	4257.1	43356.6	18643.3
718	C7H14	2-METHYL-1-HEXENE	98.188	-153.17	197.31	liquid	4335.0	44150.0	18984.5
719	C7H14	3-METHYL-1-HEXENE	98.188	-198.67	183.02	liquid	4346.0	44262.0	19032.7
720	C7H14	4-METHYL-1-HEXENE	98.188	-222.61	188.11	liquid	4350.0	44302.8	19050.2
721	C7H14	2,3,3-TRIMETHYL-1-BUTENE	98.188	-165.73	172.20	liquid	4329.9	44098.1	18962.2
722	C7H14O	DIISOPROPYL KETONE	114.188	-91.01	255.92	liquid	4095.0	35861.9	15420.6
723	C7H14O	2-HEPTANONE	114.188	-31.00	303.62	liquid	4099.5	35901.3	15437.6

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ F	$T_{boiling}$ F	state	$-\Delta H_{combustion}$ @ 77 F kjoule/mol	kjoule/kg	BTU/lb
724	C7H14O	1-HEPTANAL	114.188	-45.40	307.04	liquid	4136.0	36221.0	15575.0
725	C7H14O	1-METHYLCYCLOHEXANOL	114.188	78.80	314.60	solid	4057.8	35536.1	15280.5
726	C7H14O	cis-2-METHYLCYCLOHEXANOL	114.188	44.60	329.00	liquid	4057.4	35532.6	15279.0
727	C7H14O	trans-2-METHYLCYCLOHEXANOL	114.188	24.80	331.70	liquid	4031.8	35308.4	15182.6
728	C7H14O	cis-3-METHYLCYCLOHEXANOL	114.188	22.10	334.40	liquid	4031.4	35304.9	15181.1
729	C7H14O	trans-3-METHYLCYCLOHEXANOL	114.188	31.10	334.40	liquid	4053.2	35495.8	15263.2
730	C7H14O	cis-4-METHYLCYCLOHEXANOL	114.188	-----	339.80	liquid	4034.4	35331.2	15192.4
731	C7H14O	trans-4-METHYLCYCLOHEXANOL	114.188	-----	339.80	liquid	4014.3	35155.2	15116.7
732	C7H14O	5-METHYL-2-HEXANONE	114.188	-101.02	292.64	liquid	4100.0	35905.7	15439.5
733	C7H14O2	n-BUTYL PROPIONATE	130.187	-129.14	295.88	liquid	3900.0	29956.9	12881.5
734	C7H14O2	ETHYL ISOVALERATE	130.187	-146.74	273.74	liquid	3876.5	29776.4	12803.9
735	C7H14O2	ISOPENTYL ACETATE	130.187	-109.30	287.78	liquid	3889.9	29879.3	12848.1
736	C7H14O2	n-PENTYL ACETATE	130.187	-95.44	300.20	liquid	3893.1	29903.9	12858.7
737	C7H14O2	n-PROPYL n-BUTYRATE	130.187	-139.36	289.94	liquid	3904.8	29993.8	12897.3
738	C7H14O2	n-HEPTANOIC ACID	130.187	18.82	433.40	liquid	3839.3	29490.7	12681.0
739	C7H14O3	ETHYL-3-ETHOXYPROPIONATE	146.186	-----	329.00	liquid	3760.0	25720.7	11059.9
740	C7H15Br	1-BROMOHEPTANE	179.100	-68.98	354.02	liquid	4330.0	24176.4	10395.9
741	C7H15N	N-METHYLCYCLOHEXYLAMINE	113.203	16.70	299.93	liquid	4420.0	39044.9	16789.3
742	C7H16	2,2-DIMETHYLPENTANE	100.204	-190.86	174.54	liquid	4450.8	44417.4	19099.5
743	C7H16	2,3-DIMETHYLPENTANE	100.204	-----	193.60	liquid	4460.7	44516.2	19142.0
744	C7H16	2,4-DIMETHYLPENTANE	100.204	-182.63	176.88	liquid	4454.5	44454.3	19115.4
745	C7H16	3,3-DIMETHYLPENTANE	100.204	-210.01	186.91	liquid	4456.3	44472.3	19123.1
746	C7H16	3-ETHYLPENTANE	100.204	-181.48	200.25	liquid	4464.6	44555.1	19158.7
747	C7H16	n-HEPTANE	100.204	-131.04	209.17	liquid	4464.9	44558.1	19160.0
748	C7H16	2-METHYLHEXANE	100.204	-180.85	194.09	liquid	4459.6	44505.2	19137.2
749	C7H16	3-METHYLHEXANE	100.204	-182.92	197.33	liquid	4462.7	44536.1	19150.5
750	C7H16	2,2,3-TRIMETHYLBUTANE	100.204	-12.24	177.58	liquid	4452.6	44435.4	19107.2
751	C7H16O	1-HEPTANOL	116.203	-29.20	349.34	liquid	4288.7	36907.0	15870.0
752	C7H16O	2-HEPTANOL	116.203	-22.27	318.56	liquid	4330.0	37262.4	16022.8
753	C7H16O	5-METHYL-1-HEXANOL	116.203	-----	341.60	liquid	4290.0	36918.2	15874.8
754	C7H16O	ISOPROPYL-TERT-BUTYL-ETHER	116.203	-139.63	221.92	liquid	4303.7	37035.6	15925.3
755	C7H16S	n-HEPTYL MERCAPTAN	132.270	-45.81	350.49	liquid	4786.0	36183.6	15558.9
756	C7H16S	BUTYL-PROPYL-SULFIDE	132.263	-87.68	339.82	liquid	4807.8	36350.7	15630.8
757	C7H16S	ETHYL-PENTYL-SULFIDE	132.263	-87.68	339.82	liquid	4805.4	36332.0	15622.8
758	C7H16S	HEXYL-METHYL-SULFIDE	132.263	-87.68	339.82	liquid	4807.8	36350.3	15630.6
759	C7H17N	1-AMINOHEPTANE	115.219	-2.20	314.42	liquid	4610.0	40010.8	17204.6
760	C8H4Cl2O2	ISOPHTHALOYL CHLORIDE	203.024	110.93	528.53	solid	3330.0	16402.0	7052.9
761	C8H4O3	PHTHALIC ANHYDRIDE	148.118	268.00	544.10	solid	3171.5	21412.0	9207.2
762	C8H6	ETHYNYLBENZENE	102.135	-23.12	293.38	liquid	4166.4	40792.7	17540.8
763	C8H6O4	ISOPHTHALIC ACID	166.133	654.80	895.73	solid	3070.7	18483.4	7947.9
764	C8H6O4	PHTHALIC ACID	166.133	375.80	616.73	solid	3091.5	18608.6	8001.7
765	C8H6O4	TEREPHTHALIC ACID	166.133	800.60	1037.93	solid	3057.6	18404.5	7913.9
766	C8H6S	BENZOTHIOPHENE	134.202	88.43	427.82	solid	4336.0	32309.5	13893.1
767	C8H7N	INDOLE	117.150	32.95	487.40	liquid	4081.1	34836.5	14979.7
768	C8H8	STYRENE	104.152	-23.10	293.29	liquid	4219.3	40511.0	17419.7
769	C8H8	1,3,5,7-CYCLOOCTATETRAENE	104.151	19.42	284.02	liquid	4379.2	42046.9	18080.2
770	C8H8O	ACETOPHENONE	120.151	68.90	395.60	liquid	3973.0	33066.7	14218.7
771	C8H8O	p-TOLUALDEHYDE	120.151	-----	399.20	liquid	3990.0	33208.2	14279.5
772	C8H8O2	METHYL BENZOATE	136.150	9.68	391.10	liquid	3772.0	27704.7	11913.0
773	C8H8O2	o-TOLUIC ACID	136.150	218.66	497.93	solid	3699.0	27168.6	11682.5
774	C8H8O2	p-TOLUIC ACID	136.150	355.28	527.00	solid	3692.2	27118.6	11661.0
775	C8H8O3	METHYL SALICYLATE	152.150	17.60	428.90	liquid	3583.8	23554.4	10128.4
776	C8H8O3	VANILLIN	152.150	179.33	544.73	solid	3660.0	24055.2	10343.7
777	C8H9NO	ACETANILIDE	135.166	236.30	578.84	solid	4026.0	29785.6	12807.8
778	C8H10	ETHYLBENZENE	106.167	-138.91	277.16	liquid	4344.8	40924.2	17597.4
779	C8H10	m-XYLENE	106.167	-54.13	282.42	liquid	4331.8	40801.8	17544.8
780	C8H10	o-XYLENE	106.167	-13.31	291.97	liquid	4332.8	40811.2	17548.8
781	C8H10	p-XYLENE	106.167	55.87	281.05	liquid	4332.8	40811.2	17548.8
782	C8H10O	m-ETHYLPHENOL	122.167	-----	400.12	liquid	-----	-----	-----
783	C8H10O	p-ETHYLPHENOL	122.167	113.14	424.38	solid	4133.0	33830.7	14547.2
784	C8H10O	PHENETOLE	122.167	-21.14	338.00	liquid	4204.8	34418.5	14799.9
785	C8H10O	2-PHENYLETHANOL	122.167	-15.07	426.02	liquid	4180.0	34215.5	14712.6
786	C8H10O	2,3-XYLENOL	122.167	162.61	422.46	solid	4116.0	33691.6	14487.4
787	C8H10O	2,4-XYLENOL	122.167	76.15	411.76	liquid	4128.4	33793.1	14531.0
788	C8H10O	2,5-XYLENOL	122.167	166.71	412.12	solid	4110.6	33647.4	14468.4
789	C8H10O	2,6-XYLENOL	122.167	114.10	393.93	solid	4119.8	33722.7	14500.8

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ F	$T_{boiling}$ F	state	$-\Delta H_{combustion}$ @ 77 F kjoule/mol	kjoule/kg	BTU/lb
790	C8H10O	3,4-XYLENOL	122.167	149.18	440.60	solid	4114.9	33682.6	14483.5
791	C8H10O	3,5-XYLENOL	122.167	146.19	431.13	solid	4112.8	33665.4	14476.1
792	C8H11N	N,N-DIMETHYLANILINE	121.182	36.41	380.37	liquid	4525.0	37340.5	16056.4
793	C8H11N	o-ETHYLANILINE	121.182	-51.88	409.10	liquid	4450.0	36721.6	15790.3
794	C8H11N	2,4,6-TRIMETHYLPYRIDINE	121.182	-47.47	339.53	liquid	4450.0	36721.6	15790.3
795	C8H11NO	p-PHENETIDINE	137.181	38.93	490.73	liquid	4310.0	31418.3	13509.9
796	C8H12	1,5-CYCLOOCTADIENE	108.183	-92.51	302.22	liquid	4660.0	43075.2	18522.3
797	C8H12	VINYLCYCLOHEXENE	108.183	-164.47	262.13	liquid	4626.0	42760.9	18387.2
798	C8H12O4	1,4-CYCLOHEXANEDICARBOXYLIC ACID	172.181	594.50	744.53	solid	3623.0	21041.8	9048.0
799	C8H12O4	DIETHYL MALEATE	172.181	16.16	437.00	liquid	3800.0	22069.8	9490.0
800	C8H14O2	n-BUTYL METHACRYLATE	142.198	-----	321.53	liquid	4420.0	31083.4	13365.9
801	C8H14O3	BUTYRIC ANHYDRIDE	158.197	-99.94	383.00	liquid	4118.7	26035.3	11195.2
802	C8H14O4	DIETHYL SUCCINATE	174.197	-5.44	421.70	liquid	3920.0	22503.3	9676.4
803	C8H16	CYCLOOCTANE	112.214	58.01	304.07	liquid	4925.5	43893.5	18874.2
804	C8H16	1,1-DIMETHYLCYCLOHEXANE	112.215	-28.28	247.19	liquid	4863.9	43344.5	18638.1
805	C8H16	cis-1,2-DIMETHYLCYCLOHEXANE	112.215	-57.98	265.62	liquid	4870.8	43406.0	18664.6
806	C8H16	trans-1,2-DIMETHYLCYCLOHEXANE	112.215	-126.69	254.17	liquid	4864.4	43348.9	18640.0
807	C8H16	cis-1,3-DIMETHYLCYCLOHEXANE	112.215	-104.03	248.16	liquid	4859.7	43307.0	18622.0
808	C8H16	trans-1,3-DIMETHYLCYCLOHEXANE	112.215	-130.14	256.03	liquid	4866.9	43371.2	18649.6
809	C8H16	cis-1,4-DIMETHYLCYCLOHEXANE	112.215	-125.37	255.78	liquid	4867.0	43372.1	18650.0
810	C8H16	trans-1,4-DIMETHYLCYCLOHEXANE	112.215	-34.49	246.85	liquid	4860.3	43312.4	18624.3
811	C8H16	ETHYLCYCLOHEXANE	112.215	-168.36	269.24	liquid	4870.5	43403.3	18663.4
812	C8H16	2-ETHYL-1-HEXENE	112.215	-----	248.00	liquid	4950.0	44111.7	18968.1
813	C8H16	1-METHYL-1-ETHYLCYCLOPENTANE	112.215	-226.84	250.74	liquid	4889.2	43569.9	18735.1
814	C8H16	1-OCTENE	112.215	-151.06	250.32	liquid	4960.6	44206.2	19008.7
815	C8H16	trans-2-OCTENE	112.215	-125.86	257.00	liquid	4950.0	44111.7	18968.1
816	C8H16	trans-3-OCTENE	112.215	-166.00	253.94	liquid	4950.0	44111.7	18968.1
817	C8H16	trans-4-OCTENE	112.215	-136.80	252.07	liquid	4950.0	44111.7	18968.1
818	C8H16	n-PROPYLCYCLOPENTANE	112.215	-179.19	267.73	liquid	4893.6	43609.1	18751.9
819	C8H16	2,4,4-TRIMETHYL-1-PENTENE	112.215	-136.21	214.59	liquid	4937.3	43998.6	18919.4
820	C8H16	2,4,4-TRIMETHYL-2-PENTENE	112.215	-159.36	220.84	liquid	4940.5	44027.1	18931.6
821	C8H16O	2-ETHYLHEXANAL	128.214	-----	321.17	liquid	4734.4	36925.8	15878.1
822	C8H16O	1-OCTANAL	128.214	-16.87	345.20	liquid	4745.4	37011.6	15915.0
823	C8H16O	2-OCTANONE	128.214	-4.54	342.68	liquid	4701.0	36665.3	15766.1
824	C8H16O2	n-BUTYL n-BUTYRATE	144.214	-133.60	329.00	liquid	4502.6	31221.7	13425.3
825	C8H16O2	n-HEXYL ACETATE	144.214	-113.62	340.70	liquid	4505.0	31238.3	13432.5
826	C8H16O2	ISOBUTYL ISOBUTYRATE	144.214	-113.26	297.50	liquid	4488.6	31124.6	13383.6
827	C8H16O2	n-OCTANOIC ACID	144.214	61.70	463.82	liquid	4448.3	30845.1	13263.4
828	C8H16O4	DIETHYLENE GLYCOL ETHYL ETHER ACETATE	176.213	-13.00	423.32	liquid	4240.0	24061.8	10346.6
829	C8H18	2,2-DIMETHYLHEXANE	114.231	-186.12	224.31	liquid	5062.6	44319.0	19057.2
830	C8H18	2,3-DIMETHYLHEXANE	114.231	-----	240.10	liquid	5071.9	44400.4	19092.2
831	C8H18	2,4-DIMETHYLHEXANE	114.231	-----	228.97	liquid	5067.3	44360.1	19074.8
832	C8H18	2,5-DIMETHYLHEXANE	114.231	-132.07	228.40	liquid	5064.1	44332.1	19062.8
833	C8H18	3,3-DIMETHYLHEXANE	114.231	-194.98	233.55	liquid	5066.9	44356.6	19073.3
834	C8H18	3,4-DIMETHYLHEXANE	114.231	-----	243.91	liquid	5072.8	44408.3	19095.6
835	C8H18	3-ETHYLHEXANE	114.231	-----	245.37	liquid	5074.1	44419.6	19100.4
836	C8H18	3-ETHYL-2-METHYLPENTANE	114.230	-174.91	240.19	liquid	5085.4	44518.8	19143.1
837	C8H18	3-METHYL-3-ETHYLPENTANE	114.231	-131.57	244.89	liquid	5071.6	44397.8	19091.0
838	C8H18	2-METHYLHEPTANE	114.231	-164.18	243.77	liquid	5069.4	44378.5	19082.8
839	C8H18	3-METHYLHEPTANE	114.231	-184.99	246.07	liquid	5072.1	44402.1	19092.9
840	C8H18	4-METHYLHEPTANE	114.231	-185.71	243.88	liquid	5072.8	44408.3	19095.6
841	C8H18	n-OCTANE	114.231	-70.19	258.22	liquid	5074.1	44419.6	19100.4
842	C8H18	2,2,3-TRIMETHYLPENTANE	114.231	-170.07	229.73	liquid	5067.5	44361.9	19075.6
843	C8H18	2,2,4-TRIMETHYLPENTANE	114.231	-161.27	210.63	liquid	5065.3	44342.6	19067.3
844	C8H18	2,3,3-TRIMETHYLPENTANE	114.231	-149.67	238.59	liquid	5068.8	44373.2	19080.5
845	C8H18	2,3,4-TRIMETHYLPENTANE	114.231	-164.56	236.25	liquid	5069.4	44378.5	19082.8
846	C8H18	2,2,3,3-TETRAMETHYLBUTANE	114.230	-149.22	223.61	liquid	5072.2	44403.7	19093.6
847	C8H18O	DI-n-BUTYL ETHER	130.230	-139.36	284.52	liquid	4947.2	37988.2	16334.9
848	C8H18O	DI-sec-BUTYL ETHER	130.230	-148.00	249.89	liquid	4923.3	37804.7	16256.0
849	C8H18O	DI-tert-BUTYL ETHER	130.230	-108.67	225.05	liquid	4925.0	37817.7	16261.6
850	C8H18O	2-ETHYL-1-HEXANOL	130.230	-94.00	364.28	liquid	4892.1	37565.1	16153.0
851	C8H18O	1-OCTANOL	130.230	4.10	383.36	liquid	4899.5	37621.9	16177.4
852	C8H18O	2-OCTANOL	130.230	-24.88	355.64	liquid	4881.4	37482.9	16117.7
853	C8H18O2	DI-t-BUTYL PEROXIDE	146.230	-40.00	231.80	liquid	4940.0	33782.4	14526.4
854	C8H18O2S	DI-n-BUTYL SULFONE	178.296	112.73	555.53	solid	5010.0	28099.3	12082.7
855	C8H18O3	DIETHYLENE GLYCOL DIETHYL ETHER	162.229	-47.74	372.20	liquid	4690.0	28909.8	12431.2

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ F	$T_{boiling}$ F	state	$-\Delta H_{combustion}$ @ 77 F kjoule/mol	kjoule/kg	BTU/lb
856	C8H18O3	DIETHYLENE GLYCOL MONOBUTYL ETHER	162.229	-90.40	447.80	liquid	4640.0	28601.5	12298.7
857	C8H18O4	TRIETHYLENE GLYCOL DIMETHYL ETHER	178.229	-46.84	420.80	liquid	4580.0	25697.3	11049.8
858	C8H18O5	TETRAETHYLENE GLYCOL	194.228	23.00	586.13	liquid	4380.0	22550.8	9696.9
859	C8H18S	n-OCTYL MERCAPTAN	146.297	-56.56	390.27	liquid	5397.0	36890.7	15863.0
860	C8H18S	tert-OCTYL MERCAPTAN	146.297	-101.47	312.53	liquid	5370.0	36706.2	15783.6
861	C8H18S	BUTYL-SULFIDE	146.290	-81.92	359.60	liquid	5420.3	37052.0	15932.4
862	C8H18S	ETHYL-HEXYL-SULFIDE	146.290	-81.92	383.02	liquid	5418.0	37036.0	15925.5
863	C8H18S	HEPTYL-METHYL-SULFIDE	146.290	-81.92	383.02	liquid	5420.4	37052.5	15932.6
864	C8H18S	PENTYL-PROPYL-SULFIDE	146.290	-81.92	383.02	liquid	5417.8	37034.8	15925.0
865	C8H18S2	BUTYL-DISULFIDE	178.350	-95.78	448.18	liquid	5719.9	32071.2	13790.6
866	C8H19N	DI-n-BUTYLAMINE	129.246	-79.60	317.93	liquid	5239.7	40540.5	17432.4
867	C8H19N	DIISOBUTYLAMINE	129.246	-94.00	282.38	liquid	5227.0	40442.3	17390.2
868	C8H19N	n-OCTYLAMINE	129.246	31.28	355.28	liquid	5220.0	40388.1	17366.9
869	C8H23N5	TETRAETHYLENEPENTAMINE	189.304	-22.27	631.40	liquid	5830.0	30797.0	13242.7
870	C8H24O4Si4	OCTAMETHYLCYCLOTETRASILOXANE	296.618	63.77	347.00	liquid	7368.0	24840.0	10681.2
871	C9H4O5	TRIMELLITIC ANHYDRIDE	192.128	329.00	733.73	solid	3120.0	16239.2	6982.8
872	C9H6N2O2	TOLUENE DIISOCYANATE	174.159	57.00	482.00	liquid	3970.3	22797.0	9802.7
873	C9H7N	ISOQUINOLINE	129.161	79.34	469.85	solid	4533.3	35098.1	15092.2
874	C9H7N	QUINOLINE	129.161	5.18	459.68	liquid	4544.2	35182.4	15128.5
875	C9H7NO	8-HYDROXYQUINOLINE	145.161	163.13	512.33	solid	4300.0	29622.3	12737.6
876	C9H8	INDENE	116.163	29.39	360.72	liquid	4619.5	39767.4	17100.0
877	C9H8O	2-METHYLBENZOFURAN	132.162	-----	387.50	liquid	4450.0	33670.8	14478.4
878	C9H10	INDANE	118.178	-60.54	352.35	liquid	4762.0	40295.1	17326.9
879	C9H10	cis-PROPENYLBENZENE	118.178	-79.02	338.02	liquid	4836.1	40922.1	17596.5
880	C9H10	trans-PROPENYLBENZENE	118.178	-20.79	338.02	liquid	4831.9	40886.7	17581.3
881	C9H10	alpha-METHYLSTYRENE	118.178	-9.76	329.90	liquid	4817.9	40768.2	17530.3
882	C9H10	m-METHYLSTYRENE	118.178	-123.41	340.88	liquid	4818.0	40769.0	17530.7
883	C9H10	o-METHYLSTYRENE	118.178	-91.43	337.66	liquid	4820.0	40785.9	17538.0
884	C9H10	p-METHYLSTYRENE	118.178	-29.43	343.00	liquid	4822.9	40810.5	17548.5
885	C9H10O2	BENZYL ACETATE	150.177	-60.70	416.30	liquid	4381.9	29178.2	12546.6
886	C9H10O2	ETHYL BENZOATE	150.177	-30.46	416.12	liquid	4410.0	29365.3	12627.1
887	C9H10O3	ETHYL VANILLIN	166.177	171.50	560.93	solid	4250.0	25575.1	10997.3
888	C9H11NO	p-DIMETHYLAMINOBENZALDEHYDE	149.192	166.73	598.73	solid	4730.0	31704.1	13632.8
889	C9H12	CUMENE	120.194	-140.82	306.34	liquid	4951.3	41194.2	17713.5
890	C9H12	m-ETHYLTOLUENE	120.194	-139.97	322.39	liquid	4943.8	41131.8	17686.7
891	C9H12	o-ETHYLTOLUENE	120.194	-113.44	329.32	liquid	4946.1	41151.0	17694.9
892	C9H12	p-ETHYLTOLUENE	120.194	-80.18	323.62	liquid	4942.7	41122.7	17682.8
893	C9H12	MESITYLENE	120.194	-48.44	328.53	liquid	4929.1	41009.5	17634.1
894	C9H12	n-PROPYLBENZENE	120.194	-147.06	318.63	liquid	4954.1	41217.5	17723.5
895	C9H12	1,2,3-TRIMETHYLBENZENE	120.194	-13.65	349.02	liquid	4934.0	41050.3	17651.6
896	C9H12	1,2,4-TRIMETHYLBENZENE	120.194	-46.79	336.88	liquid	4930.7	41022.8	17639.8
897	C9H12O	BENZYL ETHYL ETHER	136.194	36.50	365.00	liquid	4826.8	35440.6	15239.5
898	C9H12O	2-PHENYL-2-PROPANOL	136.194	96.80	395.60	solid	4690.0	34436.2	14807.6
899	C9H12O2	CUMENE HYDROPEROXIDE	152.193	16.00	337.19	liquid	4844.4	31830.6	13687.2
900	C9H14O	ISOPHORONE	138.210	17.42	419.36	liquid	4932.9	35691.3	15347.3
901	C9H14O6	GLYCERYL TRIACETATE	218.207	39.38	498.20	liquid	3903.0	17886.7	7691.3
902	C9H16	1-NONYNE	124.225	-57.98	303.46	liquid	5505.3	44317.5	19056.5
903	C9H16O4	AZELAIC ACID	188.224	223.70	680.38	solid	4422.4	23495.4	10103.0
904	C9H18	BUTYLCYCLOPENTANE	126.241	-162.35	313.90	liquid	5518.4	43713.4	18796.7
905	C9H18	cis,cis-1,3,5-TRIMETHYLCYCLOHEXANE	126.241	-57.44	281.32	liquid	5474.2	43362.8	18646.0
906	C9H18	cis,trans-1,3,5-TRIMETHYLCYCLOHEXANE	126.241	-119.90	284.99	liquid	5481.5	43420.7	18670.9
907	C9H18	ISOPROPYLCYCLOHEXANE	126.242	-128.90	310.57	liquid	5480.0	43408.7	18665.7
908	C9H18	1-NONENE	126.242	-114.47	296.37	liquid	5569.1	44114.5	18969.2
909	C9H18	n-PROPYLCYCLOHEXANE	126.242	-138.77	314.15	liquid	5479.7	43406.3	18664.7
910	C9H18O	DIISOBUTYL KETONE	142.241	-50.76	334.87	liquid	5310.0	37331.0	16052.3
911	C9H18O	1-NONANAL	142.241	-0.40	383.00	liquid	5355.8	37653.0	16190.8
912	C9H18O2	n-BUTYL VALERATE	158.241	-135.04	367.70	liquid	5105.0	32260.9	13872.2
913	C9H18O2	n-NONANOIC ACID	158.241	54.32	492.08	liquid	5060.6	31980.3	13751.5
914	C9H18O2	n-OCTYL FORMATE	158.241	-38.38	389.84	liquid	5157.0	32589.5	14013.5
915	C9H20	3,3-DIETHYLPENTANE	128.258	-27.45	295.14	liquid	5684.4	44320.0	19057.6
916	C9H20	2,2-DIMETHYL-3-ETHYLPENTANE	128.258	-147.05	272.91	liquid	5687.1	44341.1	19066.7
917	C9H20	3-ETHYL-2,3-DIMETHYLPENTANE	128.257	-147.06	292.48	liquid	5696.6	44415.4	19098.6
918	C9H20	2,4-DIMETHYL-3-ETHYLPENTANE	128.258	-188.25	278.10	liquid	5690.0	44363.7	19076.4
919	C9H20	2,2-DIMETHYLHEPTANE	128.258	-171.40	270.84	liquid	5672.0	44223.4	19016.0
920	C9H20	2,6-DIMETHYLHEPTANE	128.258	-153.22	275.38	liquid	5673.8	44237.4	19022.1
921	C9H20	3-ETHYLHEPTANE	128.258	-174.82	289.76	liquid	5683.8	44315.4	19055.6

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ F	$T_{boiling}$ F	state	$-\Delta H_{combustion}$ @ 77 F kjoule/mol	kjoule/kg	BTU/lb
922	C9H20	4-ETHYLHEPTANE	128.257	-171.74	286.18	liquid	5698.3	44429.1	19104.5
923	C9H20	2,3-DIMETHYLHEPTANE	128.257	-171.38	284.92	liquid	5693.7	44392.9	19088.9
924	C9H20	2,4-DIMETHYLHEPTANE	128.257	-171.38	271.22	liquid	5689.6	44360.9	19075.2
925	C9H20	2,5-DIMETHYLHEPTANE	128.257	-171.38	276.82	liquid	5689.3	44358.9	19074.3
926	C9H20	3,4-DIMETHYLHEPTANE	128.257	-153.20	285.10	liquid	5696.3	44413.4	19097.8
927	C9H20	3,5-DIMETHYLHEPTANE	128.257	-153.20	276.82	liquid	5692.2	44381.1	19083.9
928	C9H20	4,4-DIMETHYLHEPTANE	128.257	-153.20	275.38	liquid	5688.5	44352.4	19071.5
929	C9H20	3-ETHYL-2-METHYLHEXANE	128.257	-171.38	280.42	liquid	5696.7	44416.4	19099.0
930	C9H20	4-ETHYL-2-METHYLHEXANE	128.257	-171.38	272.86	liquid	5692.2	44381.1	19083.9
931	C9H20	3-ETHYL-3-METHYLHEXANE	128.257	-171.38	285.10	liquid	5693.4	44390.6	19088.0
932	C9H20	3-ETHYL-4-METHYLHEXANE	128.257	-171.38	284.74	liquid	5699.2	44435.6	19107.3
933	C9H20	2,2,3-TRIMETHYLHEXANE	128.257	-183.98	272.48	liquid	5689.5	44359.9	19074.8
934	C9H20	2,2,4-TRIMETHYLHEXANE	128.257	-184.27	259.77	liquid	5688.2	44350.1	19070.6
935	C9H20	2,3,3-TRIMETHYLHEXANE	128.257	-178.22	279.84	liquid	5691.6	44376.9	19082.1
936	C9H20	2,3,4-TRIMETHYLHEXANE	128.257	-178.22	282.29	liquid	5694.7	44400.7	19092.3
937	C9H20	2,3,5-TRIMETHYLHEXANE	128.257	-198.02	268.43	liquid	5687.8	44347.2	19069.3
938	C9H20	2,4,4-TRIMETHYLHEXANE	128.257	-172.07	267.19	liquid	5690.3	44366.4	19077.6
939	C9H20	3,3,4-TRIMETHYLHEXANE	128.257	-150.14	284.85	liquid	5694.4	44398.1	19091.2
940	C9H20	2-METHYLOCTANE	128.258	-112.67	289.90	liquid	5679.1	44278.7	19039.8
941	C9H20	3-METHYLOCTANE	128.258	-161.68	291.61	liquid	5681.2	44295.1	19046.9
942	C9H20	4-METHYLOCTANE	128.258	-171.76	288.39	liquid	5680.2	44287.3	19043.5
943	C9H20	n-NONANE	128.258	-64.34	303.48	liquid	5685.1	44325.5	19060.0
944	C9H20	2,2,3,3-TETRAMETHYLPENTANE	128.258	14.20	284.52	liquid	5681.5	44297.4	19047.9
945	C9H20	2,2,3,4-TETRAMETHYLPENTANE	128.258	-185.96	271.45	liquid	5684.0	44316.9	19056.3
946	C9H20	2,2,4,4-TETRAMETHYLPENTANE	128.258	-87.16	252.12	liquid	5679.8	44284.2	19042.2
947	C9H20	2,3,3,4-TETRAMETHYLPENTANE	128.257	-151.69	286.83	liquid	5694.3	44397.4	19090.9
948	C9H20	2,2,5-TRIMETHYLHEXANE	128.258	-158.37	255.36	liquid	5666.4	44179.7	18997.3
949	C9H20O	2,6-DIMETHYL-4-HEPTANOL	144.257	-85.27	352.13	liquid	5490.0	38057.1	16364.5
950	C9H20O	1-NONANOL	144.257	23.00	415.58	liquid	5500.7	38131.3	16396.4
951	C9H20O	2-NONANOL	144.257	-31.00	389.30	liquid	5490.0	38057.1	16364.5
952	C9H20S	n-NONYL MERCAPTAN	160.324	-4.18	427.64	liquid	6006.1	37462.3	16108.8
953	C9H20S	BUTYL-PENTYL-SULFIDE	160.317	-43.58	424.42	liquid	6029.7	37610.8	16172.6
954	C9H20S	ETHYL-HEPTYL-SULFIDE	160.317	-43.58	424.42	liquid	6030.6	37616.5	16175.1
955	C9H20S	HEXYL-PROPYL-SULFIDE	160.317	-43.58	424.42	liquid	6030.4	37615.8	16174.8
956	C9H20S	METHYL-OCTYL-SULFIDE	160.317	-43.58	424.42	liquid	6033.0	37631.7	16181.6
957	C9H21N	n-NONYLAMINE	143.272	32.00	395.96	liquid	5830.0	40691.8	17497.5
958	C9H21N	TRIPROPYLAMINE	143.272	-136.30	313.70	liquid	5874.0	40998.9	17629.5
959	C10H6O8	PYROMELLITIC ACID	254.153	537.53	839.93	solid	3190.0	12551.5	5397.1
960	C10H7Br	1-BROMONAPHTHALENE	207.070	43.16	537.98	liquid	4882.4	23578.5	10138.8
961	C10H7Cl	1-CHLORONAPHTHALENE	162.618	24.80	498.74	liquid	4836.4	29740.9	12788.6
962	C10H8	NAPHTHALENE	128.174	176.50	424.38	solid	4980.9	38860.5	16710.0
963	C10H8	AZULENE	128.173	-147.08	467.62	liquid	5129.0	40016.6	17207.1
964	C10H9N	QUINALDINE	143.188	30.20	475.88	liquid	5232.0	36539.4	15711.9
965	C10H10	m-DIVINYLBENZENE	130.189	-88.42	391.10	liquid	5300.0	40710.0	17505.3
966	C10H10	1-METHYLINDENE	130.189	-----	389.30	liquid	5210.0	40018.7	17208.1
967	C10H10	2-METHYLINDENE	130.189	176.00	364.73	solid	5260.0	40402.8	17373.2
968	C10H10O4	DIMETHYL PHTHALATE	194.187	30.20	542.66	liquid	4408.9	22704.4	9762.9
969	C10H10O4	DIMETHYL TEREPHTHALATE	194.187	285.17	550.40	solid	4411.5	22717.8	9768.7
970	C10H12	DICYCLOPENTADIENE	132.205	92.93	337.73	solid	5540.0	41904.6	18019.0
971	C10H12	1,2,3,4-TETRAHYDRONAPHTHALENE	132.205	-32.35	405.72	liquid	5357.5	40524.2	17425.4
972	C10H12O	ANETHOLE	148.205	70.43	455.54	liquid	5280.0	35626.3	15319.3
973	C10H12O4	DIALLYL MALEATE	196.203	-52.60	476.33	liquid	4790.0	24413.5	10497.8
974	C10H14	n-BUTYLBENZENE	134.221	-126.13	361.96	liquid	5564.4	41457.0	17826.5
975	C10H14	sec-BUTYLBENZENE	134.221	-103.77	343.99	liquid	5561.4	41434.6	17816.9
976	C10H14	tert-BUTYLBENZENE	134.221	-72.18	336.47	liquid	5557.1	41402.6	17803.1
977	C10H14	1,2,3,4-TETRAMETHYLBENZENE	134.221	20.77	401.18	liquid	5544.8	41311.3	17763.8
978	C10H14	m-CYMENE	134.221	-82.68	347.14	liquid	5549.2	41343.8	17777.8
979	C10H14	o-CYMENE	134.221	-96.72	352.72	liquid	5554.5	41383.2	17794.8
980	C10H14	p-CYMENE	134.221	-90.22	350.83	liquid	5549.8	41348.2	17779.7
981	C10H14	m-DIETHYLBENZENE	134.221	-119.00	358.05	liquid	5554.3	41381.8	17794.2
982	C10H14	o-DIETHYLBENZENE	134.221	-24.20	362.23	liquid	5559.3	41419.0	17810.2
983	C10H14	p-DIETHYLBENZENE	134.221	-45.09	362.82	liquid	5550.0	41349.7	17780.4
984	C10H14	2-ETHYL-m-XYLENE	134.221	2.73	374.07	liquid	5548.0	41334.8	17774.0
985	C10H14	2-ETHYL-p-XYLENE	134.221	-64.53	368.29	liquid	5543.0	41297.6	17758.0
986	C10H14	3-ETHYL-o-XYLENE	134.221	-57.12	381.13	liquid	5547.3	41329.6	17771.7
987	C10H14	4-ETHYL-m-XYLENE	134.221	-81.18	371.19	liquid	5544.0	41305.0	17761.2

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ F	$T_{boiling}$ F	state	$-\Delta H_{combustion}$ @ 77 F kjoule/mol	kjoule/kg	BTU/lb
988	C10H14	4-ETHYL-o-XYLENE	134.221	-88.47	373.60	liquid	5542.0	41290.1	17754.7
989	C10H14	5-ETHYL-m-XYLENE	134.221	-119.79	362.80	liquid	5540.0	41275.2	17748.3
990	C10H14	ISOBUTYLBENZENE	134.221	-60.61	343.02	liquid	5558.0	41409.3	17806.0
991	C10H14	1,2,3,5-TETRAMETHYLBENZENE	134.221	-10.64	388.40	liquid	5532.0	41215.6	17722.7
992	C10H14	1,2,4,5-TETRAMETHYLBENZENE	134.221	174.61	386.31	solid	5529.8	41199.2	17715.7
993	C10H14O	p-tert-BUTYLPHENOL	150.221	209.14	463.51	solid	5360.0	35680.8	15342.7
994	C10H14O2	p-tert-BUTYLCATECHOL	166.220	125.33	544.73	solid	5170.0	31103.4	13374.4
995	C10H15N	N,N-DIETYHLANILINE	149.236	-36.40	421.29	liquid	5730.0	38395.6	16510.1
996	C10H15N	2,6-DIETHYLANILINE	149.236	38.30	455.90	liquid	5650.0	37859.5	16279.6
997	C10H16	CAMPHENE	136.237	116.60	320.90	solid	5790.0	42499.5	18274.8
998	C10H16	D-LIMONENE	136.237	-101.47	349.70	liquid	5815.4	42685.9	18354.9
999	C10H16	alpha-PHELLANDRENE	136.237	-----	347.00	liquid	5810.0	42646.3	18337.9
1000	C10H16	beta-PHELLANDRENE	136.237	-----	345.20	liquid	5810.0	42646.3	18337.9
1001	C10H16	alpha-PINENE	136.237	-83.20	313.05	liquid	5850.0	42939.9	18464.1
1002	C10H16	beta-PINENE	136.237	-78.77	330.87	liquid	5860.0	43013.3	18495.7
1003	C10H16	alpha-TERPINENE	136.237	-----	350.96	liquid	5800.0	42572.9	18306.3
1004	C10H16	gamma-TERPINENE	136.237	-----	361.40	liquid	5810.0	42646.3	18337.9
1005	C10H16	TERPINOLENE	136.237	-----	365.00	liquid	-----	-----	-----
1006	C10H16O	CAMPHOR	152.236	356.18	405.36	solid	5560.0	36522.2	15704.6
1007	C10H18	1-DECYNE	138.252	-47.18	345.22	liquid	6118.1	44253.4	19029.0
1008	C10H18	cis-DECAHYDRONANPHTALENE	138.253	-45.31	384.48	liquid	5892.1	42618.2	18325.8
1009	C10H18	trans-DECAHYDRONAPHTHALENE	138.253	-22.65	369.16	liquid	5880.9	42537.2	18291.0
1010	C10H18O4	SEBACIC ACID	202.251	274.10	696.09	solid	5029.0	24865.1	10692.0
1011	C10H20	n-BUTYLCYCLOHEXANE	140.269	-102.51	357.76	liquid	6090.2	43418.0	18669.7
1012	C10H20	1-CYCLOPENTYLPENTANE	140.268	-117.38	357.10	liquid	6131.1	43709.8	18795.2
1013	C10H20	1-DECENE	140.269	-87.27	339.08	liquid	6178.2	44045.4	18939.5
1014	C10H20O	1-DECANAL	156.268	21.20	419.00	liquid	5964.4	38167.8	16412.1
1015	C10H20O2	n-DECANOIC ACID	172.268	88.88	518.00	solid	5752.0	33389.8	14357.6
1016	C10H20O2	2-ETHYLHEXYL ACETATE	172.268	-135.40	389.48	liquid	5720.0	33204.1	14277.8
1017	C10H20O2	ISOPENTYL ISOVALERATE	172.268	-72.67	381.20	liquid	5713.1	33164.0	14260.5
1018	C10H22	n-DECANE	142.285	-21.39	345.47	liquid	6294.2	44236.6	19021.7
1019	C10H22	2,2-DIMETHYLOCTANE	142.285	-102.37	332.60	liquid	6281.0	44143.8	18981.8
1020	C10H22	2-METHYLNONANE	142.285	-120.64	334.04	liquid	6288.8	44198.6	19005.4
1021	C10H22	3-ETHYLOCTANE	142.285	-145.66	330.26	liquid	6308.9	44339.7	19066.1
1022	C10H22	4-ETHYLOCTANE	142.285	-125.86	329.27	liquid	6309.4	44343.3	19067.6
1023	C10H22	2,3-DIMETHYLOCTANE	142.284	-125.84	331.72	liquid	6311.0	44355.2	19072.7
1024	C10H22	2,4-DIMETHYLOCTANE	142.284	-125.84	326.57	liquid	6311.3	44357.0	19073.5
1025	C10H22	2,5-DIMETHYLOCTANE	142.285	-----	314.42	liquid	6296.7	44254.2	19029.3
1026	C10H22	2,6-DIMETHYLOCTANE	142.284	-65.18	327.78	liquid	6302.0	44291.8	19045.5
1027	C10H22	2,7-DIMETHYLOCTANE	142.284	-65.18	312.64	liquid	6307.2	44328.6	19061.3
1028	C10H22	3,3-DIMETHYLOCTANE	142.284	-65.18	317.32	liquid	6302.4	44294.5	19046.6
1029	C10H22	3,4-DIMETHYLOCTANE	142.284	-65.18	320.70	liquid	6302.0	44291.8	19045.5
1030	C10H22	3,5-DIMETHYLOCTANE	142.284	-65.18	319.78	liquid	6299.1	44271.2	19036.6
1031	C10H22	3,6-DIMETHYLOCTANE	142.284	-65.18	322.18	liquid	6301.5	44288.3	19044.0
1032	C10H22	4,4-DIMETHYLOCTANE	142.284	-65.18	326.14	liquid	6309.9	44347.4	19069.4
1033	C10H22	4,5-DIMETHYLOCTANE	142.284	-65.18	318.94	liquid	6305.4	44315.4	19055.6
1034	C10H22	4-PROPYLHEPTANE	142.284	-65.18	321.46	liquid	6305.0	44313.0	19054.6
1035	C10H22	4-ISOPROPYLHEPTANE	142.284	-65.18	315.52	liquid	6301.9	44290.9	19045.1
1036	C10H22	3-ETHYL-2-METHYLHEPTANE	142.284	-65.18	323.85	liquid	6310.1	44348.6	19069.9
1037	C10H22	4-ETHYL-2-METHYLHEPTANE	142.284	-65.18	315.52	liquid	6312.1	44363.0	19076.1
1038	C10H22	5-ETHYL-2-METHYLHEPTANE	142.284	-65.18	318.04	liquid	6312.8	44367.4	19078.0
1039	C10H22	3-ETHYL-3-METHYLHEPTANE	142.284	-65.18	322.18	liquid	6310.2	44349.5	19070.3
1040	C10H22	4-ETHYL-3-METHYLHEPTANE	142.284	-65.18	313.18	liquid	6305.7	44318.0	19056.7
1041	C10H22	3-ETHYL-5-METHYLHEPTANE	142.284	-65.18	319.48	liquid	6305.4	44315.4	19055.6
1042	C10H22	3-ETHYL-4-METHYLHEPTANE	142.284	-65.18	326.86	liquid	6306.9	44325.9	19060.2
1043	C10H22	4-ETHYL-4-METHYLHEPTANE	142.284	-65.18	323.98	liquid	6313.2	44370.3	19079.2
1044	C10H22	2,2,3-TRIMETHYLHEPTANE	142.284	-65.18	316.78	liquid	6308.3	44335.6	19064.3
1045	C10H22	2,2,4-TRIMETHYLHEPTANE	142.284	-65.18	325.42	liquid	6313.1	44369.8	19079.0
1046	C10H22	3-METHYLNONANE	142.284	-65.18	321.46	liquid	6291.0	44214.4	19012.2
1047	C10H22	2,2,5-TRIMETHYLHEPTANE	142.284	-65.18	315.70	liquid	6302.4	44294.5	19046.6
1048	C10H22	2,2,6-TRIMETHYLHEPTANE	142.284	-65.18	298.96	liquid	6301.1	44285.4	19042.7
1049	C10H22	2,3,3-TRIMETHYLHEPTANE	142.284	-65.18	303.46	liquid	6292.9	44228.0	19018.0
1050	C10H22	2,3,4-TRIMETHYLHEPTANE	142.284	-65.18	300.09	liquid	6290.0	44207.1	19009.1
1051	C10H22	2,3,5-TRIMETHYLHEPTANE	142.284	-65.18	320.38	liquid	6304.7	44310.6	19053.6
1052	C10H22	2,3,6-TRIMETHYLHEPTANE	142.284	-65.18	319.84	liquid	6308.3	44336.2	19064.6
1053	C10H22	2,4,4-TRIMETHYLHEPTANE	142.284	-65.18	321.28	liquid	6303.7	44303.3	19050.4

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ F	$T_{boiling}$ F	state	$-\Delta H_{combustion}$ @ 77 F kjoule/mol	kjoule/kg	BTU/lb
1054	C10H22	2,4,5-TRIMETHYLHEPTANE	142.284	-65.18	312.82	liquid	6300.6	44281.8	19041.2
1055	C10H22	2,4,6-TRIMETHYLHEPTANE	142.284	-65.18	303.82	liquid	6303.5	44302.4	19050.0
1056	C10H22	2,5,5-TRIMETHYLHEPTANE	142.284	-65.18	313.72	liquid	6303.7	44303.6	19050.5
1057	C10H22	3,3,4-TRIMETHYLHEPTANE	142.284	-65.18	297.70	liquid	6311.2	44356.5	19073.3
1058	C10H22	3,3,5-TRIMETHYLHEPTANE	142.284	-65.18	307.06	liquid	6295.2	44243.9	19024.9
1059	C10H22	3,4,4-TRIMETHYLHEPTANE	142.284	-65.18	323.44	liquid	6307.6	44330.9	19062.3
1060	C10H22	3,4,5-TRIMETHYLHEPTANE	142.284	-65.18	312.26	liquid	6306.1	44320.6	19057.9
1061	C10H22	3-ISOPROPYL-2-METHYLHEXANE	142.284	-65.18	322.00	liquid	6307.7	44331.8	19062.7
1062	C10H22	3,3-DIETHYLHEXANE	142.284	-65.18	324.52	liquid	6311.1	44355.3	19072.8
1063	C10H22	3,4-DIETHYLHEXANE	142.284	-65.18	332.08	liquid	6309.0	44341.2	19066.7
1064	C10H22	3-ETHYL-2,2-DIMETHYLHEXANE	142.284	-65.18	331.36	liquid	6312.1	44362.4	19075.8
1065	C10H22	4-ETHYL-2,2-DIMETHYLHEXANE	142.284	-65.18	327.04	liquid	6316.1	44390.9	19088.1
1066	C10H22	3-ETHYL-2,3-DIMETHYLHEXANE	142.284	-65.18	313.00	liquid	6305.7	44317.7	19056.6
1067	C10H22	4-ETHYL-2,3-DIMETHYLHEXANE	142.284	-65.18	296.62	liquid	6304.2	44306.8	19051.9
1068	C10H22	3-ETHYL-2,4-DIMETHYLHEXANE	142.284	-65.18	326.68	liquid	6310.0	44347.7	19069.5
1069	C10H22	4-ETHYL-2,4-DIMETHYLHEXANE	142.284	-65.18	321.64	liquid	6311.3	44356.8	19073.4
1070	C10H22	3-ETHYL-2,5-DIMETHYLHEXANE	142.284	-65.18	320.20	liquid	6311.3	44357.4	19073.7
1071	C10H22	4-ETHYL-3,3-DIMETHYLHEXANE	142.284	-65.18	322.00	liquid	6308.1	44334.5	19063.8
1072	C10H22	3-ETHYL-3,4-DIMETHYLHEXANE	142.284	-65.18	309.40	liquid	6304.0	44305.7	19051.4
1073	C10H22	4-METHYLNONANE	142.284	-65.18	325.24	liquid	6291.0	44214.4	19012.2
1074	C10H22	2,2,3,3-TETRAMETHYLHEXANE	142.284	-65.18	323.80	liquid	6313.1	44369.5	19078.9
1075	C10H22	2,2,3,4-TETRAMETHYLHEXANE	142.284	-65.18	320.59	liquid	6307.1	44327.7	19060.9
1076	C10H22	2,2,3,5-TETRAMETHYLHEXANE	142.284	-65.18	317.86	liquid	6311.6	44359.2	19074.4
1077	C10H22	2,2,4,4-TETRAMETHYLHEXANE	142.284	-65.18	299.14	liquid	6296.1	44250.4	19027.7
1078	C10H22	2,2,4,5-TETRAMETHYLHEXANE	142.284	-65.18	308.86	liquid	6309.0	44340.6	19066.5
1079	C10H22	2,2,5,5-TETRAMETHYLHEXANE	142.284	-65.18	298.20	liquid	6299.4	44273.3	19037.5
1080	C10H22	2,3,3,4-TETRAMETHYLHEXANE	142.284	9.34	279.46	liquid	6280.8	44142.7	18981.4
1081	C10H22	2,3,3,5-TETRAMETHYLHEXANE	142.284	9.34	328.28	liquid	6310.6	44351.8	19071.3
1082	C10H22	2,3,4,4-TETRAMETHYLHEXANE	142.284	9.34	307.60	liquid	6306.4	44322.4	19058.6
1083	C10H22	2,3,4,5-TETRAMETHYLHEXANE	142.284	9.34	322.90	liquid	6313.7	44374.2	19080.9
1084	C10H22	3,3,4,4-TETRAMETHYLHEXANE	142.284	9.34	313.18	liquid	6306.5	44323.0	19058.9
1085	C10H22	2,4-DIMETHYL-3-ISOPROPYLPENTANE	142.284	9.34	338.02	liquid	6313.7	44374.2	19080.9
1086	C10H22	3,3-DIETHYL-2-METHYLPENTANE	142.284	-115.04	314.69	liquid	6307.0	44326.5	19060.4
1087	C10H22	3-ETHYL-2,2,3-TRIMETHYLPENTANE	142.284	-115.04	337.48	liquid	6314.9	44382.4	19084.4
1088	C10H22	3-ETHYL-2,2,4-TRIMETHYLPENTANE	142.284	-115.04	337.12	liquid	6312.3	44363.9	19076.5
1089	C10H22	3-ETHYL-2,3,4-TRIMETHYLPENTANE	142.284	-115.04	311.56	liquid	6311.9	44360.9	19075.2
1090	C10H22	2,2,3,3,4-PENTAMETHYLPENTANE	142.284	-115.04	337.01	liquid	6312.9	44368.3	19078.4
1091	C10H22	2,2,3,4,4-PENTAMETHYLPENTANE	142.284	-33.59	330.91	liquid	6317.8	44402.7	19093.2
1092	C10H22	5-METHYLNONANE	142.284	-37.73	318.74	liquid	6291.0	44214.4	19012.2
1093	C10H22O	1-DECANOL	158.284	44.42	446.36	liquid	6117.0	38645.7	16617.7
1094	C10H22O	DI-n-PENTYL ETHER	158.284	-92.97	368.15	liquid	6170.0	38980.6	16761.6
1095	C10H22O	ISODECANOL	158.284	-76.00	427.73	liquid	6110.0	38601.5	16598.6
1096	C10H22O5	TETRAETHYLENE GLYCOL DIMETHYL ETHER	222.282	-21.46	528.44	liquid	5640.0	25373.2	10910.5
1097	C10H22S	n-DECYL MERCAPTAN	174.351	-14.06	462.56	liquid	6616.0	37946.4	16317.0
1098	C10H22S	BUTYL-HEXYL-SULFIDE	174.344	-30.98	464.02	liquid	6642.3	38098.9	16382.5
1099	C10H22S	ETHYL-OCTYL-SULFIDE	174.344	-30.98	464.02	liquid	6643.2	38104.0	16384.7
1100	C10H22S	HEPTYL-PROPYL-SULFIDE	174.344	-30.98	464.02	liquid	6643.1	38103.3	16384.4
1101	C10H22S	METHYL-NONYL-SULFIDE	174.344	-30.98	464.02	liquid	6645.6	38117.9	16390.7
1102	C10H22S	PENTYL-SULFIDE	174.344	-30.98	464.02	liquid	6642.3	38098.9	16382.5
1103	C10H22S2	PENTYL-DISULFIDE	206.404	-74.18	507.04	liquid	6946.3	33653.9	14471.2
1104	C10H23N	n-DECYLAMINE	157.299	60.26	428.90	liquid	6440.0	40941.1	17604.7
1105	C11H10	1-METHYLNAPHTHALENE	142.200	-22.86	472.42	liquid	5594.0	39339.0	16915.8
1106	C11H10	2-METHYLNAPHTHALENE	142.200	94.24	465.89	solid	5582.7	39259.5	16881.6
1107	C11H14O2	n-BUTYL BENZOATE	178.231	-6.70	482.00	liquid	5590.0	31363.8	13486.4
1108	C11H16	n-PENTYLBENZENE	148.248	-103.00	401.83	liquid	6177.0	41666.7	17916.7
1109	C11H16O	p-tert-AMYLPHENOL	164.247	199.13	503.60	solid	5980.0	36408.6	15655.7
1110	C11H20	1-UNDECYNE	152.279	-12.98	383.02	liquid	6731.0	44201.8	19006.8
1111	C11H20O2	2-ETHYLHEXYL ACRYLATE	184.279	-130.00	420.80	liquid	6220.3	33754.8	14514.6
1112	C11H22	1-UNDECENE	154.296	-56.49	378.81	liquid	6787.9	43992.7	18916.9
1113	C11H22	1-CYCLOPENTYLHEXANE	154.295	-99.38	397.60	liquid	6744.2	43709.7	18795.2
1114	C11H22	PENTYLCYCLOHEXANE	154.295	-71.48	398.70	liquid	6720.2	43554.3	18728.3
1115	C11H22O	1-UNDECANAL	170.295	32.00	451.40	liquid	6570.0	38580.1	16589.4
1116	C11H24	n-UNDECANE	156.312	-14.04	384.67	liquid	6903.8	44166.8	18991.7
1117	C11H24O	1-UNDECANOL	172.311	60.62	473.00	liquid	6739.1	39110.1	16817.3
1118	C11H24S	UNDECYL MERCAPTAN	188.378	26.60	495.32	liquid	7225.4	38355.9	16493.0
1119	C11H24S	BUTYL-HEPTYL-SULFIDE	188.371	-1.28	500.02	liquid	7255.1	38514.9	16561.4

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ F	$T_{boiling}$ F	state	$-\Delta H_{combustion}$ @ 77 F kjoule/mol	kjoule/kg	BTU/lb
1120	C11H24S	DECYL-METHYL-SULFIDE	188.371	-1.28	500.02	liquid	7258.4	38532.7	16569.1
1121	C11H24S	ETHYL-NONYL-SULFIDE	188.371	-1.28	500.02	liquid	7256.0	38519.8	16563.5
1122	C11H24S	OCTYL-PROPYL-SULFIDE	188.371	-1.28	500.02	liquid	7256.0	38519.6	16563.4
1123	C12H8O	DIBENZOFURAN	168.195	180.50	544.48	solid	5680.0	33770.3	14521.2
1124	C12H9N	DIBENZOPYRROLE	167.210	472.64	670.48	solid	5935.6	35497.9	15264.1
1125	C12H10	ACENAPHTHENE	154.211	200.14	531.30	solid	6001.4	38916.8	16734.2
1126	C12H10	BIPHENYL	154.211	156.60	491.00	solid	6031.7	39113.3	16818.7
1127	C12H10O	DIPHENYL ETHER	170.211	80.37	496.96	solid	5920.0	34780.4	14955.6
1128	C12H11N	p-AMINODIPHENYL	169.226	127.13	575.33	solid	6160.0	36401.0	15652.4
1129	C12H11N	DIPHENYLAMINE	169.226	127.40	575.60	solid	6180.0	36519.2	15703.3
1130	C12H11N3	p-AMINOAZOBENZENE	197.240	262.13	679.73	solid	6380.0	32346.4	13908.9
1131	C12H11N3	1,3-DIPHENYLTRIAZENE	197.240	209.93	638.33	solid	6384.0	32366.7	13917.7
1132	C12H12	1,2-DIMETHYLNAPHTHALENE	156.227	30.22	511.36	liquid	6209.7	39748.2	17091.7
1133	C12H12	1,3-DIMETHYLNAPHTHALENE	156.227	24.82	509.38	liquid	6208.3	39738.8	17087.7
1134	C12H12	1,4-DIMETHYLNAPHTHALENE	156.227	45.81	513.16	liquid	6208.8	39742.1	17089.1
1135	C12H12	1,5-DIMETHYLNAPHTHALENE	156.227	179.62	509.02	solid	6208.3	39738.9	17087.7
1136	C12H12	1,6-DIMETHYLNAPHTHALENE	156.227	6.82	505.42	liquid	6209.2	39744.7	17090.2
1137	C12H12	1,7-DIMETHYLNAPHTHALENE	156.227	8.62	505.42	liquid	6208.5	39740.2	17088.3
1138	C12H12	2,3-DIMETHYLNAPHTHALENE	156.227	221.02	514.42	solid	6209.8	39748.4	17091.8
1139	C12H12	2,6-DIMETHYLNAPHTHALENE	156.227	232.52	503.60	solid	6167.6	39478.5	16975.7
1140	C12H12	2,7-DIMETHYLNAPHTHALENE	156.227	206.60	505.40	solid	6167.9	39480.4	16976.6
1141	C12H12	1-ETHYLNAPHTHALENE	156.227	7.14	496.99	liquid	6171.0	39500.2	16985.1
1142	C12H12	2-ETHYLNAPHTHALENE	156.227	18.70	497.01	liquid	6224.2	39840.6	17131.5
1143	C12H12N2	p-AMINODIPHENYLAMINE	184.241	154.40	669.20	solid	6286.4	34120.5	14671.8
1144	C12H12N2	HYDRAZOBENZENE	184.241	267.80	571.73	solid	6394.6	34707.8	14924.4
1145	C12H14	1,2,3-TRIMETHYLINDENE	158.243	160.70	456.53	solid	6470.0	40886.5	17581.2
1146	C12H14O4	DIETHYL PHTHALATE	222.241	24.80	561.20	liquid	5636.0	25359.9	10904.7
1147	C12H16	CYCLOHEXYLBENZENE	160.259	44.58	464.22	liquid	6574.8	41026.1	17641.2
1148	C12H18	m-DIISOPROPYLBENZENE	162.275	-81.63	397.72	liquid	6770.0	41719.3	17939.3
1149	C12H18	p-DIISOPROPYLBENZENE	162.275	1.27	410.90	liquid	6770.0	41719.3	17939.3
1150	C12H18	n-HEXYLBENZENE	162.275	-78.07	439.00	liquid	6783.7	41803.7	17975.6
1151	C12H18	1,2,3-TRIETHYLBENZENE	162.274	-87.68	423.52	liquid	6790.8	41848.0	17994.6
1152	C12H18	1,2,4-TRIETHYLBENZENE	162.274	-87.68	423.52	liquid	6787.7	41828.9	17986.4
1153	C12H18	1,3,5-TRIETHYLBENZENE	162.274	-87.68	420.82	liquid	6784.2	41807.3	17977.1
1154	C12H18	HEXAMETHYLBENZENE	162.274	329.92	506.21	solid	6751.9	41607.9	17891.4
1155	C12H20O4	DIBUTYL MALEATE	228.288	-121.00	536.00	liquid	6360.0	27859.5	11979.6
1156	C12H22	BICYCLOHEXYL	166.307	38.53	462.27	liquid	7053.0	42409.5	18236.1
1157	C12H22	1-DODECYNE	166.306	-2.18	419.02	liquid	7343.9	44159.1	18988.4
1158	C12H23N	DICYCLOHEXYLAMINE	181.321	31.82	492.53	liquid	7260.0	40039.5	17217.0
1159	C12H24	1-DODECENE	168.323	-31.40	416.03	liquid	7397.7	43949.4	18898.3
1160	C12H24	1-CYCLOPENTYLHEPTANE	168.322	-63.67	435.47	liquid	7357.3	43709.5	18795.1
1161	C12H24	1-CYCLOHEXYLHEXANE	168.322	14.81	436.48	liquid	7333.5	43568.3	18734.4
1162	C12H24O	1-DODECANAL	184.322	53.60	482.00	liquid	7181.5	38961.7	16753.5
1163	C12H24O2	n-DODECANOIC ACID	200.321	111.20	569.66	solid	6849.9	34194.6	14703.7
1164	C12H26	n-DODECANE	170.338	14.76	421.38	liquid	7513.6	44109.9	18967.3
1165	C12H26O	DI-n-HEXYL ETHER	186.338	-45.40	438.26	liquid	7383.8	39625.8	17039.1
1166	C12H26O	1-DODECANOL	186.338	74.84	503.33	liquid	7338.0	39380.1	16933.4
1167	C12H26O3	DIETHYLENE GLYCOL DI-n-BUTYL ETHER	218.337	-76.36	492.80	liquid	7140.0	32701.7	14061.7
1168	C12H26S	n-DODECYL MERCAPTAN	202.404	17.60	526.28	liquid	7840.0	38734.4	16655.8
1169	C12H26S	BUTYL-OCTYL-SULFIDE	202.397	6.82	534.22	liquid	7868.0	38874.2	16715.9
1170	C12H26S	DECYL-ETHYL-SULFIDE	202.397	6.82	534.22	liquid	7867.4	38871.1	16714.6
1171	C12H26S	HEXYL-SULFIDE	202.397	6.82	534.22	liquid	7868.0	38874.2	16715.9
1172	C12H26S	METHYL-UNDECYL-SULFIDE	202.397	6.82	534.22	liquid	7871.3	38890.5	16722.9
1173	C12H26S	NONYL-PROPYL-SULFIDE	202.397	6.82	534.22	liquid	7868.8	38877.9	16717.5
1174	C12H26S2	HEXYL-DISULFIDE	234.457	-54.38	560.32	liquid	8173.1	34859.7	14989.7
1175	C12H27BO3	TRI-n-BUTYL BORATE	230.156	-94.00	452.30	liquid	-----	-----	-----
1176	C12H27N	DODECYLAMINE	185.353	82.98	498.56	solid	7660.0	41326.5	17770.4
1177	C12H27N	TRI-n-BUTYLAMINE	185.353	-94.27	417.20	liquid	7690.0	41488.4	17840.0
1178	C13H10	FLUORENE	166.222	238.62	567.12	solid	6425.1	38653.7	16621.1
1179	C13H10O	BENZOPHENONE	182.222	118.76	582.96	solid	6292.0	34529.3	14847.6
1180	C13H12	DIPHENYLMETHANE	168.238	77.43	507.69	solid	6658.9	39580.2	17019.5
1181	C13H14	1-PROPYLNAPHTHALENE	170.254	16.77	523.06	liquid	6835.6	40149.3	17264.2
1182	C13H14	2-PROPYLNAPHTHALENE	170.254	26.62	524.32	liquid	6834.3	40141.8	17261.0
1183	C13H14	2ETHYL-3-METHYLNAPHTHALENE	170.254	159.82	530.62	solid	6826.4	40095.5	17241.1
1184	C13H14	2ETHYL-6-METHYLNAPHTHALENE	170.254	113.02	518.02	solid	6822.6	40073.1	17231.4
1185	C13H14	2ETHYL-7-METHYLNAPHTHALENE	170.254	113.02	518.02	solid	6822.2	40070.9	17230.5

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ F	$T_{boiling}$ F	state	$-\Delta H_{combustion}$ @ 77 F kjoule/mol	kjoule/kg	BTU/lb
1186	C13H20	n-HEPTYLBENZENE	176.302	-54.40	474.98	liquid	7393.4	41936.0	18032.5
1187	C13H24	1-TRIDECYNE	180.333	23.02	453.22	liquid	7956.9	44123.6	18973.2
1188	C13H26	1-TRIDECENE	182.349	-9.53	451.00	liquid	8007.3	43911.9	18882.1
1189	C13H26	1-CYCLOPENTYLOCTANE	182.348	-47.18	470.68	liquid	7970.5	43710.6	18795.5
1190	C13H26	1-CYCLOHEXYLHEPTANE	182.348	-22.88	472.84	liquid	7946.7	43580.0	18739.4
1191	C13H26O	1-TRIDECANAL	198.349	59.00	512.60	liquid	7790.0	39274.2	16887.9
1192	C13H26O2	n-BUTYL NONANOATE	214.348	-36.40	445.73	liquid	7561.0	35274.4	15168.0
1193	C13H26O2	METHYL DODECANOATE	214.348	41.00	512.33	liquid	7566.8	35301.5	15179.6
1194	C13H28	n-TRIDECANE	184.365	22.30	455.85	liquid	8123.5	44062.1	18946.7
1195	C13H28O	1-TRIDECANOL	200.365	87.08	525.20	solid	7953.0	39692.6	17067.8
1196	C13H28S	BUTYL-NONYL-SULFIDE	216.424	28.42	566.62	liquid	8481.0	39187.0	16850.4
1197	C13H28S	DECYL-PROPYL-SULFIDE	216.424	28.42	566.62	liquid	8481.8	39190.4	16851.9
1198	C13H28S	DODECYL-METHYL-SULFIDE	216.424	28.42	566.62	liquid	8484.3	39202.4	16857.0
1199	C13H28S	ETHYL-UNDECYL-SULFIDE	216.424	28.42	566.62	liquid	8481.9	39191.2	16852.2
1200	C13H28S	1-TRIDECANETHIOL	216.424	48.00	555.46	liquid	8480.0	39182.5	16848.5
1201	C14H8O2	ANTHRAQUINONE	208.216	546.80	715.82	solid	6292.0	30218.6	12994.0
1202	C14H10	ANTHRACENE	178.233	420.98	647.65	solid	6847.4	38418.3	16519.8
1203	C14H10	DIPHENYLACETYLENE	178.233	144.50	571.73	solid	7148.4	40107.1	17246.0
1204	C14H10	PHENANTHRENE	178.233	210.61	644.54	solid	6834.4	38345.3	16488.5
1205	C14H12	cis-STILBENE	180.249	23.01	503.33	liquid	7196.9	39927.5	17168.8
1206	C14H12	trans-STILBENE	180.249	255.56	583.70	solid	7200.0	39944.7	17176.2
1207	C14H12O2	BENZYL BENZOATE	212.248	66.92	614.30	liquid	6690.0	31519.7	13553.5
1208	C14H14	1,1-DIPHENYLETHANE	182.265	-0.31	522.73	liquid	7250.0	39777.2	17104.2
1209	C14H14	1,2-DIPHENYLETHANE	182.265	124.14	536.90	solid	7280.2	39942.9	17175.5
1210	C14H14O	DIBENZYL ETHER	198.265	38.48	550.94	liquid	7145.1	36038.1	15496.4
1211	C14H16	1-n-BUTYLNAPHTHALENE	184.281	-3.50	552.90	liquid	7425.0	40291.7	17325.4
1212	C14H16	2-BUTYLNAPHTHALENE	184.280	23.02	552.22	liquid	7446.9	40410.8	17376.6
1213	C14H22	n-OCTYLBENZENE	190.329	-32.80	507.92	liquid	8003.0	42048.2	18080.7
1214	C14H22	1,2,3,4-TETRAETHYLBENZENE	190.328	53.26	483.82	liquid	8003.3	42049.8	18081.4
1215	C14H22	1,2,3,5-TETRAETHYLBENZENE	190.328	51.82	482.92	liquid	8003.7	42052.3	18082.5
1216	C14H22	1,2,4,5-TETRAETHYLBENZENE	190.328	50.02	482.02	liquid	8003.4	42050.3	18081.6
1217	C14H22O	p-tert-OCTYLPHENOL	206.328	185.72	554.81	solid	8460.0	41002.7	17631.2
1218	C14H28	1-TETRADECENE	196.376	8.87	483.98	liquid	8616.9	43879.6	18868.2
1219	C14H28	1-CYCLOPENTYLNONANE	196.375	-20.18	503.80	liquid	8584.0	43712.1	18796.2
1220	C14H28	1-CYCLOHEXYLOCTANE	196.375	-3.44	506.50	liquid	8560.1	43590.7	18744.0
1221	C14H28O2	n-TETRADECANOIC ACID	228.375	129.92	619.16	solid	8060.0	35292.8	15175.9
1222	C14H30	n-TETRADECANE	198.392	42.55	488.44	liquid	8733.3	44020.4	18928.8
1223	C14H30O	1-TETRADECANOL	214.392	99.50	548.60	solid	8562.7	39939.5	17174.0
1224	C14H30S	BUTYL-DECYL-SULFIDE	230.451	37.42	597.22	liquid	9094.1	39462.3	16968.8
1225	C14H30S	DODECYL-ETHYL-SULFIDE	230.451	37.42	597.22	liquid	9095.1	39466.3	16970.5
1226	C14H30S	HEPTYL-SULFIDE	230.451	37.42	597.22	liquid	9094.2	39462.5	16968.9
1227	C14H30S	METHYL-TRIDECYL-SULFIDE	230.451	37.42	597.22	liquid	9097.5	39476.9	16975.0
1228	C14H30S	PROPYL-UNDECYL-SULFIDE	230.451	37.42	597.22	liquid	9094.9	39465.8	16970.3
1229	C14H30S	1-TETRADECANETHIOL	230.451	43.00	583.18	liquid	9093.6	39460.1	16967.8
1230	C14H30S2	HEPTYL-DISULFIDE	262.511	-36.38	609.28	liquid	9399.9	35807.7	15397.3
1231	C14H31N	TETRADECYLAMINE	213.407	100.74	556.34	solid	8830.0	41376.3	17791.8
1232	C15H10N2O2	DIPHENYLMETHANE-4,4'-DIISOCYANATE	250.257	100.49	636.53	solid	7056.0	28195.0	12123.9
1233	C15H16O	p-CUMYLPHENOL	212.291	163.13	635.00	solid	7690.0	36223.9	15576.3
1234	C15H16O2	BISPHENOL A	228.291	307.40	680.90	solid	7590.4	33248.8	14297.0
1235	C15H18	1-PENTYLNAPHTHALENE	198.307	-7.58	584.62	liquid	8060.5	40646.6	17478.0
1236	C15H18	2-PENTYLNAPHTHALENE	198.307	24.82	590.02	liquid	8059.5	40641.4	17475.8
1237	C15H24	n-NONYLBENZENE	204.356	-11.47	539.69	liquid	8611.3	42138.7	18119.6
1238	C15H24O	2,6-DI-tert-BUTYL-p-CRESOL	220.355	159.53	508.73	solid	8390.0	38074.9	16372.2
1239	C15H24O	NONYLPHENOL	220.355	-----	586.13	liquid	8420.0	38211.1	16430.8
1240	C15H28	1-PENTADECYNE	208.386	50.02	514.42	liquid	9183.3	44068.8	18949.6
1241	C15H30	1-PENTADECENE	210.403	25.29	515.23	liquid	9230.0	43868.2	18863.3
1242	C15H30	1-CYCLOPENTYLDECANE	210.402	-7.82	534.90	liquid	9197.5	43713.8	18796.9
1243	C15H30	1-CYCLOHEXYLNONANE	210.402	13.66	538.72	liquid	9173.6	43600.3	18748.1
1244	C15H30O2	PENTADECANOIC ACID	242.402	126.55	642.02	solid	8668.9	35762.5	15377.9
1245	C15H32	n-PENTADECANE	212.419	49.93	519.22	liquid	9343.0	43983.8	18913.0
1246	C15H32O	1-PENTADECANOL	228.417	111.00	580.75	solid	9207.2	40308.6	17332.7
1247	C15H32S	BUTYL-UNDECYL-SULFIDE	244.478	51.82	626.02	liquid	9707.5	39707.1	17074.0
1248	C15H32S	DODECYL-PROPYL-SULFIDE	244.478	51.82	626.02	liquid	9708.3	39710.1	17075.4
1249	C15H32S	ETHYL-TRIDECYL-SULFIDE	244.478	51.82	626.02	liquid	9708.4	39710.7	17075.6
1250	C15H32S	METHYL-TETRADECYL-SULFIDE	244.478	51.82	626.02	liquid	9710.8	39720.6	17079.8
1251	C15H32S	1-PENTADECANETHIOL	244.478	64.00	609.28	liquid	9704.9	39696.2	17069.4

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ F	$T_{boiling}$ F	state	$-\Delta H_{combustion}$ @ 77 F kjoule/mol	kjoule/kg	BTU/lb
1252	C16H10	FLUORANTHENE	202.255	230.32	721.04	solid	7695.0	38046.0	16359.8
1253	C16H10	PYRENE	202.255	303.19	742.64	solid	7620.1	37675.7	16200.6
1254	C16H12	1-PHENYLNAPHTHALENE	204.271	113.00	633.20	solid	7920.0	38772.0	16672.0
1255	C16H20	1-n-HEXYLNAPHTHALENE	212.335	-0.40	611.60	liquid	8648.0	40728.1	17513.1
1256	C16H2204	DIBUTYL PHTHALATE	278.348	-31.00	644.00	liquid	8106.6	29124.0	12523.3
1257	C16H26	n-DECYLBENZENE	218.382	6.12	568.20	liquid	9222.3	42230.1	18159.0
1258	C16H26	PENTAETHYLBENZENE	218.381	130.12	530.62	solid	9219.7	42218.6	18154.0
1259	C16H30	1-HEXADECYNE	222.413	59.02	543.22	liquid	9796.7	44047.2	18940.3
1260	C16H32	n-DECYLCYCLOHEXANE	224.430	28.89	567.68	liquid	9749.0	43438.9	18678.7
1261	C16H32	1-CYCLOPENTYLUNDECANE	224.429	14.02	564.10	liquid	9810.9	43714.9	18797.4
1262	C16H32	1-HEXADECENE	224.430	39.85	544.77	liquid	9836.3	43827.9	18846.0
1263	C16H3202	n-HEXADECANOIC ACID	256.429	145.04	663.80	solid	9274.7	36168.7	15552.5
1264	C16H34	n-HEXADECANE	226.446	64.74	548.35	liquid	9952.8	43952.2	18899.4
1265	C16H34O	DI-n-OCTYL ETHER	242.445	18.32	547.70	liquid	9820.0	40504.0	17416.7
1266	C16H34O	1-HEXADECANOL	242.445	120.56	593.60	solid	9797.0	40409.2	17375.9
1267	C16H34S	BUTYL-DODECYL-SULFIDE	258.505	59.02	653.02	liquid	10321.1	39926.0	17168.2
1268	C16H34S	ETHYL-TETRADECYL-SULFIDE	258.505	59.02	653.02	liquid	10325.1	39941.8	17175.0
1269	C16H34S	METHYL-PENTADECYL-SULFIDE	258.505	59.02	653.02	liquid	10324.4	39939.0	17173.8
1270	C16H34S	OCTYL-SULFIDE	258.505	59.02	653.02	liquid	10321.1	39926.2	17168.3
1271	C16H34S	PROPYL-TRIDECYL-SULFIDE	258.505	59.02	653.02	liquid	10321.8	39929.0	17169.4
1272	C16H34S	1-HEXADECANETHIOL	258.505	64.00	633.22	liquid	10318.6	39916.3	17164.0
1273	C16H34S2	OCTYL-DISULFIDE	290.565	-20.18	654.82	liquid	10625.4	36568.1	15724.3
1274	C17H28	n-UNDECYLBENZENE	232.409	22.73	595.85	liquid	9832.0	42304.7	18191.0
1275	C17H32	1-HEPTADECYNE	236.440	71.62	570.22	liquid	10410.2	44028.7	18932.4
1276	C17H34	1-CYCLOPENTYLDODECANE	238.456	23.02	591.64	liquid	10421.7	43705.1	18793.2
1277	C17H34	1-CYCLOHEXYLUNDECANE	238.456	42.46	595.60	liquid	10400.7	43617.0	18755.3
1278	C17H34	1-HEPTADECENE	238.457	52.25	572.59	liquid	10446.0	43806.6	18836.9
1279	C17H36	n-HEPTADECANE	240.473	71.56	575.87	liquid	10568.0	43946.7	18897.1
1280	C17H36O	1-HEPTADECANOL	256.472	129.02	615.20	solid	10396.0	40534.6	17429.9
1281	C17H36S	BUTYL-TRIDECYL-SULFIDE	272.531	69.82	678.22	liquid	10935.0	40123.8	17253.3
1282	C17H36S	ETHYL-PENTADECYL-SULFIDE	272.531	69.82	678.22	liquid	10935.9	40127.1	17254.6
1283	C17H36S	HEXADECYL-METHYL-SULFIDE	272.531	69.82	678.22	liquid	10938.3	40136.0	17258.5
1284	C17H36S	PROPYL-TETRADECYL-SULFIDE	272.531	69.82	678.22	liquid	10935.7	40126.6	17254.4
1285	C17H36S	1-HEPTADECANETHIOL	272.531	81.00	658.42	solid	10932.4	40114.3	17249.1
1286	C18H12	CHRYSENE	228.293	496.40	825.80	solid	8679.4	38018.7	16348.0
1287	C18H14	m-TERPHENYL	230.309	188.33	710.33	solid	9050.0	39295.0	16896.9
1288	C18H14	o-TERPHENYL	230.309	133.16	636.53	solid	9050.0	39295.0	16896.9
1289	C18H14	p-TERPHENYL	230.309	413.33	708.80	solid	9052.5	39305.9	16901.5
1290	C18H15P	TRIPHENYLPHOSPHINE	262.291	178.25	710.60	solid	10032.0	38247.6	16446.5
1291	C18H15O4P	TRIPHENYL PHOSPHATE	326.288	122.00	776.30	solid	9059.0	27763.8	11938.4
1292	C18H16N2	N,N'-DIPHENYL-p-PHENYLENEDIAMINE	260.339	276.53	778.73	solid	9340.0	35876.3	15426.8
1293	C18H22	2,3-DIMETHYL-2,3-DIPHENYLBUTANE	238.373	246.20	600.53	solid	9800.0	41112.0	17678.2
1294	C18H2202	DICUMYL PEROXIDE	270.371	100.40	744.53	solid	9630.0	35617.7	15315.6
1295	C18H30	n-DODECYLBENZENE	246.436	37.00	621.70	liquid	10442.0	42372.1	18220.0
1296	C18H30	HEXAETHYLBENZENE	246.435	262.42	568.42	solid	10439.8	42363.5	18216.3
1297	C18H3202	LINOLEIC ACID	280.451	23.00	670.73	liquid	10400.0	37083.1	15945.7
1298	C18H34	1-OCTADECYNE	250.467	80.62	595.42	solid	11023.9	44013.6	18925.8
1299	C18H3402	OLEIC ACID	282.467	56.08	679.73	liquid	10523.0	37253.9	16019.2
1300	C18H3404	DIBUTYL SEBACATE	314.466	15.44	660.20	liquid	10033.0	31904.9	13719.1
1301	C18H3404	DIHEXYL ADIPATE	314.466	7.16	658.40	liquid	10100.0	32117.9	13810.7
1302	C18H36	1-CYCOPENTYLTRIDECANE	252.482	41.02	617.74	liquid	11038.0	43718.2	18798.8
1303	C18H36	1-CYCLOHEXYLDODECANE	252.482	54.52	621.88	liquid	11014.5	43624.9	18758.7
1304	C18H36	1-OCTADECENE	252.484	63.70	598.68	liquid	11056.0	43788.9	18829.2
1305	C18H3602	STEARIC ACID	284.483	157.28	707.36	solid	10489.0	36870.4	15854.3
1306	C18H38	n-OCTADECANE	254.500	82.72	602.08	solid	11173.0	43901.8	18877.8
1307	C18H38O	DINONYL ETHER	270.499	-----	604.13	liquid	11100.0	41035.3	17645.2
1308	C18H38O	1-OCTADECANOL	270.499	136.22	635.00	solid	10998.0	40658.2	17483.0
1309	C18H38S	BUTYL-TETRADECYL-SULFIDE	286.558	77.02	703.42	solid	11549.1	40302.8	17330.2
1310	C18H38S	ETHYL-HEXADECYL-SULFIDE	286.558	77.02	703.42	solid	11550.0	40306.0	17331.6
1311	C18H38S	HEPTADECYL-METHYL-SULFIDE	286.558	77.02	703.42	solid	11552.4	40314.5	17335.2
1312	C18H38S	NONYL-SULFIDE	286.558	77.02	703.42	solid	11549.1	40302.8	17330.2
1313	C18H38S	PENTADECYL-PROPYL-SULFIDE	286.558	77.02	703.42	solid	11549.8	40305.4	17331.3
1314	C18H38S	1-OCTADECANETHIOL	286.558	82.00	680.02	solid	11546.6	40294.2	17326.5
1315	C18H38S2	NONYL-DISULFIDE	318.618	-5.78	696.22	liquid	11854.1	37204.9	15998.1
1316	C19H26	1-n-NONYLNAPHTHALENE	254.415	51.80	690.53	liquid	10500.0	41271.2	17746.6
1317	C19H32	n-TRIDECYLBENZENE	260.463	50.00	646.30	liquid	11051.0	42428.3	18244.2

NO	FORMULA	NAME	Mol Wt g/mol	$T_{freezing}$ F	$T_{boiling}$ F	state	$-\Delta H_{combustion}$ @ 77 F kjoule/mol	kjoule/kg	BTU/lb
1318	C19H36	1-NONADECYNE	264.493	91.42	620.62	solid	11637.8	44000.6	18920.3
1319	C19H3602	METHYL OLEATE	296.494	67.82	650.93	liquid	11100.0	37437.5	16098.1
1320	C19H38	1-CYCLOPENTYLTETRADECANE	266.509	47.93	642.22	liquid	11651.6	43719.5	18799.4
1321	C19H38	1-CYCLOHEXYLTRIDECANE	266.509	65.32	646.72	liquid	11628.3	43631.8	18761.7
1322	C19H38	1-NONADECENE	266.511	74.12	624.24	liquid	11700.0	43900.6	18877.3
1323	C19H3802	NONADECANOIC ACID	298.510	154.54	726.80	solid	11088.0	37144.5	15972.1
1324	C19H40	n-NONADECANE	268.527	89.92	625.82	solid	11782.0	43876.4	18866.9
1325	C19H400	1-NONADECANOL	284.524	143.10	676.13	solid	11666.8	41004.5	17631.9
1326	C19H40S	BUTYL-PENTADECYL-SULFIDE	300.585	86.02	726.82	solid	12163.6	40466.4	17400.5
1327	C19H40S	ETHYL-HEPTADECYL-SULFIDE	300.585	86.02	726.82	solid	12164.5	40469.4	17401.9
1328	C19H40S	HEXADECYL-PROPYL-SULFIDE	300.585	86.02	726.82	solid	12164.4	40469.0	17401.7
1329	C19H40S	METHYL-OCTADECYL-SULFIDE	300.585	86.02	726.82	solid	12166.9	40477.5	17405.3
1330	C19H40S	1-NONADECANETHIOL	300.585	93.00	701.62	solid	12161.1	40458.2	17397.0
1331	C20H16	TRIPHENYLETHYLENE	256.347	156.20	744.53	solid	10000.0	39009.6	16774.1
1332	C20H28	1-n-DECYLNAPHTHALENE	268.442	59.00	713.93	liquid	11100.0	41349.7	17780.4
1333	C20H3002	ABIETIC ACID	302.457	344.30	709.79	solid	10900.0	36038.2	15496.4
1334	C20H31N	DEHYDROABIETYLAMINE	285.473	112.10	728.33	solid	11440.2	40074.4	17232.0
1335	C20H34	1-PHENYLTETRADECANE	274.489	60.82	669.22	liquid	11713.1	42672.3	18349.1
1336	C20H38	1-EICOSYNE	278.520	96.82	644.02	solid	12252.1	43990.0	18915.7
1337	C20H40	1-CYCLOPENTYLPENTADECANE	280.536	62.33	665.33	liquid	12265.2	43720.7	18799.9
1338	C20H40	1-CYCLOHEXYLTETRADECANE	280.536	75.22	669.22	liquid	12242.0	43637.9	18764.3
1339	C20H40	1-EICOSENE	280.538	83.50	648.30	solid	12241.0	43634.0	18762.6
1340	C20H42	n-EICOSANE	282.553	97.59	650.80	solid	12392.0	43857.3	18858.6
1341	C20H420	1-EICOSANOL	298.553	149.72	672.80	solid	12216.0	40917.4	17594.5
1342	C20H42S	BUTYL-HEXADECYL-SULFIDE	314.612	95.02	748.42	solid	12778.5	40616.8	17465.2
1343	C20H42S	DECYL-SULFIDE	314.612	95.02	748.42	solid	12778.5	40616.8	17465.2
1344	C20H42S	ETHYL-OCTADECYL-SULFIDE	314.612	95.02	748.42	solid	12779.4	40619.6	17466.4
1345	C20H42S	HEPTADECYL-PROPYL-SULFIDE	314.612	95.02	748.42	solid	12779.3	40619.2	17466.3
1346	C20H42S	METHYL-NONADECYL-SULFIDE	314.612	95.02	748.42	solid	12781.8	40627.3	17469.8
1347	C20H42S	1-EICOSANETHIOL	314.612	99.00	721.42	solid	12776.1	40609.0	17461.9
1348	C20H42S2	DECYL-DISULFIDE	346.672	6.82	734.02	liquid	13084.3	37742.6	16229.3
1349	C21H2104P	TRI-o-CRESYL PHOSPHATE	368.369	-27.40	-----	liquid	11000.0	29861.4	12840.4
1350	C21H36	1-PHENYLPENTADECANE	288.515	71.62	690.82	liquid	12326.7	42724.6	18371.6
1351	C21H42	1-CYCLOPENTYLHEXADECANE	294.563	69.82	687.22	liquid	12878.9	43722.0	18800.4
1352	C21H42	1-CYCLOHEXYLPENTADECANE	294.563	84.22	692.62	solid	12855.9	43644.0	18766.9
1353	C22H38	1-PHENYLHEXADECANE	302.542	80.62	712.42	solid	12940.3	42772.0	18391.9
1354	C22H44	1-CYCLOHEXYLHEXADECANE	308.590	92.50	714.22	solid	13469.9	43649.7	18769.4
1355	C22H4402	n-BUTYL STEARATE	340.590	79.34	662.00	solid	13158.0	38633.0	16612.2
1356	C24H3804	DIISOOCTYL PHTHALATE	390.563	-----	789.53	liquid	12950.0	33157.3	14257.6
1357	C24H3804	DIOCTYL PHTHALATE	390.563	-58.00	723.20	liquid	12956.0	33172.6	14264.2
1358	C24H420	DINONYLPHENOL	346.597	-----	839.93	liquid	14000.0	40392.7	17368.9
1359	C26H20	TETRAPHENYLETHYLENE	332.445	433.40	908.33	solid	13000.0	39104.2	16814.8
1360	C28H4604	DIISODECYL PHTHALATE	446.671	-50.01	841.73	liquid	15538.0	34786.2	14958.1

NOTE:

1. The enthalpy of combustion applies at 77 F and 1 atm.
2. The tabulated values are the negative of the enthalpy of combustion. A positive value as shown means that heat is released. A negative value means that heat is required.
3. For compounds in the table, the products of combustion are CO2 (gas), H2O (gas), F2 (gas), Cl2 (gas), Br2 (gas), I2 (gas), N2 (gas), SO2 (gas), H3PO4 (solid) and SiO2 (crystobalite).

Table 5-2 EXAMPLES

Example 1 Combustion of propane (C3H8, 50 kg/hr) occurs at ambient conditions (77 F, 1 atm).

Estimate the quantity of heat released in the combustion.

Substitution of the tabulated value for propane into the equation below provides the quantity of heat released:

$\Delta H = (-\Delta H_{combustion})(mass)$

$= (46{,}333 \text{ kjoule/kg})(50 \text{ kg/hr})$

$\Delta H = 2.32$ million kjoule/hr

Example 2 Combustion of n-hexane (C6H14, 150 lb/hr) occurs at ambient conditions (77 F, 1 atm).

Estimate the quantity of heat released in the combustion.

Substitution of the tabulated value for n-hexane into the equation below provides the quantity of heat released:

$\Delta H = (-\Delta H_{combustion})(mass)$

$= (19{,}236.4 \text{ BTU/lb})(150 \text{ lb/hr})$

$\Delta H = 2.89$ million BTU/hr

Table 5-3 COMPUTER PROGRAM RESULTS

ENTHALPY OF COMBUSTION

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1. Number..... 598
2. Formula..... C6H14
3. Name..... n-HEXANE
4. Molecular Weight..... = 86.177
5. Freezing Point..... F = -139.56
6. Boiling Point..... F = 155.71
7. State..... = liquid
8. - Enthalpy of Combustion...kjoule/mol = 3855.2
9. - Enthalpy of Combustion....kjoule/kg = 44735.8
10. - Enthalpy of Combustion.....BTU/lb = 19236.4

The enthalpy of combustion applies at 77 F and 1 atm.
The numerical values as shown are the negative of the enthalpy of combustion. A positive value means that heat is released in in the combustion. A negative value means that heat is required. The products of combustion are CO2 (gas), H2O(gas), F2(gas), Cl2 (gas), Br2 (gas), I2 (gas), N2 (gas), SO2 (gas), H3PO4 (solid) and SiO2 (crystobalite) for substances in the datafile.

Chapter 6

EXPOSURE LIMITS FOR HEALTH

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ABSTRACT

Results for recommended and permissible exposure limits in air for safeguarding health are presented for major organic chemical compounds. The results are displayed in an easy-to-use table which is especially applicable for rapid engineering usage. The organic chemicals encompass hydrocarbon, oxygen, nitrogen, halogen, silicon, sulfur and other chemical type compounds.

EXPOSURE LIMITS FOR SAFEGUARDING HEALTH

The results for recommended (REL) and permissible (PEL) exposure limits in air for safeguarding health in the workplace are presented in Table 6-1. The REL value is the recommended exposure limit by the NIOSH (National Institute for Occupational Safety and Health). The PEL value is the permissible exposure limit for maintaining health as provided by OSHA (Occupational Safety and Health Act). Both REL and PEL values apply to a 40 hour workweek. The last column in the tabulation provides IDLH (immediately dangerous to life or health) values. The tabulation also provides the freezing and boiling point temperatures which are helpful in determining whether the substance is a gas, liquid or solid at ambient conditions.

Threshold limit values (TLV) which also apply to a 40 hour workweek are published by the American Conference of Governmental Industrial Hygienists. The PEL values of OSHA are frequently based on the TLV values issuing from the American Conference of Governmental Industrial Hygienists (7).

In the data collection, a literature search was conducted to identify data source publications (1-15) for the table. The publications were screened and copies of appropriate data were made. These data were then keyed into the computer to provide a data base for use in preparing the tabulation.

If more than one substance is present in the workplace, then exposure limits are needed for gas mixtures. The following equation (1) maybe used for exposure limits of gas mixtures:

$$PEL_{mixture} = \Sigma\, y_i \,/\, \Sigma\, (y_i/PEL_i) \qquad (6\text{-}1)$$

where $PEL_{mixture}$ = permissible exposure limit of mixture, ppm

y_i = mole fraction of component i, ppm

EXAMPLES

The tabulated values maybe used in engineering applications involving exposure of pure components and mixtures in the workplace. Examples are shown in Table 6-2.

COMPUTER PROGRAM

A computer program, containing the data for all compounds, is available for a nominal fee (Carl L. Yaws, Box 10053, Lamar University, Beaumont, TX 77710, phone/FAX 409-880-8787). The computer program (random data file) is in ASCII which can be accessed by other software.

Computer program results for a representative compound are shown in Table 6-3.

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Table 6-1 EXPOSURE LIMITS

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	REL - Recommended Exposure Limit (NIOSH)		PEL - Permissible Exposure Limit (OSHA)		IDLH - Immediately Dangerous to Life or Health	
						ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3
1	CBrF3	BROMOTRIFLUOROMETHANE	148.910	-270.40	-72.20	1000	-----	1000	-----	40000	-----
2	CBr2F2	DIBROMODIFLUOROMETHANE	209.816	-166.18	73.02	100	-----	100	-----	2000	-----
3	CCl2F2	DICHLORODIFLUOROMETHANE	120.913	-252.40	-21.62	1000	-----	75	-----	15000	-----
4	CCl2O	PHOSGENE	98.916	-198.00	45.61	0.1	-----	0.1	-----	2	-----
5	CCl4	CARBON TETRACHLORIDE	153.822	-9.08	169.95	----	-----	10	-----	200	-----
6	CF2O	CARBONYL FLUORIDE	66.007	-168.27	-120.23	2	-----	----	-----	----	-----
7	CHBr3	TRIBROMOMETHANE	252.731	46.49	300.56	0.5	-----	0.5	-----	850	-----
8	CHClF2	CHLORODIFLUOROMETHANE	86.468	-251.36	-41.49	1000	-----	----	-----	----	-----
9	CHCl2F	DICHLOROFLUOROMETHANE	102.923	-211.00	48.02	10	-----	1000	-----	5000	-----
10	CHCl3	CHLOROFORM	119.377	-82.34	142.12	----	-----	2	-----	500	-----
11	CHN	HYDROGEN CYANIDE	27.026	8.17	78.26	----	-----	10	-----	50	-----
12	CH2BrCl	BROMOCHLOROMETHANE	129.384	-126.31	154.49	200	-----	200	-----	2000	-----
13	CH2Cl2	DICHLOROMETHANE	84.932	-139.25	103.55	----	-----	500	-----	2300	-----
14	CH2O	FORMALDEHYDE	30.026	-133.60	-2.38	0.016	-----	0.75	-----	20	-----
15	CH2O2	FORMIC ACID	46.026	47.12	213.01	5	-----	5	-----	30	-----
16	CH3Br	METHYL BROMIDE	94.939	-136.48	38.41	----	-----	----	-----	250	-----
17	CH3Cl	METHYL CHLORIDE	50.488	-143.86	-11.60	----	-----	100	-----	2000	-----
18	CH3I	METHYL IODIDE	141.939	-87.61	108.37	2	-----	5	-----	100	-----
19	CH3NO	FORMAMIDE	45.041	36.59	427.73	10	-----	----	-----	----	-----
20	CH3NO2	NITROMETHANE	61.040	-19.39	214.16	----	-----	100	-----	750	-----
21	CH4O	METHANOL	32.042	-143.82	148.46	200	-----	200	-----	6000	-----
22	CH4S	METHYL MERCAPTAN	48.109	-189.35	42.73	----	-----	----	-----	150	-----
23	CH5N	METHYLAMINE	31.057	-136.23	20.61	10	-----	10	-----	100	-----
24	CN4O8	TETRANITROMETHANE	196.033	57.02	258.26	1	-----	1	-----	4	-----
25	CO	CARBON MONOXIDE	28.010	-337.00	-312.61	35	-----	50	-----	1200	-----
26	CO2	CARBON DIOXIDE	44.010	-69.83	-109.26	5000	-----	5000	-----	40000	-----
27	CS2	CARBON DISULFIDE	76.143	-168.83	115.20	1	-----	20	-----	500	-----
28	C2ClF5	CHLOROPENTAFLUOROETHANE	154.467	-146.99	-38.40	1000	-----	----	-----	----	-----
29	C2Cl2F4	1,2-DICHLOROTETRAFLUOROETHANE	170.921	-137.20	38.79	1000	-----	1000	-----	15000	-----
30	C2Cl3F3	1,1,2-TRICHLOROTRIFLUOROETHANE	187.375	-31.00	117.68	1000	-----	1000	-----	2000	-----
31	C2Cl4	TETRACHLOROETHYLENE	165.833	-8.23	250.25	----	-----	100	-----	150	-----
32	C2Cl4F2	1,1,2,2-TETRACHLORODIFLUOROETHANE	203.830	78.80	199.13	500	-----	500	-----	2000	-----
33	C2Cl6	HEXACHLOROETHANE	236.738	368.24	368.33	1	-----	1	-----	300	-----
34	C2HCl3	TRICHLOROETHYLENE	131.388	-120.55	188.51	----	-----	100	-----	1000	-----
35	C2H2Cl2	cis-1,2-DICHLOROETHYLENE	96.943	-112.00	140.90	200	-----	200	-----	1000	-----
36	C2H2Cl2	trans-1,2-DICHLOROETHYLENE	96.943	-57.64	117.86	200	-----	200	-----	1000	-----
37	C2H2Cl2O	CHLOROACETYL CHLORIDE	112.943	-7.60	222.80	0.05	-----	----	-----	----	-----
38	C2H2Cl4	1,1,2,2-TETRACHLOROETHANE	167.849	-46.84	293.18	1	-----	5	-----	100	-----
39	C2H2F2	1,1-DIFLUOROETHYLENE	64.035	-227.20	-122.17	1	-----	----	-----	----	-----
40	C2H2O	KETENE	42.037	-240.07	-57.66	0.5	-----	0.5	-----	5	-----
41	C2H3Cl	VINYL CHLORIDE	62.499	-244.82	7.93	----	-----	1	-----	----	-----
42	C2H3ClO	CHLOROACETALDEHYDE	78.498	-----	184.73	----	-----	----	-----	45	-----
43	C2H3Cl3	1,1,1-TRICHLOROETHANE	133.404	-22.72	165.34	----	-----	350	-----	700	-----
44	C2H3Cl3	1,1,2-TRICHLOROETHANE	133.404	-33.97	236.93	10	-----	10	-----	100	-----
45	C2H3F	VINYL FLUORIDE	46.044	-256.90	-97.96	1	-----	----	-----	----	-----
46	C2H3N	ACETONITRILE	41.053	-46.89	178.88	20	-----	40	-----	500	-----
47	C2H3NO	METHYL ISOCYANATE	57.052	1.40	101.93	0.02	-----	0.02	-----	3	-----
48	C2H4Br2	1,2-DIBROMOETHANE	187.862	49.62	268.45	0.045	-----	20	-----	100	-----
49	C2H4Cl2	1,1-DICHLOROETHANE	98.959	-142.53	135.14	100	-----	100	-----	3000	-----
50	C2H4Cl2	1,2-DICHLOROETHANE	98.959	-32.19	182.19	1	-----	50	-----	50	-----
51	C2H4O	ACETALDEHYDE	44.053	-189.40	68.72	----	-----	200	-----	2000	-----
52	C2H4O	ETHYLENE OXIDE	44.053	-169.06	51.26	----	-----	1	-----	800	-----
53	C2H4O2	ACETIC ACID	60.053	61.99	244.22	10	-----	10	-----	50	-----
54	C2H4O2	METHYL FORMATE	60.053	-146.20	89.15	100	-----	100	-----	4500	-----
55	C2H5Br	BROMOETHANE	108.966	-181.48	101.03	----	-----	200	-----	2000	-----
56	C2H5Cl	ETHYL CHLORIDE	64.514	-213.52	54.09	----	-----	1000	-----	3800	-----
57	C2H5ClO	2-CHLOROETHANOL	80.514	-89.50	263.48	----	-----	5	-----	7	-----
58	C2H5N	ETHYLENEIMINE	43.068	-108.31	132.53	----	-----	----	-----	100	-----
59	C2H5NO	N-METHYLFORMAMIDE	59.068	25.16	391.12	1000	-----	1000	-----	3300	-----
60	C2H5NO2	NITROETHANE	75.067	-129.14	237.33	100	-----	100	-----	1000	-----

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						ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3
61	C2H6O4S	DIMETHYL SULFATE	126.133	-25.24	371.84	0.1	-----	1	-----	7	-----
62	C2H6S	ETHYL MERCAPTAN	62.136	-234.20	95.00	----	-----	----	-----	500	-----
63	C2H7N	DIMETHYLAMINE	45.084	-133.94	44.38	10	-----	10	-----	500	-----
64	C2H7N	ETHYLAMINE	45.084	-113.80	61.84	10	-----	10	-----	600	-----
65	C2H7NO	MONOETHANOLAMINE	61.084	50.90	339.80	3	-----	3	-----	30	-----
66	C2H8N2	ETHYLENEDIAMINE	60.099	52.05	243.07	10	-----	10	-----	1000	-----
67	C2N2	CYANOGEN	52.036	-18.22	-6.07	10	-----	----	-----	----	-----
68	C3F6O	HEXAFLUOROACETONE	166.023	-187.60	-17.09	0.1	-----	----	-----	----	-----
69	C3H2N2	MALONONITRILE	66.062	89.15	425.03	3	-----	----	-----	----	-----
70	C3H3N	ACRYLONITRILE	53.064	-118.34	171.23	1	-----	2	-----	85	-----
71	C3H4	METHYLACETYLENE	40.065	-152.86	-9.78	1000	-----	1000	-----	1700	-----
72	C3H4O	ACROLEIN	56.064	-125.86	126.84	0.1	-----	0.1	-----	2	-----
73	C3H4O	PROPARGYL ALCOHOL	56.064	-61.24	236.48	1	-----	----	-----	----	-----
74	C3H4O2	ACRYLIC ACID	72.064	56.30	285.80	2	-----	----	-----	----	-----
75	C3H5Cl	3-CHLOROPROPENE	76.525	-210.10	112.93	1	-----	1	-----	250	-----
76	C3H5ClO	alpha-EPICHLOROHYDRIN	92.525	-70.96	241.00	----	-----	5	-----	75	-----
77	C3H5Cl3	1,2,3-TRICHLOROPROPANE	147.431	5.54	314.33	10	-----	50	-----	100	-----
78	C3H5N	PROPIONITRILE	55.079	-135.20	207.23	6	-----	----	-----	----	-----
79	C3H5NO	ACRYLAMIDE	71.079	184.10	378.68	----	0.03	----	0.3	----	60
80	C3H5N3O9	NITROGLYCERINE	227.088	55.40	481.73	----	-----	----	-----	----	75
81	C3H6Cl2	1,2-DICHLOROPROPANE	112.986	-148.79	205.47	----	-----	75	-----	400	-----
82	C3H6O	ACETONE	58.080	-138.46	133.32	250	-----	1000	-----	2500	-----
83	C3H6O	ALLYL ALCOHOL	58.080	-200.20	206.74	2	-----	2	-----	20	-----
84	C3H6O	1,2-PROPYLENE OXIDE	58.080	-169.47	93.02	----	-----	100	-----	400	-----
85	C3H6O2	ETHYL FORMATE	74.079	-111.28	129.76	100	-----	100	-----	1500	-----
86	C3H6O2	METHYL ACETATE	74.079	-144.40	134.49	200	-----	200	-----	3100	-----
87	C3H6O2	PROPIONIC ACID	74.079	-5.26	286.11	10	-----	----	-----	----	-----
88	C3H7N	PROPYLENEIMINE	57.095	-47.47	141.53	2	-----	2	-----	100	-----
89	C3H7NO	N,N-DIMETHYLFORMAMIDE	73.095	-76.77	307.40	10	-----	10	-----	500	-----
90	C3H7NO2	1-NITROPROPANE	89.094	-155.18	268.12	25	-----	25	-----	1000	-----
91	C3H7NO2	2-NITROPROPANE	89.094	-132.38	248.45	----	-----	25	-----	100	-----
92	C3H8	PROPANE	44.096	-305.84	-43.67	1000	-----	1000	-----	2100	-----
93	C3H8O	ISOPROPANOL	60.096	-126.17	180.07	400	-----	400	-----	2000	-----
94	C3H8O	n-PROPANOL	60.096	-195.16	206.96	200	-----	200	-----	800	-----
95	C3H8O2	2-METHOXYETHANOL	76.095	-121.18	255.92	0.1	-----	25	-----	200	-----
96	C3H8O2	METHYLAL	76.095	-156.64	107.33	1000	-----	1000	-----	2200	-----
97	C3H8O3	GLYCEROL	92.095	64.72	554.00	----	-----	----	15	----	-----
98	C3H9N	ISOPROPYLAMINE	59.111	-139.36	90.32	----	-----	5	-----	750	-----
99	C3H9N	TRIMETHYLAMINE	59.111	-178.73	37.17	10	-----	----	-----	----	-----
100	C4Cl6	HEXACHLORO-1,3-BUTADIENE	260.760	-5.80	419.00	0.02	-----	----	-----	----	-----
101	C4H2O3	MALEIC ANHYDRIDE	98.058	127.13	395.60	0.25	-----	0.25	-----	----	10
102	C4H4N2	SUCCINONITRILE	80.089	136.67	512.60	6	-----	----	-----	----	-----
103	C4H5Cl	CHLOROPRENE	88.536	-202.00	138.92	----	-----	25	-----	300	-----
104	C4H5N	METHACRYLONITRILE	67.090	-32.44	194.54	1	-----	----	-----	----	-----
105	C4H6	1,3-BUTADIENE	54.092	-164.02	24.06	----	-----	1000	-----	2000	-----
106	C4H6O	trans-CROTONALDEHYDE	70.091	-105.70	219.38	2	-----	2	-----	50	-----
107	C4H6O2	METHACRYLIC ACID	86.090	59.00	321.80	20	-----	----	-----	----	-----
108	C4H6O2	METHYL ACRYLATE	86.090	-106.29	176.36	10	-----	10	-----	250	-----
109	C4H6O3	ACETIC ANHYDRIDE	102.090	-99.40	281.53	----	-----	5	-----	200	-----
110	C4H7N	n-BUTYRONITRILE	69.106	-169.42	243.68	8	-----	----	-----	----	-----
111	C4H7N	ISOBUTYRONITRILE	69.106	-96.61	218.50	8	-----	----	-----	----	-----
112	C4H8O	METHYL ETHYL KETONE	72.107	-124.01	175.35	200	-----	200	-----	3000	-----
113	C4H8O	TETRAHYDROFURAN	72.107	-163.30	148.73	200	-----	200	-----	2000	-----
114	C4H8O2	1,4-DIOXANE	88.106	53.24	214.38	----	-----	100	-----	500	-----
115	C4H8O2	ETHYL ACETATE	88.106	-118.39	170.71	400	-----	400	-----	2000	-----
116	C4H9NO	N,N-DIMETHYLACETAMIDE	87.122	-4.00	330.98	10	-----	10	-----	300	-----
117	C4H9NO	MORPHOLINE	87.122	26.42	262.40	20	-----	20	-----	1400	-----
118	C4H10	n-BUTANE	58.123	-216.92	31.10	800	-----	----	-----	----	-----
119	C4H10	ISOBUTANE	58.123	-255.30	10.90	800	-----	----	-----	----	-----
120	C4H10O	n-BUTANOL	74.123	-128.74	243.79	----	-----	100	-----	1400	-----
121	C4H10O	sec-BUTANOL	74.123	-174.46	211.19	100	-----	150	-----	2000	-----
122	C4H10O	tert-BUTANOL	74.123	78.48	180.36	100	-----	100	-----	1600	-----

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						ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3
123	C4H10O	DIETHYL ETHER	74.123	-177.34	93.97	----	-----	400	-----	1900	-----
124	C4H10O	ISOBUTANOL	74.123	-162.40	225.79	50	-----	100	-----	1600	-----
125	C4H10O2	2-ETHOXYETHANOL	90.122	-----	275.00	0.5	-----	200	-----	500	-----
126	C4H10S	n-BUTYL MERCAPTAN	90.189	-176.24	209.23	----	-----	10	-----	500	-----
127	C4H11N	n-BUTYLAMINE	73.138	-56.38	171.32	----	-----		-----	300	-----
128	C4H11N	DIETHYLAMINE	73.138	-57.64	131.81	----	-----	25	-----	200	-----
129	C4H11NO2	DIETHANOLAMINE	105.137	82.40	516.00	3	-----	----	-----	----	-----
130	C4H13N3	DIETHYLENE TRIAMINE	103.167	-38.20	404.78	1	-----	----	-----	----	-----
131	C5Cl6	HEXACHLOROCYCLOPENTADIENE	272.771	52.41	462.20	0.01	-----	----	-----	----	-----
132	C5H4O2	FURFURAL	96.086	-33.70	323.06	----	-----	5	-----	100	-----
133	C5H5N	PYRIDINE	79.101	-42.92	239.47	5	-----	5	-----	1000	-----
134	C5H6	CYCLOPENTADIENE	66.103	-121.00	106.70	75	-----	75	-----	750	-----
135	C5H6O2	FURFURYL ALCOHOL	98.101	5.67	338.00	10	-----	50	-----	75	-----
136	C5H8O2	ETHYL ACRYLATE	100.117	-96.16	211.10	----	-----	25	-----	300	-----
137	C5H8O2	METHYL METHACRYLATE	100.117	-54.76	212.54	100	-----	100	-----	1000	-----
138	C5H10	CYCLOPENTANE	70.134	-136.91	120.65	600	-----	----	-----	----	-----
139	C5H10O	METHYL ISOPROPYL KETONE	86.134	-133.60	201.92	200	-----	----	-----	----	-----
140	C5H10O	2-PENTANONE	86.134	-106.35	216.16	150	-----	200	-----	1500	-----
141	C5H10O	DIETHYL KETONE	86.134	-38.15	215.58	200	-----	----	-----	----	-----
142	C5H10O	VALERALDEHYDE	86.134	-132.07	217.40	50	-----	----	-----	----	-----
143	C5H10O2	ISOPROPYL ACETATE	102.133	-100.12	191.30	----	-----	250	-----	1800	-----
144	C5H10O2	n-PROPYL ACETATE	102.133	-139.00	214.70	200	-----	200	-----	1700	-----
145	C5H12	n-PENTANE	72.150	-201.51	96.93	120	-----	1000	-----	1500	-----
146	C5H12O	3-METHYL-1-BUTANOL	88.150	-178.96	268.16	100	-----	100	-----	500	-----
147	C5H12O	3-METHYL-2-BUTANOL	88.150	-----	232.70	100	-----	100	-----	500	-----
148	C5H12O4	PENTAERYTHRITOL	136.148	501.80	676.13	----	10	----	15	----	-----
149	C6H4ClNO2	p-CHLORONITROBENZENE	157.556	182.30	467.60	----	-----	----	1	----	100
150	C6H4Cl2	o-DICHLOROBENZENE	147.003	1.40	356.76	----	-----	----	-----	200	-----
151	C6H4Cl2	p-DICHLOROBENZENE	147.003	127.38	345.31	----	-----	75	-----	150	-----
152	C6H4N2O4	m-DINITROBENZENE	168.109	195.53	571.73	----	1	----	1	----	50
153	C6H4N2O4	o-DINITROBENZENE	168.109	242.47	605.93	----	1	----	1	----	50
154	C6H4N2O4	p-DINITROBENZENE	168.109	344.21	569.93	----	1	----	1	----	50
155	C6H5Cl	MONOCHLOROBENZENE	112.558	-49.36	269.10	----	-----	75	-----	1000	-----
156	C6H5NO2	NITROBENZENE	123.111	42.37	411.44	1	-----	1	-----	200	-----
157	C6H6	BENZENE	78.114	41.95	176.16	0.1	-----	1	-----	500	-----
158	C6H6N2O2	p-NITROANILINE	138.126	297.50	636.80	----	3	----	6	----	300
159	C6H6O	PHENOL	94.113	105.64	359.31	5	-----	5	-----	250	-----
160	C6H6O2	1,2-BENZENEDIOL	110.112	220.01	473.90	5	-----	----	-----	----	-----
161	C6H6O2	1,3-BENZENEDIOL	110.112	227.93	529.70	10	-----	----	-----	----	-----
162	C6H6O2	p-HYDROQUINONE	110.112	340.70	545.00	----	-----	----	2	----	50
163	C6H6S	PHENYL MERCAPTAN	110.180	5.20	336.45	0.1	-----	----	-----	----	-----
164	C6H7N	ANILINE	93.128	21.16	364.01	----	-----	5	-----	100	-----
165	C6H8N2	ADIPONITRILE	108.143	36.48	563.00	4	-----	----	-----	----	-----
166	C6H8N2	p-PHENYLENEDIAMINE	108.143	283.73	512.33	----	0.1	----	0.1	----	25
167	C6H8N2	PHENYLHYDRAZINE	108.143	66.56	470.30	----	-----	5	-----	15	-----
168	C6H10	CYCLOHEXENE	82.145	-154.26	181.35	300	-----	300	-----	2000	-----
169	C6H10O	CYCLOHEXANONE	98.145	-24.07	312.35	25	-----	50	-----	700	-----
170	C6H10O	MESITYL OXIDE	98.145	-63.40	265.64	10	-----	25	-----	1400	-----
171	C6H11NO	epsilon-CAPROLACTAM	113.159	156.58	518.00	0.22	-----	----	-----	----	-----
172	C6H12	CYCLOHEXANE	84.161	43.77	177.30	300	-----	300	-----	1300	-----
173	C6H12O	CYCLOHEXANOL	100.161	74.21	321.53	50	-----	50	-----	400	-----
174	C6H12O	2-HEXANONE	100.161	-68.44	261.86	1	-----	100	-----	1600	-----
175	C6H12O	METHYL ISOBUTYL KETONE	100.161	-119.20	241.70	50	-----	100	-----	500	-----
176	C6H12O2	n-BUTYL ACETATE	116.160	-100.30	258.80	150	-----	150	-----	1700	-----
177	C6H12O2	sec-BUTYL ACETATE	116.160	-146.20	233.60	200	-----	200	-----	1700	-----
178	C6H12O2	tert-BUTYL ACETATE	116.160	-----	204.80	200	-----	200	-----	1500	-----
179	C6H12O2	ISOBUTYL ACETATE	116.160	-145.93	241.97	150	-----	150	-----	1300	-----
180	C6H12O2	DIACETONE ALCOHOL	116.160	-47.20	334.13	50	-----	50	-----	1800	-----
181	C6H12O3	2-ETHOXYETHYL ACETATE	132.159	-79.06	313.34	0.5	-----	100	-----	500	-----
182	C6H13N	CYCLOHEXYLAMINE	99.176	0.14	274.10	10	-----	----	-----	----	-----
183	C6H14	2,2-DIMETHYLBUTANE	86.177	-145.97	121.51	100	-----	----	-----	----	-----
184	C6H14	2,3-DIMETHYLBUTANE	86.177	-198.33	136.36	100	-----	----	-----	----	-----

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						ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3
185	C6H14	n-HEXANE	86.177	-139.56	155.71	50	-----	500	-----	1100	-----
186	C6H14	2-METHYLPENTANE	86.177	-244.48	140.47	100	-----	----	-----	----	-----
187	C6H14	3-METHYLPENTANE	86.177	-261.22	145.89	100	-----	----	-----	----	-----
188	C6H14O	4-METHYL-2-PENTANOL	102.177	-----	269.06	25	-----	25	-----	400	-----
189	C6H14O	DIISOPROPYL ETHER	102.177	-121.90	154.94	500	-----	500	-----	1400	-----
190	C6H14O2	2-BUTOXYETHANOL	118.176	-94.00	340.38	5	-----	50	-----	700	-----
191	C6H15N	DIISOPROPYLAMINE	101.192	-141.34	183.02	5	-----	5	-----	200	-----
192	C6H15N	TRIETHYLAMINE	101.192	-174.46	191.79	----	-----	25	-----	200	-----
193	C7H5N3O6	2,4,6-TRINITROTOLUENE	227.133	177.53	571.73	----	0.5	----	1.5	----	500
194	C7H6N2O4	2,5-DINITROTOLUENE	182.136	126.50	602.33	----	1.5	----	1.5	----	50
195	C7H6N2O4	2,6-DINITROTOLUENE	182.136	150.53	544.73	----	1.5	----	1.5	----	50
196	C7H6N2O4	3,4-DINITROTOLUENE	182.136	137.93	638.33	----	1.5	----	1.5	----	50
197	C7H6N2O4	3,5-DINITROTOLUENE	182.136	198.50	598.73	----	1.5	----	1.5	----	50
198	C7H7Cl	BENZYL CHLORIDE	126.585	-38.20	354.92	----	-----	1	-----	10	-----
199	C7H7Cl	o-CHLOROTOLUENE	126.585	-33.70	318.47	50	-----	----	-----	----	-----
200	C7H7NO2	m-NITROTOLUENE	137.138	60.89	449.33	2	-----	5	-----	200	-----
201	C7H7NO2	o-NITROTOLUENE	137.138	26.29	432.48	2	-----	5	-----	200	-----
202	C7H7NO2	p-NITROTOLUENE	137.138	124.88	461.30	2	-----	5	-----	200	-----
203	C7H8	TOLUENE	92.141	-138.95	231.13	100	-----	200	-----	500	-----
204	C7H8O	m-CRESOL	108.140	54.03	396.10	2.3	-----	5	-----	250	-----
205	C7H8O	o-CRESOL	108.140	87.87	375.80	2.3	-----	5	-----	250	-----
206	C7H8O	p-CRESOL	108.140	94.60	395.56	2.3	-----	5	-----	250	-----
207	C7H8O2	p-METHOXYPHENOL	124.139	132.53	469.13	----	5	----	-----	----	-----
208	C7H9N	N-METHYLANILINE	107.155	-70.60	384.57	0.5	-----	2	-----	100	-----
209	C7H9N	o-TOLUIDINE	107.155	-10.62	392.72	----	-----	5	-----	50	-----
210	C7H12O2	n-BUTYL ACRYLATE	128.171	-84.28	298.13	10	-----	----	-----	----	-----
211	C7H14	METHYLCYCLOHEXANE	98.188	-195.83	213.67	400	-----	500	-----	1200	-----
212	C7H14O	DIISOPROPYL KETONE	114.188	-91.01	255.92	50	-----	----	-----	----	-----
213	C7H14O	2-HEPTANONE	114.188	-31.00	303.62	100	-----	100	-----	800	-----
214	C7H14O	1-METHYLCYCLOHEXANOL	114.188	78.80	314.60	50	-----	100	-----	500	-----
215	C7H14O	cis-2-METHYLCYCLOHEXANOL	114.188	44.60	329.00	50	-----	100	-----	500	-----
216	C7H14O	trans-2-METHYLCYCLOHEXANOL	114.188	24.80	331.70	50	-----	100	-----	500	-----
217	C7H14O	cis-3-METHYLCYCLOHEXANOL	114.188	22.10	334.40	50	-----	100	-----	500	-----
218	C7H14O	trans-3-METHYLCYCLOHEXANOL	114.188	31.10	334.40	50	-----	100	-----	500	-----
219	C7H14O	cis-4-METHYLCYCLOHEXANOL	114.188	-----	339.80	50	-----	100	-----	500	-----
220	C7H14O	trans-4-METHYLCYCLOHEXANOL	114.188	-----	339.80	50	-----	100	-----	500	-----
221	C7H14O	5-METHYL-2-HEXANONE	114.188	-101.02	292.64	50	-----	100	-----	----	-----
222	C7H14O2	ISOPENTYL ACETATE	130.187	-109.30	287.78	100	-----	100	-----	1000	-----
223	C7H14O2	n-PENTYL ACETATE	130.187	-95.44	300.20	100	-----	100	-----	1000	-----
224	C7H16	n-HEPTANE	100.204	-131.04	209.17	85	-----	500	-----	750	-----
225	C8H4O3	PHTHALIC ANHYDRIDE	148.118	268.00	544.10	1	-----	2	-----	10	-----
226	C8H8	STYRENE	104.152	-23.10	293.29	50	-----	100	-----	700	-----
227	C8H10	ETHYLBENZENE	106.167	-138.91	277.16	100	-----	100	-----	800	-----
228	C8H10	m-XYLENE	106.167	-54.13	282.42	100	-----	100	-----	900	-----
229	C8H10	p-XYLENE	106.167	55.87	281.05	100	-----	100	-----	900	-----
230	C8H11N	N,N-DIMETHYLANILINE	121.182	36.41	380.37	5	-----	5	-----	100	-----
231	C8H18	n-OCTANE	114.231	-70.19	258.22	75	-----	500	-----	1000	-----
232	C9H4O5	TRIMELLITIC ANHYDRIDE	192.128	329.00	733.73	0.005	-----	----	-----	----	-----
233	C9H6N2O2	TOLUENE DIISOCYANATE	174.159	57.00	482.00	----	-----	----	-----	2.5	-----
234	C9H8	INDENE	116.163	29.39	360.72	10	-----	----	-----	----	-----
235	C9H10	alpha-METHYLSTYRENE	118.178	-9.76	329.90	50	-----	----	-----	700	-----
236	C9H10	m-METHYLSTYRENE	118.178	-123.41	340.88	100	-----	100	-----	400	-----
237	C9H10	o-METHYLSTYRENE	118.178	-91.43	337.66	100	-----	100	-----	400	-----
238	C9H10	p-METHYLSTYRENE	118.178	-29.43	343.00	100	-----	100	-----	400	-----
239	C9H12	CUMENE	120.194	-140.82	306.34	50	-----	50	-----	900	-----
240	C9H12	1,2,3-TRIMETHYLBENZENE	120.194	-13.65	349.02	25	-----	----	-----	----	-----
241	C9H12	1,2,4-TRIMETHYLBENZENE	120.194	-46.79	336.88	25	-----	----	-----	----	-----
242	C9H14O	ISOPHORONE	138.210	17.42	419.36	4	-----	25	-----	200	-----
243	C9H18O	DIISOBUTYL KETONE	142.241	-50.76	334.87	25	-----	50	-----	500	-----
244	C9H20	n-NONANE	128.258	-64.34	303.48	200	-----	----	-----	----	-----
245	C10H8	NAPHTHALENE	128.174	176.50	424.38	10	-----	10	-----	250	-----
246	C10H10	m-DIVINYLBENZENE	130.189	-88.42	391.10	10	-----	----	-----	----	-----

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	REL - Recommended Exposure Limit (NIOSH)		PEL - Permissible Exposure Limit (OSHA)		IDLH - Immediately Dangerous to Life or Health	
						ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3
247	C10H1004	DIMETHYL PHTHALATE	194.187	30.20	542.66	----	5	----	5	----	2000
248	C10H12	DICYCLOPENTADIENE	132.205	92.93	337.73	5	-----	----	-----	----	-----
249	C10H16O	CAMPHOR	152.236	356.18	405.36	----	2	----	2	----	200
250	C12H10	BIPHENYL	154.211	156.60	491.00	0.2	-----	0.2	-----	16	-----
251	C12H10O	DIPHENYL ETHER	170.211	80.37	496.96	1	-----	1	-----	100	-----
252	C12H11N	DIPHENYLAMINE	169.226	127.40	575.60	----	10	----	-----	----	-----
253	C12H14O4	DIETHYL PHTHALATE	222.241	24.80	561.20	----	5	----	-----	----	-----
254	C15H10N2O2	DIPHENYLMETHANE-4,4'-DIISOCYANATE	250.257	100.49	636.53	0.005	-----	----	-----	7.5	-----
255	C15H24O	2,6-DI-tert-BUTYL-p-CRESOL	220.355	159.53	508.73	----	10	----	-----	----	-----
256	C16H22O4	DIBUTYL PHTHALATE	278.348	-31.00	644.00	----	5	----	5	----	4000
257	C18H14	m-TERPHENYL	230.309	188.33	710.33	----	-----	----	-----	----	500
258	C18H14	o-TERPHENYL	230.309	133.16	636.53	----	-----	----	-----	----	500
259	C18H14	p-TERPHENYL	230.309	413.33	708.80	----	-----	----	-----	----	500
260	C18H15O4P	TRIPHENYL PHOSPHATE	326.288	122.00	776.30	----	3	----	3	----	1000
261	C24H38O4	DIOCTYL PHTHALATE	390.563	-58.00	723.20	----	5	----	5	----	5000

NOTE:

1. Recommended and permissible exposure limits (REL and PEL values) apply for 40 hour workweek.
2. REL and PEL values are time weighted average concentrations.
3. ppm - parts per million by volume.
4. mg/m^3 - milligrams per cubic meter (68 F, 1 atm)
5. NIOSH - National Institue for Occupational Safety and Health.
6. OSHA - Occupational Safety and Health Act.
7. Threshold limit values (TLV) which also apply to a 40 hour workweek are published by the American Conference of Governmental Industrial Hygientists. The PEL values of OSHA are frequently based on the TLV values issuing from the American Conference of Governmental Industrial Hygientists (7).

Table 6-2 EXAMPLES

Example 1 Due to a small leak, the workplace contains methylamine (CH5N) at a concentration of 13.7 ppm (parts per million, volume) in air.

Are the workers overexposed?

Inspection of the table discloses that the permissible exposure level (PEL) = 10 ppm for methylamine. Since the workplace concentraion exceed the PEL for methylamine, the workers are overexposed. This is shown below:

Workplace concentraion of 13.7 ppm > PEL of 10 ppm

Workers are overexposed.

Example 2 Estimate the permissible exposure level (PEL) for the gas mixture below:

	y_i	PEL_i
	ppm	ppm
Acetonitrile (C2H3N)	10	40
Ethylamine (C2H7N)	2	10
Monoethanolamine (C2H7NO)	2	3

Substitution of y_i and PEL_i into the equations for gas mixtures provides:

$$PEL_{mixture} = \Sigma\ y_i\ /\ \Sigma\ (y_i/PEL_i)$$

$$= (10 + 2 + 2\ )/(10/40 + 2/10 + 2/3)$$

$$PEL_{mixture} = 12.5 \text{ ppm}$$

Table 6-3 COMPUTER PROGRAM RESULTS

EXPOSURE LIMITS FOR HEALTH

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1. Number..... 75
2. Formula..... C3H5Cl
3. Name..... 3-CHLOROPROPENE
4. Molecular Weight..... = 76.525
5. Freezing Point..... F = -210.10
6. Boiling Point..... F = 112.93
7. Recommended Exposure Limit (NIOSH), ppm..... = 1
8. Permissible Exposure Limit (OSHA), ppm..... = 1
9. Immediately Dangerous to Life/Health, ppm.... = 250

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ppm - parts per million, volume.
mg/m3 - milligrams per cubic meter.
NIOSH - National Institute of Occupational Safety and Health.
OSHA - Occupational Safety and Health Act.
REL - Recommended Exposure Limit.
PEL - Permissible Exposure Limit.
IDLH - Immediately Dangerous to Life/Health.
PEL values are often identical to Threshold Limit Values (TLV).

Chapter 7

COEFFICIENT OF THERMAL EXPANSION

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ABSTRACT

Results for thermal expansion coefficient of liquids are presented for major organic chemicals. The results are especially helpful in the design of relief systems for process equipment containing liquids that are subject to thermal expansion.

The correlation constants are displayed in an easy-to-use tabular format which is especially suited for rapid engineering usage with the personal computer or hand calculator. Correlation and experimental results are in favorable agreement.

INTRODUCTION

Physical and thermodynamic property data, such as thermal expansion coefficient, are important in process engineering. The following brief discussion illustrates such importance. Liquids contained in process equipment will expand with an increase in temperature. To accommodate such expansion, it is necessary to design a relief system which will relieve (or vent) the thermally expanding liquid and prevent pressure build-up from the expansion. If provisions are not made for a relief system, the pressure will increase from the thermally expanding liquid. If the pressure increase is excessive, damage to the process equipment will occur.

In this article, results are presented for thermal expansion coefficient of liquids. The results are useful in process engineering applications including the design of relief systems for process equipment containing liquids that are subject to thermal expansion.

THERMAL EXPANSION COEFFICIENT

The following equation was selected for correlation of thermal expansion coefficient of liquid as a function of temperature:

$$\beta_{liq} = a\,(1-T/T_C)^m \qquad (7\text{-}1)$$

where β_{liq} = thermal expansion coefficient of liquid, 1/C
a and m = regression coefficients for chemical compound
T = temperature, K
T_C = critical temperature, K

The results for thermal expansion coefficient are given in Table 7-1 for major organic chemicals. The presented values are applicable to a wide variety of substances. The tabulation also discloses the temperature range for which the equation is useable. The respective minimum and maximum temperatures are denoted by TMIN and TMAX. Spot values are provided at 25 C for both thermal expansion coefficient and liquid density.

For the tabulation, a literature search was conducted to identify data source publications (1-30). The publications were screened and copies of appropriate data were made. These data were next keyed-in to the computer to provide a data base of liquid volume values for organic compounds for which experimental data are available. These data were then regressed for volume and change of volume with temperature as a function of

temperature.

The coefficient of thermal expansion involves both volume and change of volume with temperature. The variation of volume with temperature is shown in Figure 7-1 for a representative compound. Inspection of the figure discloses that the curve at constant pressure (P=29.6 atm) is very similar in shape to the curve at saturation (P=saturation). In fact, the curves are roughly parallel for the range shown. Also, the closeness of the curves indicates that the volume is about the same for both saturation and constant pressure as shown. These observations of similar shape and closeness suggest that the coefficient of thermal expansion at constant pressure is approximately equal to that at saturation:

$$\beta_{liq} = \frac{1}{v}\left(\frac{\partial v}{\partial T}\right)_p \approx \frac{1}{v}\left(\frac{\partial v}{\partial T}\right)_{saturation} \tag{7-2}$$

This equation was used in preparing the tabulated results. The equation is applicable to the liquid at conditions below the critical point (temperature below critical temperature and pressure below critical pressure).

A comparison of calculated and actual data values for thermal expansion coefficient of liquid in Figure 7-2 for a representative compound. The graph indicates good agreement of calculated and data values.

VOLUMETRIC EXPANSION RATE

Crowl and Louvar (9) have shown that the volumetric expansion (or flow) rate for a liquid contained in process equipment that undergoes thermal expansion from heat input is given by:

$$Q_v = \frac{\beta_{liq}}{\rho_{liq} C_P} UA (T_{ext} - T) \tag{7-3}$$

where
Q_v = volumetric expansion rate
ρ_{liq} = density of liquid
C_P = heat capacity of liquid
U = overall heat transfer coefficient
A = area for heat transfer
T_{ext} = external temperature
T = temperature of liquid

This equation describes the volumetric expansion rate at the beginning of the heat transfer and is applicable for the design of relief systems. The relief system should be sized to accommodate this volumetric flow (9). Property data for use in the equation are available from Yaws (29,30).

EXAMPLES

The correlation results maybe used for calculation of thermal expansion coefficient of liquid and volumetric flow from thermal expansion. Examples are shown in Table 7-2.

COMPUTER PROGRAM

A computer program, containing data for all compounds, is available for a nominal fee (Carl L. Yaws, Box 10053, Lamar University, Beaumont, TX 77710, phone/FAX 409-880-8787). The computer program (random data file) is in ASCII which can be accessed by other software.

Computer program results for a representative compound are shown in Table 7-3.

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Figure 7-1 VOLUME OF LIQUID

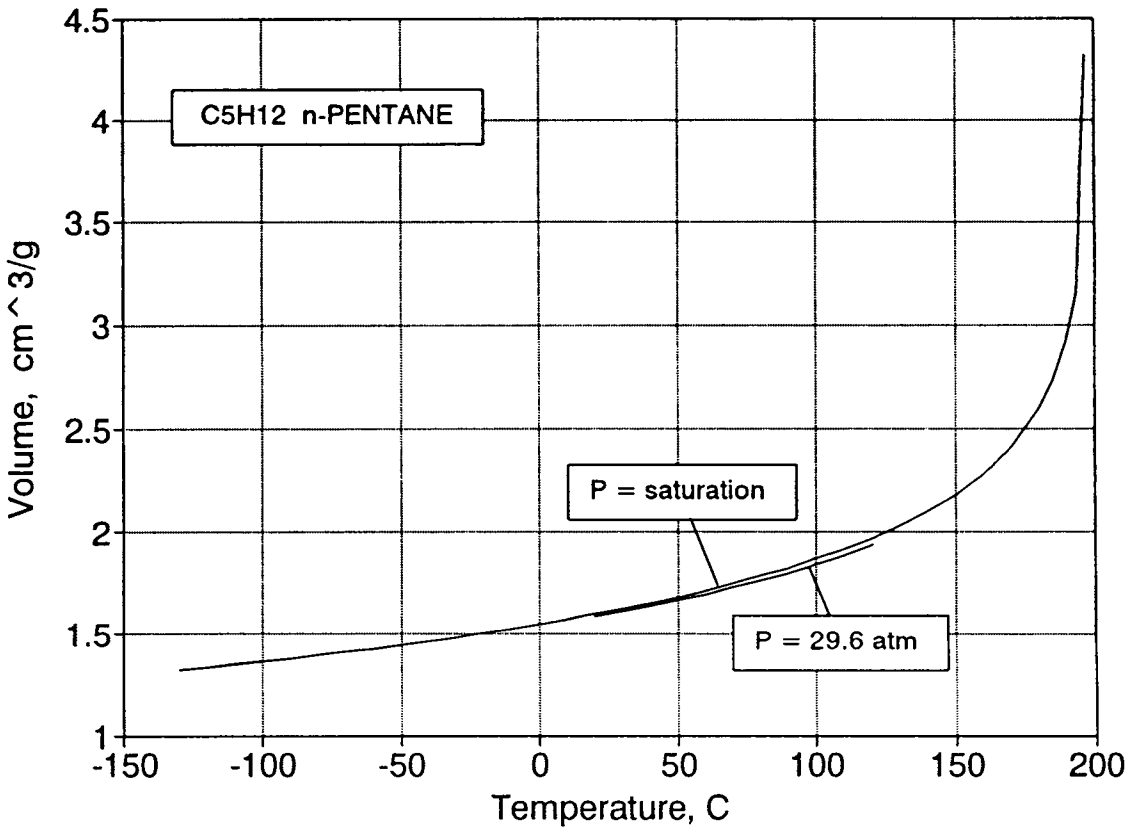

Figure 7-2 COEFFICIENT OF THERMAL EXPANSION

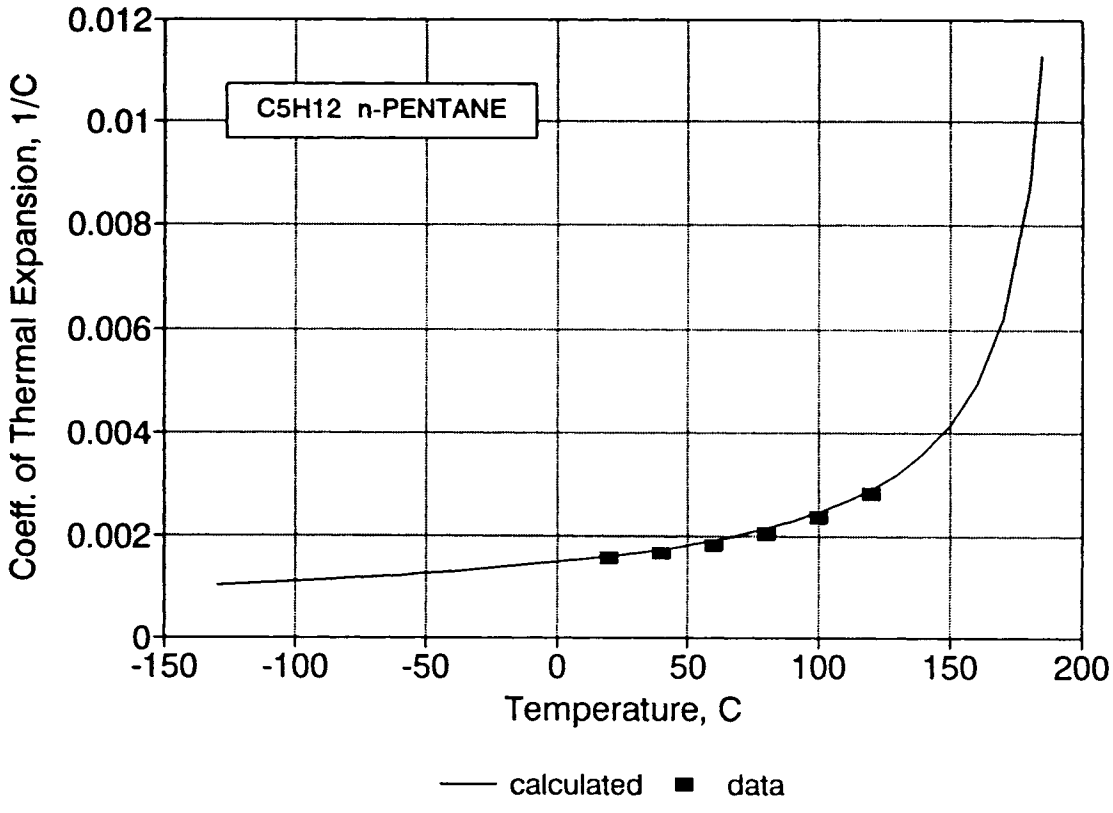

Table 7-1 COEFFICIENT OF THERMAL EXPANSION

$\beta_{liq} = a\ (1-T/TC)^m$ (β_{liq} - 1/C, T - K, ρ_{liq} - g/cm^3)

NO	FORMULA	NAME	a	TC	m	TMIN	TMAX	β_{liq} @ 25 C	ρ_{liq} @ 25 C
1	CBrClF2	BROMOCHLORODIFLUOROMETHANE	8.448E-04	426.15	-0.7356	113.65	404.84	2.046E-03	1.810
2	CBrCl3	BROMOTRICHLOROMETHANE	6.001E-04	606.00	-0.7143	252.15	575.70	9.735E-04	1.994
3	CBrF3	BROMOTRIFLUOROMETHANE	1.078E-03	340.15	-0.7199	105.15	323.14	4.861E-03	1.536
4	CBr2F2	DIBROMODIFLUOROMETHANE	7.047E-04	478.00	-0.7374	163.05	454.10	1.449E-03	2.274
5	CClF3	CHLOROTRIFLUOROMETHANE	1.229E-03	301.96	-0.7093	92.15	286.86	---	0.841
6	CClN	CYANOGEN CHLORIDE	7.816E-04	449.00	-0.7614	266.65	426.55	1.793E-03	1.172
7	CCl2F2	DICHLORODIFLUOROMETHANE	9.838E-04	384.95	-0.7035	115.15	365.70	2.805E-03	1.307
8	CCl2O	PHOSGENE	7.801E-04	455.00	-0.7280	145.37	432.25	1.694E-03	1.363
9	CCl3F	TRICHLOROFLUOROMETHANE	7.815E-04	471.20	-0.7143	162.04	447.64	1.598E-03	1.477
10	CCl4	CARBON TETRACHLORIDE	6.699E-04	556.35	-0.7100	250.33	528.53	1.155E-03	1.583
11	CF2O	CARBONYL FLUORIDE	1.069E-03	297.00	-0.7143	161.89	282.15	---	---
12	CF4	CARBON TETRAFLUORIDE	1.610E-03	227.50	-0.7091	89.56	216.13	---	---
13	CHBr3	TRIBROMOMETHANE	6.030E-04	696.00	-0.6994	281.20	661.20	8.916E-04	2.876
14	CHClF2	CHLORODIFLUOROMETHANE	1.008E-03	369.30	-0.7188	115.73	350.84	3.294E-03	1.193
15	CHCl2F	DICHLOROFLUOROMETHANE	8.258E-04	451.58	-0.7143	138.15	429.00	1.786E-03	1.367
16	CHCl3	CHLOROFORM	7.376E-04	536.40	-0.7123	209.63	509.58	1.315E-03	1.480
17	CHF3	TRIFLUOROMETHANE	1.322E-03	298.89	-0.7109	117.97	283.95	---	0.667
18	CHI3	TRIIODOMETHANE	4.565E-04	794.55	-0.7143	396.16	754.82	---	---
19	CHN	HYDROGEN CYANIDE	1.039E-03	456.65	-0.7179	259.91	433.82	2.222E-03	0.680
20	CHNS	ISOTHIOCYANIC-ACID	---	---	---	---	---	---	---
21	CH2BrCl	BROMOCHLOROMETHANE	6.585E-04	557.00	-0.7143	185.20	529.15	1.138E-03	1.926
22	CH2Br2	DIBROMOMETHANE	6.288E-04	611.00	-0.7242	220.60	580.45	1.021E-03	2.482
23	CH2ClF	CHLOROFLUOROMETHANE	9.882E-04	424.91	-0.7143	140.16	403.66	2.345E-03	1.256
24	CH2Cl2	DICHLOROMETHANE	7.736E-04	510.00	-0.7098	178.01	484.50	1.443E-03	1.318
25	CH2F2	DIFLUOROMETHANE	1.101E-03	351.60	-0.7190	137.00	334.02	4.266E-03	0.957
26	CH2I2	DIIODOMETHANE	4.926E-04	747.00	-0.7346	279.25	709.65	7.161E-04	3.306
27	CH2O	FORMALDEHYDE	1.053E-03	408.00	-0.7143	181.15	387.60	2.687E-03	0.736
28	CH2O2	FORMIC ACID	5.772E-04	580.00	-0.7634	281.55	551.00	1.001E-03	1.214
29	CH3Br	METHYL BROMIDE	8.018E-04	467.00	-0.7197	179.55	443.65	1.667E-03	1.662
30	CH3Cl	METHYL CHLORIDE	9.256E-04	416.25	-0.7131	175.45	395.44	2.273E-03	0.913
31	CH3Cl3Si	METHYL TRICHLOROSILANE	7.217E-04	517.00	-0.7221	195.35	491.15	1.343E-03	1.266
32	CH3F	METHYL FLUORIDE	1.276E-03	317.70	-0.7146	131.35	301.82	9.359E-03	0.566
33	CH3I	METHYL IODIDE	6.863E-04	528.00	-0.7321	206.70	501.60	1.262E-03	2.265
34	CH3NO	FORMAMIDE	5.199E-04	771.00	-0.7482	275.70	732.45	7.495E-04	1.129
35	CH3NO2	NITROMETHANE	7.061E-04	588.15	-0.7097	244.60	558.74	1.166E-03	1.129
36	CH3NO2	METHYL-NITRITE	---	---	---	---	---	---	---
37	CH3NO3	METHYL-NITRATE	---	---	---	---	---	---	---
38	CH4	METHANE	1.809E-03	190.58	-0.7230	90.67	181.05	---	---
39	CH4Cl2Si	METHYL DICHLOROSILANE	5.903E-04	483.00	-0.7747	182.55	458.85	1.242E-03	1.103
40	CH4O	METHANOL	5.922E-04	512.58	-0.7669	175.47	486.95	1.155E-03	0.787
41	CH4O3S	METHANESULFONIC ACID	---	---	---	---	---	---	1.477
42	CH4S	METHYL MERCAPTAN	7.722E-04	469.95	-0.7148	150.18	446.45	1.585E-03	0.862
43	CH5ClSi	METHYL CHLOROSILANE	8.038E-04	442.00	-0.7343	139.05	419.90	1.833E-03	0.884
44	CH5N	METHYLAMINE	8.155E-04	430.05	-0.7725	179.69	408.55	2.032E-03	0.655
45	CH6Si	METHYL SILANE	1.077E-03	352.50	-0.7120	116.34	334.88	4.077E-03	0.486
46	CN4O8	TETRANITROMETHANE	9.030E-04	540.00	-0.7143	287.05	513.00	1.603E-03	1.626
47	CO	CARBON MONOXIDE	2.809E-03	132.92	-0.7095	68.15	126.27	---	---
48	COS	CARBONYL SULFIDE	8.883E-04	378.80	-0.7286	134.35	359.86	2.742E-03	1.005
49	CO2	CARBON DIOXIDE	1.280E-03	304.19	-0.7097	216.58	288.98	---	0.713
50	CS2	CARBON DISULFIDE	7.285E-04	552.00	-0.6774	161.58	524.40	1.233E-03	1.256
51	C2BrF3	BROMOTRIFLUOROETHYLENE	9.911E-04	432.00	-0.7000	173.00	410.40	2.251E-03	1.830
52	C2Br2F4	1,2-DIBROMOTETRAFLUOROETHANE	7.295E-04	487.80	-0.7345	162.65	463.41	1.460E-03	2.162
53	C2ClF3	CHLOROTRIFLUOROETHYLENE	1.094E-03	379.15	-0.6926	115.00	360.19	3.187E-03	1.275
54	C2ClF5	CHLOROPENTAFLUOROETHANE	1.015E-03	353.15	-0.7147	173.71	335.49	3.836E-03	1.287
55	C2Cl2F4	1,2-DICHLOROTETRAFLUOROETHANE	8.600E-04	418.85	-0.7255	179.15	397.91	2.121E-03	1.455
56	C2Cl3F3	1,1,2-TRICHLOROTRIFLUOROETHANE	7.497E-04	487.25	-0.7196	238.15	462.89	1.481E-03	1.564
57	C2Cl4	TETRACHLOROETHYLENE	6.414E-04	620.00	-0.6437	250.80	589.00	9.781E-04	1.613
58	C2Cl4F2	1,1,2,2-TETRACHLORODIFLUOROETHANE	6.839E-04	551.00	-0.7143	299.15	523.45	---	---
59	C2Cl4O	TRICHLOROACETYL CHLORIDE	6.292E-04	590.00	-0.7143	273.15	560.50	1.040E-03	1.613
60	C2Cl6	HEXACHLOROETHANE	5.893E-04	698.00	-0.7143	459.95	663.10	---	---
61	C2F4	TETRAFLUOROETHYLENE	1.225E-03	306.45	-0.7143	142.00	291.13	---	0.920
62	C2F6	HEXAFLUOROETHANE	1.344E-03	292.80	-0.7021	172.45	278.16	---	---
63	C2HBrClF3	HALOTHANE	7.215E-04	521.00	-0.7143	223.15	494.95	1.323E-03	1.869

			$\beta_{liq} = a\ (1-T/TC)^m$					(β_{liq} - 1/C, T - K, ρ_{liq} - g/cm^3)	
NO	FORMULA	NAME	a	TC	m	TMIN	TMAX	β_{liq} @ 25 C	ρ_{liq} @ 25 C
64	C2HClF2	2-CHLORO-1,1-DIFLUOROETHYLENE	9.484E-04	400.55	-0.7118	134.65	380.52	2.504E-03	1.217
65	C2HCl3	TRICHLOROETHYLENE	6.560E-04	571.00	-0.7143	188.40	542.45	1.112E-03	1.458
66	C2HCl3O	DICHLOROACETYL CHLORIDE	6.466E-04	579.00	-0.7143	298.15	550.05	---	1.519
67	C2HCl3O	TRICHLOROACETALDEHYDE	6.526E-04	565.00	-0.7216	216.00	536.75	1.121E-03	1.499
68	C2HCl5	PENTACHLOROETHANE	5.669E-04	665.00	-0.7151	244.15	631.75	8.675E-04	1.675
69	C2HF3	TRIFLUOROETHENE	1.030E-03	347.22	-0.7143	94.53	329.86	4.167E-03	0.919
70	C2HF3O2	TRIFLUOROACETIC ACID	7.966E-04	491.25	-0.6971	257.90	466.69	1.527E-03	1.480
71	C2HF5	PENTAFLUOROETHANE	1.122E-03	342.00	-0.7143	170.15	324.90	4.867E-03	1.174
72	C2H2	ACETYLENE	1.210E-03	308.32	-0.7143	192.40	292.90	---	0.377
73	C2H2Br4	1,1,2,2-TETRABROMOETHANE	3.495E-04	824.00	-0.7860	273.15	782.80	4.975E-04	2.927
74	C2H2Cl2	1,1-DICHLOROETHYLENE	7.338E-04	482.00	-0.7143	150.65	457.90	1.461E-03	1.117
75	C2H2Cl2	cis-1,2-DICHLOROETHYLENE	7.276E-04	527.00	-0.7143	193.15	500.65	1.320E-03	1.265
76	C2H2Cl2	trans-1,2-DICHLOROETHYLENE	7.427E-04	508.00	-0.7143	223.35	482.60	1.397E-03	1.244
77	C2H2Cl2O	CHLOROACETYL CHLORIDE	6.735E-04	581.00	-0.7143	251.15	551.95	1.126E-03	1.434
78	C2H2Cl2O	DICHLOROACETALDEHYDE	7.056E-04	555.00	-0.7143	223.00	527.25	1.223E-03	1.433
79	C2H2Cl2O2	DICHLOROACETIC ACID	6.631E-04	686.00	-0.6745	286.55	651.70	9.742E-04	1.553
80	C2H2Cl3F	1,1,1-TRICHLOROFLUOROETHANE	7.010E-04	565.00	-0.7143	173.00	536.75	1.198E-03	1.575
81	C2H2Cl4	1,1,1,2-TETRACHLOROETHANE	6.173E-04	624.00	-0.7143	202.94	592.80	9.818E-04	1.535
82	C2H2Cl4	1,1,2,2-TETRACHLOROETHANE	6.189E-04	645.00	-0.7041	229.35	612.75	9.578E-04	1.587
83	C2H2F2	1,1-DIFLUOROETHYLENE	1.466E-03	302.80	-0.6906	129.15	287.66	---	0.594
84	C2H2F2	cis-1,2-DIFLUOROETHENE	1.039E-03	394.67	-0.7143	107.90	374.94	2.842E-03	1.023
85	C2H2F2	trans-1,2-DIFLUOROETHENE	1.039E-03	394.67	-0.7143	107.90	374.94	2.842E-03	1.023
86	C2H2F4	1,1,1,2-TETRAFLUOROETHANE	1.173E-03	380.00	-0.6863	172.15	361.00	3.365E-03	1.199
87	C2H2O	KETENE	1.005E-03	370.00	-0.7143	122.00	351.50	3.241E-03	0.660
88	C2H2O4	OXALIC ACID	5.462E-04	804.00	-0.7143	462.65	763.80	---	---
89	C2H3Br	VINYL BROMIDE	8.392E-04	473.00	-0.7110	135.35	449.35	1.703E-03	1.499
90	C2H3Cl	VINYL CHLORIDE	8.216E-04	432.00	-0.7284	119.36	410.40	1.929E-03	0.903
91	C2H3ClF2	1-CHLORO-1,1-DIFLUOROETHANE	1.021E-03	410.20	-0.7020	142.35	389.69	2.538E-03	1.107
92	C2H3ClO	ACETYL CHLORIDE	7.391E-04	508.00	-0.7143	160.30	482.60	1.390E-03	1.102
93	C2H3ClO	CHLOROACETALDEHYDE	7.355E-04	555.00	-0.7143	293.00	527.25	1.275E-03	1.200
94	C2H3ClO2	CHLOROACETIC ACID	6.076E-04	686.00	-0.7143	333.15	651.70	---	---
95	C2H3ClO2	METHYL CHLOROFORMATE	6.978E-04	525.00	-0.7219	192.00	498.75	1.279E-03	1.213
96	C2H3Cl3	1,1,1-TRICHLOROETHANE	6.996E-04	545.00	-0.7067	242.75	517.75	1.224E-03	1.330
97	C2H3Cl3	1,1,2-TRICHLOROETHANE	7.042E-04	602.00	-0.6900	236.50	571.90	1.129E-03	1.435
98	C2H3F	VINYL FLUORIDE	1.129E-03	327.80	-0.7143	112.65	311.41	6.281E-03	0.620
99	C2H3F3	1,1,1-TRIFLUOROETHANE	1.015E-03	346.25	-0.7375	161.85	328.94	4.353E-03	0.953
100	C2H3N	ACETONITRILE	7.659E-04	545.50	-0.7187	229.32	518.23	1.352E-03	0.779
101	C2H3NO	METHYL ISOCYANATE	8.207E-04	505.00	-0.7143	256.15	479.75	1.553E-03	0.926
102	C2H4	ETHYLENE	1.286E-03	282.36	-0.7143	104.01	268.24	---	---
103	C2H4Br2	1,1-DIBROMOETHANE	6.331E-04	628.00	-0.7018	210.15	596.60	9.948E-04	2.045
104	C2H4Br2	1,2-DIBROMOETHANE	5.814E-04	650.15	-0.7143	282.94	617.64	9.012E-04	2.169
105	C2H4Cl2	1,1-DICHLOROETHANE	7.281E-04	523.00	-0.7130	176.19	496.85	1.329E-03	1.168
106	C2H4Cl2	1,2-DICHLOROETHANE	6.899E-04	561.00	-0.6896	237.49	532.95	1.164E-03	1.246
107	C2H4Cl2O	BIS(CHLOROMETHYL)ETHER	6.760E-04	579.00	-0.7143	231.65	550.05	1.133E-03	1.312
108	C2H4F2	1,1-DIFLUOROETHANE	9.847E-04	386.60	-0.7203	156.15	367.27	2.849E-03	0.898
109	C2H4F2	1,2-DIFLUOROETHANE	9.031E-04	476.00	-0.7143	215.00	452.20	1.824E-03	1.016
110	C2H4I2	1,2-DIIODOETHANE	5.359E-04	749.91	-0.7143	356.16	712.41	---	---
111	C2H4O	ACETALDEHYDE	8.111E-04	461.00	-0.7224	150.15	437.95	1.720E-03	0.774
112	C2H4O	ETHYLENE OXIDE	8.092E-04	469.15	-0.7175	161.45	445.69	1.669E-03	0.862
113	C2H4OS	THIOACETIC-ACID	5.685E-04	577.34	-0.7143	150.16	548.47	9.553E-04	1.059
114	C2H4O2	ACETIC ACID	5.938E-04	592.71	-0.7316	289.81	563.07	9.903E-04	1.043
115	C2H4O2	METHYL FORMATE	7.689E-04	487.20	-0.7232	174.15	462.84	1.525E-03	0.967
116	C2H4S	THIACYCLOPROPANE	7.937E-04	555.00	-0.7143	165.37	527.25	1.376E-03	1.007
117	C2H5Br	BROMOETHANE	7.499E-04	503.80	-0.7202	154.55	478.61	1.430E-03	1.450
118	C2H5Cl	ETHYL CHLORIDE	6.496E-04	460.35	-0.7686	136.75	437.33	1.448E-03	0.890
119	C2H5ClO	2-CHLOROETHANOL	5.018E-04	585.00	-0.7811	205.65	555.75	8.756E-04	1.196
120	C2H5F	ETHYL FLUORIDE	8.496E-04	375.31	-0.7558	129.95	356.54	2.808E-03	0.712
121	C2H5I	ETHYL IODIDE	7.186E-04	561.00	-0.7015	162.05	532.95	1.223E-03	1.920
122	C2H5N	ETHYLENEIMINE	6.338E-04	537.00	-0.7664	195.20	510.15	1.179E-03	0.831
123	C2H5NO	ACETAMIDE	5.701E-04	761.00	-0.7143	354.15	722.95	---	---
124	C2H5NO	N-METHYLFORMAMIDE	5.696E-04	721.00	-0.7253	269.35	684.95	8.387E-04	0.999
125	C2H5NO2	NITROETHANE	6.758E-04	593.00	-0.7220	183.63	563.35	1.119E-03	1.043
126	C2H5NO3	ETHYL-NITRATE	---	---	---	---	---	---	---
127	C2H6	ETHANE	1.203E-03	305.42	-0.7167	90.35	290.15	---	0.315
128	C2H6AlCl	DIMETHYLALUMINUM CHLORIDE	6.878E-04	619.00	-0.7143	252.15	588.05	1.100E-03	0.988
129	C2H6O	DIMETHYL ETHER	9.360E-04	400.10	-0.7194	131.66	380.10	2.503E-03	0.655

$\beta_{liq} = a\,(1-T/TC)^m$ (β_{liq} - 1/C, T - K, ρ_{liq} - g/cm^3)

NO	FORMULA	NAME	a	TC	m	TMIN	TMAX	β_{liq} @ 25 C	ρ_{liq} @ 25 C
130	C2H6O	ETHANOL	6.107E-04	516.25	-0.7633	159.05	490.44	1.179E-03	0.787
131	C2H6OS	DIMETHYL SULFOXIDE	6.087E-04	726.00	-0.6780	291.67	689.70	8.712E-04	1.095
132	C2H6O2	ETHYLENE GLYCOL	3.644E-04	645.00	-0.8280	260.15	612.75	6.091E-04	1.110
133	C2H6O4S	DIMETHYL SULFATE	6.593E-04	758.00	-0.6298	241.35	720.10	9.032E-04	1.322
134	C2H6S	DIMETHYL SULFIDE	7.483E-04	503.04	-0.7143	174.88	477.89	1.421E-03	0.850
135	C2H6S	ETHYL MERCAPTAN	7.322E-04	499.15	-0.7213	125.26	474.19	1.411E-03	0.833
136	C2H6S2	DIMETHYL DISULFIDE	6.596E-04	606.00	-0.6886	188.44	575.70	1.052E-03	1.057
137	C2H7N	DIMETHYLAMINE	7.465E-04	437.65	-0.7520	180.96	415.77	1.764E-03	0.650
138	C2H7N	ETHYLAMINE	8.527E-04	456.15	-0.7141	192.15	433.34	1.818E-03	0.677
139	C2H7NO	MONOETHANOLAMINE	4.724E-04	638.00	-0.7985	283.65	606.10	7.811E-04	1.014
140	C2H8N2	ETHYLENEDIAMINE	5.354E-04	593.00	-0.7983	284.29	563.35	9.352E-04	0.893
141	C2H8Si	DIMETHYL SILANE	9.429E-04	402.00	-0.7158	122.93	381.90	2.484E-03	0.578
142	C2N2	CYANOGEN	8.052E-04	400.15	-0.7937	245.25	380.14	2.382E-03	0.866
143	C3F6	HEXAFLUOROPROPYLENE	1.200E-03	368.00	-0.6887	116.65	349.60	3.770E-03	1.304
144	C3F6O	HEXAFLUOROACETONE	9.315E-04	357.14	-0.7710	151.15	339.28	3.734E-03	1.321
145	C3F8	OCTAFLUOROPROPANE	1.062E-03	345.05	-0.7183	125.46	327.80	4.452E-03	1.317
146	C3H2N2	MALONONITRILE	5.790E-04	715.00	-0.7391	304.90	679.25	---	---
147	C3H3Cl	PROPARGYL CHLORIDE	7.920E-04	541.00	-0.6868	293.00	513.95	1.373E-03	1.024
148	C3H3N	ACRYLONITRILE	7.966E-04	535.00	-0.7106	189.63	508.25	1.421E-03	0.801
149	C3H3NO	OXAZOLE	5.796E-04	554.00	-0.7143	189.15	526.30	1.007E-03	0.718
150	C3H4	METHYLACETYLENE	9.222E-04	402.39	-0.7210	170.45	382.27	2.442E-03	0.607
151	C3H4	PROPADIENE	1.009E-03	393.15	-0.6970	136.87	373.49	2.714E-03	0.579
152	C3H4Cl2	2,3-DICHLOROPROPENE	7.282E-04	577.00	-0.6937	191.50	548.15	1.206E-03	1.201
153	C3H4O	ACROLEIN	6.603E-04	506.00	-0.7511	185.45	480.70	1.288E-03	0.834
154	C3H4O	PROPARGYL ALCOHOL	6.848E-04	580.00	-0.7143	221.35	551.00	1.147E-03	0.945
155	C3H4O2	ACRYLIC ACID	6.759E-04	615.00	-0.6930	286.65	584.25	1.070E-03	1.046
156	C3H4O2	beta-PROPIOLACTONE	6.014E-04	686.00	-0.7143	239.75	651.70	9.037E-04	1.262
157	C3H4O2	VINYL FORMATE	8.164E-04	498.00	-0.7055	200.00	473.10	1.555E-03	0.954
158	C3H4O3	ETHYLENE CARBONATE	5.212E-04	790.00	-0.7140	309.55	750.50	---	---
159	C3H4O3	PYRUVIC ACID	5.277E-04	634.52	-0.7660	286.75	602.79	8.580E-04	1.265
160	C3H5Br	3-BROMO-1-PROPENE	6.695E-04	540.20	-0.7143	153.76	513.19	1.188E-03	1.389
161	C3H5Cl	2-CHLOROPROPENE	7.790E-04	478.00	-0.7143	135.75	454.10	1.566E-03	0.895
162	C3H5Cl	3-CHLOROPROPENE	7.495E-04	514.15	-0.7143	138.65	488.44	1.392E-03	0.931
163	C3H5ClO	alpha-EPICHLOROHYDRIN	6.603E-04	610.00	-0.6969	215.95	579.50	1.054E-03	1.174
164	C3H5ClO2	METHYL CHLOROACETATE	7.129E-04	600.00	-0.6905	241.03	570.00	1.146E-03	1.229
165	C3H5ClO2	ETHYL CHLOROFORMATE	7.483E-04	508.15	-0.7170	192.00	482.74	1.410E-03	1.127
166	C3H5Cl3	1,2,3-TRICHLOROPROPANE	6.136E-04	652.00	-0.7143	258.45	619.40	9.495E-04	1.384
167	C3H5I	3-IODO-1-PROPENE	6.667E-04	595.81	-0.7143	173.86	566.02	1.094E-03	1.839
168	C3H5N	PROPIONITRILE	7.205E-04	564.40	-0.7196	180.26	536.18	1.237E-03	0.777
169	C3H5NO	ACRYLAMIDE	5.547E-04	710.00	-0.7143	357.65	674.50	---	---
170	C3H5NO	HYDRACRYLONITRILE	4.688E-04	690.00	-0.7755	227.15	655.50	7.270E-04	1.040
171	C3H5NO	LACTONITRILE	5.090E-04	643.00	-0.7666	233.00	610.85	8.206E-04	0.983
172	C3H5N3O9	NITROGLYCERINE	5.633E-04	680.00	-0.7001	286.15	646.00	8.437E-04	1.586
173	C3H6	CYCLOPROPANE	9.296E-04	397.91	-0.7143	145.73	378.01	2.497E-03	0.619
174	C3H6	PROPYLENE	1.070E-03	364.76	-0.6975	87.90	346.52	3.503E-03	0.504
175	C3H6Br2	1,2-DIBROMOPROPANE	4.995E-04	634.11	-0.7143	217.96	602.40	7.864E-04	1.925
176	C3H6Cl2	1,1-DICHLOROPROPANE	6.764E-04	560.00	-0.7143	200.00	532.00	1.164E-03	1.126
177	C3H6Cl2	1,2-DICHLOROPROPANE	6.718E-04	572.00	-0.7143	172.71	543.40	1.137E-03	1.150
178	C3H6Cl2	1,3-DICHLOROPROPANE	6.015E-04	603.00	-0.7290	173.65	572.85	9.891E-04	1.181
179	C3H6Cl2	2,2-DICHLOROPROPANE	7.014E-04	539.46	-0.7143	239.36	512.49	1.246E-03	1.106
180	C3H6I2	1,2-DIIODOPROPANE	5.194E-04	780.49	-0.7143	253.16	741.47	7.325E-04	2.566
181	C3H6O	ACETONE	7.981E-04	508.20	-0.7010	178.45	482.79	1.483E-03	0.786
182	C3H6O	ALLYL ALCOHOL	7.182E-04	545.05	-0.7143	144.15	517.80	1.264E-03	0.845
183	C3H6O	METHYL VINYL ETHER	7.856E-04	437.00	-0.7420	151.15	415.15	1.839E-03	0.744
184	C3H6O	n-PROPIONALDEHYDE	8.136E-04	496.00	-0.7140	193.15	471.20	1.568E-03	0.796
185	C3H6O	1,2-PROPYLENE OXIDE	7.828E-04	482.25	-0.7065	161.22	458.14	1.546E-03	0.823
186	C3H6O	1,3-PROPYLENE OXIDE	7.541E-04	520.00	-0.7143	255.00	494.00	1.386E-03	0.894
187	C3H6O2	ETHYL FORMATE	7.573E-04	508.40	-0.7065	193.55	482.98	1.413E-03	0.917
188	C3H6O2	METHYL ACETATE	7.326E-04	506.80	-0.7255	175.15	481.46	1.395E-03	0.927
189	C3H6O2	PROPIONIC ACID	6.180E-04	604.00	-0.7236	252.45	573.80	1.011E-03	0.988
190	C3H6O2S	3-MERCAPTOPROPIONIC ACID	8.010E-04	729.00	-0.5953	290.65	692.55	1.096E-03	1.213
191	C3H6O3	LACTIC ACID	6.186E-04	616.00	-0.7143	291.15	585.20	9.923E-04	1.201
192	C3H6O3	METHOXYACETIC ACID	5.483E-04	691.00	-0.7255	281.00	656.45	8.259E-04	1.170
193	C3H6O3	TRIOXANE	6.397E-04	604.00	-0.7143	334.65	573.80	---	---
194	C3H6S	THIACYCLOBUTANE	7.005E-04	603.00	-0.7143	199.96	572.85	1.140E-03	1.014
195	C3H7Br	1-BROMOPROPANE	7.218E-04	544.00	-0.7084	163.15	516.80	1.267E-03	1.345

$\beta_{liq} = a\ (1-T/TC)^m$ (β_{liq} - 1/C, T - K, ρ_{liq} - g/cm^3)

NO	FORMULA	NAME	a	TC	m	TMIN	TMAX	β_{liq} @ 25 C	ρ_{liq} @ 25 C
196	C3H7Br	2-BROMOPROPANE	9.959E-04	532.00	-0.6200	184.15	505.40	1.658E-03	1.282
197	C3H7Cl	ISOPROPYL CHLORIDE	7.542E-04	489.00	-0.7143	155.97	464.55	1.477E-03	0.855
198	C3H7Cl	n-PROPYL CHLORIDE	7.358E-04	503.15	-0.7143	150.35	477.99	1.397E-03	0.856
199	C3H7F	1-FLUOROPROPANE	9.043E-04	422.00	-0.7143	114.16	400.90	2.171E-03	0.787
200	C3H7F	2-FLUOROPROPANE	9.206E-04	415.68	-0.7143	139.80	394.90	2.270E-03	0.733
201	C3H7I	ISOPROPYL IODIDE	6.914E-04	578.00	-0.6977	183.15	549.10	1.147E-03	1.695
202	C3H7I	n-PROPYL IODIDE	6.817E-04	593.00	-0.6988	171.85	563.35	1.111E-03	1.739
203	C3H7N	ALLYLAMINE	5.873E-04	505.00	-0.7924	184.95	479.75	1.191E-03	0.757
204	C3H7N	PROPYLENEIMINE	7.354E-04	529.00	-0.7140	229.00	502.55	1.329E-03	0.802
205	C3H7NO	N,N-DIMETHYLFORMAMIDE	6.274E-04	647.00	-0.7237	212.72	614.65	9.810E-04	0.945
206	C3H7NO	N-METHYLACETAMIDE	5.511E-04	718.00	-0.7262	301.15	682.10	---	---
207	C3H7NO2	1-NITROPROPANE	6.367E-04	605.00	-0.7264	169.16	574.75	1.043E-03	0.996
208	C3H7NO2	2-NITROPROPANE	6.449E-04	594.00	-0.7263	181.83	564.30	1.070E-03	0.983
209	C3H7NO3	PROPYL-NITRATE	---	---	---	---	---	---	---
210	C3H7NO3	ISOPROPYL-NITRATE	---	---	---	---	---	---	---
211	C3H8	PROPANE	9.950E-04	369.82	-0.7130	85.46	351.33	3.206E-03	0.493
212	C3H8O	ISOPROPANOL	6.353E-04	508.31	-0.7570	185.28	482.89	1.240E-03	0.783
213	C3H8O	METHYL ETHYL ETHER	8.204E-04	437.80	-0.7105	160.00	415.91	1.848E-03	0.692
214	C3H8O	n-PROPANOL	6.050E-04	536.71	-0.7506	146.95	509.87	1.112E-03	0.802
215	C3H8O2	2-METHOXYETHANOL	6.921E-04	564.00	-0.7143	188.05	535.80	1.184E-03	0.960
216	C3H8O2	METHYLAL	7.829E-04	480.60	-0.6825	168.35	456.57	1.516E-03	0.854
217	C3H8O2	1,2-PROPYLENE GLYCOL	4.389E-04	626.00	-0.7954	213.15	594.70	7.342E-04	1.033
218	C3H8O2	1,3-PROPYLENE GLYCOL	6.005E-04	658.00	-0.7143	246.45	625.10	9.242E-04	1.052
219	C3H8O3	GLYCEROL	2.963E-04	723.00	-0.8459	291.33	686.85	4.646E-04	1.257
220	C3H8S	n-PROPYLMERCAPTAN	6.411E-04	536.00	-0.7308	159.95	509.20	1.161E-03	0.836
221	C3H8S	ISOPROPYL MERCAPTAN	7.016E-04	517.00	-0.7143	142.61	491.15	1.297E-03	0.809
222	C3H8S	ETHYL-METHYL-SULFIDE	7.183E-04	532.80	-0.7143	167.20	506.16	1.290E-03	0.832
223	C3H9N	n-PROPYLAMINE	7.093E-04	496.95	-0.7539	190.15	472.10	1.415E-03	0.714
224	C3H9N	ISOPROPYLAMINE	7.955E-04	471.85	-0.7028	177.95	448.26	1.606E-03	0.684
225	C3H9N	TRIMETHYLAMINE	8.426E-04	433.25	-0.7313	156.08	411.59	1.976E-03	0.629
226	C3H9NO	1-AMINO-2-PROPANOL	5.281E-04	614.00	-0.7787	274.89	583.30	8.862E-04	0.957
227	C3H9NO	3-AMINO-1-PROPANOL	6.083E-04	649.00	-0.7143	284.15	616.55	9.440E-04	0.972
228	C3H9NO	METHYLETHANOLAMINE	6.245E-04	630.00	-0.7143	268.65	598.50	9.871E-04	0.934
229	C3H9O4P	TRIMETHYL PHOSPHATE	---	---	---	---	---	---	1.202
230	C3H10N2	1,2-PROPANEDIAMINE	6.773E-04	587.00	-0.7438	236.53	557.65	1.148E-03	0.856
231	C3H10Si	TRIMETHYL SILANE	9.004E-04	432.00	-0.7077	137.26	410.40	2.063E-03	0.614
232	C4Cl4S	TETRACHLOROTHIOPHENE	5.245E-04	753.00	-0.7143	301.97	715.35	---	---
233	C4Cl6	HEXACHLORO-1,3-BUTADIENE	5.299E-04	741.00	-0.7143	252.15	703.95	7.654E-04	1.556
234	C4F8	OCTAFLUORO-2-BUTENE	9.830E-04	392.00	-0.7187	138.15	372.40	2.747E-03	1.442
235	C4F8	OCTAFLUOROCYCLOBUTANE	9.628E-04	388.37	-0.7223	232.96	368.95	2.763E-03	1.495
236	C4F10	DECAFLUOROBUTANE	9.417E-04	386.35	-0.7330	144.95	367.03	2.780E-03	1.497
237	C4H2	BUTADIYNE(BIACETYLENE)	7.804E-04	478.02	-0.7143	237.16	454.12	1.569E-03	0.709
238	C4H2O3	MALEIC ANHYDRIDE	6.622E-04	721.00	-0.6442	326.00	684.95	---	---
239	C4H4	VINYLACETYLENE	8.394E-04	454.00	-0.7143	179.95	431.30	1.801E-03	0.680
240	C4H4N2	SUCCINONITRILE	5.347E-04	770.00	-0.7298	331.30	731.50	---	---
241	C4H4O	FURAN	7.427E-04	490.15	-0.7395	187.55	465.64	1.485E-03	0.935
242	C4H4O2	DIKETENE	6.022E-04	616.00	-0.7143	266.65	585.20	9.660E-04	1.050
243	C4H8O3	SUCCINIC ANHYDRIDE	5.286E-04	811.00	-0.7143	393.00	770.45	---	---
244	C4H4O4	FUMARIC ACID	5.430E-04	771.00	-0.7143	560.15	732.45	---	---
245	C4H4O4	MALEIC ACID	5.497E-04	773.00	-0.7100	403.45	734.35	---	---
246	C4H4S	THIOPHENE	6.724E-04	579.35	-0.6923	234.94	550.38	1.109E-03	1.059
247	C4H5Cl	CHLOROPRENE	7.062E-04	525.00	-0.7214	143.15	498.75	1.294E-03	0.950
248	C4H5N	trans-CROTONITRILE	7.288E-04	586.00	-0.7143	222.00	556.70	1.211E-03	0.807
249	C4H5N	cis-CROTONITRILE	7.197E-04	568.00	-0.7178	200.55	539.60	1.228E-03	0.819
250	C4H5N	METHACRYLONITRILE	7.694E-04	554.00	-0.7037	237.35	526.30	1.325E-03	0.795
251	C4H5N	PYRROLE	5.419E-04	639.75	-0.7521	249.74	607.76	8.686E-04	0.965
252	C4H5N	VINYLACETONITRILE	7.102E-04	584.00	-0.7101	186.15	554.80	1.180E-03	0.829
253	C4H5NO2	METHYL CYANOACETATE	6.896E-04	687.00	-0.6805	260.08	652.65	1.016E-03	1.119
254	C4H6	CYCLOBUTENE	8.195E-04	446.33	-0.7143	153.76	424.01	1.801E-03	0.704
255	C4H6	1,2-BUTADIENE	8.498E-04	444.00	-0.7143	136.95	421.80	1.882E-03	0.646
256	C4H6	1,3-BUTADIENE	8.892E-04	425.37	-0.7093	164.25	404.10	2.093E-03	0.615
257	C4H6	DIMETHYLACETYLENE	7.680E-04	488.15	-0.7143	240.91	463.74	1.507E-03	0.686
258	C4H6	ETHYLACETYLENE	8.569E-04	443.20	-0.7169	147.43	421.04	1.908E-03	0.648
259	C4H6Cl2	1,3-DICHLORO-trans-2-BUTENE	5.952E-04	618.00	-0.7212	276.00	587.10	9.571E-04	1.153
260	C4H6Cl2	1,4-DICHLORO-cis-2-BUTENE	6.307E-04	640.00	-0.7143	225.15	608.00	9.870E-04	1.188
261	C4H6Cl2	1,4-DICHLORO-trans-2-BUTENE	6.262E-04	646.00	-0.7143	274.15	613.70	9.744E-04	1.187

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NO	FORMULA	NAME	a	TC	m	TMIN	TMAX	β_{liq} @ 25 C	ρ_{liq} @ 25 C
262	C4H6Cl2	3,4-DICHLORO-1-BUTENE	6.560E-04	589.00	-0.7143	212.00	559.55	1.086E-03	1.148
263	C4H6O	trans-CROTONALDEHYDE	7.951E-04	571.00	-0.6765	196.65	542.45	1.310E-03	0.847
264	C4H6O	2,5-DIHYDROFURAN	7.031E-04	542.00	-0.7143	273.00	514.90	1.244E-03	0.939
265	C4H6O	DIVINYL ETHER	7.944E-04	463.00	-0.7143	172.05	439.85	1.661E-03	0.731
266	C4H6O	METHACROLEIN	7.591E-04	530.00	-0.7143	192.15	503.50	1.370E-03	0.840
267	C4H6O2	2-BUTYNE-1,4-DIOL	5.538E-04	695.00	-0.7143	331.00	660.25	---	---
268	C4H6O2	gamma-BUTYROLACTONE	5.107E-04	739.00	-0.7350	229.78	702.05	7.466E-04	1.125
269	C4H6O2	cis-CROTONIC ACID	6.270E-04	647.00	-0.7143	288.65	614.65	9.747E-04	1.023
270	C4H6O2	trans-CROTONIC ACID	6.124E-04	666.00	-0.7143	344.55	632.70	---	---
271	C4H6O2	METHACRYLIC ACID	6.271E-04	643.00	-0.7143	288.15	610.85	9.786E-04	1.012
272	C4H6O2	METHYL ACRYLATE	7.277E-04	536.00	-0.7143	196.32	509.20	1.300E-03	0.949
273	C4H6O2	VINYL ACETATE	7.309E-04	524.00	-0.7173	180.35	497.80	1.337E-03	0.926
274	C4H6O3	ACETIC ANHYDRIDE	6.752E-04	569.15	-0.7301	200.15	540.69	1.161E-03	1.077
275	C4H6O4	SUCCINIC ACID	5.517E-04	806.00	-0.7143	461.15	765.70	---	---
276	C4H6O5	DIGLYCOLIC ACID	5.356E-04	820.00	-0.7143	421.15	779.00	---	---
277	C4H6O5	MALIC ACID	4.956E-04	781.00	-0.7143	403.15	741.95	---	---
278	C4H6O6	TARTARIC ACID	5.071E-04	828.00	-0.7143	479.15	786.60	---	---
279	C4H7N	n-BUTYRONITRILE	6.939E-04	582.25	-0.7141	161.25	553.14	1.158E-03	0.786
280	C4H7N	ISOBUTYRONITRILE	7.475E-04	565.00	-0.7002	201.70	536.75	1.264E-03	0.766
281	C4H7NO	ACETONE CYANOHYDRIN	6.305E-04	647.00	-0.7143	253.15	614.65	9.801E-04	0.928
282	C4H7NO	2-METHACRYLAMIDE	5.212E-04	741.00	-0.7100	383.65	703.95	---	---
283	C4H7NO	3-METHOXYPROPIONITRILE	6.744E-04	638.00	-0.7143	210.12	606.10	1.058E-03	0.924
284	C4H7NO	2-PYRROLIDONE	5.314E-04	792.00	-0.7036	298.15	752.40	---	1.108
285	C4H8	1-BUTENE	8.997E-04	419.59	-0.7147	87.80	398.61	2.182E-03	0.588
286	C4H8	cis-2-BUTENE	8.575E-04	435.58	-0.7143	134.26	413.80	1.955E-03	0.617
287	C4H8	trans-2-BUTENE	8.674E-04	428.63	-0.7143	167.62	407.20	2.029E-03	0.599
288	C4H8	CYCLOBUTANE	6.297E-04	459.93	-0.7619	182.48	436.93	1.396E-03	0.689
289	C4H8	ISOBUTENE	8.846E-04	417.90	-0.7204	132.81	397.00	2.177E-03	0.589
290	C4H8Br2	1,2-DIBROMOBUTANE	4.871E-04	659.28	-0.7143	207.76	626.32	7.487E-04	1.785
291	C4H8Br2	2,3-DIBROMOBUTANE	4.901E-04	656.96	-0.7143	238.66	624.11	7.550E-04	1.774
292	C4H8Cl2	1,4-DICHLOROBUTANE	6.258E-04	641.00	-0.7027	235.85	608.95	9.715E-04	1.135
293	C4H8I2	1,2-DIIODOBUTANE	5.223E-04	726.41	-0.7143	279.06	690.09	7.618E-04	2.280
294	C4H8O	n-BUTYRALDEHYDE	7.583E-04	525.00	-0.7143	176.75	498.75	1.381E-03	0.797
295	C4H8O	ISOBUTYRALDEHYDE	7.658E-04	507.00	-0.7143	208.15	481.65	1.443E-03	0.784
296	C4H8O	1,2-EPOXYBUTANE	7.390E-04	526.00	-0.7143	123.15	499.70	1.343E-03	0.824
297	C4H8O	METHYL ETHYL KETONE	7.366E-04	535.50	-0.7143	186.48	508.73	1.317E-03	0.799
298	C4H8O	ETHYL VINYL ETHER	7.919E-04	475.15	-0.7143	157.35	451.39	1.603E-03	0.749
299	C4H8O	TETRAHYDROFURAN	6.847E-04	540.15	-0.7088	164.65	513.14	1.210E-03	0.880
300	C4H8O2	cis-2-BUTENE-1,4-DIOL	5.880E-04	677.88	-0.7143	284.15	643.99	8.895E-04	1.070
301	C4H8O2	trans-2-BUTENE-1,4-DIOL	5.856E-04	681.00	-0.7143	300.45	646.95	---	---
302	C4H8O2	ISOBUTYRIC ACID	6.027E-04	609.15	-0.7314	227.15	578.69	9.855E-04	0.946
303	C4H8O2	n-BUTYRIC ACID	5.973E-04	628.00	-0.7200	267.95	596.60	9.495E-04	0.953
304	C4H8O2	1,4-DIOXANE	6.584E-04	587.00	-0.6953	284.95	557.65	1.078E-03	1.029
305	C4H8O2	ETHYL ACETATE	7.186E-04	523.30	-0.7220	189.60	497.13	1.321E-03	0.894
306	C4H8O2	METHYL PROPIONATE	7.060E-04	530.60	-0.7230	185.65	504.07	1.282E-03	0.909
307	C4H8O2	n-PROPYL FORMATE	6.984E-04	538.00	-0.7200	180.25	511.10	1.249E-03	0.900
308	C4H8O2S	SULFOLANE	4.691E-04	849.00	-0.6960	300.75	806.55	---	---
309	C4H8S	TETRAHYDROTHIOPHENE	4.777E-04	631.95	-0.7512	176.99	600.35	7.715E-04	0.997
310	C4H9Br	1-BROMOBUTANE	6.696E-04	577.00	-0.7109	160.75	548.15	1.123E-03	1.269
311	C4H9Br	2-BROMOBUTANE	5.435E-04	567.00	-0.7600	161.25	538.65	9.582E-04	1.253
312	C4H9Cl	n-BUTYL CHLORIDE	7.320E-04	537.00	-0.7046	150.05	510.15	1.295E-03	0.880
313	C4H9Cl	sec-BUTYL CHLORIDE	7.031E-04	520.60	-0.7209	141.85	494.57	1.298E-03	0.868
314	C4H9Cl	tert-BUTYL CHLORIDE	7.229E-04	507.00	-0.7143	247.75	481.65	1.362E-03	0.836
315	C4H9I	2-IODO-2-METHYLPROPANE	6.418E-04	587.90	-0.7143	234.96	558.51	1.064E-03	1.536
316	C4H9N	PYRROLIDINE	6.197E-04	568.55	-0.7367	215.31	540.12	1.071E-03	0.860
317	C4H9NO	N,N-DIMETHYLACETAMIDE	5.987E-04	658.00	-0.7298	253.15	625.10	9.300E-04	0.937
318	C4H9NO	MORPHOLINE	5.644E-04	618.00	-0.7436	270.05	587.10	9.210E-04	0.996
319	C4H9NO2	1-NITROBUTANE	6.168E-04	624.00	-0.7143	191.83	592.80	9.810E-04	0.968
320	C4H9NO2	2-NITROBUTANE	6.187E-04	615.00	-0.7143	141.16	584.25	9.936E-04	0.978
321	C4H10	n-BUTANE	8.757E-04	425.18	-0.7137	134.86	403.92	2.074E-03	0.573
322	C4H10	ISOBUTANE	8.686E-04	408.14	-0.7270	113.54	387.73	2.253E-03	0.552
323	C4H10N2	PIPERAZINE	5.061E-04	638.00	-0.7143	379.15	606.10	---	---
324	C4H10O	n-BUTANOL	5.768E-04	562.93	-0.7543	183.85	534.78	1.019E-03	0.806
325	C4H10O	sec-BUTANOL	6.479E-04	536.01	-0.7396	158.45	509.21	1.182E-03	0.805
326	C4H10O	tert-BUTANOL	7.357E-04	506.20	-0.7263	298.97	480.89	---	---
327	C4H10O	DIETHYL ETHER	8.096E-04	466.70	-0.7064	156.85	443.37	1.662E-03	0.708

NO	FORMULA	NAME	$\beta_{liq} = a\,(1-T/TC)^m$ a	TC	m	TMIN	TMAX	β_{liq} @ 25 C	ρ_{liq} @ 25 C
			(β_{liq} - 1/C, T - K, ρ_{liq} - g/cm^3)						
328	C4H10O	METHYL-PROPYL-ETHER	8.013E-04	476.20	-0.7143	156.87	452.39	1.618E-03	0.723
329	C4H10O	METHYL ISOPROPYL ETHER	6.609E-04	464.50	-0.7556	127.93	441.28	1.436E-03	0.714
330	C4H10O	ISOBUTANOL	5.570E-04	547.73	-0.7657	165.15	520.34	1.017E-03	0.797
331	C4H10O2	1,3-BUTANEDIOL	5.989E-04	643.00	-0.7143	196.15	610.85	9.346E-04	1.002
332	C4H10O2	1,4-BUTANEDIOL	5.916E-04	667.00	-0.7143	293.05	633.65	9.032E-04	1.013
333	C4H10O2	2,3-BUTANEDIOL	6.131E-04	611.00	-0.7140	280.75	580.45	9.887E-04	0.994
334	C4H10O2	t-BUTYL HYDROPEROXIDE	6.527E-04	576.00	-0.7143	277.45	547.20	1.099E-03	0.886
335	C4H10O2	1,2-DIMETHOXYETHANE	7.141E-04	536.15	-0.7143	215.15	509.34	1.276E-03	0.865
336	C4H10O2	2-ETHOXYETHANOL	6.767E-04	569.00	-0.7143	183.00	540.55	1.150E-03	0.925
337	C4H10O3	DIETHYLENE GLYCOL	4.368E-04	744.60	-0.7578	262.70	707.37	6.436E-04	1.114
338	C4H10O4S	DIETHYL SULFATE	6.920E-04	792.00	-0.5916	248.00	752.40	9.151E-04	1.172
339	C4H10S	n-BUTYL MERCAPTAN	6.880E-04	569.00	-0.7006	157.46	540.55	1.157E-03	0.837
340	C4H10S	ISOBUTYL MERCAPTAN	5.873E-04	559.00	-0.7405	128.31	531.05	1.033E-03	0.830
341	C4H10S	sec-BUTYL MERCAPTAN	7.247E-04	554.00	-0.6932	133.02	526.30	1.238E-03	0.825
342	C4H10S	tert-BUTYL MERCAPTAN	7.828E-04	530.00	-0.6800	274.26	503.50	1.373E-03	0.795
343	C4H10S	DIETHYL SULFIDE	6.573E-04	557.15	-0.7256	169.20	529.29	1.146E-03	0.832
344	C4H10S	ISOPROPYL-METHYL-SULFIDE	6.809E-04	551.00	-0.7143	171.65	523.45	1.188E-03	0.825
345	C4H10S	METHYL-PROPYL-SULFIDE	6.720E-04	563.00	-0.7143	160.19	534.85	1.152E-03	0.837
346	C4H10S2	DIETHYL DISULFIDE	6.000E-04	642.00	-0.6994	171.63	609.90	9.285E-04	0.988
347	C4H11N	n-BUTYLAMINE	6.425E-04	531.90	-0.7572	224.05	505.31	1.198E-03	0.741
348	C4H11N	ISOBUTYLAMINE	6.421E-04	513.73	-0.7635	188.55	488.04	1.246E-03	0.730
349	C4H11N	sec-BUTYLAMINE	6.642E-04	514.30	-0.7529	168.65	488.58	1.276E-03	0.720
350	C4H11N	tert-BUTYLAMINE	6.788E-04	483.90	-0.7460	206.19	459.71	1.387E-03	0.688
351	C4H11N	DIETHYLAMINE	7.536E-04	496.60	-0.7272	223.35	471.77	1.468E-03	0.702
352	C4H11NO	DIMETHYLETHANOLAMINE	6.708E-04	571.82	-0.7143	214.15	543.23	1.135E-03	0.882
353	C4H11NO2	DIETHANOLAMINE	3.780E-04	715.00	-0.8108	301.15	679.25	---	---
354	C4H11NO2	2-AMINOETHOXYETHANOL	5.712E-04	699.00	-0.7143	293.15	664.05	8.497E-04	1.051
355	C4H12N2O	N-AMINOETHYL ETHANOLAMINE	5.625E-04	698.00	-0.7143	273.15	663.10	8.375E-04	1.022
356	C4H12Si	TETRAMETHYLSILANE	8.546E-04	450.40	-0.7062	174.07	427.88	1.838E-03	0.641
357	C4H13N3	DIETHYLENE TRIAMINE	5.747E-04	676.00	-0.7143	234.15	642.20	8.708E-04	0.954
358	C5Cl6	HEXACHLOROCYCLOPENTADIENE	5.248E-04	746.00	-0.7143	284.49	708.70	7.556E-04	1.703
359	C5H4O2	FURFURAL	5.853E-04	657.00	-0.7143	236.65	624.15	9.015E-04	1.155
360	C5H5N	PYRIDINE	6.942E-04	619.95	-0.6955	231.53	588.95	1.095E-03	0.979
361	C5H6	CYCLOPENTADIENE	7.264E-04	507.00	-0.7143	188.15	481.65	1.369E-03	0.797
362	C5H6	2-METHYL-1-BUTENE-3-YNE	8.048E-04	492.00	-0.6918	160.15	467.40	1.533E-03	0.699
363	C5H6	1-PENTENE-3-YNE	9.988E-04	520.00	-0.6355	150.00	494.00	1.716E-03	0.734
364	C5H6	1-PENTENE-4-YNE	7.505E-04	503.00	-0.7143	150.00	477.85	1.426E-03	0.724
365	C5H6N2	GLUTARONITRILE	6.761E-04	782.00	-0.6552	244.21	742.90	9.261E-04	0.981
366	C5H6O2	FURFURYL ALCOHOL	4.701E-04	632.00	-0.7682	258.52	600.40	7.676E-04	1.127
367	C5H6O3	GLUTARIC ANHYDRIDE	5.026E-04	838.00	-0.7143	328.00	796.10	---	---
368	C5H6O4	CITRACONIC ACID	5.300E-04	829.00	-0.7143	356.15	787.55	---	---
369	C5H6O4	ITACONIC ACID	5.322E-04	821.00	-0.7143	438.75	779.95	---	---
370	C5H6S	2-METHYLTHIOPHENE	6.220E-04	610.00	-0.7143	209.77	579.50	1.004E-03	1.014
371	C5H6S	3-METHYLTHIOPHENE	6.205E-04	615.00	-0.7143	204.18	584.25	9.965E-04	1.016
372	C5H7N	N-METHYLPYRROLE	8.146E-04	610.00	-0.6562	216.91	579.50	1.265E-03	0.903
373	C5H7NO2	ETHYL CYANOACETATE	6.177E-04	679.00	-0.7070	250.65	645.05	9.297E-04	1.058
374	C5H8	CYCLOPENTENE	7.276E-04	507.00	-0.7143	138.13	481.65	1.371E-03	0.767
375	C5H8	ISOPRENE	7.842E-04	484.00	-0.7143	127.27	459.80	1.554E-03	0.676
376	C5H8	3-METHYL-1,2-BUTADIENE	8.306E-04	490.00	-0.7096	159.53	465.50	1.616E-03	0.681
377	C5H8	2-METHYL-1,3-BUTADIENE	8.243E-04	483.30	-0.7143	127.20	459.14	1.636E-03	0.675
378	C5H8	1,2-PENTADIENE	7.659E-04	500.00	-0.7121	135.89	475.00	1.461E-03	0.688
379	C5H8	cis-1,3-PENTADIENE	7.803E-04	499.00	-0.7143	132.35	474.05	1.495E-03	0.686
380	C5H8	trans-1,3-PENTADIENE	8.012E-04	500.00	-0.6960	185.71	475.00	1.506E-03	0.671
381	C5H8	1,4-PENTADIENE	1.044E-03	479.00	-0.6627	124.86	455.05	1.990E-03	0.653
382	C5H8	2,3-PENTADIENE	7.619E-04	497.00	-0.7299	147.50	472.15	1.487E-03	0.690
383	C5H8	1-PENTYNE	1.062E-03	481.20	-0.6470	167.45	457.14	1.984E-03	0.688
384	C5H8	2-PENTYNE	7.167E-04	521.99	-0.7143	163.86	495.89	1.312E-03	0.705
385	C5H8	3-METHYL-1-BUTYNE	8.957E-04	463.20	-0.6919	183.45	440.04	1.829E-03	0.660
386	C5H8	SPIROPENTANE	6.941E-04	499.74	-0.7143	166.11	474.75	1.328E-03	0.735
387	C5H8N4O12	PENTAERYTHRITOL TETRANITRATE	5.217E-04	676.00	-0.7143	413.65	642.20	---	---
388	C5H8O	CYCLOPENTANONE	6.520E-04	626.00	-0.6867	221.85	594.70	1.017E-03	0.945
389	C5H8O	METHYL ISOPROPENYL KETONE	6.979E-04	566.00	-0.7143	219.55	537.70	1.191E-03	0.846
390	C5H8O2	ACETYLACETONE	5.640E-04	602.00	-0.7495	249.65	571.90	9.414E-04	0.971
391	C5H8O2	ALLYL ACETATE	6.952E-04	559.00	-0.7143	138.00	531.05	1.198E-03	0.922
392	C5H8O2	ETHYL ACRYLATE	6.993E-04	553.00	-0.7143	201.95	525.35	1.216E-03	0.918
393	C5H8O2	METHYL METHACRYLATE	6.951E-04	564.00	-0.7143	224.95	535.80	1.189E-03	0.937

NO	FORMULA	NAME	$\beta_{liq} = a\ (1-T/TC)^m$ a	TC	m	TMIN	TMAX	β_{liq} @ 25 C	ρ_{liq} @ 25 C
			(β_{liq} - 1/C, T - K, ρ_{liq} - g/cm^3)						
394	C5H8O2	VINYL PROPIONATE	7.009E-04	546.00	-0.7143	364.35	518.70	---	---
395	C5H8O3	2-HYDROXYETHYL ACRYLATE	5.820E-04	662.00	-0.7143	213.00	628.90	8.925E-04	1.008
396	C5H8O3	LEVULINIC ACID	4.935E-04	723.00	-0.7428	308.15	686.85	---	---
397	C5H8O3	METHYL ACETOACETATE	4.368E-04	642.00	-0.7870	193.15	609.90	7.140E-04	1.072
398	C5H8O4	GLUTARIC ACID	4.443E-04	807.00	-0.7448	370.65	766.65	---	---
399	C5H9N	VALERONITRILE	6.463E-04	603.00	-0.7203	176.95	572.85	1.056E-03	0.794
400	C5H9NO	n-BUTYL ISOCYANATE	1.142E-03	568.00	-0.5880	193.00	539.60	1.769E-03	0.877
401	C5H9NO	N-METHYL-2-PYRROLIDONE	5.174E-04	724.00	-0.7264	249.15	687.80	7.608E-04	1.025
402	C5H9NO4	L-GLUTAMIC ACID	4.957E-04	886.00	-0.7143	497.15	841.70	---	---
403	C5H10	CYCLOPENTANE	7.259E-04	511.76	-0.7143	179.31	486.17	1.355E-03	0.750
404	C5H10	2-METHYL-1-BUTENE	8.261E-04	465.00	-0.7143	135.58	441.75	1.718E-03	0.645
405	C5H10	2-METHYL-2-BUTENE	8.242E-04	471.00	-0.7143	139.39	447.45	1.687E-03	0.657
406	C5H10	3-METHYL-1-BUTENE	7.688E-04	450.37	-0.7361	104.66	427.85	1.708E-03	0.622
407	C5H10	1-PENTENE	8.266E-04	464.78	-0.7095	107.93	441.54	1.711E-03	0.635
408	C5H10	cis-2-PENTENE	8.664E-04	475.93	-0.7014	121.75	452.13	1.728E-03	0.650
409	C5H10	trans-2-PENTENE	7.822E-04	475.37	-0.7224	132.89	451.60	1.595E-03	0.643
410	C5H10Br2	2,3-DIBROMO-2-METHYLBUTANE	4.818E-04	668.37	-0.7143	288.00	634.95	7.347E-04	1.410
411	C5H10Cl2	1,5-DICHLOROPENTANE	6.072E-04	663.00	-0.7143	200.35	629.85	9.303E-04	1.096
412	C5H10O	METHYL ISOPROPYL KETONE	6.919E-04	553.00	-0.7143	181.15	525.35	1.203E-03	0.805
413	C5H10O	2-PENTANONE	7.740E-04	561.08	-0.6715	196.29	533.03	1.288E-03	0.802
414	C5H10O	DIETHYL KETONE	6.903E-04	560.95	-0.7264	234.18	532.90	1.197E-03	0.810
415	C5H10O	VALERALDEHYDE	5.776E-04	554.00	-0.7554	182.00	526.30	1.035E-03	0.805
416	C5H10O2	n-BUTYL FORMATE	6.596E-04	559.00	-0.7215	181.25	531.05	1.143E-03	0.887
417	C5H10O2	ETHYL PROPIONATE	7.201E-04	546.00	-0.7058	199.25	518.70	1.257E-03	0.884
418	C5H10O2	ISOBUTYL FORMATE	6.617E-04	551.35	-0.7317	177.35	523.78	1.169E-03	0.875
419	C5H10O2	ISOPROPYL ACETATE	7.013E-04	538.00	-0.7140	199.75	511.10	1.249E-03	0.871
420	C5H10O2	n-PROPYL ACETATE	6.902E-04	549.40	-0.7217	178.15	521.93	1.214E-03	0.883
421	C5H10O2	METHYL n-BUTYRATE	6.792E-04	554.50	-0.7228	187.35	526.78	1.186E-03	0.893
422	C5H10O2	2-METHYLBUTYRIC ACID	6.117E-04	643.00	-0.7143	193.00	610.85	9.545E-04	0.932
423	C5H10O2	ISOVALERIC ACID	5.728E-04	634.00	-0.7257	243.85	602.30	9.083E-04	0.926
424	C5H10O2	VALERIC ACID	5.765E-04	651.00	-0.7185	239.15	618.45	8.952E-04	0.934
425	C5H10O2	TETRAHYDROFURFURYL ALCOHOL	4.611E-04	639.00	-0.7667	193.00	607.05	7.466E-04	1.048
426	C5H10O2S	3-METHYL SULFOLANE	5.056E-04	817.00	-0.6856	273.65	776.15	6.902E-04	1.188
427	C5H10O3	DIETHYL CARBONATE	6.555E-04	576.00	-0.7143	230.15	547.20	1.103E-03	0.970
428	C5H10O3	ETHYL LACTATE	1.201E-03	588.00	-0.5447	247.15	558.60	1.766E-03	1.027
429	C5H10S	THIACYCLOHEXANE	5.993E-04	657.12	-0.7143	292.14	624.26	9.230E-04	0.981
430	C5H10S	CYCLOPENTANETHIOL	5.848E-04	629.00	-0.7143	155.39	597.55	9.253E-04	0.961
431	C5H11Br	1-BROMOPENTANE	6.041E-04	564.76	-0.7143	185.26	536.52	1.033E-03	1.212
432	C5H11Cl	1-CHLOROPENTANE	6.473E-04	568.00	-0.7196	174.15	539.60	1.106E-03	0.878
433	C5H11Cl	1-CHLORO-3-METHYLBUTANE	6.906E-04	558.87	-0.7143	168.76	530.93	1.191E-03	0.865
434	C5H11Cl	2-CHLORO-2-METHYLBUTANE	6.951E-04	548.97	-0.7143	199.66	521.52	1.216E-03	0.860
435	C5H11N	N-METHYLPYRROLIDINE	6.740E-04	550.00	-0.7140	183.15	522.50	1.177E-03	0.806
436	C5H11N	PIPERIDINE	6.250E-04	594.05	-0.7286	262.65	564.35	1.039E-03	0.858
437	C5H11NO	tert-BUTYLFORMAMIDE	5.943E-04	692.00	-0.7143	289.15	657.40	8.889E-04	0.899
438	C5H12	ISOPENTANE	8.015E-04	460.43	-0.7133	113.25	437.41	1.686E-03	0.616
439	C5H12	NEOPENTANE	8.718E-04	433.78	-0.7081	256.58	412.09	1.986E-03	0.586
440	C5H12	n-PENTANE	7.883E-04	469.65	-0.7179	143.42	446.17	1.625E-03	0.621
441	C5H12O	2,2-DIMETHYL-1-PROPANOL	6.669E-04	550.00	-0.7143	327.15	522.50	---	---
442	C5H12O	tert-PENTYL-ALCOHOL	6.625E-04	549.00	-0.7143	327.00	521.55	---	---
443	C5H12O	2-METHYL-1-BUTANOL	5.407E-04	565.00	-0.7678	203.00	536.75	9.618E-04	0.814
444	C5H12O	2-METHYL-2-BUTANOL	6.548E-04	545.15	-0.7353	264.35	517.89	1.172E-03	0.805
445	C5H12O	3-METHYL-1-BUTANOL	6.627E-04	579.45	-0.7143	155.95	550.48	1.110E-03	0.812
446	C5H12O	3-METHYL-2-BUTANOL	6.621E-04	574.00	-0.7143	188.00	545.30	1.118E-03	0.814
447	C5H12O	1-PENTANOL	5.641E-04	586.15	-0.7494	195.56	556.84	9.608E-04	0.812
448	C5H12O	2-PENTANOL	6.840E-04	552.00	-0.7143	200.00	524.40	1.191E-03	0.805
449	C5H12O	3-PENTANOL	6.932E-04	547.00	-0.7143	204.15	519.65	1.217E-03	0.818
450	C5H12O	METHYL sec-BUTYL ETHER	7.512E-04	498.00	-0.7143	150.00	473.10	1.442E-03	0.737
451	C5H12O	METHYL tert-BUTYL ETHER	7.445E-04	497.10	-0.7171	164.55	472.25	1.436E-03	0.735
452	C5H12O	METHYL ISOBUTYL ETHER	7.467E-04	497.00	-0.7143	150.00	472.15	1.437E-03	0.725
453	C5H12O	ETHYL PROPYL ETHER	7.730E-04	500.23	-0.7080	145.65	475.22	1.469E-03	0.724
454	C5H12O2	ETHYLENE GLYCOL MONOPROPYL ETHER	6.600E-04	582.00	-0.7143	183.15	552.90	1.102E-03	0.906
455	C5H12O2	NEOPENTYL GLYCOL	5.753E-04	643.00	-0.7143	400.00	610.85	---	---
456	C5H12O2	1,5-PENTANEDIOL	5.874E-04	673.00	-0.7143	257.15	639.35	8.923E-04	0.994
457	C5H12O3	2-(2-METHOXYETHOXY)ETHANOL	6.254E-04	630.00	-0.7143	197.15	598.50	9.886E-04	1.017
458	C5H12O4	PENTAERYTHRITOL	4.720E-04	780.00	-0.7100	534.15	741.00	---	---
459	C5H12S	n-PENTYL MERCAPTAN	6.574E-04	598.00	-0.6987	197.45	568.10	1.065E-03	0.838

$\beta_{liq} = a\ (1-T/TC)^m$ (β_{liq} - 1/C, T - K, ρ_{liq} - g/cm^3)

NO	FORMULA	NAME	a	TC	m	TMIN	TMAX	β_{liq} @ 25 C	ρ_{liq} @ 25 C
460	C5H12S	BUTYL-METHYL-SULFIDE	6.420E-04	591.00	-0.7143	175.33	561.45	1.060E-03	0.838
461	C5H12S	ETHYL-PROPYL-SULFIDE	6.442E-04	584.00	-0.7143	156.15	554.80	1.073E-03	0.832
462	C5H12S	2-METHYL-2-BUTANETHIOL	6.284E-04	566.00	-0.7143	169.38	537.70	1.072E-03	0.821
463	C5H13N	n-PENTYLAMINE	6.315E-04	555.00	-0.7481	218.15	527.25	1.124E-03	0.751
464	C5H13NO2	METHYL DIETHANOLAMINE	5.770E-04	678.00	-0.7143	252.15	644.10	8.728E-04	1.029
465	C6Cl6	HEXACHLOROBENZENE	5.259E-04	825.00	-0.7143	501.70	783.75	---	---
466	C6F6	HEXAFLUOROBENZENE	7.272E-04	516.73	-0.7215	278.25	490.89	1.353E-03	1.606
467	C6H3ClN2O4	1-CHLORO-2,4-DINITROBENZENE	4.300E-04	813.77	-0.7578	326.55	773.08	---	---
468	C6H3Cl2NO2	1,2-DICHLORO-4-NITROBENZENE	5.119E-04	758.00	-0.7257	315.65	720.10	---	---
469	C6H3Cl3	1,2,4-TRICHLOROBENZENE	5.425E-04	725.00	-0.7143	290.15	688.75	7.921E-04	1.449
470	C6H3N3O6	1,3,5-TRINITROBENZENE	4.423E-04	1005.00	-0.7143	398.40	954.75	---	---
471	C6H4Br2	m-DIBROMOBENZENE	4.858E-04	761.00	-0.7143	266.25	722.95	6.929E-04	1.947
472	C6H4ClNO2	m-CHLORONITROBENZENE	4.949E-04	742.00	-0.7550	317.65	704.90	---	---
473	C6H4ClNO2	o-CHLORONITROBENZENE	5.285E-04	757.00	-0.7143	306.15	719.15	---	---
474	C6H4ClNO2	p-CHLORONITROBENZENE	4.435E-04	751.00	-0.7732	356.65	713.45	---	---
475	C6H4Cl2	m-DICHLOROBENZENE	6.183E-04	683.95	-0.6847	248.39	649.75	9.151E-04	1.283
476	C6H4Cl2	o-DICHLOROBENZENE	5.869E-04	705.00	-0.6919	256.15	669.75	8.585E-04	1.301
477	C6H4Cl2	p-DICHLOROBENZENE	6.009E-04	684.75	-0.6921	326.14	650.51	---	---
478	C6H4F2	m-DIFLUOROBENZENE	6.862E-04	552.94	-0.7143	249.16	525.29	1.193E-03	1.162
479	C6H4F2	o-DIFLUOROBENZENE	6.863E-04	554.46	-0.7143	239.16	526.74	1.191E-03	1.150
480	C6H4F2	p-DIFLUOROBENZENE	6.805E-04	556.00	-0.7143	260.16	528.20	1.178E-03	1.162
481	C6H4N2O4	m-DINITROBENZENE	4.060E-04	805.00	-0.7728	364.00	764.75	---	---
482	C6H4N2O4	o-DINITROBENZENE	4.878E-04	831.00	-0.7143	390.08	789.45	---	---
483	C6H4N2O4	p-DINITROBENZENE	4.932E-04	803.00	-0.7143	446.60	762.85	---	---
484	C6H5Br	BROMOBENZENE	5.569E-04	670.15	-0.7179	242.43	636.64	8.498E-04	1.487
485	C6H5Cl	MONOCHLOROBENZENE	5.903E-04	632.35	-0.7096	227.95	600.73	9.282E-04	1.101
486	C6H5ClO	m-CHLOROPHENOL	5.088E-04	729.00	-0.7143	306.00	692.55	---	---
487	C6H5ClO	o-CHLOROPHENOL	5.437E-04	675.00	-0.7286	282.00	641.25	8.314E-04	1.255
488	C6H5ClO	p-CHLOROPHENOL	5.520E-04	738.00	-0.7046	316.00	701.10	---	---
489	C6H5Cl2N	3,4-DICHLOROANILINE	5.007E-04	800.00	-0.7143	344.65	760.00	---	---
490	C6H5F	FLUOROBENZENE	6.562E-04	560.09	-0.7171	230.94	532.09	1.132E-03	1.019
491	C6H5I	IODOBENZENE	5.349E-04	721.15	-0.7105	241.83	685.09	7.815E-04	1.822
492	C6H5NO2	NITROBENZENE	5.552E-04	719.00	-0.7143	278.91	683.05	8.139E-04	1.199
493	C6H6	BENZENE	6.606E-04	562.16	-0.7182	278.68	534.05	1.137E-03	0.873
494	C6H6ClN	m-CHLOROANILINE	6.305E-04	751.00	-0.6759	262.75	713.45	8.875E-04	1.211
495	C6H6ClN	o-CHLOROANILINE	5.115E-04	722.00	-0.7396	481.99	685.90	---	---
496	C6H6ClN	p-CHLOROANILINE	5.436E-04	754.00	-0.7150	343.05	716.30	---	---
497	C6H6N2	cis-DICYANO-1-BUTENE	6.634E-04	691.00	-0.7143	249.00	656.45	9.930E-04	1.062
498	C6H6N2	trans-DICYANO-1-BUTENE	6.633E-04	689.00	-0.7143	260.00	654.55	9.944E-04	1.054
499	C6H6N2	1,4-DICYANO-2-BUTENE	6.083E-04	755.00	-0.7143	349.00	717.25	---	---
500	C6H6N2O2	m-NITROANILINE	4.669E-04	815.00	-0.7143	387.15	774.25	---	---
501	C6H6N2O2	o-NITROANILINE	4.705E-04	784.00	-0.7143	344.65	744.80	---	---
502	C6H6N2O2	p-NITROANILINE	4.628E-04	851.00	-0.7143	420.65	808.45	---	---
503	C6H6O	PHENOL	5.248E-04	694.25	-0.6788	314.06	659.54	---	---
504	C6H6O2	1,2-BENZENEDIOL	4.807E-04	764.00	-0.7331	377.60	725.80	---	---
505	C6H6O2	1,3-BENZENEDIOL	4.086E-04	810.00	-0.7567	382.00	769.50	---	---
506	C6H6O2	p-HYDROQUINONE	3.885E-04	822.00	-0.7143	444.65	780.90	---	---
507	C6H6O3	1,2,3-BENZENETRIOL	3.111E-04	830.00	-0.7143	407.00	788.50	---	---
508	C6H6S	PHENYL MERCAPTAN	5.966E-04	689.00	-0.6920	258.26	654.55	8.832E-04	1.073
509	C6H7N	ANILINE	5.666E-04	699.00	-0.7143	267.13	664.05	8.429E-04	1.018
510	C6H7N	2-METHYLPYRIDINE	6.130E-04	621.00	-0.7282	206.44	589.95	9.870E-04	0.940
511	C6H7N	3-METHYLPYRIDINE	6.209E-04	645.00	-0.7166	255.01	612.75	9.684E-04	0.952
512	C6H7N	4-METHYLPYRIDINE	6.061E-04	646.15	-0.7248	276.73	613.84	9.491E-04	0.950
513	C6H8	1,3-CYCLOHEXADIENE	7.629E-04	558.00	-0.6851	161.00	530.10	1.288E-03	0.837
514	C6H8	METHYLCYCLOPENTADIENE	6.831E-04	541.00	-0.7143	150.00	513.95	1.211E-03	0.805
515	C6H8N2	ADIPONITRILE	5.339E-04	781.00	-0.7162	275.64	741.95	7.534E-04	0.960
516	C6H8N2	METHYLGLUTARONITRILE	7.263E-04	742.00	-0.6454	228.15	704.90	1.012E-03	0.950
517	C6H8N2	m-PHENYLENEDIAMINE	4.742E-04	824.00	-0.7464	334.00	782.80	---	---
518	C6H8N2	o-PHENYLENEDIAMINE	5.058E-04	781.00	-0.7143	376.95	741.95	---	---
519	C6H8N2	p-PHENYLENEDIAMINE	5.005E-04	796.00	-0.7143	413.00	756.20	---	---
520	C6H8N2	PHENYLHYDRAZINE	5.136E-04	761.00	-0.7595	292.35	722.95	7.493E-04	1.094
521	C6H8N2O	BIS(CYANOETHYL)ETHER	5.141E-04	783.00	-0.6981	246.85	743.85	7.184E-04	1.044
522	C6H8O4	DIMETHYL MALEATE	5.964E-04	675.00	-0.7088	254.15	641.25	9.014E-04	1.148
523	C6H8O6	ASCORBIC ACID	4.709E-04	783.00	-0.7143	465.15	743.85	---	---
524	C6H8O7	CITRIC ACID	4.973E-04	822.00	-0.7143	426.15	780.90	---	---
525	C6H10	1-METHYLCYCLOPENTENE	6.844E-04	541.99	-0.7143	145.96	514.89	1.211E-03	0.776

$\beta_{liq} = a\ (1-T/TC)^m$ (β_{liq} - 1/C, T - K, ρ_{liq} - g/cm^3)

NO	FORMULA	NAME	a	TC	m	TMIN	TMAX	β_{liq} @ 25 C	ρ_{liq} @ 25 C
526	C6H10	3-METHYLCYCLOPENTENE	7.003E-04	535.71	-0.7143	130.16	508.92	1.252E-03	0.759
527	C6H10	4-METHYLCYCLOPENTENE	6.978E-04	543.75	-0.7143	112.31	516.56	1.231E-03	0.763
528	C6H10	CYCLOHEXENE	6.645E-04	560.40	-0.7143	169.67	532.38	1.143E-03	0.806
529	C6H10	2,3-DIMETHYL-1,3-BUTADIENE	7.155E-04	526.00	-0.7110	197.15	499.70	1.297E-03	0.723
530	C6H10	1,5-HEXADIENE	6.988E-04	507.00	-0.7323	132.47	481.65	1.338E-03	0.688
531	C6H10	cis,trans-2,4-HEXADIENE	7.235E-04	538.00	-0.7109	177.05	511.10	1.285E-03	0.719
532	C6H10	trans,trans-2,4-HEXADIENE	6.977E-04	535.00	-0.7179	228.25	508.25	1.252E-03	0.710
533	C6H10	1-HEXYNE	6.992E-04	516.20	-0.7229	141.25	490.39	1.304E-03	0.712
534	C6H10	2-HEXYNE	7.925E-04	549.00	-0.6839	183.65	521.55	1.354E-03	0.727
535	C6H10	3-HEXYNE	7.062E-04	544.00	-0.7143	170.05	516.80	1.245E-03	0.718
536	C6H10O	CYCLOHEXANONE	5.625E-04	629.15	-0.7283	242.00	597.69	8.979E-04	0.942
537	C6H10O	MESITYL OXIDE	6.499E-04	600.00	-0.7152	220.15	570.00	1.062E-03	0.852
538	C6H10O2	epsilon-CAPROLACTONE	5.075E-04	771.00	-0.7143	271.85	732.45	7.197E-04	1.067
539	C6H10O2	ETHYL METHACRYLATE	6.730E-04	577.00	-0.7143	223.15	548.15	1.131E-03	0.908
540	C6H10O2	n-PROPYL ACRYLATE	6.773E-04	569.00	-0.7143	273.15	540.55	1.151E-03	0.900
541	C6H10O3	ETHYLACETOACETATE	6.176E-04	643.00	-0.7143	234.15	610.85	9.637E-04	1.023
542	C6H10O3	PROPIONIC ANHYDRIDE	6.262E-04	618.00	-0.7143	228.15	587.10	1.002E-03	1.007
543	C6H10O4	ADIPIC ACID	4.707E-04	809.00	-0.7180	425.50	768.55	---	---
544	C6H10O4	DIETHYL OXALATE	7.103E-04	646.00	-0.6658	232.55	613.70	1.073E-03	1.073
545	C6H10O4	ETHYLENE GLYCOL DIACETATE	6.142E-04	653.00	-0.7143	242.15	620.35	9.495E-04	1.101
546	C6H10O4	ETHYLIDENE DIACETATE	6.110E-04	635.00	-0.7046	292.00	603.25	9.550E-04	1.069
547	C6H11N	HEXANENITRILE	6.397E-04	622.05	-0.7136	192.85	590.95	1.019E-03	0.801
548	C6H11NO	epsilon-CAPROLACTAM	4.864E-04	806.00	-0.7143	342.36	765.70	---	---
549	C6H11NO	CYCLOHEXANONE OXIME	4.933E-04	715.00	-0.7143	363.15	679.25	---	---
550	C6H12	CYCLOHEXANE	6.667E-04	553.54	-0.7149	279.69	525.86	1.159E-03	0.773
551	C6H12	2,3-DIMETHYL-1-BUTENE	7.530E-04	500.00	-0.7143	115.89	475.00	1.439E-03	0.673
552	C6H12	2,3-DIMETHYL-2-BUTENE	7.138E-04	524.00	-0.7360	198.82	497.80	1.326E-03	0.703
553	C6H12	3,3-DIMETHYL-1-BUTENE	7.842E-04	480.00	-0.7009	157.95	456.00	1.548E-03	0.648
554	C6H12	2-ETHYL-1-BUTENE	7.422E-04	512.00	-0.7248	141.61	486.40	1.397E-03	0.685
555	C6H12	trans-3-METHYL-2-PENTENE	7.180E-04	521.00	-0.7143	134.70	494.95	1.317E-03	0.693
556	C6H12	1-HEXENE	7.506E-04	504.03	-0.7143	133.39	478.83	1.423E-03	0.667
557	C6H12	cis-2-HEXENE	7.389E-04	513.00	-0.7216	132.00	487.35	1.385E-03	0.683
558	C6H12	trans-2-HEXENE	7.444E-04	513.00	-0.7143	140.17	487.35	1.386E-03	0.673
559	C6H12	cis-3-HEXENE	7.489E-04	509.00	-0.7143	135.33	483.55	1.405E-03	0.675
560	C6H12	trans-3-HEXENE	7.769E-04	509.00	-0.7045	159.73	483.55	1.445E-03	0.673
561	C6H12	METHYLCYCLOPENTANE	6.941E-04	532.79	-0.7172	130.73	506.15	1.250E-03	0.745
562	C6H12	2-METHYL-1-PENTENE	7.519E-04	507.00	-0.7143	137.42	481.65	1.417E-03	0.675
563	C6H12	2-METHYL-2-PENTENE	7.471E-04	514.00	-0.7143	138.07	488.30	1.389E-03	0.681
564	C6H12	3-METHYL-1-PENTENE	7.428E-04	495.00	-0.7156	120.20	470.25	1.437E-03	0.663
565	C6H12	3-METHYL-cis-2-PENTENE	7.272E-04	515.00	-0.7161	138.31	489.25	1.351E-03	0.689
566	C6H12	4-METHYL-1-PENTENE	7.507E-04	496.00	-0.7143	119.51	471.20	1.447E-03	0.659
567	C6H12	4-METHYL-cis-2-PENTENE	7.500E-04	499.00	-0.7143	138.30	474.05	1.437E-03	0.665
568	C6H12	4-METHYL-trans-2-PENTENE	7.475E-04	501.00	-0.7143	132.35	475.95	1.426E-03	0.664
569	C6H12N2	TRIETHYLENEDIAMINE	5.647E-04	655.00	-0.7143	434.25	622.25	---	---
570	C6H12O	BUTYL VINYL ETHER	7.139E-04	536.00	-0.7143	181.25	509.20	1.276E-03	0.774
571	C6H12O	CYCLOHEXANOL	6.458E-04	625.15	-0.7143	296.60	593.89	1.026E-03	0.960
572	C6H12O	1-HEXANAL	5.508E-04	579.00	-0.7555	217.15	550.05	9.514E-04	0.810
573	C6H12O	ETHYL ISOPROPYL KETONE	8.503E-04	567.00	-0.6570	200.00	538.65	1.388E-03	0.806
574	C6H12O	2-HEXANONE	6.785E-04	587.05	-0.7037	217.35	557.70	1.117E-03	0.807
575	C6H12O	3-HEXANONE	6.520E-04	582.82	-0.7134	217.50	553.68	1.087E-03	0.810
576	C6H12O	METHYL ISOBUTYL KETONE	6.757E-04	571.40	-0.7143	189.15	542.83	1.145E-03	0.796
577	C6H12O2	n-PENTYL FORMATE	7.264E-04	576.00	-0.6914	199.65	547.20	1.202E-03	0.881
578	C6H12O2	n-BUTYL ACETATE	7.175E-04	579.65	-0.6910	199.65	550.67	1.182E-03	0.876
579	C6H12O2	sec-BUTYL ACETATE	7.286E-04	561.00	-0.6958	174.15	532.95	1.235E-03	0.868
580	C6H12O2	tert-BUTYL ACETATE	6.499E-04	545.00	-0.7300	283.15	517.75	1.159E-03	0.861
581	C6H12O2	ETHYL n-BUTYRATE	6.476E-04	571.00	-0.7361	175.15	542.45	1.115E-03	0.874
582	C6H12O2	ETHYL ISOBUTYRATE	6.937E-04	553.15	-0.7143	185.00	525.49	1.206E-03	0.863
583	C6H12O2	ISOBUTYL ACETATE	6.701E-04	561.00	-0.7163	174.30	532.95	1.153E-03	0.869
584	C6H12O2	n-PROPYL PROPIONATE	7.016E-04	578.00	-0.6977	197.25	549.10	1.164E-03	0.877
585	C6H12O2	CYCLOHEXYL PEROXIDE	5.569E-04	685.00	-0.7143	253.15	650.75	8.376E-04	1.015
586	C6H12O2	DIACETONE ALCOHOL	5.577E-04	606.00	-0.7489	229.15	575.70	9.261E-04	0.934
587	C6H12O2	2-ETHYL BUTYRIC ACID	6.450E-04	655.00	-0.6890	258.15	622.25	9.802E-04	0.919
588	C6H12O2	n-HEXANOIC ACID	5.493E-04	667.00	-0.7235	270.15	633.65	8.432E-04	0.921
589	C6H12O3	2-ETHOXYETHYL ACETATE	7.083E-04	597.00	-0.7143	211.45	567.15	1.161E-03	0.970
590	C6H12O3	HYDROXYCAPROIC ACID	5.507E-04	758.00	-0.7143	334.00	720.10	---	---
591	C6H12O3	PARALDEHYDE	6.797E-04	579.00	-0.6866	285.75	550.05	1.117E-03	0.985

			$\beta_{liq} = a\,(1-T/TC)^m$					(β_{liq} - 1/C, T - K, ρ_{liq} - g/cm^3)	
NO	FORMULA	NAME	a	TC	m	TMIN	TMAX	β_{liq} @ 25 C	ρ_{liq} @ 25 C
592	C6H12O3	sec-BUTYL GLYCOLATE	---	---	---	---	---	---	---
593	C6H12S	THIACYCLOHEPTANE	5.058E-04	640.07	-0.7143	292.14	608.07	7.916E-04	0.766
594	C6H13N	CYCLOHEXYLAMINE	6.012E-04	615.00	-0.7293	255.45	584.25	9.751E-04	0.863
595	C6H13N	HEXAMETHYLENEIMINE	5.719E-04	615.00	-0.7438	236.15	584.25	9.366E-04	0.875
596	C6H14	2,2-DIMETHYLBUTANE	7.358E-04	488.78	-0.7201	174.28	464.34	1.449E-03	0.644
597	C6H14	2,3-DIMETHYLBUTANE	7.473E-04	499.98	-0.7143	145.19	474.98	1.429E-03	0.658
598	C6H14	n-HEXANE	7.278E-04	507.43	-0.7219	177.84	482.06	1.379E-03	0.656
599	C6H14	2-METHYLPENTANE	7.578E-04	497.50	-0.7143	119.55	472.63	1.456E-03	0.648
600	C6H14	3-METHYLPENTANE	7.329E-04	504.43	-0.7208	110.25	479.21	1.396E-03	0.660
601	C6H14N2O2	LYSINE	4.688E-04	821.00	-0.7143	483.00	779.95	---	---
602	C6H14O	2-ETHYL-1-BUTANOL	5.738E-04	580.00	-0.7527	158.75	551.00	9.878E-04	0.829
603	C6H14O	1-HEXANOL	5.482E-04	611.35	-0.7460	228.55	580.78	9.030E-04	0.816
604	C6H14O	2-HEXANOL	6.144E-04	586.20	-0.7306	223.00	556.89	1.032E-03	0.810
605	C6H14O	2-METHYL-1-PENTANOL	6.612E-04	582.00	-0.7143	223.00	552.90	1.104E-03	0.827
606	C6H14O	4-METHYL-2-PENTANOL	6.545E-04	574.40	-0.7143	183.00	545.68	1.104E-03	0.805
607	C6H14O	n-BUTYL ETHYL ETHER	7.144E-04	531.00	-0.7143	170.15	504.45	1.287E-03	0.745
608	C6H14O	DIISOPROPYL ETHER	7.487E-04	500.05	-0.7143	187.65	475.05	1.431E-03	0.721
609	C6H14O	DI-n-PROPYL ETHER	7.094E-04	530.60	-0.7143	149.95	504.07	1.279E-03	0.741
610	C6H14O	METHYL tert-PENTYL ETHER	7.146E-04	534.00	-0.7143	160.00	507.30	1.281E-03	0.766
611	C6H14O2	ACETAL	6.914E-04	541.00	-0.7143	173.15	513.95	1.225E-03	0.821
612	C6H14O2	2-BUTOXYETHANOL	5.608E-04	600.00	-0.7455	203.15	570.00	9.360E-04	0.896
613	C6H14O2	1,6-HEXANEDIOL	5.891E-04	670.00	-0.7143	315.15	636.50	---	---
614	C6H14O2	HEXYLENE GLYCOL	5.791E-04	621.00	-0.7143	223.15	589.95	9.240E-04	0.918
615	C6H14O2S	DI-n-PROPYL SULFONE	5.452E-04	763.00	-0.6943	303.00	724.85	---	---
616	C6H14O3	DIETHYLENE GLYCOL DIMETHYL ETHER	6.517E-04	604.00	-0.7143	203.15	573.80	1.060E-03	0.942
617	C6H14O3	DIPROPYLENE GLYCOL	5.801E-04	654.00	-0.7143	233.00	621.30	8.961E-04	1.018
618	C6H14O3	2-(2-ETHOXYETHOXY)ETHANOL	6.184E-04	632.00	-0.7143	195.15	600.40	9.755E-04	0.984
619	C6H14O3	TRIMETHYLOLPROPANE	3.003E-04	709.00	-0.8424	331.15	673.55	---	---
620	C6H14O4	TRIETHYLENE GLYCOL	4.025E-04	700.00	-0.7904	265.79	665.00	6.242E-04	1.122
621	C6H14O6	SORBITOL	3.305E-04	959.00	-0.7827	370.85	911.05	---	---
622	C6H14S	n-HEXYLMERCAPTAN	8.152E-04	623.00	-0.6278	192.62	591.85	1.227E-03	0.837
623	C6H14S	BUTYL-ETHYL-SULFIDE	6.230E-04	609.00	-0.7143	178.03	578.55	1.007E-03	0.833
624	C6H14S	ISOPROPYL-SULFIDE	6.315E-04	585.71	-0.7143	170.45	556.42	1.050E-03	0.822
625	C6H14S	METHYL-PENTYL-SULFIDE	6.256E-04	587.98	-0.7143	179.16	558.58	1.037E-03	0.839
626	C6H14S	PROPYL-SULFIDE	6.205E-04	609.73	-0.7143	170.45	579.24	1.002E-03	0.833
627	C6H14S2	PROPYL-DISULFIDE	5.450E-04	673.00	-0.7143	187.68	639.35	8.278E-04	0.955
628	C6H15Al	TRIETHYL ALUMINUM	6.683E-04	720.15	-0.3445	220.65	684.14	8.034E-04	0.833
629	C6H15Al2Cl3	ETHYL ALUMINUM SESQUICHLORIDE	---	---	---	---	---	---	1.092
630	C6H15N	DIISOPROPYLAMINE	7.022E-04	523.10	-0.7290	176.85	496.95	1.299E-03	0.713
631	C6H15N	DI-n-PROPYLAMINE	6.772E-04	555.80	-0.7257	210.15	528.01	1.183E-03	0.737
632	C6H15N	n-HEXYLAMINE	5.931E-04	583.00	-0.7477	251.85	553.85	1.013E-03	0.761
633	C6H15N	TRIETHYLAMINE	6.951E-04	535.15	-0.7128	158.45	508.39	1.242E-03	0.724
634	C6H15NO	6-AMINOHEXANOL	5.572E-04	681.00	-0.7143	331.00	646.95	---	---
635	C6H15NO2	DIISOPROPANOLAMINE	4.648E-04	672.00	-0.7771	318.15	638.40	---	---
636	C6H15NO3	TRIETHANOLAMINE	3.605E-04	787.00	-0.7965	294.35	747.65	5.268E-04	1.120
637	C6H15N3	N-AMINOETHYL PIPERAZINE	5.337E-04	708.00	-0.7143	254.15	672.60	7.887E-04	0.983
638	C6H15O4P	TRIETHYL PHOSPHATE	6.474E-04	794.00	-0.7434	216.00	754.30	9.188E-04	1.066
639	C6H16N2	HEXAMETHYLENEDIAMINE	5.440E-04	663.00	-0.7143	313.95	629.85	---	---
640	C6H18N3OP	HEXAMETHYL PHOSPHORAMIDE	---	---	---	---	---	---	1.020
641	C6H18N4	TRIETHYLENE TETRAMINE	5.426E-04	718.00	-0.7143	285.15	682.10	7.960E-04	0.978
642	C6H18OSi2	HEXAMETHYLDISILOXANE	7.277E-04	518.70	-0.7143	204.93	492.77	1.341E-03	0.760
643	C6H18O3Si3	HEXAMETHYLCYCLOTRISILOXANE	6.943E-04	554.20	-0.6907	337.15	526.49	---	---
644	C6H19NSi2	HEXAMETHYLDISILAZANE	7.079E-04	544.00	-0.7143	293.15	516.80	1.248E-03	0.772
645	C7H3ClF3NO2	4-CHLORO-3-NITROBENZOTRIFLUORIDE	5.926E-04	686.00	-0.7143	293.15	651.70	8.906E-04	1.506
646	C7H3Cl2F3	2,4-DICHLOROBENZOTRIFLUORIDE	6.220E-04	646.00	-0.7143	247.55	613.70	9.679E-04	1.492
647	C7H3Cl2NO	3,4-DICHLOROPHENYL ISOCYANATE	5.357E-04	733.00	-0.7255	316.15	696.35	---	---
648	C7H4ClF3	p-CHLOROBENZOTRIFLUORIDE	6.318E-04	601.00	-0.7143	237.15	570.95	1.031E-03	1.226
649	C7H4Cl2O	m-CHLOROBENZOYL CHLORIDE	5.502E-04	724.00	-0.7143	280.00	687.80	8.039E-04	1.430
650	C7H4F3NO2	3-NITROBENZOTRIFLUORIDE	6.255E-04	667.00	-0.7143	272.00	633.65	9.550E-04	1.426
651	C7H5ClO	BENZOYL CHLORIDE	5.549E-04	697.00	-0.7140	272.65	662.15	8.267E-04	1.206
652	C7H5ClO2	o-CHLOROBENZOIC ACID	5.342E-04	792.00	-0.7143	415.15	752.40	---	---
653	C7H5Cl3	BENZOTRICHLORIDE	5.314E-04	737.00	-0.7143	268.40	700.15	7.696E-04	1.369
654	C7H5F3	BENZOTRIFLUORIDE	6.752E-04	565.00	-0.7143	244.14	536.75	1.154E-03	1.178
655	C7H5N	BENZONITRILE	5.665E-04	699.35	-0.7159	260.40	664.38	8.433E-04	1.001
656	C7H5NO	PHENYL ISOCYANATE	5.994E-04	648.00	-0.7143	243.15	615.60	9.309E-04	1.093
657	C7H5N3O6	2,4,6-TRINITROTOLUENE	4.726E-04	795.00	-0.7183	354.00	755.25	---	---

			$\beta_{liq} = a\ (1-T/TC)^m$					(β_{liq} - 1/C, T - K, ρ_{liq} - g/cm^3)	
NO	FORMULA	NAME	a	TC	m	TMIN	TMAX	β_{liq} @ 25 C	ρ_{liq} @ 25 C
658	C7H6Cl2	BENZYL DICHLORIDE	5.891E-04	731.00	-0.6806	257.00	694.45	8.415E-04	1.247
659	C7H6Cl2	2,4-DICHLOROTOLUENE	5.543E-04	705.00	-0.7143	259.65	669.75	8.209E-04	1.247
660	C7H6N2O4	2,4-DINITROTOLUENE	5.320E-04	814.00	-0.7085	343.00	773.30	---	---
661	C7H6N2O4	2,5-DINITROTOLUENE	5.054E-04	814.00	-0.7143	325.65	773.30	---	---
662	C7H6N2O4	2,6-DINITROTOLUENE	5.267E-04	770.00	-0.7143	339.00	731.50	---	---
663	C7H6N2O4	3,4-DINITROTOLUENE	4.897E-04	842.00	-0.7143	332.00	799.90	---	---
664	C7H6N2O4	3,5-DINITROTOLUENE	5.047E-04	814.00	-0.7143	365.65	773.30	---	---
665	C7H6O	BENZALDEHYDE	5.559E-04	695.00	-0.7150	247.15	660.25	8.298E-04	1.040
666	C7H6O2	BENZOIC ACID	5.303E-04	751.00	-0.7143	395.52	713.45	---	---
667	C7H6O2	p-HYDROXYBENZALDEHYDE	4.053E-04	844.00	-0.7577	390.15	801.80	---	---
668	C7H6O2	SALICYLALDEHYDE	5.299E-04	680.00	-0.7375	266.15	646.00	8.109E-04	1.162
669	C7H6O3	SALICYLIC ACID	---	---	---	---	---	---	---
670	C7H7Br	p-BROMOTOLUENE	5.757E-04	699.00	-0.6992	299.95	664.05	---	---
671	C7H7Cl	BENZYL CHLORIDE	5.712E-04	686.00	-0.7143	234.15	651.70	8.584E-04	1.097
672	C7H7Cl	o-CHLOROTOLUENE	5.670E-04	656.00	-0.7160	236.65	623.20	8.751E-04	1.077
673	C7H7Cl	p-CHLOROTOLUENE	5.727E-04	660.00	-0.7125	280.65	627.00	8.788E-04	1.063
674	C7H7F	p-FLUOROTOLUENE	6.481E-04	590.48	-0.7143	216.36	560.96	1.071E-03	0.991
675	C7H7NO	FORMANILIDE	5.259E-04	787.00	-0.7100	323.15	747.65	---	---
676	C7H7NO2	m-NITROTOLUENE	5.595E-04	734.00	-0.7279	289.20	697.30	8.176E-04	1.152
677	C7H7NO2	o-NITROTOLUENE	5.717E-04	720.00	-0.7291	269.98	684.00	8.443E-04	1.158
678	C7H7NO2	p-NITROTOLUENE	5.198E-04	736.00	-0.7437	324.75	699.20	---	---
679	C7H7NO3	o-NITROANISOLE	5.218E-04	782.00	-0.7117	283.60	742.90	7.343E-04	1.244
680	C7H8	TOLUENE	6.593E-04	591.79	-0.7011	178.18	562.20	1.078E-03	0.865
681	C7H8	1,3,5-CYCLOHEPTATRIENE	6.371E-04	593.90	-0.7143	193.66	564.21	1.048E-03	0.882
682	C7H8O	ANISOLE	5.860E-04	641.65	-0.7199	235.65	609.57	9.189E-04	0.990
683	C7H8O	BENZYL ALCOHOL	4.406E-04	677.00	-0.7760	257.85	643.15	6.913E-04	1.041
684	C7H8O	m-CRESOL	4.845E-04	705.85	-0.7293	285.39	670.56	7.231E-04	1.030
685	C7H8O	o-CRESOL	5.273E-04	697.55	-0.6901	304.19	662.67	---	---
686	C7H8O	p-CRESOL	5.721E-04	704.65	-0.6659	307.93	669.42	---	---
687	C7H8O2	GUAIACOL	5.269E-04	697.00	-0.7288	304.65	662.15	---	---
688	C7H8O2	p-METHOXYPHENOL	4.981E-04	758.00	-0.7155	329.00	720.10	---	---
689	C7H9N	BENZYLAMINE	2.611E-04	683.50	-0.8655	227.15	649.33	4.287E-04	0.981
690	C7H9N	2,6-DIMETHYLPYRIDINE	5.174E-04	623.75	-0.7283	267.00	592.56	8.307E-04	0.918
691	C7H9N	N-METHYLANILINE	5.113E-04	701.55	-0.7463	216.15	666.47	7.727E-04	0.982
692	C7H9N	m-TOLUIDINE	5.416E-04	709.15	-0.7310	242.75	673.69	8.069E-04	0.985
693	C7H9N	o-TOLUIDINE	5.318E-04	694.15	-0.7427	249.47	659.44	8.068E-04	0.994
694	C7H9N	p-TOLUIDINE	5.373E-04	693.15	-0.7384	316.90	658.49	---	---
695	C7H10	2-NORBORNENE	6.362E-04	583.00	-0.7143	319.40	553.85	---	---
696	C7H10N2	TOLUENEDIAMINE	4.974E-04	804.00	-0.7143	371.25	763.80	---	---
697	C7H11NO	CYCLOHEXYL ISOCYANATE	6.322E-04	633.00	-0.7143	193.00	601.35	9.964E-04	1.077
698	C7H12	1-HEPTYNE	6.572E-04	559.69	-0.7143	192.26	531.71	1.132E-03	0.728
699	C7H12O2	n-BUTYL ACRYLATE	6.980E-04	598.00	-0.6916	208.55	568.10	1.125E-03	0.894
700	C7H12O2	ISOBUTYL ACRYLATE	6.583E-04	580.00	-0.7143	212.00	551.00	1.102E-03	0.885
701	C7H12O2	n-PROPYL METHACRYLATE	6.503E-04	599.00	-0.7143	223.00	569.05	1.063E-03	0.897
702	C7H12O4	DIETHYL MALONATE	6.593E-04	653.00	-0.6839	224.25	620.35	1.000E-03	1.050
703	C7H14	CYCLOHEPTANE	6.156E-04	604.30	-0.7143	265.15	574.09	1.001E-03	0.806
704	C7H14	1,1-DIMETYLCYCLOPENTANE	7.073E-04	547.00	-0.6984	203.36	519.65	1.226E-03	0.750
705	C7H14	cis-1,2-DIMETHYLCYCLOPENTANE	6.623E-04	565.15	-0.7143	219.26	536.89	1.132E-03	0.768
706	C7H14	trans-1,2-DIMETHYLCYCLOPENTANE	7.170E-04	553.15	-0.6902	155.58	525.49	1.224E-03	0.747
707	C7H14	cis-1,3-DIMETHYLCYCLOPENTANE	7.267E-04	551.00	-0.6860	139.45	523.45	1.240E-03	0.740
708	C7H14	trans-1,3-DIMETHYLCYCLOPENTANE	7.003E-04	553.00	-0.6953	139.18	525.35	1.200E-03	0.744
709	C7H14	ETHYLCYCLOPENTANE	6.396E-04	569.52	-0.7223	134.71	541.04	1.093E-03	0.763
710	C7H14	2-ETHYL-1-PENTENE	6.358E-04	543.00	-0.7337	168.00	515.85	1.141E-03	0.704
711	C7H14	3-ETHYL-1-PENTENE	5.750E-04	530.00	-0.7580	145.67	503.50	1.076E-03	0.692
712	C7H14	1-HEPTENE	6.815E-04	537.29	-0.7258	154.27	510.43	1.226E-03	0.693
713	C7H14	cis-2-HEPTENE	7.315E-04	549.00	-0.7114	164.00	521.55	1.277E-03	0.703
714	C7H14	trans-2-HEPTENE	7.022E-04	543.00	-0.7133	163.67	515.85	1.239E-03	0.697
715	C7H14	cis-3-HEPTENE	7.017E-04	545.00	-0.7206	136.51	517.75	1.242E-03	0.698
716	C7H14	trans-3-HEPTENE	7.015E-04	540.00	-0.7143	136.52	513.00	1.245E-03	0.694
717	C7H14	METHYLCYCLOHEXANE	6.690E-04	572.19	-0.7073	146.58	543.58	1.126E-03	0.766
718	C7H14	2-METHYL-1-HEXENE	7.155E-04	538.00	-0.7079	170.28	511.10	1.268E-03	0.698
719	C7H14	3-METHYL-1-HEXENE	6.923E-04	528.00	-0.7178	145.00	501.60	1.258E-03	0.687
720	C7H14	4-METHYL-1-HEXENE	6.931E-04	534.00	-0.7163	131.70	507.30	1.245E-03	0.694
721	C7H14	2,3,3-TRIMETHYL-1-BUTENE	7.115E-04	531.00	-0.7040	163.30	504.45	1.271E-03	0.701
722	C7H14O	DIISOPROPYL KETONE	6.604E-04	576.00	-0.7382	204.81	547.20	1.131E-03	0.912
723	C7H14O	2-HEPTANONE	6.685E-04	611.55	-0.6955	238.15	580.97	1.064E-03	0.811

$\beta_{liq} = a\ (1-T/TC)^m$ (β_{liq} - 1/C, T - K, ρ_{liq} - g/cm^3)

NO	FORMULA	NAME	a	TC	m	TMIN	TMAX	β_{liq} @ 25 C	ρ_{liq} @ 25 C
724	C7H14O	1-HEPTANAL	6.422E-04	603.00	-0.7105	230.15	572.85	1.043E-03	0.813
725	C7H14O	1-METHYLCYCLOHEXANOL	7.782E-04	603.00	-0.6867	299.15	572.85	---	---
726	C7H14O	cis-2-METHYLCYCLOHEXANOL	5.497E-04	614.00	-0.7631	280.15	583.30	9.130E-04	0.932
727	C7H14O	trans-2-METHYLCYCLOHEXANOL	5.143E-04	616.00	-0.7738	269.15	585.20	8.581E-04	0.921
728	C7H14O	cis-3-METHYLCYCLOHEXANOL	6.562E-04	618.00	-0.7182	267.65	587.10	1.053E-03	0.911
729	C7H14O	trans-3-METHYLCYCLOHEXANOL	4.943E-04	617.00	-0.7805	272.65	586.15	8.275E-04	0.918
730	C7H14O	cis-4-METHYLCYCLOHEXANOL	5.997E-04	622.00	-0.7143	294.85	590.90	9.559E-04	0.913
731	C7H14O	trans-4-METHYLCYCLOHEXANOL	5.652E-04	622.00	-0.7495	293.00	590.90	9.218E-04	0.908
732	C7H14O	5-METHYL-2-HEXANONE	6.463E-04	601.00	-0.7143	199.25	570.95	1.054E-03	0.808
733	C7H14O2	n-BUTYL PROPIONATE	6.528E-04	594.00	-0.7143	183.63	564.30	1.074E-03	0.872
734	C7H14O2	ETHYL ISOVALERATE	6.516E-04	587.95	-0.7143	173.85	558.55	1.080E-03	0.865
735	C7H14O2	ISOPENTYL ACETATE	6.670E-04	599.00	-0.6991	194.65	569.05	1.080E-03	0.867
736	C7H14O2	n-PENTYL ACETATE	6.515E-04	598.00	-0.7068	202.35	568.10	1.061E-03	0.872
737	C7H14O2	n-PROPYL n-BUTYRATE	6.671E-04	594.00	-0.7021	177.95	564.30	1.088E-03	0.868
738	C7H14O2	n-HEPTANOIC ACID	6.074E-04	680.00	-0.6941	265.83	646.00	9.066E-04	0.913
739	C7H14O3	ETHYL-3-ETHOXYPROPIONATE	7.169E-04	609.00	-0.6785	223.00	578.55	1.131E-03	0.945
740	C7H15Br	1-BROMOHEPTANE	5.751E-04	651.00	-0.7143	217.05	618.45	8.907E-04	1.135
741	C7H15N	N-METHYLCYCLOHEXYLAMINE	6.093E-04	622.00	-0.7143	264.65	590.90	9.711E-04	0.865
742	C7H16	2,2-DIMETHYLPENTANE	6.986E-04	520.50	-0.7170	149.34	494.48	1.285E-03	0.673
743	C7H16	2,3-DIMETHYLPENTANE	6.317E-04	537.35	-0.7287	160.00	510.48	1.139E-03	0.691
744	C7H16	2,4-DIMETHYLPENTANE	6.688E-04	519.79	-0.7305	153.91	493.80	1.247E-03	0.668
745	C7H16	3,3-DIMETHYLPENTANE	7.526E-04	536.40	-0.6916	138.70	509.58	1.319E-03	0.687
746	C7H16	3-ETHYLPENTANE	7.169E-04	540.64	-0.7086	154.55	513.61	1.265E-03	0.695
747	C7H16	n-HEPTANE	6.955E-04	540.26	-0.7209	182.57	513.25	1.241E-03	0.682
748	C7H16	2-METHYLHEXANE	6.894E-04	530.37	-0.7210	154.90	503.85	1.250E-03	0.674
749	C7H16	3-METHYLHEXANE	6.232E-04	535.25	-0.7375	153.75	508.49	1.136E-03	0.684
750	C7H16	2,2,3-TRIMETHYLBUTANE	6.725E-04	531.17	-0.7200	248.57	504.61	1.217E-03	0.687
751	C7H16O	1-HEPTANOL	5.767E-04	631.90	-0.7270	239.15	600.31	9.173E-04	0.820
752	C7H16O	2-HEPTANOL	5.710E-04	588.00	-0.7466	243.00	558.60	9.682E-04	0.814
753	C7H16O	5-METHYL-1-HEXANOL	7.573E-04	605.00	-0.6688	293.15	574.75	1.193E-03	0.812
754	C7H16O	ISOPROPYL-TERT-BUTYL-ETHER	6.875E-04	558.21	-0.7143	177.80	530.30	1.186E-03	0.750
755	C7H16S	n-HEPTYL MERCAPTAN	6.140E-04	645.00	-0.6967	229.92	612.75	9.460E-04	0.839
756	C7H16S	BUTYL-PROPYL-SULFIDE	5.906E-04	653.50	-0.7143	206.66	620.83	9.127E-04	0.839
757	C7H16S	ETHYL-PENTYL-SULFIDE	6.046E-04	638.37	-0.7143	206.66	606.45	9.478E-04	0.839
758	C7H16S	HEXYL-METHYL-SULFIDE	6.046E-04	638.37	-0.7143	206.66	606.45	9.478E-04	0.839
759	C7H17N	1-AMINOHEPTANE	6.022E-04	607.00	-0.7341	254.15	576.65	9.889E-04	0.772
760	C8H4Cl2O2	ISOPHTHALOYL CHLORIDE	5.155E-04	768.00	-0.7143	317.00	729.60	---	---
761	C8H4O3	PHTHALIC ANHYDRIDE	4.331E-04	791.00	-0.7654	404.26	751.45	---	---
762	C8H6	ETHYNYLBENZENE	5.659E-04	655.43	-0.7143	242.53	622.66	8.730E-04	0.901
763	C8H6O4	ISOPHTHALIC ACID	4.566E-04	1007.00	-0.7143	619.15	956.65	---	---
764	C8H6O4	PHTHALIC ACID	4.923E-04	800.00	-0.7143	464.15	760.00	---	---
765	C8H6O4	TEREPHTHALIC ACID	4.388E-04	1113.00	-0.7143	700.15	1057.35	---	---
766	C8H6S	BENZOTHIOPHENE	5.983E-04	754.00	-0.6670	304.50	716.30	---	---
767	C8H7N	INDOLE	4.556E-04	790.00	-0.7676	273.68	750.50	6.555E-04	1.102
768	C8H8	STYRENE	5.886E-04	648.00	-0.7143	242.54	615.60	9.142E-04	0.900
769	C8H8	1,3,5,7-CYCLOOCTATETRAENE	5.855E-04	642.55	-0.7143	266.16	610.42	9.141E-04	0.907
770	C8H8O	ACETOPHENONE	5.670E-04	701.00	-0.7094	293.65	665.95	8.399E-04	1.024
771	C8H8O	p-TOLUALDEHYDE	5.714E-04	698.00	-0.7143	298.85	663.10	---	---
772	C8H8O2	METHYL BENZOATE	5.589E-04	693.00	-0.7324	260.75	658.35	8.438E-04	1.085
773	C8H8O2	o-TOLUIC ACID	5.322E-04	751.00	-0.7143	376.85	713.45	---	---
774	C8H8O2	p-TOLUIC ACID	5.306E-04	773.00	-0.7143	452.75	734.35	---	---
775	C8H8O3	METHYL SALICYLATE	4.960E-04	701.00	-0.7388	265.15	665.95	7.469E-04	1.175
776	C8H8O3	VANILLIN	4.982E-04	777.00	-0.7143	355.00	738.15	---	---
777	C8H9NO	ACETANILIDE	4.986E-04	825.00	-0.7143	386.65	783.75	---	---
778	C8H10	ETHYLBENZENE	6.296E-04	617.17	-0.7079	178.20	586.31	1.005E-03	0.865
779	C8H10	m-XYLENE	5.960E-04	617.05	-0.7276	225.30	586.20	9.634E-04	0.861
780	C8H10	o-XYLENE	5.844E-04	630.37	-0.7259	247.98	598.85	9.302E-04	0.876
781	C8H10	p-XYLENE	6.098E-04	616.26	-0.7210	286.41	585.45	9.823E-04	0.858
782	C8H10O	m-ETHYLPHENOL	---	---	---	---	---	---	---
783	C8H10O	p-ETHYLPHENOL	5.232E-04	716.45	-0.7143	318.23	680.63	---	---
784	C8H10O	PHENETOLE	6.039E-04	647.15	-0.7143	243.63	614.79	9.386E-04	0.961
785	C8H10O	2-PHENYLETHANOL	6.154E-04	684.00	-0.6972	247.00	649.80	9.174E-04	1.016
786	C8H10O	2,3-XYLENOL	4.851E-04	722.95	-0.7143	345.71	686.80	---	---
787	C8H10O	2,4-XYLENOL	4.735E-04	707.65	-0.7513	297.68	672.27	7.142E-04	1.015
788	C8H10O	2,5-XYLENOL	5.274E-04	707.05	-0.7030	347.99	671.70	---	---
789	C8H10O	2,6-XYLENOL	5.073E-04	701.05	-0.7143	318.76	666.00	---	---

			$\beta_{liq} = a\,(1-T/TC)^m$					(β_{liq} - 1/C, T - K, ρ_{liq} - g/cm^3)	
NO	FORMULA	NAME	a	TC	m	TMIN	TMAX	β_{liq} @ 25 C	ρ_{liq} @ 25 C
790	C8H10O	3,4-XYLENOL	4.808E-04	729.95	-0.7193	338.25	693.45	---	---
791	C8H10O	3,5-XYLENOL	4.937E-04	715.65	-0.7737	336.59	679.87	---	---
792	C8H11N	N,N-DIMETHYLANILINE	5.014E-04	687.15	-0.7665	275.60	652.79	7.755E-04	0.949
793	C8H11N	o-ETHYLANILINE	5.548E-04	704.00	-0.7143	226.55	668.80	8.222E-04	0.977
794	C8H11N	2,4,6-TRIMETHYLPYRIDINE	5.963E-04	653.00	-0.7143	229.00	620.35	9.219E-04	0.913
795	C8H11NO	p-PHENETIDINE	5.289E-04	754.00	-0.7143	277.00	716.30	7.576E-04	1.057
796	C8H12	1,5-CYCLOOCTADIENE	7.276E-04	645.00	-0.6525	203.98	612.75	1.091E-03	0.878
797	C8H12	VINYLCYCLOHEXENE	6.301E-04	599.00	-0.7143	164.00	569.05	1.030E-03	0.826
798	C8H12O4	1,4-CYCLOHEXANEDICARBOXYLIC ACID	4.940E-04	889.00	-0.7143	585.65	844.55	---	---
799	C8H12O4	DIETHYL MALEATE	6.196E-04	680.00	-0.6664	264.35	646.00	9.102E-04	0.961
800	C8H14O2	n-BUTYL METHACRYLATE	6.347E-04	616.00	-0.7143	223.00	585.20	1.018E-03	0.891
801	C8H14O3	BUTYRIC ANHYDRIDE	6.049E-04	639.00	-0.7143	199.85	607.05	9.477E-04	0.960
802	C8H14O4	DIETHYL SUCCINATE	6.049E-04	660.00	-0.7048	252.35	627.00	9.239E-04	1.036
803	C8H16	CYCLOOCTANE	5.764E-04	647.20	-0.7143	287.60	614.84	8.959E-04	0.830
804	C8H16	1,1-DIMETHYLCYCLOHEXANE	6.483E-04	591.15	-0.7224	239.66	561.59	1.076E-03	0.777
805	C8H16	cis-1,2-DIMETHYLCYCLOHEXANE	6.246E-04	606.15	-0.7319	223.16	575.84	1.025E-03	0.792
806	C8H16	trans-1,2-DIMETHYLCYCLOHEXANE	6.176E-04	596.15	-0.7342	184.99	566.34	1.028E-03	0.772
807	C8H16	cis-1,3-DIMETHYLCYCLOHEXANE	6.548E-04	591.15	-0.7161	197.58	561.59	1.082E-03	0.762
808	C8H16	trans-1,3-DIMETHYLCYCLOHEXANE	6.549E-04	598.00	-0.7220	183.07	568.10	1.078E-03	0.781
809	C8H16	cis-1,4-DIMETHYLCYCLOHEXANE	6.510E-04	598.15	-0.7229	185.72	568.24	1.072E-03	0.779
810	C8H16	trans-1,4-DIMETHYLCYCLOHEXANE	6.360E-04	590.15	-0.7225	236.21	560.64	1.057E-03	0.759
811	C8H16	ETHYLCYCLOHEXANE	6.021E-04	609.15	-0.7325	161.84	578.69	9.852E-04	0.784
812	C8H16	2-ETHYL-1-HEXENE	7.222E-04	574.00	-0.6581	173.00	545.30	1.170E-03	0.723
813	C8H16	1-METHYL-1-ETHYLCYCLOPENTANE	6.509E-04	582.00	-0.7143	129.35	552.90	1.087E-03	0.777
814	C8H16	1-OCTENE	6.861E-04	566.60	-0.7143	171.45	538.27	1.170E-03	0.711
815	C8H16	trans-2-OCTENE	6.756E-04	577.00	-0.7143	185.45	548.15	1.136E-03	0.716
816	C8H16	trans-3-OCTENE	6.765E-04	574.00	-0.7143	163.15	545.30	1.142E-03	0.711
817	C8H16	trans-4-OCTENE	6.769E-04	573.00	-0.7143	179.37	544.35	1.144E-03	0.710
818	C8H16	n-PROPYLCYCLOPENTANE	6.303E-04	603.00	-0.7097	155.82	572.85	1.023E-03	0.773
819	C8H16	2,4,4-TRIMETHYL-1-PENTENE	6.895E-04	553.00	-0.7143	179.70	525.35	1.199E-03	0.711
820	C8H16	2,4,4-TRIMETHYL-2-PENTENE	6.877E-04	558.00	-0.7143	166.84	530.10	1.187E-03	0.717
821	C8H16O	2-ETHYLHEXANAL	6.516E-04	607.00	-0.7143	200.00	576.65	1.056E-03	0.819
822	C8H16O	1-OCTANAL	5.229E-04	621.00	-0.7504	246.00	589.95	8.542E-04	0.816
823	C8H16O	2-OCTANONE	6.285E-04	624.00	-0.7037	252.85	592.80	9.928E-04	0.815
824	C8H16O2	n-BUTYL n-BUTYRATE	5.859E-04	616.00	-0.7235	181.15	585.20	9.457E-04	0.866
825	C8H16O2	n-HEXYL ACETATE	6.398E-04	618.00	-0.7019	192.25	587.10	1.016E-03	0.868
826	C8H16O2	ISOBUTYL ISOBUTYRATE	6.320E-04	602.00	-0.7143	192.45	571.90	1.030E-03	0.852
827	C8H16O2	n-OCTANOIC ACID	5.351E-04	692.00	-0.7198	289.65	657.40	8.028E-04	0.903
828	C8H16O4	DIETHYLENE GLYCOL ETHYL ETHER ACETATE	6.018E-04	660.00	-0.7143	248.15	627.00	9.245E-04	1.006
829	C8H18	2,2-DIMETHYLHEXANE	6.731E-04	549.80	-0.7223	151.97	522.31	1.184E-03	0.692
830	C8H18	2,3-DIMETHYLHEXANE	6.296E-04	563.40	-0.7305	272.04	535.23	1.092E-03	0.708
831	C8H18	2,4-DIMETHYLHEXANE	7.006E-04	553.50	-0.7015	272.04	525.83	1.205E-03	0.693
832	C8H18	2,5-DIMETHYLHEXANE	6.750E-04	550.00	-0.7218	182.00	522.50	1.186E-03	0.690
833	C8H18	3,3-DIMETHYLHEXANE	5.654E-04	562.00	-0.7432	147.05	533.90	9.918E-04	0.707
834	C8H18	3,4-DIMETHYLHEXANE	6.234E-04	568.80	-0.7324	272.04	540.36	1.074E-03	0.716
835	C8H18	3-ETHYLHEXANE	6.028E-04	565.40	-0.7343	272.04	537.13	1.045E-03	0.710
836	C8H18	3-ETHYL-2-METHYLPENTANE	6.906E-04	567.00	-0.7143	158.20	538.65	1.177E-03	0.711
837	C8H18	3-METHYL-3-ETHYLPENTANE	6.352E-04	576.50	-0.7183	182.28	547.68	1.072E-03	0.724
838	C8H18	2-METHYLHEPTANE	6.549E-04	559.64	-0.7287	164.16	531.66	1.140E-03	0.696
839	C8H18	3-METHYLHEPTANE	6.224E-04	563.67	-0.7287	152.60	535.49	1.077E-03	0.702
840	C8H18	4-METHYLHEPTANE	6.815E-04	561.74	-0.7168	152.20	533.65	1.172E-03	0.713
841	C8H18	n-OCTANE	6.476E-04	568.83	-0.7306	216.38	540.39	1.114E-03	0.699
842	C8H18	2,2,3-TRIMETHYLPENTANE	5.994E-04	563.50	-0.7266	160.89	535.33	1.036E-03	0.712
843	C8H18	2,2,4-TRIMETHYLPENTANE	6.779E-04	543.96	-0.7154	165.78	516.76	1.197E-03	0.690
844	C8H18	2,3,3-TRIMETHYLPENTANE	6.180E-04	573.50	-0.7259	172.22	544.83	1.053E-03	0.722
845	C8H18	2,3,4-TRIMETHYLPENTANE	6.157E-04	566.30	-0.7353	163.95	537.99	1.067E-03	0.716
846	C8H18	2,2,3,3-TETRAMETHYLBUTANE	6.406E-04	567.80	-0.7143	172.47	539.41	1.090E-03	0.692
847	C8H18O	DI-n-BUTYL ETHER	6.627E-04	581.00	-0.7143	177.95	551.95	1.108E-03	0.764
848	C8H18O	DI-sec-BUTYL ETHER	6.716E-04	559.00	-0.7143	173.15	531.05	1.158E-03	0.759
849	C8H18O	DI-tert-BUTYL ETHER	6.800E-04	550.00	-0.7143	195.00	522.50	1.188E-03	0.760
850	C8H18O	2-ETHYL-1-HEXANOL	5.813E-04	640.25	-0.7227	203.15	608.24	9.144E-04	0.830
851	C8H18O	1-OCTANOL	5.778E-04	652.50	-0.7191	257.65	619.88	8.963E-04	0.823
852	C8H18O	2-OCTANOL	6.003E-04	637.15	-0.7057	241.55	605.29	9.370E-04	0.817
853	C8H18O2	DI-t-BUTYL PEROXIDE	6.660E-04	547.00	-0.7143	233.15	519.65	1.169E-03	0.790
854	C8H18O2S	DI-n-BUTYL SULFONE	5.390E-04	767.00	-0.6948	318.00	728.65	---	---
855	C8H18O3	DIETHYLENE GLYCOL DIETHYL ETHER	6.256E-04	624.00	-0.7143	228.85	592.80	9.950E-04	0.904

$\beta_{liq} = a\,(1-T/TC)^m$ (β_{liq} - 1/C, T - K, ρ_{liq} - g/cm^3)

NO	FORMULA	NAME	a	TC	m	TMIN	TMAX	β_{liq} @ 25 C	ρ_{liq} @ 25 C
856	C8H18O3	DIETHYLENE GLYCOL MONOBUTYL EHTER	5.988E-04	654.00	-0.7143	205.15	621.30	9.249E-04	0.952
857	C8H18O4	TRIETHYLENE GLYCOL DIMETHYL ETHER	8.435E-04	651.00	-0.6082	229.35	618.45	1.224E-03	0.980
858	C8H18O5	TETRAETHYLENE GLYCOL	5.523E-04	722.00	-0.7143	268.15	685.90	8.079E-04	1.122
859	C8H18S	n-OCTYL MERCAPTAN	5.883E-04	664.00	-0.7002	223.95	630.80	8.930E-04	0.840
860	C8H18S	tert-OCTYL MERCAPTAN	6.092E-04	627.00	-0.7143	199.00	595.65	9.660E-04	0.841
861	C8H18S	BUTYL-SULFIDE	5.921E-04	650.00	-0.7143	209.86	617.50	9.179E-04	0.840
862	C8H18S	ETHYL-HEXYL-SULFIDE	5.960E-04	660.72	-0.7143	209.86	627.68	9.150E-04	0.840
863	C8H18S	HEPTYL-METHYL-SULFIDE	5.960E-04	660.72	-0.7143	209.86	627.68	9.150E-04	0.840
864	C8H18S	PENTYL-PROPYL-SULFIDE	5.960E-04	660.72	-0.7143	209.86	627.68	9.150E-04	0.840
865	C8H18S2	BUTYL-DISULFIDE	5.388E-04	704.16	-0.7143	202.16	668.95	7.985E-04	0.934
866	C8H19N	DI-n-BUTYLAMINE	6.300E-04	607.50	-0.7173	211.15	577.13	1.022E-03	0.757
867	C8H19N	DIISOBUTYLAMINE	6.273E-04	580.00	-0.7280	203.15	551.00	1.061E-03	0.743
868	C8H19N	n-OCTYLAMINE	6.218E-04	627.00	-0.7143	272.75	595.65	9.859E-04	0.779
869	C8H23N5	TETRAETHYLENEPENTAMINE	5.117E-04	774.00	-0.7143	243.00	735.30	7.243E-04	0.994
870	C8H24O4Si4	OCTAMETHYLCYCLOTETRASILOXANE	6.502E-04	586.50	-0.7231	290.80	557.18	1.086E-03	0.949
871	C9H4O5	TRIMELLITIC ANHYDRIDE	4.387E-04	890.00	-0.7143	438.15	845.50	---	---
872	C9H6N2O2	TOLUENE DIISOCYANATE	2.740E-04	737.00	-0.8561	287.04	700.15	4.270E-04	1.220
873	C9H7N	ISOQUINOLINE	4.849E-04	803.15	-0.7211	299.45	762.99	---	---
874	C9H7N	QUINOLINE	4.650E-04	782.15	-0.7638	258.25	743.04	6.709E-04	1.090
875	C9H7NO	8-HYDROXYQUINOLINE	4.738E-04	788.00	-0.7100	346.00	748.60	---	---
876	C9H8	INDENE	6.184E-04	687.00	-0.6900	271.70	652.65	9.158E-04	0.994
877	C9H8O	2-METHYLBENZOFURAN	5.611E-04	698.00	-0.7143	290.00	663.10	8.353E-04	1.051
878	C9H10	INDANE	5.925E-04	684.90	-0.6978	221.74	650.66	8.827E-04	0.960
879	C9H10	cis-PROPENYLBENZENE	5.824E-04	664.60	-0.7143	211.47	631.37	8.911E-04	0.904
880	C9H10	trans-PROPENYLBENZENE	5.824E-04	664.60	-0.7143	243.82	631.37	8.911E-04	0.902
881	C9H10	alpha-METHYLSTYRENE	6.345E-04	654.00	-0.7049	249.95	621.30	9.744E-04	0.905
882	C9H10	m-METHYLSTYRENE	6.013E-04	657.00	-0.7093	186.81	624.15	9.234E-04	0.908
883	C9H10	o-METHYLSTYRENE	6.047E-04	659.00	-0.7069	204.58	626.05	9.256E-04	0.908
884	C9H10	p-METHYLSTYRENE	7.723E-04	665.00	-0.6534	239.02	631.75	1.139E-03	0.916
885	C9H10O2	BENZYL ACETATE	6.546E-04	699.00	-0.6664	221.65	664.05	9.482E-04	1.045
886	C9H10O2	ETHYL BENZOATE	5.845E-04	698.00	-0.7151	238.45	663.10	8.706E-04	1.042
887	C9H10O3	ETHYL VANILLIN	5.357E-04	748.00	-0.7143	350.65	710.60	---	---
888	C9H11NO	p-DIMETHYLAMINOBENZALDEHYDE	5.110E-04	832.00	-0.7143	348.00	790.40	---	---
889	C9H12	CUMENE	6.158E-04	631.15	-0.7100	177.14	599.59	9.696E-04	0.860
890	C9H12	m-ETHYLTOLUENE	6.022E-04	637.15	-0.7404	177.61	605.29	9.609E-04	0.860
891	C9H12	o-ETHYLTOLUENE	5.940E-04	651.15	-0.7293	192.35	618.59	9.284E-04	0.877
892	C9H12	p-ETHYLTOLUENE	6.093E-04	640.15	-0.7280	210.83	608.14	9.617E-04	0.857
893	C9H12	MESITYLENE	5.929E-04	637.36	-0.7202	228.46	605.49	9.339E-04	0.861
894	C9H12	n-PROPYLBENZENE	6.277E-04	638.38	-0.7087	173.67	606.46	9.805E-04	0.860
895	C9H12	1,2,3-TRIMETHYLBENZENE	5.135E-04	664.53	-0.7392	247.79	631.30	7.974E-04	0.891
896	C9H12	1,2,4-TRIMETHYLBENZENE	5.762E-04	649.13	-0.7228	229.38	616.67	8.986E-04	0.872
897	C9H12O	BENZYL ETHYL ETHER	5.217E-04	662.00	-0.7368	275.65	628.90	8.108E-04	0.945
898	C9H12O	2-PHENYL-2-PROPANOL	5.363E-04	660.00	-0.7398	309.15	627.00	---	---
899	C9H12O2	CUMENE HYDROPEROXIDE	6.052E-04	605.00	-0.7140	264.26	574.75	9.826E-04	1.043
900	C9H14O	ISOPHORONE	5.325E-04	715.00	-0.7143	265.05	679.25	7.828E-04	0.920
901	C9H14O6	GLYCERYL TRIACETATE	5.686E-04	704.00	-0.7143	277.25	668.80	8.428E-04	1.158
902	C9H16	1-NONYNE	6.230E-04	610.81	-0.7143	223.16	580.27	1.005E-03	0.752
903	C9H16O4	AZELAIC ACID	5.153E-04	811.00	-0.7143	379.65	770.45	---	---
904	C9H18	BUTYLCYCLOPENTANE	6.228E-04	625.05	-0.7143	165.18	593.80	9.896E-04	0.781
905	C9H18	cis,cis-1,3,5-TRIMETHYLCYCLOHEXANE	6.573E-04	607.86	-0.7143	223.46	577.47	1.064E-03	0.767
906	C9H18	cis,trans-1,3,5-TRIMETHYLCYCLOHEXANE	6.673E-04	602.20	-0.7143	188.76	572.09	1.087E-03	0.718
907	C9H18	ISOPROPYLCYCLOHEXANE	6.202E-04	627.00	-0.7020	183.76	595.65	9.756E-04	0.798
908	C9H18	1-NONENE	6.615E-04	593.25	-0.7143	191.78	563.59	1.089E-03	0.725
909	C9H18	n-PROPYLCYCLOHEXANE	6.203E-04	639.15	-0.6998	178.28	607.19	9.629E-04	0.790
910	C9H18O	DIISOBUTYL KETONE	5.948E-04	615.00	-0.7187	227.17	584.25	9.581E-04	0.802
911	C9H18O	1-NONANAL	5.075E-04	640.00	-0.7499	255.15	608.00	8.122E-04	0.819
912	C9H18O2	n-BUTYL VALERATE	6.234E-04	629.00	-0.7035	180.35	597.55	9.796E-04	0.863
913	C9H18O2	n-NONANOIC ACID	6.088E-04	703.00	-0.6839	285.55	667.85	8.880E-04	0.902
914	C9H18O2	n-OCTYL FORMATE	6.387E-04	645.00	-0.6911	234.05	612.75	9.806E-04	0.870
915	C9H20	3,3-DIETHYLPENTANE	5.957E-04	610.05	-0.7066	240.12	579.55	9.570E-04	0.750
916	C9H20	2,2-DIMETHYL-3-ETHYLPENTANE	6.359E-04	590.00	-0.7143	173.68	560.50	1.051E-03	0.731
917	C9H20	3-ETHYL-2,3-DIMETHYLPENTANE	6.453E-04	606.80	-0.7143	173.67	576.46	1.046E-03	0.751
918	C9H20	2,4-DIMETHYL-3-ETHYLPENTANE	6.404E-04	591.00	-0.7143	150.79	561.45	1.057E-03	0.734
919	C9H20	2,2-DIMETHYLHEPTANE	6.625E-04	576.80	-0.7062	160.15	547.96	1.108E-03	0.707
920	C9H20	2,6-DIMETHYLHEPTANE	6.557E-04	579.00	-0.7077	170.25	550.05	1.094E-03	0.706
921	C9H20	3-ETHYLHEPTANE	6.274E-04	590.00	-0.7210	158.25	560.50	1.042E-03	0.723

			β_{liq} = a (1-T/TC)^m			(β_{liq} - 1/C, T - K, ρ_{liq} - g/cm^3)			
NO	FORMULA	NAME	a	TC	m	TMIN	TMAX	β_{liq} @ 25 C	ρ_{liq} @ 25 C
922	C9H20	4-ETHYLHEPTANE	6.675E-04	584.95	-0.7143	159.96	555.70	1.111E-03	0.724
923	C9H20	2,3-DIMETHYLHEPTANE	6.679E-04	589.60	-0.7143	160.16	560.12	1.105E-03	0.722
924	C9H20	2,4-DIMETHYLHEPTANE	6.827E-04	576.80	-0.7143	160.16	547.96	1.148E-03	0.711
925	C9H20	2,5-DIMETHYLHEPTANE	6.738E-04	581.10	-0.7143	160.16	552.05	1.127E-03	0.713
926	C9H20	3,4-DIMETHYLHEPTANE	6.653E-04	591.90	-0.7143	170.26	562.31	1.097E-03	0.727
927	C9H20	3,5-DIMETHYLHEPTANE	6.733E-04	583.20	-0.7143	170.26	554.04	1.123E-03	0.719
928	C9H20	4,4-DIMETHYLHEPTANE	6.766E-04	585.40	-0.7143	170.26	556.13	1.125E-03	0.721
929	C9H20	3-ETHYL-2-METHYLHEXANE	6.754E-04	588.10	-0.7143	160.16	558.70	1.119E-03	0.729
930	C9H20	4-ETHYL-2-METHYLHEXANE	6.809E-04	580.00	-0.7143	160.16	551.00	1.140E-03	0.719
931	C9H20	3-ETHYL-3-METHYLHEXANE	6.629E-04	597.50	-0.7143	160.16	567.63	1.086E-03	0.737
932	C9H20	3-ETHYL-4-METHYLHEXANE	6.691E-04	593.70	-0.7143	160.16	564.02	1.101E-03	0.736
933	C9H20	2,2,3-TRIMETHYLHEXANE	6.659E-04	588.00	-0.7143	153.16	558.60	1.104E-03	0.725
934	C9H20	2,2,4-TRIMETHYLHEXANE	6.847E-04	573.50	-0.7143	153.00	544.83	1.156E-03	0.713
935	C9H20	2,3,3-TRIMETHYLHEXANE	6.589E-04	596.00	-0.7143	156.36	566.20	1.081E-03	0.734
936	C9H20	2,3,4-TRIMETHYLHEXANE	6.624E-04	594.50	-0.7143	156.36	564.78	1.089E-03	0.735
937	C9H20	2,3,5-TRIMETHYLHEXANE	6.760E-04	579.20	-0.7143	145.36	550.24	1.133E-03	0.718
938	C9H20	2,4,4-TRIMETHYLHEXANE	6.792E-04	581.50	-0.7143	159.78	552.43	1.135E-03	0.720
939	C9H20	3,3,4-TRIMETHYLHEXANE	6.501E-04	602.30	-0.7143	171.96	572.19	1.059E-03	0.741
940	C9H20	2-METHYLOCTANE	6.613E-04	586.75	-0.7143	192.78	557.41	1.098E-03	0.710
941	C9H20	3-METHYLOCTANE	6.265E-04	590.15	-0.7199	165.55	560.64	1.040E-03	0.717
942	C9H20	4-METHYLOCTANE	6.762E-04	587.65	-0.7002	159.95	558.27	1.110E-03	0.716
943	C9H20	n-NONANE	6.544E-04	595.65	-0.7143	219.63	565.87	1.074E-03	0.715
944	C9H20	2,2,3,3-TETRAMETHYLPENTANE	6.124E-04	610.85	-0.7029	263.26	580.31	9.804E-04	0.753
945	C9H20	2,2,3,4-TETRAMETHYLPENTANE	6.248E-04	592.15	-0.7080	152.06	562.54	1.026E-03	0.735
946	C9H20	2,2,4,4-TETRAMETHYLPENTANE	6.400E-04	571.35	-0.7137	206.95	542.78	1.084E-03	0.716
947	C9H20	2,3,3,4-TETRAMETHYLPENTANE	6.665E-04	592.60	-0.7143	152.00	562.97	1.098E-03	0.735
948	C9H20	2,2,5-TRIMETHYLHEXANE	6.857E-04	568.05	-0.7046	167.39	539.65	1.158E-03	0.707
949	C9H20O	2,6-DIMETHYL-4-HEPTANOL	6.232E-04	603.00	-0.7143	208.00	572.85	1.015E-03	0.807
950	C9H20O	1-NONANOL	5.193E-04	673.00	-0.7369	268.15	639.35	7.993E-04	0.824
951	C9H20O	2-NONANOL	5.829E-04	623.00	-0.7278	238.15	591.85	9.363E-04	0.820
952	C9H20S	n-NONYL MERCAPTAN	5.873E-04	681.00	-0.6943	253.05	646.95	8.760E-04	0.841
953	C9H20S	BUTYL-PENTYL-SULFIDE	5.879E-04	681.56	-0.7143	231.16	647.48	8.867E-04	0.840
954	C9H20S	ETHYL-HEPTYL-SULFIDE	5.879E-04	681.56	-0.7143	231.16	647.48	8.867E-04	0.840
955	C9H20S	HEXYL-PROPYL-SULFIDE	5.879E-04	681.56	-0.7143	231.16	647.48	8.867E-04	0.840
956	C9H20S	METHYL-OCTYL-SULFIDE	5.879E-04	681.56	-0.7143	231.16	647.48	8.867E-04	0.840
957	C9H21N	n-NONYLAMINE	6.060E-04	648.00	-0.7143	273.15	615.60	9.412E-04	0.785
958	C9H21N	TRIPROPYLAMINE	5.607E-04	577.50	-0.7550	179.65	548.63	9.702E-04	0.754
959	C10H6O8	PYROMELLITIC ACID	4.474E-04	893.00	-0.7143	554.00	848.35	---	---
960	C10H7Br	1-BROMONAPHTHALENE	4.945E-04	824.00	-0.6970	279.35	782.80	6.763E-04	1.478
961	C10H7Cl	1-CHLORONAPHTHALENE	5.307E-04	785.00	-0.6854	269.15	745.75	7.364E-04	1.171
962	C10H8	NAPHTHALENE	5.052E-04	748.35	-0.7270	353.43	710.93	---	---
963	C10H8	AZULENE	5.150E-04	773.48	-0.7143	173.66	734.81	7.293E-04	1.053
964	C10H9N	QUINALDINE	5.480E-04	773.00	-0.7143	272.15	734.35	7.761E-04	1.055
965	C10H10	m-DIVINYLBENZENE	5.921E-04	692.00	-0.6971	206.25	657.40	8.771E-04	0.925
966	C10H10	1-METHYLINDENE	4.032E-04	703.00	-0.7877	350.00	667.85	---	---
967	C10H10	2-METHYLINDENE	4.683E-04	684.00	-0.7605	353.15	649.80	---	---
968	C10H10O4	DIMETHYL PHTHALATE	5.492E-04	766.00	-0.6928	272.15	727.70	7.728E-04	1.189
969	C10H10O4	DIMETHYL TEREPHTHALATE	4.444E-04	772.00	-0.7388	413.80	733.40	---	---
970	C10H12	DICYCLOPENTADIENE	6.036E-04	660.00	-0.7143	307.00	627.00	---	---
971	C10H12	1,2,3,4-TETRAHYDRONAPHTHALENE	5.043E-04	720.15	-0.7323	237.40	684.14	7.459E-04	0.967
972	C10H12O	ANETHOLE	5.555E-04	723.00	-0.7048	294.50	686.85	8.081E-04	0.984
973	C10H12O4	DIALLYL MALEATE	5.799E-04	693.00	-0.7143	226.15	658.35	8.666E-04	1.073
974	C10H14	n-BUTYLBENZENE	6.021E-04	660.55	-0.7104	185.30	627.52	9.224E-04	0.858
975	C10H14	sec-BUTYLBENZENE	5.789E-04	664.54	-0.7143	197.72	631.31	8.858E-04	0.858
976	C10H14	tert-BUTYLBENZENE	5.814E-04	660.00	-0.7143	215.27	627.00	8.931E-04	0.863
977	C10H14	1,2,3,4-TETRAMETHYLBENZENE	5.918E-04	695.10	-0.7143	266.91	660.35	8.830E-04	0.901
978	C10H14	m-CYMENE	6.048E-04	657.00	-0.7058	209.44	624.15	9.269E-04	0.857
979	C10H14	o-CYMENE	5.979E-04	662.00	-0.7120	201.64	628.90	9.157E-04	0.873
980	C10H14	p-CYMENE	5.973E-04	653.15	-0.7125	205.25	620.49	9.223E-04	0.852
981	C10H14	m-DIETHYLBENZENE	5.861E-04	663.00	-0.7143	189.26	629.85	8.980E-04	0.860
982	C10H14	o-DIETHYLBENZENE	5.871E-04	668.00	-0.7143	241.93	634.60	8.956E-04	0.876
983	C10H14	p-DIETHYLBENZENE	5.951E-04	657.96	-0.7143	230.32	625.06	9.159E-04	0.858
984	C10H14	2-ETHYL-m-XYLENE	5.966E-04	671.00	-0.7087	256.89	637.45	9.047E-04	0.886
985	C10H14	2-ETHYL-p-XYLENE	6.021E-04	663.00	-0.7068	219.52	629.85	9.184E-04	0.873
986	C10H14	3-ETHYL-o-XYLENE	5.976E-04	680.00	-0.7152	223.64	646.00	9.029E-04	0.888
987	C10H14	4-ETHYL-m-XYLENE	6.046E-04	665.00	-0.7046	210.27	631.75	9.194E-04	0.872

$\beta_{liq} = a\,(1-T/TC)^m$ (β_{liq} - 1/C, T - K, ρ_{liq} - g/cm^3)

NO	FORMULA	NAME	a	TC	m	TMIN	TMAX	β_{liq} @ 25 C	ρ_{liq} @ 25 C
988	C10H14	4-ETHYL-o-XYLENE	5.864E-04	667.00	-0.7143	206.22	633.65	8.953E-04	0.871
989	C10H14	5-ETHYL-m-XYLENE	6.071E-04	655.00	-0.7054	188.82	622.25	9.317E-04	0.861
990	C10H14	ISOBUTYLBENZENE	6.404E-04	650.15	-0.6776	221.70	617.64	9.704E-04	0.849
991	C10H14	1,2,3,5-TETRAMETHYLBENZENE	5.762E-04	679.00	-0.7143	249.46	645.05	8.708E-04	0.887
992	C10H14	1,2,4,5-TETRAMETHYLBENZENE	5.802E-04	675.15	-0.7143	352.38	641.39	---	---
993	C10H14O	p-tert-BUTYLPHENOL	5.171E-04	734.00	-0.7143	371.56	697.30	---	---
994	C10H14O2	p-tert-BUTYLCATECHOL	4.722E-04	776.00	-0.7143	325.00	737.20	---	---
995	C10H15N	N,N-DIETYHLANILINE	5.357E-04	702.00	-0.7380	235.15	666.90	8.055E-04	0.931
996	C10H15N	2,6-DIETHYLANILINE	5.454E-04	678.00	-0.7143	276.65	644.10	8.249E-04	0.902
997	C10H16	CAMPHENE	5.652E-04	638.00	-0.7353	320.15	606.10	---	---
998	C10H16	D-LIMONENE	5.690E-04	660.00	-0.7279	199.00	627.00	8.812E-04	0.839
999	C10H16	alpha-PHELLANDRENE	5.918E-04	649.00	-0.7143	220.00	616.55	9.182E-04	0.843
1000	C10H16	beta-PHELLANDRENE	6.467E-04	648.00	-0.6850	220.00	615.60	9.864E-04	0.837
1001	C10H16	alpha-PINENE	5.614E-04	632.00	-0.7396	209.15	600.40	9.000E-04	0.857
1002	C10H16	beta-PINENE	4.281E-04	643.00	-0.7932	211.61	610.85	7.018E-04	0.867
1003	C10H16	alpha-TERPINENE	5.879E-04	652.00	-0.7143	220.00	619.40	9.097E-04	0.830
1004	C10H16	gamma-TERPINENE	5.863E-04	661.00	-0.7143	220.00	627.95	8.999E-04	0.845
1005	C10H16	TERPINOLENE	5.856E-04	672.00	-0.7143	200.00	638.40	8.902E-04	0.858
1006	C10H16O	CAMPHOR	5.870E-04	709.00	-0.7143	453.25	673.55	---	---
1007	C10H18	1-DECYNE	6.138E-04	632.49	-0.7143	229.16	600.87	9.677E-04	0.762
1008	C10H18	cis-DECAHYDRONANPHTALENE	5.414E-04	702.25	-0.7128	230.20	667.14	8.027E-04	0.894
1009	C10H18	trans-DECAHYDRONAPHTHALENE	5.627E-04	687.05	-0.7048	242.79	652.70	8.404E-04	0.868
1010	C10H18O4	SEBACIC ACID	5.177E-04	815.00	-0.7143	407.65	774.25	---	---
1011	C10H20	n-BUTYLCYCLOHEXANE	6.011E-04	667.00	-0.6976	198.42	633.65	9.087E-04	0.796
1012	C10H20	1-CYCLOPENTYLPENTANE	6.117E-04	647.49	-0.7143	190.16	615.12	9.505E-04	0.787
1013	C10H20	1-DECENE	6.275E-04	617.05	-0.7144	206.89	586.20	1.006E-03	0.737
1014	C10H20O	1-DECANAL	5.356E-04	657.00	-0.7316	267.15	624.15	8.336E-04	0.821
1015	C10H20O2	n-DECANOIC ACID	4.922E-04	713.00	-0.7314	304.75	677.35	---	---
1016	C10H20O2	2-ETHYLHEXYL ACETATE	6.122E-04	639.00	-0.7143	180.15	607.05	9.591E-04	0.869
1017	C10H20O2	ISOPENTYL ISOVALERATE	4.869E-04	637.00	-0.7561	215.00	605.15	7.847E-04	0.854
1018	C10H22	n-DECANE	6.360E-04	618.45	-0.7143	243.49	587.53	1.018E-03	0.728
1019	C10H22	2-METHYLNONANE	6.554E-04	610.00	-0.6992	198.50	579.50	1.048E-03	0.723
1020	C10H22	3-METHYLNONANE	6.204E-04	613.00	-0.7131	188.35	582.35	9.977E-04	0.729
1021	C10H22	4-METHYLNONANE	6.696E-04	610.00	-0.6954	174.45	579.50	1.068E-03	0.728
1022	C10H22	5-METHYLNONANE	6.434E-04	610.00	-0.7055	185.45	579.50	1.033E-03	0.729
1023	C10H22	3-ETHYLOCTANE	6.626E-04	613.60	-0.7143	185.46	582.92	1.066E-03	0.736
1024	C10H22	4-ETHYLOCTANE	6.748E-04	609.60	-0.7143	185.46	579.12	1.090E-03	0.734
1025	C10H22	2,2-DIMETHYLOCTANE	6.351E-04	602.00	-0.7069	225.00	571.90	1.030E-03	0.721
1026	C10H22	2,3-DIMETHYLOCTANE	6.592E-04	613.20	-0.7143	219.16	582.54	1.061E-03	0.734
1027	C10H22	2,4-DIMETHYLOCTANE	6.743E-04	599.40	-0.7143	219.16	569.43	1.102E-03	0.723
1028	C10H22	2,5-DIMETHYLOCTANE	6.684E-04	603.00	-0.7143	219.16	572.85	1.088E-03	0.726
1029	C10H22	2,6-DIMETHYLOCTANE	6.625E-04	603.10	-0.7143	219.16	572.95	1.078E-03	0.723
1030	C10H22	2,7-DIMETHYLOCTANE	6.627E-04	602.90	-0.7143	219.16	572.76	1.079E-03	0.720
1031	C10H22	3,3-DIMETHYLOCTANE	6.603E-04	612.10	-0.7143	219.16	581.50	1.064E-03	0.735
1032	C10H22	3,4-DIMETHYLOCTANE	6.602E-04	614.00	-0.7143	219.16	583.30	1.061E-03	0.741
1033	C10H22	3,5-DIMETHYLOCTANE	6.706E-04	606.30	-0.7143	219.16	575.99	1.087E-03	0.733
1034	C10H22	3,6-DIMETHYLOCTANE	6.645E-04	608.30	-0.7143	219.16	577.88	1.075E-03	0.732
1035	C10H22	4,4-DIMETHYLOCTANE	6.719E-04	606.90	-0.7143	219.16	576.56	1.089E-03	0.731
1036	C10H22	4,5-DIMETHYLOCTANE	6.660E-04	612.20	-0.7143	219.16	581.59	1.073E-03	0.743
1037	C10H22	4-PROPYLHEPTANE	6.824E-04	601.00	-0.7143	219.16	570.95	1.113E-03	0.732
1038	C10H22	4-ISOPROPYLHEPTANE	6.770E-04	607.60	-0.7143	219.16	577.22	1.096E-03	0.735
1039	C10H22	3-ETHYL-2-METHYLHEPTANE	6.694E-04	610.90	-0.7143	219.16	580.36	1.080E-03	0.740
1040	C10H22	4-ETHYL-2-METHYLHEPTANE	6.815E-04	601.80	-0.7143	219.16	571.71	1.111E-03	0.732
1041	C10H22	5-ETHYL-2-METHYLHEPTANE	6.701E-04	606.70	-0.7143	219.16	576.37	1.086E-03	0.732
1042	C10H22	3-ETHYL-3-METHYLHEPTANE	6.615E-04	620.00	-0.7143	219.16	589.00	1.057E-03	0.746
1043	C10H22	4-ETHYL-3-METHYLHEPTANE	6.696E-04	614.30	-0.7143	219.16	583.59	1.076E-03	0.746
1044	C10H22	3-ETHYL-5-METHYLHEPTANE	6.742E-04	606.60	-0.7143	219.16	576.27	1.093E-03	0.737
1045	C10H22	3-ETHYL-4-METHYLHEPTANE	6.683E-04	615.50	-0.7143	219.16	584.73	1.073E-03	0.747
1046	C10H22	4-ETHYL-4-METHYLHEPTANE	6.681E-04	615.70	-0.7143	219.16	584.92	1.072E-03	0.747
1047	C10H22	2,2,3-TRIMETHYLHEPTANE	6.589E-04	611.70	-0.7143	219.16	581.12	1.062E-03	0.738
1048	C10H22	2,2,4-TRIMETHYLHEPTANE	6.819E-04	594.50	-0.7143	219.16	564.78	1.121E-03	0.724
1049	C10H22	2,2,5-TRIMETHYLHEPTANE	6.740E-04	598.00	-0.7143	219.16	568.10	1.103E-03	0.724
1050	C10H22	2,2,6-TRIMETHYLHEPTANE	6.733E-04	593.40	-0.7143	219.16	563.73	1.109E-03	0.720
1051	C10H22	2,3,3-TRIMETHYLHEPTANE	6.546E-04	617.50	-0.7143	219.16	586.63	1.048E-03	0.745
1052	C10H22	2,3,4-TRIMETHYLHEPTANE	6.625E-04	613.70	-0.7143	219.16	583.02	1.065E-03	0.745
1053	C10H22	2,3,5-TRIMETHYLHEPTANE	6.654E-04	612.80	-0.7143	219.16	582.16	1.071E-03	0.741

$\beta_{liq} = a\ (1-T/TC)^m$ (β_{liq} - 1/C, T - K, ρ_{liq} - g/cm^3)

NO	FORMULA	NAME	a	TC	m	TMIN	TMAX	β_{liq} @ 25 C	ρ_{liq} @ 25 C
1054	C10H22	2,3,6-TRIMETHYLHEPTANE	6.671E-04	604.10	-0.7143	219.16	573.90	1.085E-03	0.731
1055	C10H22	2,4,4-TRIMETHYLHEPTANE	6.773E-04	600.30	-0.7143	219.16	570.29	1.106E-03	0.731
1056	C10H22	2,4,5-TRIMETHYLHEPTANE	6.699E-04	606.90	-0.7143	219.16	576.56	1.086E-03	0.737
1057	C10H22	2,4,6-TRIMETHYLHEPTANE	6.808E-04	590.30	-0.7143	219.16	560.79	1.125E-03	0.719
1058	C10H22	2,5,5-TRIMETHYLHEPTANE	6.704E-04	602.90	-0.7143	219.16	572.76	1.091E-03	0.736
1059	C10H22	3,3,4-TRIMETHYLHEPTANE	6.535E-04	622.10	-0.7143	219.16	591.00	1.042E-03	0.752
1060	C10H22	3,3,5-TRIMETHYLHEPTANE	6.536E-04	609.50	-0.7143	219.16	579.03	1.056E-03	0.739
1061	C10H22	3,4,4-TRIMETHYLHEPTANE	6.548E-04	620.90	-0.7143	219.16	589.86	1.045E-03	0.753
1062	C10H22	3,4,5-TRIMETHYLHEPTANE	6.654E-04	612.80	-0.7143	219.16	582.16	1.071E-03	0.752
1063	C10H22	3-ISOPROPYL-2-METHYLHEXANE	6.657E-04	623.40	-0.7143	219.16	592.23	1.059E-03	0.744
1064	C10H22	3,3-DIETHYLHEXANE	6.571E-04	627.80	-0.7143	219.16	596.41	1.041E-03	0.757
1065	C10H22	3,4-DIETHYLHEXANE	6.687E-04	618.80	-0.7143	219.16	587.86	1.069E-03	0.747
1066	C10H22	3-ETHYL-2,2-DIMETHYLHEXANE	6.685E-04	611.70	-0.7143	219.16	581.12	1.078E-03	0.745
1067	C10H22	4-ETHYL-2,2-DIMETHYLHEXANE	6.818E-04	594.60	-0.7143	219.16	564.87	1.121E-03	0.730
1068	C10H22	3-ETHYL-2,3-DIMETHYLHEXANE	6.505E-04	626.80	-0.7143	219.16	595.46	1.032E-03	0.760
1069	C10H22	4-ETHYL-2,3-DIMETHYLHEXANE	6.625E-04	617.30	-0.7143	219.16	586.44	1.061E-03	0.752
1070	C10H22	3-ETHYL-2,4-DIMETHYLHEXANE	6.638E-04	616.10	-0.7143	219.16	585.30	1.065E-03	0.751
1071	C10H22	4-ETHYL-2,4-DIMETHYLHEXANE	6.548E-04	620.90	-0.7143	219.16	589.86	1.045E-03	0.752
1072	C10H22	3-ETHYL-2,5-DIMETHYLHEXANE	6.756E-04	603.50	-0.7143	219.16	573.33	1.099E-03	0.737
1073	C10H22	4-ETHYL-3,3-DIMETHYLHEXANE	6.536E-04	625.70	-0.7143	219.16	594.42	1.038E-03	0.760
1074	C10H22	3-ETHYL-3,4-DIMETHYLHEXANE	6.567E-04	624.50	-0.7143	219.16	593.28	1.044E-03	0.760
1075	C10H22	2,2,3,3-TETRAMETHYLHEXANE	6.507E-04	623.00	-0.7143	219.16	591.85	1.036E-03	0.761
1076	C10H22	2,2,3,4-TETRAMETHYLHEXANE	6.553E-04	620.40	-0.7143	219.16	589.38	1.046E-03	0.751
1077	C10H22	2,2,3,5-TETRAMETHYLHEXANE	6.683E-04	601.30	-0.7143	219.16	571.24	1.090E-03	0.733
1078	C10H22	2,2,4,4-TETRAMETHYLHEXANE	6.741E-04	610.20	-0.7143	219.16	579.69	1.088E-03	0.742
1079	C10H22	2,2,4,5-TETRAMETHYLHEXANE	6.754E-04	598.50	-0.7143	219.16	568.58	1.105E-03	0.731
1080	C10H22	2,2,5,5-TETRAMETHYLHEXANE	6.696E-04	581.40	-0.7143	260.56	552.33	1.119E-03	0.715
1081	C10H22	2,3,3,4-TETRAMETHYLHEXANE	6.403E-04	633.10	-0.7143	260.56	601.45	1.009E-03	0.765
1082	C10H22	2,3,3,5-TETRAMETHYLHEXANE	6.625E-04	610.10	-0.7143	260.56	579.60	1.070E-03	0.745
1083	C10H22	2,3,4,4-TETRAMETHYLHEXANE	6.488E-04	626.60	-0.7143	260.56	595.27	1.029E-03	0.779
1084	C10H22	2,3,4,5-TETRAMETHYLHEXANE	6.592E-04	613.20	-0.7143	260.56	582.54	1.061E-03	0.746
1085	C10H22	3,3,4,4-TETRAMETHYLHEXANE	6.268E-04	646.70	-0.7143	260.56	614.37	9.748E-04	0.779
1086	C10H22	2,4-DIMETHYL-3-ISOPROPYLPENTANE	6.656E-04	614.40	-0.7143	191.46	583.68	1.070E-03	0.754
1087	C10H22	3,3-DIETHYL-2-METHYLPENTANE	6.391E-04	639.90	-0.7143	191.46	607.91	1.000E-03	0.775
1088	C10H22	3-ETHYL-2,2,3-TRIMETHYLPENTANE	6.293E-04	646.00	-0.7143	191.46	613.70	9.793E-04	0.778
1089	C10H22	3-ETHYL-2,2,4-TRIMETHYLPENTANE	6.627E-04	615.30	-0.7143	191.46	584.54	1.064E-03	0.753
1090	C10H22	3-ETHYL-2,3,4-TRIMETHYLPENTANE	6.330E-04	642.30	-0.7143	191.46	610.19	9.884E-04	0.773
1091	C10H22	2,2,3,3,4-PENTAMETHYLPENTANE	6.242E-04	643.80	-0.7143	236.71	611.61	9.733E-04	0.777
1092	C10H22	2,2,3,4,4-PENTAMETHYLPENTANE	6.500E-04	627.30	-0.7143	234.41	595.94	1.030E-03	0.764
1093	C10H22O	1-DECANOL	5.651E-04	690.00	-0.7096	280.05	655.50	8.443E-04	0.825
1094	C10H22O	DI-n-PENTYL ETHER	6.275E-04	622.00	-0.7006	203.72	590.90	9.913E-04	0.780
1095	C10H22O	ISODECANOL	6.082E-04	644.00	-0.7143	213.15	611.80	9.482E-04	0.837
1096	C10H22O5	TETRAETHYLENE GLYCOL DIMETHYL ETHER	6.771E-04	705.00	-0.6473	243.45	669.75	9.664E-04	1.006
1097	C10H22S	n-DECYL MERCAPTAN	4.786E-04	696.00	-0.7388	247.56	661.20	7.235E-04	0.841
1098	C10H22S	BUTYL-HEXYL-SULFIDE	5.833E-04	701.03	-0.7143	238.16	665.98	8.665E-04	0.841
1099	C10H22S	ETHYL-OCTYL-SULFIDE	5.833E-04	701.03	-0.7143	238.16	665.98	8.665E-04	0.841
1100	C10H22S	HEPTYL-PROPYL-SULFIDE	5.833E-04	701.03	-0.7143	238.16	665.98	8.665E-04	0.841
1101	C10H22S	METHYL-NONYL-SULFIDE	5.833E-04	701.03	-0.7143	238.16	665.98	8.665E-04	0.841
1102	C10H22S	PENTYL-SULFIDE	5.833E-04	701.03	-0.7143	238.16	665.98	8.665E-04	0.841
1103	C10H22S2	PENTYL-DISULFIDE	5.402E-04	726.94	-0.7143	214.16	690.59	7.876E-04	0.918
1104	C10H23N	n-DECYLAMINE	5.945E-04	663.00	-0.7143	288.85	629.85	9.108E-04	0.791
1105	C11H10	1-METHYLNAPHTHALENE	4.981E-04	772.04	-0.7429	242.67	733.44	7.158E-04	1.017
1106	C11H10	2-METHYLNAPHTHALENE	4.821E-04	761.00	-0.7441	307.73	722.95	---	---
1107	C11H14O2	n-BUTYL BENZOATE	5.460E-04	724.00	-0.7029	251.65	687.80	7.929E-04	1.001
1108	C11H16	n-PENTYLBENZENE	5.614E-04	679.90	-0.7187	198.15	645.91	8.500E-04	0.855
1109	C11H16O	p-tert-AMYLPHENOL	5.110E-04	751.00	-0.7143	366.00	713.45	---	---
1110	C11H20	1-UNDECYNE	6.067E-04	650.99	-0.7143	248.16	618.44	9.396E-04	0.769
1111	C11H20O2	2-ETHYLHEXYL ACRYLATE	8.557E-04	655.00	-0.6048	183.15	622.25	1.236E-03	0.880
1112	C11H22	1-UNDECENE	6.193E-04	638.00	-0.7097	223.99	606.10	9.683E-04	0.747
1113	C11H22	1-CYCLOPENTYLHEXANE	6.054E-04	667.67	-0.7143	200.16	634.29	9.237E-04	0.793
1114	C11H22	PENTYLCYCLOHEXANE	5.980E-04	674.01	-0.7143	215.66	640.31	9.075E-04	0.800
1115	C11H22O	1-UNDECANAL	6.170E-04	672.00	-0.6904	273.15	638.40	9.249E-04	0.823
1116	C11H24	n-UNDECANE	6.201E-04	638.76	-0.7143	247.57	606.82	9.717E-04	0.737
1117	C11H24O	1-UNDECANOL	5.731E-04	704.00	-0.6980	289.05	668.80	8.417E-04	0.831
1118	C11H24S	UNDECYL MERCAPTAN	4.601E-04	710.00	-0.7430	270.15	674.50	6.895E-04	0.841
1119	C11H24S	BUTYL-HEPTYL-SULFIDE	5.815E-04	717.91	-0.7143	254.66	682.01	8.531E-04	0.841

			$\beta_{liq} = a\ (1-T/TC)^m$					(β_{liq} - 1/C, T - K, ρ_{liq} - g/cm^3)	
NO	FORMULA	NAME	a	TC	m	TMIN	TMAX	β_{liq} @ 25 C	ρ_{liq} @ 25 C
1120	C11H24S	DECYL-METHYL-SULFIDE	5.815E-04	717.91	-0.7143	254.66	682.01	8.531E-04	0.841
1121	C11H24S	ETHYL-NONYL-SULFIDE	5.815E-04	717.91	-0.7143	254.66	682.01	8.531E-04	0.841
1122	C11H24S	OCTYL-PROPYL-SULFIDE	5.815E-04	717.91	-0.7143	254.66	682.01	8.531E-04	0.841
1123	C12H8O	DIBENZOFURAN	5.178E-04	837.80	-0.7055	355.65	795.91	---	---
1124	C12H9N	DIBENZOPYRROLE	4.960E-04	899.00	-0.7143	517.95	854.05	---	---
1125	C12H10	ACENAPHTHENE	4.522E-04	803.15	-0.7598	366.56	762.99	---	---
1126	C12H10	BIPHENYL	4.846E-04	789.26	-0.7211	342.37	749.80	---	---
1127	C12H10O	DIPHENYL ETHER	4.498E-04	763.00	-0.7334	300.02	724.85	---	---
1128	C12H11N	p-AMINODIPHENYL	4.697E-04	817.00	-0.7143	326.00	776.15	---	---
1129	C12H11N	DIPHENYLAMINE	4.871E-04	817.00	-0.7167	326.15	776.15	---	---
1130	C12H11N3	p-AMINOAZOBENZENE	4.452E-04	877.00	-0.7143	401.00	833.15	---	---
1131	C12H11N3	1,3-DIPHENYLTRIAZENE	4.581E-04	845.00	-0.7143	372.00	802.75	---	---
1132	C12H12	1,2-DIMETHYLNAPHTHALENE	5.213E-04	775.34	-0.7143	272.16	736.57	7.374E-04	1.014
1133	C12H12	1,3-DIMETHYLNAPHTHALENE	5.209E-04	773.76	-0.7143	269.16	735.07	7.374E-04	1.003
1134	C12H12	1,4-DIMETHYLNAPHTHALENE	5.204E-04	776.78	-0.7143	280.82	737.94	7.354E-04	1.013
1135	C12H12	1,5-DIMETHYLNAPHTHALENE	5.211E-04	773.47	-0.7143	355.16	734.80	---	---
1136	C12H12	1,6-DIMETHYLNAPHTHALENE	5.215E-04	770.60	-0.7143	259.16	732.07	7.396E-04	0.999
1137	C12H12	1,7-DIMETHYLNAPHTHALENE	5.215E-04	770.60	-0.7143	260.16	732.07	7.396E-04	0.999
1138	C12H12	2,3-DIMETHYLNAPHTHALENE	5.212E-04	777.78	-0.7143	378.16	738.89	---	---
1139	C12H12	2,6-DIMETHYLNAPHTHALENE	5.759E-04	777.00	-0.6809	384.55	738.15	---	---
1140	C12H12	2,7-DIMETHYLNAPHTHALENE	5.766E-04	778.00	-0.6801	370.15	739.10	---	---
1141	C12H12	1-ETHYLNAPHTHALENE	4.666E-04	776.00	-0.7360	259.34	737.20	6.666E-04	1.004
1142	C12H12	2-ETHYLNAPHTHALENE	5.053E-04	774.90	-0.7143	265.76	736.16	7.149E-04	0.988
1143	C12H12N2	p-AMINODIPHENYLAMINE	4.389E-04	867.00	-0.7143	341.15	823.65	---	---
1144	C12H12N2	HYDRAZOBENZENE	4.846E-04	792.00	-0.7143	404.15	752.40	---	---
1145	C12H14	1,2,3-TRIMETHYLINDENE	5.571E-04	726.00	-0.7143	344.65	689.70	---	---
1146	C12H14O4	DIETHYL PHTHALATE	6.427E-04	757.00	-0.6475	269.15	719.15	8.887E-04	1.113
1147	C12H16	CYCLOHEXYLBENZENE	5.996E-04	744.00	-0.6773	280.14	706.80	8.482E-04	0.939
1148	C12H18	m-DIISOPROPYLBENZENE	8.545E-04	684.00	-0.5960	210.02	649.80	1.202E-03	0.852
1149	C12H18	p-DIISOPROPYLBENZENE	5.622E-04	689.00	-0.7143	256.08	654.55	8.429E-04	0.853
1150	C12H18	n-HEXYLBENZENE	5.639E-04	698.00	-0.7143	212.00	663.10	8.395E-04	0.855
1151	C12H18	1,2,3-TRIETHYLBENZENE	5.855E-04	684.37	-0.7143	206.66	650.15	8.810E-04	0.870
1152	C12H18	1,2,4-TRIETHYLBENZENE	5.855E-04	684.37	-0.7143	206.66	650.15	8.810E-04	0.870
1153	C12H18	1,3,5-TRIETHYLBENZENE	5.856E-04	682.28	-0.7143	206.66	648.17	8.827E-04	0.887
1154	C12H18	HEXAMETHYLBENZENE	5.776E-04	758.00	-0.7143	438.66	720.10	---	---
1155	C12H20O4	DIBUTYL MALEATE	5.764E-04	716.00	-0.6926	188.15	680.20	8.370E-04	0.991
1156	C12H22	BICYCLOHEXYL	5.185E-04	727.00	-0.7187	276.78	690.65	7.577E-04	0.883
1157	C12H22	1-DODECYNE	6.032E-04	668.16	-0.7143	254.16	634.75	9.200E-04	0.775
1158	C12H23N	DICYCLOHEXYLAMINE	5.345E-04	737.00	-0.7020	273.05	700.15	7.692E-04	0.909
1159	C12H24	1-DODECENE	6.184E-04	657.00	-0.7034	237.93	624.15	9.463E-04	0.756
1160	C12H24	1-CYCLOPENTYLHEPTANE	6.058E-04	679.00	-0.7143	220.00	645.05	9.156E-04	0.806
1161	C12H24	1-CYCLOHEXYLHEXANE	5.928E-04	691.81	-0.7143	263.60	657.22	8.868E-04	0.892
1162	C12H24O	1-DODECANAL	5.907E-04	685.00	-0.7143	285.15	650.75	8.885E-04	0.826
1163	C12H24O2	n-DODECANOIC ACID	5.299E-04	734.00	-0.7067	317.15	697.30	---	---
1164	C12H26	n-DODECANE	6.067E-04	658.20	-0.7104	263.57	625.29	9.314E-04	0.745
1165	C12H26O	DI-n-HEXYL ETHER	5.984E-04	658.00	-0.6975	230.15	625.10	9.116E-04	0.790
1166	C12H26O	1-DODECANOL	5.775E-04	721.00	-0.6890	296.95	684.95	8.340E-04	0.830
1167	C12H26O3	DIETHYLENE GLYCOL DI-n-BUTYL ETHER	5.826E-04	680.00	-0.7143	212.95	646.00	8.798E-04	0.881
1168	C12H26S	n-DODECYL MERCAPTAN	5.637E-04	724.00	-0.6881	265.15	687.80	8.122E-04	0.842
1169	C12H26S	BUTYL-OCTYL-SULFIDE	5.809E-04	733.68	-0.7143	259.16	697.00	8.431E-04	0.842
1170	C12H26S	DECYL-ETHYL-SULFIDE	5.809E-04	733.68	-0.7143	259.16	697.00	8.431E-04	0.842
1171	C12H26S	HEXYL-SULFIDE	5.809E-04	733.68	-0.7143	259.16	697.00	8.431E-04	0.842
1172	C12H26S	METHYL-UNDECYL-SULFIDE	5.809E-04	733.68	-0.7143	259.16	697.00	8.431E-04	0.842
1173	C12H26S	NONYL-PROPYL-SULFIDE	5.809E-04	733.68	-0.7143	259.16	697.00	8.431E-04	0.842
1174	C12H26S2	HEXYL-DISULFIDE	5.442E-04	747.10	-0.7143	225.16	709.75	7.829E-04	0.908
1175	C12H27BO3	TRI-n-BUTYL BORATE	7.469E-04	743.15	-0.6097	203.15	705.99	1.021E-03	0.854
1176	C12H27N	DODECYLAMINE	5.311E-04	696.00	-0.7226	301.47	661.20	---	---
1177	C12H27N	TRI-n-BUTYLAMINE	5.653E-04	644.00	-0.7257	203.00	611.80	8.876E-04	0.775
1178	C13H10	FLUORENE	4.424E-04	870.00	-0.7143	387.94	826.50	---	---
1179	C13H10O	BENZOPHENONE	4.828E-04	816.00	-0.7269	321.35	775.20	---	---
1180	C13H12	DIPHENYLMETHANE	5.110E-04	768.00	-0.7143	298.39	729.60	---	---
1181	C13H14	1-PROPYLNAPHTHALENE	5.164E-04	771.45	-0.7143	264.69	732.88	7.320E-04	0.987
1182	C13H14	2-PROPYLNAPHTHALENE	5.157E-04	772.44	-0.7143	270.16	733.82	7.307E-04	0.973
1183	C13H14	2ETHYL-3-METHYLNAPHTHALENE	5.206E-04	776.44	-0.7143	344.16	737.62	---	---
1184	C13H14	2ETHYL-6-METHYLNAPHTHALENE	5.227E-04	766.56	-0.7143	318.16	728.23	---	---
1185	C13H14	2ETHYL-7-METHYLNAPHTHALENE	5.227E-04	766.56	-0.7143	318.16	728.23	---	---

			$\beta_{liq} = a\ (1-T/TC)^m$					(β_{liq} - 1/C, T - K, ρ_{liq} - g/cm^3)	
NO	FORMULA	NAME	a	TC	m	TMIN	TMAX	β_{liq} @ 25 C	ρ_{liq} @ 25 C
1186	C13H20	n-HEPTYLBENZENE	6.110E-04	714.00	-0.6791	225.15	678.30	8.820E-04	0.853
1187	C13H24	1-TRIDECYNE	6.013E-04	684.11	-0.7143	268.16	649.90	9.050E-04	0.781
1188	C13H26	1-TRIDECENE	6.188E-04	675.00	-0.6960	250.08	641.25	9.284E-04	0.762
1189	C13H26	1-CYCLOPENTYLOCTANE	5.963E-04	702.06	-0.7143	229.16	666.96	8.851E-04	0.801
1190	C13H26	1-CYCLOHEXYLHEPTANE	5.908E-04	708.63	-0.7143	242.66	673.20	8.726E-04	0.807
1191	C13H26O	1-TRIDECANAL	6.172E-04	700.00	-0.6783	288.15	665.00	8.993E-04	0.827
1192	C13H26O2	n-BUTYL NONANOATE	5.991E-04	652.00	-0.7143	235.15	619.40	9.270E-04	0.851
1193	C13H26O2	METHYL DODECANOATE	6.058E-04	712.00	-0.7143	278.15	676.40	8.925E-04	1.039
1194	C13H28	n-TRIDECANE	6.393E-04	675.80	-0.6880	267.76	642.01	9.540E-04	0.754
1195	C13H28O	1-TRIDECANOL	5.545E-04	731.00	-0.7143	303.75	694.45	---	---
1196	C13H28S	BUTYL-NONYL-SULFIDE	5.798E-04	748.42	-0.7143	271.16	711.00	8.334E-04	0.842
1197	C13H28S	DECYL-PROPYL-SULFIDE	5.798E-04	748.42	-0.7143	271.16	711.00	8.334E-04	0.842
1198	C13H28S	DODECYL-METHYL-SULFIDE	5.798E-04	748.42	-0.7143	271.16	711.00	8.334E-04	0.842
1199	C13H28S	ETHYL-UNDECYL-SULFIDE	5.798E-04	748.42	-0.7143	271.16	711.00	8.334E-04	0.842
1200	C13H28S	1-TRIDECANETHIOL	5.658E-04	742.13	-0.7143	282.04	705.02	8.167E-04	0.842
1201	C14H8O2	ANTHRAQUINONE	4.528E-04	900.00	-0.7143	559.15	855.00	---	---
1202	C14H10	ANTHRACENE	3.624E-04	873.00	-0.7647	489.25	829.35	---	---
1203	C14H10	DIPHENYLACETYLENE	4.679E-04	832.00	-0.7143	335.65	790.40	---	---
1204	C14H10	PHENANTHRENE	3.939E-04	869.25	-0.7514	372.38	825.79	---	---
1205	C14H12	cis-STILBENE	5.167E-04	757.00	-0.7143	268.15	719.15	7.388E-04	1.011
1206	C14H12	trans-STILBENE	5.091E-04	820.00	-0.7143	397.35	779.00	---	---
1207	C14H12O2	BENZYL BENZOATE	5.980E-04	820.00	-0.6730	292.55	779.00	8.106E-04	1.115
1208	C14H14	1,1-DIPHENYLETHANE	5.419E-04	775.00	-0.6965	255.20	736.25	7.600E-04	0.996
1209	C14H14	1,2-DIPHENYLETHANE	5.184E-04	780.00	-0.7100	324.34	741.00	---	---
1210	C14H14O	DIBENZYL ETHER	5.080E-04	777.00	-0.7143	276.75	738.15	7.178E-04	1.042
1211	C14H16	1-n-BUTYLNAPHTHALENE	4.924E-04	792.00	-0.7166	253.43	752.40	6.907E-04	0.973
1212	C14H16	2-BUTYLNAPHTHALENE	5.161E-04	780.96	-0.7143	268.16	741.91	7.276E-04	0.962
1213	C14H22	n-OCTYLBENZENE	6.096E-04	729.00	-0.6737	237.15	692.55	8.688E-04	0.853
1214	C14H22	1,2,3,4-TETRAETHYLBENZENE	5.877E-04	708.20	-0.7143	284.96	672.79	8.683E-04	0.883
1215	C14H22	1,2,3,5-TETRAETHYLBENZENE	5.865E-04	707.52	-0.7143	284.16	672.14	8.670E-04	0.878
1216	C14H22	1,2,4,5-TETRAETHYLBENZENE	5.871E-04	706.85	-0.7143	283.16	671.51	8.683E-04	0.875
1217	C14H22O	p-tert-OCTYLPHENOL	5.225E-04	765.00	-0.7100	358.55	726.75	---	---
1218	C14H28	1-TETRADECENE	6.066E-04	692.00	-0.6955	260.30	657.40	8.977E-04	0.768
1219	C14H28	1-CYCLOPENTYLNONANE	5.944E-04	716.95	-0.7143	244.16	681.10	8.727E-04	0.804
1220	C14H28	1-CYCLOHEXYLOCTANE	5.890E-04	723.61	-0.7143	253.46	687.43	8.607E-04	0.810
1221	C14H28O2	n-TETRADECANOIC ACID	4.917E-04	756.00	-0.7164	327.55	718.20	---	---
1222	C14H30	n-TETRADECANE	5.384E-04	692.40	-0.7265	279.01	657.78	8.105E-04	0.758
1223	C14H30O	1-TETRADECANOL	5.737E-04	741.00	-0.6818	310.65	703.95	---	---
1224	C14H30S	BUTYL-DECYL-SULFIDE	5.797E-04	762.23	-0.7143	276.16	724.12	8.262E-04	0.843
1225	C14H30S	DODECYL-ETHYL-SULFIDE	5.797E-04	762.23	-0.7143	276.16	724.12	8.262E-04	0.843
1226	C14H30S	HEPTYL-SULFIDE	5.797E-04	762.23	-0.7143	276.16	724.12	8.262E-04	0.843
1227	C14H30S	METHYL-TRIDECYL-SULFIDE	5.797E-04	762.23	-0.7143	276.16	724.12	8.262E-04	0.843
1228	C14H30S	PROPYL-UNDECYL-SULFIDE	5.797E-04	762.23	-0.7143	276.16	724.12	8.262E-04	0.843
1229	C14H30S	1-TETRADECANETHIOL	5.688E-04	753.80	-0.7143	279.26	716.11	8.149E-04	0.842
1230	C14H30S2	HEPTYL-DISULFIDE	5.515E-04	765.96	-0.7143	235.16	727.66	7.843E-04	0.900
1231	C14H31N	TETRADECYLAMINE	5.562E-04	722.30	-0.7143	311.34	686.19	---	---
1232	C15H10N2O2	DIPHENYLMETHANE-4,4'-DIISOCYANATE	5.034E-04	802.00	-0.7143	311.20	761.90	---	---
1233	C15H16O	p-CUMYLPHENOL	4.681E-04	834.00	-0.7143	346.00	792.30	---	---
1234	C15H16O2	BISPHENOL A	4.272E-04	849.00	-0.7143	426.15	806.55	---	---
1235	C15H18	1-PENTYLNAPHTHALENE	5.170E-04	793.32	-0.7143	251.16	753.65	7.239E-04	0.962
1236	C15H18	2-PENTYLNAPHTHALENE	5.173E-04	797.48	-0.7143	269.16	757.61	7.228E-04	0.953
1237	C15H24	n-NONYLBENZENE	5.662E-04	741.00	-0.6986	249.00	703.95	8.113E-04	0.852
1238	C15H24O	2,6-DI-tert-BUTYL-p-CRESOL	5.300E-04	720.00	-0.7143	344.00	684.00	---	---
1239	C15H24O	NONYLPHENOL	5.285E-04	757.00	-0.7076	279.15	719.15	7.532E-04	0.949
1240	C15H28	1-PENTADECYNE	5.991E-04	711.41	-0.7143	283.16	675.84	8.830E-04	0.789
1241	C15H30	1-PENTADECENE	6.082E-04	708.00	-0.6889	269.42	672.60	8.863E-04	0.773
1242	C15H30	1-CYCLOPENTYLDECANE	5.939E-04	730.64	-0.7143	251.03	694.11	8.637E-04	0.807
1243	C15H30	1-CYCLOHEXYLNONANE	5.881E-04	737.79	-0.7143	262.96	700.90	8.513E-04	0.813
1244	C15H30O2	PENTADECANOIC ACID	5.901E-04	766.00	-0.6657	325.68	727.70	---	---
1245	C15H32	n-PENTADECANE	6.127E-04	706.80	-0.6842	283.11	671.46	8.914E-04	0.765
1246	C15H32O	1-PENTADECANOL	5.881E-04	722.53	-0.7143	317.04	686.40	---	---
1247	C15H32S	BUTYL-UNDECYL-SULFIDE	5.805E-04	775.15	-0.7143	284.16	736.39	8.212E-04	0.843
1248	C15H32S	DODECYL-PROPYL-SULFIDE	5.805E-04	775.15	-0.7143	284.16	736.39	8.212E-04	0.843
1249	C15H32S	ETHYL-TRIDECYL-SULFIDE	5.805E-04	775.15	-0.7143	284.16	736.39	8.212E-04	0.843
1250	C15H32S	METHYL-TETRADECYL-SULFIDE	5.805E-04	775.15	-0.7143	284.16	736.39	8.212E-04	0.843
1251	C15H32S	1-PENTADECANETHIOL	5.708E-04	764.77	-0.7143	290.93	726.53	8.124E-04	0.843

$\beta_{liq} = a\ (1-T/TC)^m$ (β_{liq} - 1/C, T - K, ρ_{liq} - g/cm^3)

NO	FORMULA	NAME	a	TC	m	TMIN	TMAX	β_{liq} @ 25 C	ρ_{liq} @ 25 C
1252	C16H10	FLUORANTHENE	4.678E-04	905.00	-0.7143	383.33	859.75	---	---
1253	C16H10	PYRENE	4.712E-04	936.00	-0.7143	423.81	889.20	---	---
1254	C16H12	1-PHENYLNAPHTHALENE	4.861E-04	849.00	-0.7095	318.15	806.55	---	---
1255	C16H20	1-n-HEXYLNAPHTHALENE	5.077E-04	813.00	-0.6991	255.15	772.35	6.988E-04	0.947
1256	C16H2204	DIBUTYL PHTHALATE	6.604E-04	781.00	-0.6263	238.15	741.95	8.926E-04	1.043
1257	C16H26	n-DECYLBENZENE	5.637E-04	753.00	-0.7038	258.77	715.35	8.038E-04	0.852
1258	C16H26	PENTAETHYLBENZENE	5.942E-04	723.64	-0.7143	327.66	687.46	---	---
1259	C16H30	1-HEXADECYNE	5.991E-04	724.26	-0.7143	288.16	688.05	8.751E-04	0.793
1260	C16H32	n-DECYLCYCLOHEXANE	5.736E-04	751.25	-0.6779	271.42	713.69	8.081E-04	0.815
1261	C16H32	1-CYCLOPENTYLUNDECANE	5.944E-04	743.30	-0.7143	263.16	706.13	8.573E-04	0.810
1262	C16H32	1-HEXADECENE	6.069E-04	722.00	-0.6843	277.51	685.90	8.739E-04	0.777
1263	C16H3202	n-HEXADECANOIC ACID	5.000E-04	776.00	-0.7053	335.95	737.20	---	---
1264	C16H34	n-HEXADECANE	6.151E-04	720.60	-0.6762	291.34	684.57	8.825E-04	0.770
1265	C16H34O	DI-n-OCTYL ETHER	5.601E-04	707.00	-0.6961	265.55	671.65	8.200E-04	0.803
1266	C16H34O	1-HEXADECANOL	5.679E-04	761.00	-0.6764	322.35	722.95	---	---
1267	C16H34S	BUTYL-DODECYL-SULFIDE	5.823E-04	787.27	-0.7143	288.16	747.91	8.181E-04	0.843
1268	C16H34S	ETHYL-TETRADECYL-SULFIDE	6.149E-04	791.68	-0.7143	288.16	752.10	8.618E-04	0.844
1269	C16H34S	METHYL-PENTADECYL-SULFIDE	5.823E-04	787.27	-0.7143	288.16	747.91	8.181E-04	0.843
1270	C16H34S	OCTYL-SULFIDE	5.823E-04	787.27	-0.7143	288.16	747.91	8.181E-04	0.843
1271	C16H34S	PROPYL-TRIDECYL-SULFIDE	5.823E-04	787.27	-0.7143	288.16	747.91	8.181E-04	0.843
1272	C16H34S	1-HEXADECANETHIOL	5.738E-04	774.68	-0.7143	290.93	735.95	8.119E-04	0.843
1273	C16H34S2	OCTYL-DISULFIDE	5.598E-04	784.46	-0.7143	244.16	745.24	7.878E-04	0.894
1274	C17H28	n-UNDECYLBENZENE	5.661E-04	764.00	-0.6916	268.00	725.80	7.970E-04	0.851
1275	C17H32	1-HEPTADECYNE	6.020E-04	736.21	-0.7143	295.16	699.40	8.722E-04	0.796
1276	C17H34	1-CYCLOPENTYLDODECANE	5.959E-04	755.17	-0.7143	268.16	717.41	8.530E-04	0.812
1277	C17H34	1-CYCLOHEXYLUNDECANE	5.890E-04	761.74	-0.7143	278.96	723.65	8.397E-04	0.817
1278	C17H34	1-HEPTADECENE	6.166E-04	736.00	-0.6657	284.40	699.20	8.712E-04	0.782
1279	C17H36	n-HEPTADECANE	5.717E-04	733.37	-0.6948	295.13	696.70	8.215E-04	0.773
1280	C17H36O	1-HEPTADECANOL	5.950E-04	770.00	-0.6610	327.05	731.50	---	---
1281	C17H36S	BUTYL-TRIDECYL-SULFIDE	5.848E-04	798.63	-0.7143	294.16	758.70	8.166E-04	0.844
1282	C17H36S	ETHYL-PENTADECYL-SULFIDE	5.848E-04	798.63	-0.7143	294.16	758.70	8.166E-04	0.844
1283	C17H36S	HEXADECYL-METHYL-SULFIDE	5.848E-04	798.63	-0.7143	294.16	758.70	8.166E-04	0.844
1284	C17H36S	PROPYL-TETRADECYL-SULFIDE	5.848E-04	798.63	-0.7143	294.16	758.70	8.166E-04	0.844
1285	C17H36S	1-HEPTADECANETHIOL	5.761E-04	786.01	-0.7143	300.37	746.71	---	---
1286	C18H12	CHRYSENE	4.515E-04	979.00	-0.7143	531.15	930.05	---	---
1287	C18H14	m-TERPHENYL	4.622E-04	924.85	-0.7032	360.00	878.61	---	---
1288	C18H14	o-TERPHENYL	5.076E-04	890.95	-0.6828	329.35	846.40	---	---
1289	C18H14	p-TERPHENYL	4.582E-04	925.95	-0.7057	485.00	879.65	---	---
1290	C18H15P	TRIPHENYLPHOSPHINE	5.727E-04	1008.00	-0.4453	354.40	957.60	---	---
1291	C18H1504P	TRIPHENYL PHOSPHATE	---	---	---	---	---	---	---
1292	C18H16N2	N,N'-DIPHENYL-p-PHENYLENEDIAMINE	4.359E-04	906.00	-0.7143	409.00	860.70	---	---
1293	C18H22	2,3-DIMETHYL-2,3-DIPHENYLBUTANE	5.185E-04	805.00	-0.7143	392.15	764.75	---	---
1294	C18H2202	DICUMYL PEROXIDE	4.366E-04	884.00	-0.7143	311.15	839.80	---	---
1295	C18H30	n-DODECYLBENZENE	5.212E-04	774.26	-0.7143	275.93	735.55	7.377E-04	0.849
1296	C18H30	HEXAETHYLBENZENE	6.032E-04	734.78	-0.7143	401.16	698.04	---	---
1297	C18H3202	LINOLEIC ACID	5.304E-04	775.00	-0.7140	268.15	736.25	7.503E-04	0.902
1298	C18H34	1-OCTADECYNE	6.022E-04	747.33	-0.7143	300.16	709.96	---	---
1299	C18H3402	OLEIC ACID	4.883E-04	781.00	-0.7103	286.53	741.95	6.871E-04	0.888
1300	C18H3404	DIBUTYL SEBACATE	6.742E-04	768.00	-0.6215	263.95	729.60	9.149E-04	0.932
1301	C18H3404	DIHEXYL ADIPATE	6.846E-04	767.00	-0.6115	259.35	728.65	9.251E-04	0.932
1302	C18H36	1-CYCOPENTYLTRIDECANE	5.962E-04	766.47	-0.7143	278.16	728.15	8.477E-04	0.814
1303	C18H36	1-CYCLOHEXYLDODECANE	5.913E-04	772.83	-0.7143	285.66	734.19	8.376E-04	0.819
1304	C18H36	1-OCTADECENE	6.114E-04	748.00	-0.6728	290.76	710.60	8.608E-04	0.785
1305	C18H3602	STEARIC ACID	4.977E-04	799.00	-0.6975	342.75	759.05	---	---
1306	C18H38	n-OCTADECANE	4.986E-04	745.26	-0.7260	301.33	708.00	---	---
1307	C18H38O	DINONYL ETHER	5.936E-04	736.00	-0.6697	273.00	699.20	8.405E-04	0.808
1308	C18H38O	1-OCTADECANOL	5.593E-04	777.00	-0.6728	331.05	738.15	---	---
1309	C18H38S	BUTYL-TETRADECYL-SULFIDE	5.854E-04	810.53	-0.7143	298.16	770.00	---	---
1310	C18H38S	ETHYL-HEXADECYL-SULFIDE	5.854E-04	810.53	-0.7143	298.16	770.00	---	---
1311	C18H38S	HEPTADECYL-METHYL-SULFIDE	5.854E-04	810.53	-0.7143	298.16	770.00	---	---
1312	C18H38S	NONYL-SULFIDE	5.854E-04	810.53	-0.7143	298.16	770.00	---	---
1313	C18H38S	PENTADECYL-PROPYL-SULFIDE	5.854E-04	810.53	-0.7143	298.16	770.00	---	---
1314	C18H38S	1-OCTADECANETHIOL	5.782E-04	795.36	-0.7143	300.93	755.59	---	---
1315	C18H38S2	NONYL-DISULFIDE	5.661E-04	802.30	-0.7143	252.16	762.19	7.889E-04	0.889
1316	C19H26	1-n-NONYLNAPHTHALENE	5.263E-04	849.00	-0.6984	284.15	806.55	7.119E-04	0.934
1317	C19H32	n-TRIDECYLBENZENE	5.917E-04	783.00	-0.6802	283.15	743.85	8.198E-04	0.851

			$\beta_{liq} = a\,(1-T/TC)^m$					(β_{liq} - 1/C, T - K, ρ_{liq} - g/cm^3)	
NO	FORMULA	NAME	a	TC	m	TMIN	TMAX	β_{liq} @ 25 C	ρ_{liq} @ 25 C
1318	C19H36	1-NONADECYNE	6.040E-04	758.94	-0.7143	306.16	720.99	---	---
1319	C19H3602	METHYL OLEATE	5.822E-04	764.00	-0.6675	293.05	725.80	8.100E-04	0.870
1320	C19H38	1-CYCLOPENTYLTETRADECANE	5.938E-04	772.00	-0.7143	282.00	733.40	8.415E-04	0.816
1321	C19H38	1-CYCLOHEXYLTRIDECANE	5.925E-04	783.38	-0.7143	291.66	744.21	8.342E-04	0.821
1322	C19H38	1-NONADECENE	6.110E-04	760.00	-0.6666	296.55	722.00	8.516E-04	0.788
1323	C19H3802	NONADECANOIC ACID	5.308E-04	810.00	-0.6784	341.23	769.50	---	---
1324	C19H40	n-NONADECANE	5.619E-04	755.93	-0.6935	305.33	718.13	---	---
1325	C19H400	1-NONADECANOL	5.950E-04	775.30	-0.7143	334.87	736.54	---	---
1326	C19H40S	BUTYL-PENTADECYL-SULFIDE	5.867E-04	821.75	-0.7143	303.16	780.66	---	---
1327	C19H40S	ETHYL-HEPTADECYL-SULFIDE	5.867E-04	821.75	-0.7143	303.16	780.66	---	---
1328	C19H40S	HEXADECYL-PROPYL-SULFIDE	5.867E-04	821.75	-0.7143	303.16	780.66	---	---
1329	C19H40S	METHYL-OCTADECYL-SULFIDE	5.867E-04	821.75	-0.7143	303.16	780.66	---	---
1330	C19H40S	1-NONADECANETHIOL	5.818E-04	805.29	-0.7143	307.04	765.03	---	---
1331	C20H16	TRIPHENYLETHYLENE	4.504E-04	908.00	-0.7143	342.15	862.60	---	---
1332	C20H28	1-n-DECYLNAPHTHALENE	5.339E-04	859.00	-0.6925	288.15	816.05	7.172E-04	0.928
1333	C20H3002	ABIETIC ACID	5.107E-04	832.00	-0.7143	446.65	790.40	---	---
1334	C20H31N	DEHYDROABIETYLAMINE	4.693E-04	863.00	-0.7143	317.65	819.85	---	---
1335	C20H34	1-PHENYLTETRADECANE	5.148E-04	792.00	-0.7143	289.16	752.40	7.214E-04	0.851
1336	C20H38	1-EICOSYNE	6.068E-04	769.79	-0.7143	309.16	731.30	---	---
1337	C20H40	1-CYCLOPENTYLPENTADECANE	6.064E-04	780.00	-0.7143	290.00	741.00	8.554E-04	0.818
1338	C20H40	1-CYCLOHEXYLTETRADECANE	5.947E-04	792.82	-0.7143	297.16	753.18	8.330E-04	0.822
1339	C20H40	1-EICOSENE	6.084E-04	771.00	-0.6641	301.76	732.45	---	---
1340	C20H42	n-EICOSANE	5.592E-04	767.04	-0.6912	309.59	728.69	---	---
1341	C20H420	1-EICOSANOL	4.790E-04	792.00	-0.7113	338.55	752.40	---	---
1342	C20H42S	BUTYL-HEXADECYL-SULFIDE	5.906E-04	832.33	-0.7143	308.16	790.71	---	---
1343	C20H42S	DECYL-SULFIDE	5.906E-04	832.33	-0.7143	308.16	790.71	---	---
1344	C20H42S	ETHYL-OCTADECYL-SULFIDE	5.906E-04	832.33	-0.7143	308.16	790.71	---	---
1345	C20H42S	HEPTADECYL-PROPYL-SULFIDE	5.906E-04	832.33	-0.7143	308.16	790.71	---	---
1346	C20H42S	METHYL-NONADECYL-SULFIDE	5.906E-04	832.33	-0.7143	308.16	790.71	---	---
1347	C20H42S	1-EICOSANETHIOL	5.844E-04	814.57	-0.7143	310.37	773.84	---	---
1348	C20H42S2	DECYL-DISULFIDE	5.749E-04	820.08	-0.7143	259.16	779.08	7.940E-04	0.885
1349	C21H2104P	TRI-o-CRESYL PHOSPHATE	---	---	---	---	---	---	1.165
1350	C21H36	1-PHENYLPENTADECANE	5.249E-04	800.00	-0.7143	295.16	760.00	7.323E-04	0.851
1351	C21H42	1-CYCLOPENTYLHEXADECANE	6.028E-04	797.25	-0.7143	294.16	757.39	8.423E-04	0.819
1352	C21H42	1-CYCLOHEXYLPENTADECANE	5.962E-04	803.46	-0.7143	302.16	763.29	---	---
1353	C22H38	1-PHENYLHEXADECANE	5.197E-04	808.00	-0.7143	300.16	767.60	---	---
1354	C22H44	1-CYCLOHEXYLHEXADECANE	5.984E-04	813.42	-0.7143	306.76	772.75	---	---
1355	C22H4402	n-BUTYL STEARATE	5.337E-04	764.00	-0.7143	299.45	725.80	---	---
1356	C24H3804	DIISOOCTYL PHTHALATE	4.837E-04	851.00	-0.7143	254.00	808.45	6.582E-04	0.983
1357	C24H3804	DIOCTYL PHTHALATE	6.604E-04	806.00	-0.6155	223.15	765.70	8.775E-04	0.980
1358	C24H420	DINONYLPHENOL	5.110E-04	886.00	-0.7143	350.00	841.70	---	---
1359	C26H20	TETRAPHENYLETHYLENE	4.477E-04	996.00	-0.7143	496.15	946.20	---	---
1360	C28H4604	DIISODECYL PHTHALATE	4.739E-04	887.00	-0.7140	227.59	842.65	6.349E-04	0.973

Table 7-2 EXAMPLES

Example 1

Estimate the thermal expansion coefficient of liquid for n-pentane (C5H12) at 40 C.

Substitution of the correlation constants from the table and temperature into the correlation equation yields

$$\beta_{liq} = 7.883E\text{-}04\ (1-(40+273.15)/469.65)^{.7179}$$

$$\underline{\beta_{liq} = 0.00174\ C^{-1}}$$

Example 2

Estimate the thermal expansion coefficient of liquid for n-butane (C4H10) at 40 C.

Substitution of the correlation constants from the table and temperature into the correlation equation yields

$$\beta_{liq} = 8.757E\text{-}04\ (1-(40+273.15)/425.18)^{.7137}$$

$$\underline{\beta_{liq} = 0.00227\ C^{-1}}$$

Example 3

The tubing in a reactor contains benzene (C6H6) at 25 C (76.7 F). Other data are:

heat capacity of liquid (C_P)	0.413 BTU/lb-F
overall heat transfer coefficient (U)	40 BTU/hr-ft^2-F
surface area of tubing (A)	500 ft^2

Estimate the volumetric expansion rate if the tubing is exposed to 500 F superheated steam.

Substitution of the spot values at 25 C (β_{liq}=1.137E-03 C^{-1} and ρ_{liq}=0.873 g/cm^3) from the table into the volumetric expansion equation yields:

$$Q_v = \frac{1.137E\text{-}03\ C^{-1}/(1.8\ F/C)}{(0.873\ g/cm^3\ 62.4\ lb/ft^3/g/cm^3)(0.413\ BTU/lb\text{-}F)}\ (40\ BTU/hr\text{-}ft^2\text{-}F)(500\ ft^2)\ (500\text{-}76.7)\ F$$

$$\underline{Q_v = 237.69\ ft^3/hr = 29.63\ gal/min}$$

The relief system should be designed to accommodate this volumetric flow.

Table 7-3 COMPUTER PROGRAM RESULTS

COEFFICIENT OF THERMAL EXPANSION OF LIQUID

COMPOUND: 440 C5H12 n-PENTANE

BETA = a*(1-T/TC)^m	a = .0007883
	TC = 469.65
BETA = COEFFICIENT OF THERMAL EXPANSION	m = -.7179
OF LIQUID, 1/C	TMIN = 143.42
T = TEMPERATURE, K	TMAX = 446.17

TEMP K	COEFF. OF THERMAL EXPANSION, 1/C
150	1.039E-03
175	1.102E-03
200	1.174E-03
225	1.259E-03
250	1.360E-03
275	1.484E-03
298.15	1.625E-03
300	1.637E-03
325	1.836E-03
350	2.104E-03
375	2.489E-03
400	3.103E-03
425	4.269E-03

Chapter 8

THERMODYNAMIC PROPERTIES FOR EXPLOSION CALCULATIONS

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ABSTRACT

Thermodynamic properties for explosion calculations are presented for major organic chemical compounds. The thermodynamic properties include enthalpy of formation, Gibbs free energy of formation, internal energy of formation and Helmholtz free energy of formation. The major chemicals include hydrocarbon, oxygen, nitrogen, sulfur, fluorine, chlorine, bromine, iodine and other compound types.

EXPLOSION ENERGY AND THERMODYNAMIC PROPERTIES

The energy of an explosion involves work of expansion ($dW = PdV$) resulting from the explosion (1,2). As the expansion occurs, this energy is transferred from the explosion. At constant temperature, the change in Helmholtz free energy ($dA = -PdV$) is related to such expansion work. Thus, it is convenient to utilize the change in Helmholtz free energy to ascertain the energy of an explosion:

$$\text{Explosion Energy}_{\text{limit}} = -\Delta A \tag{8-1}$$

Since thermal effects and irreversibility are involved in an explosion, this equation represents a limiting or maximum value for the explosion energy.

For an explosion reaction, the change in Helmholtz free energy maybe determined from Helmholtz free energy of formation for the products and reactants according to equation given below:

$$\Delta A = \Sigma\,(n\Delta A_f)_{\text{products}} - \Sigma\,(m\Delta A_f)_{\text{reactants}} \tag{8-2}$$

The actual energy release in an explosion will be less than the limiting value given by the change in Helmholtz free energy because of thermal effects and irreversibility. In an example in Crowl and Louvar (1), 12% of the limiting value is suggested for a vapor cloud explosion in a partially confined area (ethylene explosion in a ditch). For vapor cloud explosion in an unconfined area, 2% of the limiting value is suggested by the same authors.

The results for Helmholtz free energy of formation are presented in Table 8-1. The values for Helmholtz free energy of formation are useful in ascertaining the explosion energy of reactions. Other thermodynamic properties are also provided in the tabulation. The values for enthalpy of formation are useful in determining the heat effects of explosion reactions. Values for Gibbs free energy of formation are useful in ascertaining the thermodynamic equilibrium. The values for the internal energy of formation are useful in determining the internal energy changes for explosion reactions.

In the data collection, a literature search was conducted to identify data source publications (1-21) for the table. The publications were screened and copies of appropriate data were made. These data were then keyed into the computer to provide a data base for use in preparing the tabulation.

EXAMPLE

The tabulated values for thermodynamic properties are useful in engineering applications involving explosion reactions. An example is shown in Table 8-2.

COMPUTER PROGRAM

A computer program, containing the data for all compounds, is available for a nominal fee (Carl L. Yaws, Box 10053, Lamar University, Beaumont, TX 77710, phone/FAX 409-880-8787). The computer program (random data file) is in ASCII which can be accessed by other software.

Computer program results for a representative compound are shown in Table 8-3.

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Table 8-1 THERMODYNAMIC PROPERTIES

NO	FORMULA	NAME	Mol Wt g/mol	state	ΔH_f @298 kJ/mol	ΔG_f @298 kJ/mol	ΔU_f @298 kJ/mol	ΔA_f @298 kJ/mol
1	CBrClF2	BROMOCHLORODIFLUOROMETHANE	165.365	gas	-431.37	-408.00	-430.13	-406.76
2	CBrCl3	BROMOTRICHLOROMETHANE	198.273	gas	-38.90	-15.20	-37.66	-13.96
3	CBrF3	BROMOTRIFLUOROMETHANE	148.910	gas	-648.94	-622.66	-647.70	-621.42
4	CBr2F2	DIBROMODIFLUOROMETHANE	209.816	gas	-386.60	-375.70	-386.60	-375.70
5	CClF3	CHLOROTRIFLUOROMETHANE	104.459	gas	-707.93	-653.96	-705.45	-651.48
6	CClN	CYANOGEN CHLORIDE	61.470	gas	137.95	131.00	137.95	131.00
7	CCl2F2	DICHLORODIFLUOROMETHANE	120.913	gas	-493.29	-438.06	-490.81	-435.59
8	CCl2O	PHOSGENE	98.916	gas	-218.95	-205.94	-217.71	-204.70
9	CCl3F	TRICHLOROFLUOROMETHANE	137.368	gas	-284.93	-245.18	-282.45	-242.70
10	CCl4	CARBON TETRACHLORIDE	153.822	gas	-100.42	-58.24	-97.94	-55.76
11	CF2O	CARBONYL FLUORIDE	66.007	gas	-638.90	-623.36	-637.66	-622.12
12	CF4	CARBON TETRAFLUORIDE	88.005	gas	-933.03	-888.43	-930.55	-885.95
13	CHBr3	TRIBROMOMETHANE	252.731	gas	16.70	7.40	15.46	6.16
14	CHClF2	CHLORODIFLUOROMETHANE	86.468	gas	-483.67	-450.47	-481.19	-448.00
15	CHCl2F	DICHLOROFLUOROMETHANE	102.923	gas	-284.93	-252.81	-282.45	-250.33
16	CHCl3	CHLOROFORM	119.377	gas	-101.25	-68.53	-98.77	-66.06
17	CHF3	TRIFLUOROMETHANE	70.014	gas	-697.51	-663.08	-695.04	-660.60
18	CHI3	TRIIODOMETHANE	393.732	gas	210.87	177.95	209.63	176.71
19	CHN	HYDROGEN CYANIDE	27.026	gas	135.14	124.68	135.14	124.68
20	CHNS	ISOTHIOCYANIC-ACID	59.086	gas	127.61	112.88	127.61	112.88
21	CH2BrCl	BROMOCHLOROMETHANE	129.384	gas	-42.70	-31.80	-41.46	-30.56
22	CH2Br2	DIBROMOMETHANE	173.835	gas	-14.80	-16.20	-14.80	-16.20
23	CH2ClF	CHLOROFLUOROMETHANE	68.478	gas	-264.43	-236.64	-261.95	-234.16
24	CH2Cl2	DICHLOROMETHANE	84.932	gas	-95.40	-68.87	-92.92	-66.39
25	CH2F2	DIFLUOROMETHANE	52.024	gas	-452.88	-425.35	-450.40	-422.87
26	CH2I2	DIIODOMETHANE	267.836	gas	117.99	101.09	117.99	101.09
27	CH2O	FORMALDEHYDE	30.026	gas	-115.90	-109.91	-114.66	-108.67
28	CH2O2	FORMIC ACID	46.026	gas	-378.61	-351.00	-376.13	-348.52
29	CH3Br	METHYL BROMIDE	94.939	gas	-37.66	-28.16	-36.42	-26.92
30	CH3Cl	METHYL CHLORIDE	50.488	gas	-86.32	-62.89	-83.84	-60.41
31	CH3Cl3Si	METHYL TRICHLOROSILANE	149.478	gas	-571.80	-511.10	-566.84	-506.14
32	CH3F	METHYL FLUORIDE	34.033	gas	-233.89	-210.00	-231.41	-207.52
33	CH3I	METHYL IODIDE	141.939	gas	13.97	15.65	15.21	16.89
34	CH3NO	FORMAMIDE	45.041	gas	-186.19	-141.04	-182.47	-137.32
35	CH3NO2	NITROMETHANE	61.040	gas	-74.73	-6.95	-69.77	-1.99
36	CH3NO2	METHYL-NITRITE	61.040	gas	-64.02	1.00	-59.06	5.96
37	CH3NO3	METHYL-NITRATE	77.040	gas	-120.50	-30.17	-114.30	-23.97
38	CH4	METHANE	16.043	gas	-74.85	-50.84	-72.37	-48.36
39	CH4Cl2Si	METHYL DICHLOROSILANE	115.034	gas	-402.00	-348.30	-397.04	-343.34
40	CH4O	METHANOL	32.042	gas	-201.17	-162.51	-197.45	-158.79
41	CH4O3S	METHANESULFONIC ACID	96.107	gas	-------	-459.00	-------	-------
42	CH4S	METHYL MERCAPTAN	48.109	gas	-22.97	-9.92	-20.49	-7.44
43	CH5ClSi	METHYL CHLOROSILANE	80.589	gas	-215.00	-166.10	-210.04	-161.14
44	CH5N	METHYLAMINE	31.057	gas	-23.01	32.26	-18.05	37.22
45	CH6Si	METHYL SILANE	46.144	gas	-29.10	18.53	-24.14	23.49
46	CN4O8	TETRANITROMETHANE	196.033	gas	82.30	-------	94.69	-------
47	CO	CARBON MONOXIDE	28.010	gas	-110.54	-137.28	-111.78	-138.52
48	COS	CARBONYL SULFIDE	60.076	gas	-138.41	-165.64	-139.65	-166.88
49	CO2	CARBON DIOXIDE	44.010	gas	-393.51	-394.38	-393.51	-394.38
50	CS2	CARBON DISULFIDE	76.143	gas	117.07	66.90	114.59	64.42
51	C2BrF3	BROMOTRIFLUOROETHYLENE	160.921	gas	-455.00	-438.00	-453.76	-436.76
52	C2Br2F4	1,2-DIBROMOTETRAFLUOROETHANE	259.824	gas	-922.99	-868.86	-920.51	-866.38
53	C2ClF3	CHLOROTRIFLUOROETHYLENE	116.470	gas	-572.70	-542.00	-570.22	-539.52
54	C2ClF5	CHLOROPENTAFLUOROETHANE	154.467	gas	-1108.76	-1025.08	-1103.80	-1020.12
55	C2Cl2F4	1,2-DICHLOROTETRAFLUOROETHANE	170.921	gas	-887.43	-805.42	-882.47	-800.46
56	C2Cl3F3	1,1,2-TRICHLOROTRIFLUOROETHANE	187.375	gas	-694.96	-617.14	-690.00	-612.18
57	C2Cl4	TETRACHLOROETHYLENE	165.833	gas	-12.13	22.64	-9.65	25.11
58	C2Cl4F2	1,1,2,2-TETRACHLORODIFLUOROETHANE	203.830	gas	-699.57	-618.55	-694.61	-613.59
59	C2Cl4O	TRICHLOROACETYL CHLORIDE	181.832	gas	-305.93	-249.12	-302.21	-245.40
60	C2Cl6	HEXACHLOROETHANE	236.738	gas	-141.42	-56.82	-136.46	-51.86
61	C2F4	TETRAFLUOROETHYLENE	100.016	gas	-658.56	-623.71	-656.08	-621.23
62	C2F6	HEXAFLUOROETHANE	138.012	gas	-1343.06	-1257.38	-1338.11	-1252.42
63	C2HBrClF3	HALOTHANE	197.382	gas	-705.00	-644.66	-701.28	-640.94

NO	FORMULA	NAME	Mol Wt g/mol	state	ΔH_f @298 kJ/mol	ΔG_f @298 kJ/mol	ΔU_f @298 kJ/mol	ΔA_f @298 kJ/mol
64	C2HClF2	2-CHLORO-1,1-DIFLUOROETHYLENE	98.479	gas	-329.00	-303.00	-326.52	-300.52
65	C2HCl3	TRICHLOROETHYLENE	131.388	gas	-9.62	16.07	-7.14	18.55
66	C2HCl3O	DICHLOROACETYL CHLORIDE	147.387	gas	-280.83	-232.15	-277.11	-228.43
67	C2HCl3O	TRICHLOROACETALDEHYDE	147.387	gas	-197.00	-148.00	-193.28	-144.28
68	C2HCl5	PENTACHLOROETHANE	202.293	gas	-142.26	-66.65	-137.30	-61.69
69	C2HF3	TRIFLUOROETHENE	82.025	gas	-490.78	-464.47	-488.30	-461.99
70	C2HF3O2	TRIFLUOROACETIC ACID	114.024	gas	-1021.70	-946.00	-1016.74	-941.04
71	C2HF5	PENTAFLUOROETHANE	120.022	gas	-1104.60	-1030.10	-1099.64	-1025.14
72	C2H2	ACETYLENE	26.038	gas	226.73	209.20	226.73	209.20
73	C2H2Br4	1,1,2,2-TETRABROMOETHANE	345.654	gas	10.88	24.70	10.88	24.70
74	C2H2Cl2	1,1-DICHLOROETHYLENE	96.943	gas	2.38	25.40	4.86	27.88
75	C2H2Cl2	cis-1,2-DICHLOROETHYLENE	96.943	gas	-2.80	19.66	-0.32	22.14
76	C2H2Cl2	trans-1,2-DICHLOROETHYLENE	96.943	gas	-0.42	22.01	2.06	24.49
77	C2H2Cl2O	CHLOROACETYL CHLORIDE	112.943	gas	-245.60	-203.37	-241.88	-199.65
78	C2H2Cl2O	DICHLOROACETALDEHYDE	112.943	gas	-201.00	-160.00	-197.28	-156.28
79	C2H2Cl2O2	DICHLOROACETIC ACID	128.942	gas	-436.00	-368.00	-431.04	-363.04
80	C2H2Cl3F	1,1,1-TRICHLOROFLUOROETHANE	151.394	gas	-302.00	-234.00	-297.04	-229.04
81	C2H2Cl4	1,1,1,2-TETRACHLOROETHANE	167.849	gas	-149.40	-80.30	-144.44	-75.34
82	C2H2Cl4	1,1,2,2-TETRACHLOROETHANE	167.849	gas	-152.72	-85.56	-147.76	-80.61
83	C2H2F2	1,1-DIFLUOROETHYLENE	64.035	gas	-336.81	-313.09	-334.33	-310.61
84	C2H2F2	cis-1,2-DIFLUOROETHENE	64.035	gas	-322.17	-299.49	-319.69	-297.01
85	C2H2F2	trans-1,2-DIFLUOROETHENE	64.035	gas	-322.17	-299.32	-319.69	-296.84
86	C2H2F4	1,1,1,2-TETRAFLUOROETHANE	102.031	gas	-895.79	-826.90	-890.83	-821.94
87	C2H2O	KETENE	42.037	gas	-61.09	-60.29	-59.85	-59.05
88	C2H2O4	OXALIC ACID	90.036	gas	-723.70	-661.00	-718.74	-656.04
89	C2H3Br	VINYL BROMIDE	106.950	gas	78.37	80.75	79.61	81.99
90	C2H3Cl	VINYL CHLORIDE	62.499	gas	28.45	42.93	30.93	45.41
91	C2H3ClF2	1-CHLORO-1,1-DIFLUOROETHANE	100.495	gas	-487.00	-423.00	-482.04	-418.04
92	C2H3ClO	ACETYL CHLORIDE	78.498	gas	-243.93	-206.23	-240.21	-202.51
93	C2H3ClO	CHLOROACETALDEHYDE	78.498	gas	-191.00	-156.00	-187.28	-152.28
94	C2H3ClO2	CHLOROACETIC ACID	94.497	gas	-436.20	-373.50	-431.24	-368.54
95	C2H3ClO2	METHYL CHLOROFORMATE	94.497	gas	-424.00	-361.00	-419.04	-356.04
96	C2H3Cl3	1,1,1-TRICHLOROETHANE	133.404	gas	-142.30	-76.19	-137.34	-71.23
97	C2H3Cl3	1,1,2-TRICHLOROETHANE	133.404	gas	-138.49	-77.49	-133.53	-72.53
98	C2H3F	VINYL FLUORIDE	46.044	gas	-138.91	-125.06	-136.43	-122.58
99	C2H3F3	1,1,1-TRIFLUOROETHANE	84.041	gas	-745.59	-678.77	-740.63	-673.81
100	C2H3N	ACETONITRILE	41.053	gas	87.86	105.60	90.34	108.08
101	C2H3NO	METHYL ISOCYANATE	57.052	gas	-57.78	-17.70	-54.06	-13.98
102	C2H4	ETHYLENE	28.054	gas	52.30	68.12	54.78	70.59
103	C2H4Br2	1,1-DIBROMOETHANE	187.862	gas	-40.80	-11.81	-38.32	-9.33
104	C2H4Br2	1,2-DIBROMOETHANE	187.862	gas	-38.91	-10.59	-36.43	-8.11
105	C2H4Cl2	1,1-DICHLOROETHANE	98.959	gas	-129.91	-73.09	-124.96	-68.14
106	C2H4Cl2	1,2-DICHLOROETHANE	98.959	gas	-129.70	-73.85	-124.75	-68.89
107	C2H4Cl2O	BIS(CHLOROMETHYL)ETHER	114.959	gas	-241.00	-170.00	-234.80	-163.80
108	C2H4F2	1,1-DIFLUOROETHANE	66.051	gas	-493.71	-436.22	-488.75	-431.27
109	C2H4F2	1,2-DIFLUOROETHANE	66.051	gas	-431.00	-375.00	-426.04	-370.04
110	C2H4I2	1,2-DIIODOETHANE	281.863	gas	66.53	78.49	69.00	80.97
111	C2H4O	ACETALDEHYDE	44.053	gas	-166.36	-133.30	-162.64	-129.58
112	C2H4O	ETHYLENE OXIDE	44.053	gas	-52.63	-13.10	-48.92	-9.38
113	C2H4OS	THIOACETIC-ACID	76.113	gas	-181.96	-154.01	-178.24	-150.29
114	C2H4O2	ACETIC ACID	60.053	gas	-434.84	-376.69	-429.89	-371.73
115	C2H4O2	METHYL FORMATE	60.053	gas	-349.78	-297.19	-344.82	-292.23
116	C2H4S	THIACYCLOPROPANE	60.114	gas	82.22	96.90	84.69	99.38
117	C2H5Br	BROMOETHANE	108.966	gas	-64.02	-26.32	-60.30	-22.60
118	C2H5Cl	ETHYL CHLORIDE	64.514	gas	-111.71	-60.00	-106.76	-55.04
119	C2H5ClO	2-CHLOROETHANOL	80.514	gas	-262.00	-193.00	-255.80	-186.80
120	C2H5F	ETHYL FLUORIDE	48.060	gas	-261.50	-209.53	-256.54	-204.58
121	C2H5I	ETHYL IODIDE	155.966	gas	-8.37	21.34	-4.65	25.06
122	C2H5N	ETHYLENEIMINE	43.068	gas	123.43	177.99	128.39	182.95
123	C2H5NO	ACETAMIDE	59.068	gas	-238.30	-159.60	-232.10	-153.40
124	C2H5NO	N-METHYLFORMAMIDE	59.068	gas	-184.43	-108.23	-178.23	-102.03
125	C2H5NO2	NITROETHANE	75.067	gas	-101.25	-4.90	-93.82	2.54
126	C2H5NO3	ETHYL-NITRATE	91.066	gas	-153.97	-36.86	-145.30	-28.19
127	C2H6	ETHANE	30.070	gas	-84.68	-32.93	-79.73	-27.97
128	C2H6AlCl	DIMETHYLALUMINUM CHLORIDE	92.054	gas	-------	-------	-------	-------
129	C2H6O	DIMETHYL ETHER	46.069	gas	-184.05	-112.93	-177.86	-106.73

NO	FORMULA	NAME	Mol Wt g/mol	state	ΔH_f @298 kJ/mol	ΔG_f @298 kJ/mol	ΔU_f @298 kJ/mol	ΔA_f @298 kJ/mol
130	C2H6O	ETHANOL	46.069	gas	-234.81	-168.28	-228.61	-162.08
131	C2H6OS	DIMETHYL SULFOXIDE	78.135	gas	-209.16	-115.69	-202.96	-109.49
132	C2H6O2	ETHYLENE GLYCOL	62.068	gas	-389.32	-304.47	-381.88	-297.03
133	C2H6O4S	DIMETHYL SULFATE	126.133	gas	-687.00	-535.00	-677.08	-525.08
134	C2H6S	DIMETHYL SULFIDE	62.136	gas	-37.53	6.95	-32.57	11.90
135	C2H6S	ETHYL MERCAPTAN	62.136	gas	-46.11	-4.69	-41.15	0.27
136	C2H6S2	DIMETHYL DISULFIDE	94.202	gas	-24.14	14.73	-19.18	19.69
137	C2H7N	DIMETHYLAMINE	45.084	gas	-18.83	67.99	-11.39	75.43
138	C2H7N	ETHYLAMINE	45.084	gas	-46.02	37.28	-38.59	44.72
139	C2H7NO	MONOETHANOLAMINE	61.084	gas	-210.19	-106.88	-201.51	-98.20
140	C2H8N2	ETHYLENEDIAMINE	60.099	gas	-17.32	103.22	-7.41	113.14
141	C2H8Si	DIMETHYL SILANE	60.171	gas	-94.70	-19.58	-87.26	-12.14
142	C2N2	CYANOGEN	52.036	gas	308.95	297.19	308.95	297.19
143	C3F6	HEXAFLUOROPROPYLENE	150.023	gas	-1080.00	-1040.10	-1075.04	-1035.14
144	C3F6O	HEXAFLUOROACETONE	166.023	gas	-1460.00	-1360.00	-1453.80	-1353.80
145	C3F8	OCTAFLUOROPROPANE	188.020	gas	-1703.20	-1580.00	-1695.76	-1572.56
146	C3H2N2	MALONONITRILE	66.062	gas	265.50	281.00	267.98	283.48
147	C3H3Cl	PROPARGYL CHLORIDE	74.510	gas	159.00	170.00	161.48	172.48
148	C3H3N	ACRYLONITRILE	53.064	gas	184.93	195.31	187.41	197.79
149	C3H3NO	OXAZOLE	69.063	gas	-15.52	26.40	-11.80	30.12
150	C3H4	METHYLACETYLENE	40.065	gas	185.43	194.43	187.91	196.91
151	C3H4	PROPADIENE	40.065	gas	192.13	202.38	194.61	204.86
152	C3H4Cl2	2,3-DICHLOROPROPENE	110.970	gas	-47.90	1.39	-42.94	6.35
153	C3H4O	ACROLEIN	56.064	gas	-81.00	-55.98	-77.28	-52.26
154	C3H4O	PROPARGYL ALCOHOL	56.064	gas	42.20	68.40	45.92	72.12
155	C3H4O2	ACRYLIC ACID	72.064	gas	-336.23	-286.06	-331.27	-281.10
156	C3H4O2	beta-PROPIOLACTONE	72.064	gas	-297.06	-238.25	-292.10	-233.29
157	C3H4O2	VINYL FORMATE	72.064	gas	-262.00	-209.00	-257.04	-204.04
158	C3H4O3	ETHYLENE CARBONATE	88.063	gas	-506.90	-410.00	-500.70	-403.80
159	C3H4O3	PYRUVIC ACID	88.063	gas	-625.00	-545.00	-618.80	-538.80
160	C3H5Br	3-BROMO-1-PROPENE	120.977	gas	49.37	79.96	53.09	83.67
161	C3H5Cl	2-CHLOROPROPENE	76.525	gas	-21.00	24.70	-16.04	29.66
162	C3H5Cl	3-CHLOROPROPENE	76.525	gas	-0.63	43.60	4.33	48.55
163	C3H5ClO	alpha-EPICHLOROHYDRIN	92.525	gas	-107.80	-36.74	-101.60	-30.55
164	C3H5ClO2	METHYL CHLOROACETATE	108.524	gas	-449.00	-363.00	-441.56	-355.56
165	C3H5ClO2	ETHYL CHLOROFORMATE	108.524	gas	-458.00	-364.00	-450.56	-356.56
166	C3H5Cl3	1,2,3-TRICHLOROPROPANE	147.431	gas	-185.77	-97.78	-178.33	-90.34
167	C3H5I	3-IODO-1-PROPENE	167.977	gas	95.81	120.16	99.53	123.88
168	C3H5N	PROPIONITRILE	55.079	gas	50.63	96.15	55.58	101.11
169	C3H5NO	ACRYLAMIDE	71.079	gas	-170.00	-97.90	-163.80	-91.70
170	C3H5NO	HYDRACRYLONITRILE	71.079	gas	-98.30	-35.40	-92.10	-29.20
171	C3H5NO	LACTONITRILE	71.079	gas	-63.90	-24.00	-57.70	-17.80
172	C3H5N3O9	NITROGLYCERINE	227.088	gas	-270.90	-------	-252.31	-------
173	C3H6	CYCLOPROPANE	42.081	gas	53.30	104.39	58.26	109.35
174	C3H6	PROPYLENE	42.081	gas	20.42	62.72	25.38	67.68
175	C3H6Br2	1,2-DIBROMOPROPANE	201.888	gas	-72.80	-17.66	-67.84	-12.70
176	C3H6Cl2	1,1-DICHLOROPROPANE	112.986	gas	-150.80	-65.20	-143.36	-57.76
177	C3H6Cl2	1,2-DICHLOROPROPANE	112.986	gas	-165.69	-83.09	-158.25	-75.66
178	C3H6Cl2	1,3-DICHLOROPROPANE	112.987	gas	-161.50	-82.59	-154.07	-75.16
179	C3H6Cl2	2,2-DICHLOROPROPANE	112.986	gas	-175.73	-84.56	-168.29	-77.12
180	C3H6I2	1,2-DIIODOPROPANE	295.889	gas	35.98	74.52	40.94	79.47
181	C3H6O	ACETONE	58.080	gas	-217.57	-153.05	-211.37	-146.85
182	C3H6O	ALLYL ALCOHOL	58.080	gas	-132.01	-71.25	-125.81	-65.06
183	C3H6O	METHYL VINYL ETHER	58.080	gas	-108.00	-47.30	-101.80	-41.10
184	C3H6O	n-PROPIONALDEHYDE	58.080	gas	-192.05	-130.46	-185.85	-124.26
185	C3H6O	1,2-PROPYLENE OXIDE	58.080	gas	-92.76	-25.77	-86.56	-19.58
186	C3H6O	1,3-PROPYLENE OXIDE	58.080	gas	-75.06	-1.66	-68.86	4.54
187	C3H6O2	ETHYL FORMATE	74.079	gas	-388.30	-303.10	-380.86	-295.66
188	C3H6O2	METHYL ACETATE	74.079	gas	-410.00	-321.50	-402.56	-314.06
189	C3H6O2	PROPIONIC ACID	74.079	gas	-453.50	-366.70	-446.06	-359.26
190	C3H6O2S	3-MERCAPTOPROPIONIC ACID	106.145	gas	-405.94	-343.90	-398.50	-336.46
191	C3H6O3	LACTIC ACID	90.079	gas	-621.00	-516.00	-612.32	-507.32
192	C3H6O3	METHOXYACETIC ACID	90.079	gas	-563.00	-457.00	-554.32	-448.32
193	C3H6O3	TRIOXANE	90.079	gas	-465.90	-337.22	-457.22	-328.54
194	C3H6S	THIACYCLOBUTANE	74.140	gas	61.13	107.49	66.09	112.44
195	C3H7Br	1-BROMOPROPANE	122.993	gas	-87.86	-22.47	-81.67	-16.27

NO	FORMULA	NAME	Mol Wt g/mol	state	ΔH_f @298 kJ/mol	ΔG_f @298 kJ/mol	ΔU_f @298 kJ/mol	ΔA_f @298 kJ/mol
196	C3H7Br	2-BROMOPROPANE	122.993	gas	-97.07	-27.24	-90.87	-21.04
197	C3H7Cl	ISOPROPYL CHLORIDE	78.541	gas	-146.44	-62.51	-139.00	-55.07
198	C3H7Cl	n-PROPYL CHLORIDE	78.541	gas	-130.12	-50.67	-122.69	-43.23
199	C3H7F	1-FLUOROPROPANE	62.087	gas	-281.16	-200.29	-273.73	-192.85
200	C3H7F	2-FLUOROPROPANE	62.087	gas	-288.70	-204.22	-281.26	-196.78
201	C3H7I	ISOPROPYL IODIDE	169.993	gas	-41.84	20.08	-35.64	26.28
202	C3H7I	n-PROPYL IODIDE	169.993	gas	-30.54	27.95	-24.35	34.15
203	C3H7N	ALLYAMINE	57.095	gas	58.20	135.00	65.64	142.44
204	C3H7N	PROPYLENEIMINE	57.095	gas	88.80	173.00	96.24	180.44
205	C3H7NO	N,N-DIMETHYLFORMAMIDE	73.095	gas	-191.70	-88.41	-183.02	-79.73
206	C3H7NO	N-METHYLACETAMIDE	73.095	gas	-240.00	-135.00	-231.32	-126.32
207	C3H7NO2	1-NITROPROPANE	89.094	gas	-124.68	0.33	-114.77	10.25
208	C3H7NO2	2-NITROPROPANE	89.094	gas	-140.16	-12.80	-130.25	-2.89
209	C3H7NO3	PROPYL-NITRATE	105.093	gas	-174.05	-27.32	-162.90	-16.17
210	C3H7NO3	ISOPROPYL-NITRATE	105.093	gas	-191.00	-40.67	-179.84	-29.51
211	C3H8	PROPANE	44.096	gas	-103.85	-23.47	-96.41	-16.04
212	C3H8O	ISOPROPANOL	60.096	gas	-272.59	-173.59	-263.91	-164.92
213	C3H8O	METHYL ETHYL ETHER	60.096	gas	-216.44	-117.65	-207.76	-108.98
214	C3H8O	n-PROPANOL	60.096	gas	-257.53	-162.97	-248.85	-154.29
215	C3H8O2	2-METHOXYETHANOL	76.095	gas	-434.00	-319.00	-424.08	-309.08
216	C3H8O2	METHYLAL	76.095	gas	-348.20	-226.31	-338.28	-216.39
217	C3H8O2	1,2-PROPYLENE GLYCOL	76.095	gas	-421.50	-304.48	-411.58	-294.56
218	C3H8O2	1,3-PROPYLENE GLYCOL	76.095	gas	-392.10	-277.18	-382.18	-267.26
219	C3H8O3	GLYCEROL	92.095	gas	-582.80	-448.49	-571.65	-437.34
220	C3H8S	n-PROPYLMERCAPTAN	76.163	gas	-67.86	2.18	-60.43	9.61
221	C3H8S	ISOPROPYL MERCAPTAN	76.163	gas	-76.23	-2.55	-68.80	4.88
222	C3H8S	ETHYL-METHYL-SULFIDE	76.156	gas	-59.62	11.42	-52.19	18.86
223	C3H9N	n-PROPYLAMINE	59.111	gas	-72.38	39.79	-62.47	49.71
224	C3H9N	ISOPROPYLAMINE	59.111	gas	-83.80	31.93	-73.88	41.85
225	C3H9N	TRIMETHYLAMINE	59.111	gas	-23.85	98.91	-13.93	108.83
226	C3H9NO	1-AMINO-2-PROPANOL	75.111	gas	-239.00	-108.00	-227.85	-96.85
227	C3H9NO	3-AMINO-1-PROPANOL	75.111	gas	-221.00	-91.00	-209.85	-79.85
228	C3H9NO	METHYLETHANOLAMINE	75.111	gas	-198.00	-61.10	-186.85	-49.95
229	C3H9O4P	TRIMETHYL PHOSPHATE	140.076	gas	-1080.00	-------	-1066.37	-------
230	C3H10N2	1,2-PROPANEDIAMINE	74.126	gas	-53.68	95.83	-41.29	108.22
231	C3H10Si	TRIMETHYL SILANE	74.198	gas	-156.61	-49.91	-146.69	-39.99
232	C4Cl4S	TETRACHLOROTHIOPHENE	221.921	gas	-------	-------	-------	-------
233	C4Cl6	HEXACHLORO-1,3-BUTADIENE	260.760	gas	-46.74	22.75	-41.78	27.70
234	C4F8	OCTAFLUORO-2-BUTENE	200.031	gas	-1650.00	-1530.00	-1642.56	-1522.56
235	C4F8	OCTAFLUOROCYCLOBUTANE	200.031	gas	-1528.00	-1398.84	-1520.56	-1391.40
236	C4F10	DECAFLUOROBUTANE	238.028	gas	-2140.00	-1970.00	-2130.08	-1960.08
237	C4H2	BUTADIYNE(BIACETYLENE)	50.060	gas	472.79	443.96	472.79	443.96
238	C4H2O3	MALEIC ANHYDRIDE	98.058	gas	-398.30	-355.00	-394.58	-351.28
239	C4H4	VINYLACETYLENE	52.076	gas	304.60	305.98	307.07	308.45
240	C4H4N2	SUCCINONITRILE	80.089	gas	209.70	254.01	214.66	258.97
241	C4H4O	FURAN	68.075	gas	-34.69	0.88	-30.97	4.60
242	C4H4O2	DIKETENE	84.075	gas	-190.20	-136.00	-185.24	-131.04
243	C4H4O3	SUCCINIC ANHYDRIDE	100.074	gas	-524.10	-448.00	-517.90	-441.80
244	C4H4O4	FUMARIC ACID	116.073	gas	-671.95	-582.16	-664.51	-574.72
245	C4H4O4	MALEIC ACID	116.073	gas	-675.80	-586.09	-668.36	-578.65
246	C4H4S	THIOPHENE	84.142	gas	115.73	126.78	118.21	129.25
247	C4H5Cl	CHLOROPRENE	88.536	gas	73.01	114.84	77.97	119.80
248	C4H5N	trans-CROTONITRILE	67.090	gas	140.70	184.46	145.66	189.42
249	C4H5N	cis-CROTONITRILE	67.090	gas	143.40	185.50	148.36	190.46
250	C4H5N	METHACRYLONITRILE	67.090	gas	98.03	164.00	102.99	168.96
251	C4H5N	PYRROLE	67.090	gas	108.28	160.29	113.24	165.25
252	C4H5N	VINYLACETONITRILE	67.090	gas	157.80	200.00	162.76	204.96
253	C4H5NO2	METHYL CYANOACETATE	99.089	gas	-237.00	-157.00	-229.56	-149.56
254	C4H6	CYCLOBUTENE	54.091	gas	129.70	174.72	134.66	179.68
255	C4H6	1,2-BUTADIENE	54.092	gas	162.21	198.45	167.17	203.40
256	C4H6	1,3-BUTADIENE	54.092	gas	110.16	150.67	115.12	155.62
257	C4H6	DIMETHYLACETYLENE	54.092	gas	146.31	185.43	151.27	190.39
258	C4H6	ETHYLACETYLENE	54.092	gas	165.18	202.09	170.14	207.04
259	C4H6Cl2	1,3-DICHLORO-trans-2-BUTENE	124.997	gas	-79.00	5.86	-71.56	13.30
260	C4H6Cl2	1,4-DICHLORO-cis-2-BUTENE	124.997	gas	78.20	108.50	85.64	115.94
261	C4H6Cl2	1,4-DICHLORO-trans-2-BUTENE	124.997	gas	-66.20	9.72	-58.76	17.16

NO	FORMULA	NAME	Mol Wt g/mol	state	ΔH_f @298 kJ/mol	ΔG_f @298 kJ/mol	ΔU_f @298 kJ/mol	ΔA_f @298 kJ/mol
262	C4H6Cl2	3,4-DICHLORO-1-BUTENE	124.997	gas	-64.40	15.10	-56.96	22.54
263	C4H6O	trans-CROTONALDEHYDE	70.091	gas	-103.60	-48.70	-97.40	-42.50
264	C4H6O	2,5-DIHYDROFURAN	70.091	gas	-108.78	-39.50	-102.58	-33.30
265	C4H6O	DIVINYL ETHER	70.091	gas	-14.00	40.62	-7.80	46.82
266	C4H6O	METHACROLEIN	70.091	gas	-112.00	-57.60	-105.80	-51.40
267	C4H6O2	2-BUTYNE-1,4-DIOL	86.090	gas	-155.00	-77.00	-147.56	-69.56
268	C4H6O2	gamma-BUTYROLACTONE	86.090	gas	-379.00	-285.29	-371.56	-277.85
269	C4H6O2	cis-CROTONIC ACID	86.090	gas	-359.00	-279.00	-351.56	-271.56
270	C4H6O2	trans-CROTONIC ACID	86.090	gas	-368.65	-290.23	-361.21	-282.79
271	C4H6O2	METHACRYLIC ACID	86.090	gas	-367.94	-287.72	-360.50	-280.28
272	C4H6O2	METHYL ACRYLATE	86.090	gas	-333.00	-257.32	-325.56	-249.88
273	C4H6O2	VINYL ACETATE	86.090	gas	-315.70	-228.70	-308.26	-221.26
274	C4H6O3	ACETIC ANHYDRIDE	102.090	gas	-575.72	-476.68	-567.04	-468.01
275	C4H6O4	SUCCINIC ACID	118.089	gas	-822.90	-697.00	-812.98	-687.08
276	C4H6O5	DIGLYCOLIC ACID	134.089	gas	-945.00	-800.00	-933.85	-788.85
277	C4H6O5	MALIC ACID	134.089	gas	-990.00	-848.00	-978.85	-836.85
278	C4H6O6	TARTARIC ACID	150.088	gas	-1160.00	-998.00	-1147.61	-985.61
279	C4H7N	n-BUTYRONITRILE	69.106	gas	34.06	108.66	41.49	116.09
280	C4H7N	ISOBUTYRONITRILE	69.106	gas	25.40	103.60	32.83	111.03
281	C4H7NO	ACETONE CYANOHYDRIN	85.106	gas	-133.00	-30.97	-124.32	-22.29
282	C4H7NO	2-METHACRYLAMIDE	85.106	gas	-185.00	-90.40	-176.32	-81.72
283	C4H7NO	3-METHOXYPROPIONITRILE	85.106	gas	-79.00	14.70	-70.32	23.38
284	C4H7NO	2-PYRROLIDONE	85.106	gas	-197.15	-84.73	-188.47	-76.06
285	C4H8	1-BUTENE	56.107	gas	-0.13	71.30	7.31	78.73
286	C4H8	cis-2-BUTENE	56.107	gas	-6.99	65.86	0.45	73.29
287	C4H8	trans-2-BUTENE	56.107	gas	-11.17	62.97	-3.73	70.41
288	C4H8	CYCLOBUTANE	56.107	gas	26.65	110.04	34.09	117.48
289	C4H8	ISOBUTENE	56.107	gas	-16.90	58.07	-9.47	65.51
290	C4H8Br2	1,2-DIBROMOBUTANE	215.915	gas	-99.16	-13.14	-91.72	-5.70
291	C4H8Br2	2,3-DIBROMOBUTANE	215.915	gas	-102.09	-11.92	-94.65	-4.49
292	C4H8Cl2	1,4-DICHLOROBUTANE	127.013	gas	-179.00	-65.90	-169.08	-55.98
293	C4H8I2	1,2-DIIODOBUTANE	309.916	gas	11.92	82.09	19.36	89.53
294	C4H8O	n-BUTYRALDEHYDE	72.107	gas	-205.02	-114.77	-196.34	-106.09
295	C4H8O	ISOBUTYRALDEHYDE	72.107	gas	-215.60	-116.15	-206.92	-107.47
296	C4H8O	1,2-EPOXYBUTANE	72.107	gas	-110.00	-12.88	-101.32	-4.20
297	C4H8O	METHYL ETHYL KETONE	72.107	gas	-238.36	-146.06	-229.69	-137.39
298	C4H8O	ETHYL VINYL ETHER	72.107	gas	-140.90	-51.83	-132.22	-43.15
299	C4H8O	TETRAHYDROFURAN	72.107	gas	-184.18	-79.68	-175.50	-71.00
300	C4H8O2	cis-2-BUTENE-1,4-DIOL	88.106	gas	-295.00	-186.69	-285.08	-176.77
301	C4H8O2	trans-2-BUTENE-1,4-DIOL	88.106	gas	-300.00	-191.69	-290.08	-181.77
302	C4H8O2	ISOBUTYRIC ACID	88.106	gas	-484.13	-362.18	-474.21	-352.26
303	C4H8O2	n-BUTYRIC ACID	88.106	gas	-470.28	-355.00	-460.36	-345.08
304	C4H8O2	1,4-DIOXANE	88.106	gas	-315.06	-180.79	-305.14	-170.88
305	C4H8O2	ETHYL ACETATE	88.106	gas	-442.92	-327.40	-433.00	-317.48
306	C4H8O2	METHYL PROPIONATE	88.106	gas	-427.50	-311.00	-417.58	-301.08
307	C4H8O2	n-PROPYL FORMATE	88.106	gas	-404.38	-291.89	-394.46	-281.97
308	C4H8O2S	SULFOLANE	120.172	gas	-390.00	-259.00	-380.08	-249.08
309	C4H8S	TETRAHYDROTHIOPHENE	88.173	gas	-33.81	46.02	-26.37	53.46
310	C4H9Br	1-BROMOBUTANE	137.019	gas	-107.32	-12.89	-98.64	-4.21
311	C4H9Br	2-BROMOBUTANE	137.019	gas	-120.08	-25.77	-111.40	-17.10
312	C4H9Cl	n-BUTYL CHLORIDE	92.568	gas	-147.28	-38.79	-137.36	-28.87
313	C4H9Cl	sec-BUTYL CHLORIDE	92.568	gas	-161.50	-53.47	-151.59	-43.56
314	C4H9Cl	tert-BUTYL CHLORIDE	92.568	gas	-183.26	-64.10	-173.34	-54.18
315	C4H9I	2-IODO-2-METHYLPROPANE	184.020	gas	-73.64	23.64	-64.96	32.32
316	C4H9N	PYRROLIDINE	71.122	gas	-3.60	114.68	6.32	124.60
317	C4H9NO	N,N-DIMETHYLACETAMIDE	87.122	gas	-225.00	-88.50	-213.85	-77.35
318	C4H9NO	MORPHOLINE	87.122	gas	-156.00	16.00	-144.85	27.15
319	C4H9NO2	1-NITROBUTANE	103.121	gas	-143.93	10.13	-131.54	22.52
320	C4H9NO2	2-NITROBUTANE	103.121	gas	-163.59	-6.23	-151.20	6.16
321	C4H10	n-BUTANE	58.123	gas	-126.15	-17.15	-116.23	-7.24
322	C4H10	ISOBUTANE	58.123	gas	-134.52	-20.88	-124.60	-10.96
323	C4H10N2	PIPERAZINE	86.137	gas	22.30	185.00	34.69	197.39
324	C4H10O	n-BUTANOL	74.123	gas	-274.43	-150.67	-263.27	-139.51
325	C4H10O	sec-BUTANOL	74.123	gas	-292.29	-167.32	-281.14	-156.16
326	C4H10O	tert-BUTANOL	74.123	gas	-325.81	-191.04	-314.65	-179.89
327	C4H10O	DIETHYL ETHER	74.123	gas	-252.21	-122.34	-241.06	-111.19

NO	FORMULA	NAME	Mol Wt g/mol	state	ΔH_f @298 kJ/mol	ΔG_f @298 kJ/mol	ΔU_f @298 kJ/mol	ΔA_f @298 kJ/mol
328	C4H10O	METHYL-PROPYL-ETHER	74.122	gas	-237.73	-109.91	-226.58	-98.76
329	C4H10O	METHYL ISOPROPYL ETHER	74.123	gas	-252.04	-120.88	-240.89	-109.72
330	C4H10O	ISOBUTANOL	74.123	gas	-426.70	-277.72	-415.55	-266.57
331	C4H10O2	1,3-BUTANEDIOL	90.122	gas	-283.22	-155.01	-270.83	-142.62
332	C4H10O2	1,4-BUTANEDIOL	90.122	gas	-434.60	-291.69	-422.21	-279.30
333	C4H10O2	2,3-BUTANEDIOL	90.122	gas	-482.30	-339.00	-469.91	-326.61
334	C4H10O2	t-BUTYL HYDROPEROXIDE	90.122	gas	-243.00	-88.90	-230.61	-76.51
335	C4H10O2	1,2-DIMETHOXYETHANE	90.122	gas	-346.00	-198.16	-333.61	-185.77
336	C4H10O2	2-ETHOXYETHANOL	90.122	gas	-400.00	-256.00	-387.61	-243.61
337	C4H10O3	DIETHYLENE GLYCOL	106.122	gas	-571.20	-409.00	-557.57	-395.37
338	C4H10O4S	DIETHYL SULFATE	154.187	gas	-756.30	-547.00	-741.43	-532.13
339	C4H10S	n-BUTYL MERCAPTAN	90.189	gas	-88.07	11.05	-78.16	20.96
340	C4H10S	ISOBUTYL MERCAPTAN	90.189	gas	-97.24	5.56	-87.32	15.48
341	C4H10S	sec-BUTYL MERCAPTAN	90.189	gas	-96.23	5.40	-86.32	15.31
342	C4H10S	tert-BUTYL MERCAPTAN	90.189	gas	-109.50	0.71	-99.58	10.63
343	C4H10S	DIETHYL SULFIDE	90.189	gas	-83.47	17.78	-73.56	27.70
344	C4H10S	ISOPROPYL-METHYL-SULFIDE	90.183	gas	-90.42	13.43	-80.50	23.35
345	C4H10S	METHYL-PROPYL-SULFIDE	90.183	gas	-81.76	18.41	-71.84	28.32
346	C4H10S2	DIETHYL DISULFIDE	122.255	gas	-74.64	22.26	-64.73	32.17
347	C4H11N	n-BUTYLAMINE	73.138	gas	-92.05	49.20	-79.65	61.60
348	C4H11N	ISOBUTYLAMINE	73.138	gas	-98.80	46.10	-86.41	58.49
349	C4H11N	sec-BUTYLAMINE	73.138	gas	-104.18	40.63	-91.79	53.02
350	C4H11N	tert-BUTYLAMINE	73.138	gas	-119.87	28.87	-107.48	41.26
351	C4H11N	DIETHYLAMINE	73.138	gas	-72.38	72.09	-59.99	84.48
352	C4H11NO	DIMETHYLETHANOLAMINE	89.137	gas	-202.00	-36.40	-188.37	-22.77
353	C4H11NO2	DIETHANOLAMINE	105.137	gas	-396.88	-214.08	-382.01	-199.21
354	C4H11NO2	2-AMINOETHOXYETHANOL	105.137	gas	-365.00	-187.00	-350.13	-172.13
355	C4H12N2O	N-AMINOETHYL ETHANOLAMINE	104.152	gas	-191.00	3.81	-174.89	19.92
356	C4H12Si	TETRAMETHYLSILANE	88.225	gas	-233.20	-94.18	-220.81	-81.79
357	C4H13N3	DIETHYLENE TRIAMINE	103.167	gas	-5.86	207.29	11.49	224.64
358	C5Cl6	HEXACHLOROCYCLOPENTADIENE	272.771	gas	-102.00	-30.00	-97.04	-25.04
359	C5H4O2	FURFURAL	96.086	gas	-151.04	-102.87	-146.08	-97.91
360	C5H5N	PYRIDINE	79.101	gas	140.16	190.20	145.12	195.16
361	C5H6	CYCLOPENTADIENE	66.103	gas	130.80	172.57	135.76	177.53
362	C5H6	2-METHYL-1-BUTENE-3-YNE	66.103	gas	260.00	302.00	264.96	306.96
363	C5H6	1-PENTENE-3-YNE	66.103	gas	249.00	281.00	253.96	285.96
364	C5H6	1-PENTENE-4-YNE	66.103	gas	269.00	303.00	273.96	307.96
365	C5H6N2	GLUTARONITRILE	94.116	gas	170.00	243.00	177.44	250.44
366	C5H6O2	FURFURYL ALCOHOL	98.101	gas	-218.90	-154.00	-211.46	-146.56
367	C5H6O3	GLUTARIC ANHYDRIDE	114.101	gas	-349.00	-237.00	-340.32	-228.32
368	C5H6O4	CITRACONIC ACID	130.100	gas	-740.00	-622.00	-730.08	-612.08
369	C5H6O4	ITACONIC ACID	130.100	gas	-729.00	-612.00	-719.08	-602.08
370	C5H6S	2-METHYLTHIOPHENE	98.162	gas	83.68	122.93	88.64	127.88
371	C5H6S	3-METHYLTHIOPHENE	98.162	gas	82.80	121.84	87.76	126.80
372	C5H7N	N-METHYLPYRROLE	81.117	gas	103.10	184.80	110.54	192.24
373	C5H7NO2	ETHYL CYANOACETATE	113.116	gas	-316.14	-204.77	-306.22	-194.85
374	C5H8	CYCLOPENTENE	68.118	gas	32.93	110.79	40.36	118.23
375	C5H8	ISOPRENE	68.118	gas	75.73	145.90	83.17	153.34
376	C5H8	3-METHYL-1,2-BUTADIENE	68.118	gas	129.70	198.61	137.14	206.05
377	C5H8	2-METHYL-1,3-BUTADIENE	68.118	gas	75.73	145.85	83.17	153.29
378	C5H8	1,2-PENTADIENE	68.118	gas	145.60	210.41	153.04	217.85
379	C5H8	cis-1,3-PENTADIENE	68.118	gas	78.24	145.77	85.68	153.21
380	C5H8	trans-1,3-PENTADIENE	68.118	gas	77.82	146.73	85.26	154.17
381	C5H8	1,4-PENTADIENE	68.118	gas	105.44	170.25	112.87	177.68
382	C5H8	2,3-PENTADIENE	68.118	gas	138.49	205.89	145.93	213.33
383	C5H8	1-PENTYNE	68.118	gas	144.35	210.25	151.78	217.68
384	C5H8	2-PENTYNE	68.118	gas	128.87	194.18	136.30	201.62
385	C5H8	3-METHYL-1-BUTYNE	68.118	gas	136.40	205.52	143.83	212.95
386	C5H8	SPIROPENTANE	68.118	gas	185.23	265.31	192.66	272.74
387	C5H8N4O12	PENTAERYTHRITOL TETRANITRATE	316.138	gas	-386.70	-------	-359.43	-------
388	C5H8O	CYCLOPENTANONE	84.118	gas	-194.14	-96.20	-185.46	-87.52
389	C5H8O	METHYL ISOPROPENYL KETONE	84.118	gas	-180.00	-92.50	-171.32	-83.82
390	C5H8O2	ACETYLACETONE	100.117	gas	-380.00	-275.00	-370.08	-265.08
391	C5H8O2	ALLYL ACETATE	100.117	gas	-334.00	-229.00	-324.08	-219.08
392	C5H8O2	ETHYL ACRYLATE	100.117	gas	-349.53	-245.45	-339.61	-235.53
393	C5H8O2	METHYL METHACRYLATE	100.117	gas	-347.36	-241.59	-337.44	-231.67

NO	FORMULA	NAME	Mol Wt g/mol	state	ΔH_f @298 kJ/mol	ΔG_f @298 kJ/mol	ΔU_f @298 kJ/mol	ΔA_f @298 kJ/mol
394	C5H8O2	VINYL PROPIONATE	100.117	gas	-347.36	-236.76	-337.44	-226.84
395	C5H8O3	2-HYDROXYETHYL ACRYLATE	116.117	gas	-493.00	-371.00	-481.85	-359.85
396	C5H8O3	LEVULINIC ACID	116.117	gas	-607.00	-478.00	-595.85	-466.85
397	C5H8O3	METHYL ACETOACETATE	116.117	gas	-589.00	-465.00	-577.85	-453.85
398	C5H8O4	GLUTARIC ACID	132.116	gas	-844.00	-690.00	-831.61	-677.61
399	C5H9N	VALERONITRILE	83.133	gas	11.46	114.74	21.38	124.66
400	C5H9NO	n-BUTYL ISOCYANATE	99.133	gas	-127.00	1.96	-115.85	13.11
401	C5H9NO	N-METHYL-2-PYRROLIDONE	99.133	gas	-195.39	-53.42	-184.24	-42.27
402	C5H9NO4	L-GLUTAMIC ACID	147.131	gas	-824.00	-636.00	-809.13	-621.13
403	C5H10	CYCLOPENTANE	70.134	gas	-77.24	38.62	-67.32	48.53
404	C5H10	2-METHYL-1-BUTENE	70.134	gas	-36.32	65.61	-26.40	75.52
405	C5H10	2-METHYL-2-BUTENE	70.134	gas	-42.55	59.66	-32.64	69.58
406	C5H10	3-METHYL-1-BUTENE	70.134	gas	-28.95	74.77	-19.04	84.68
407	C5H10	1-PENTENE	70.134	gas	-20.92	79.12	-11.00	89.03
408	C5H10	cis-2-PENTENE	70.134	gas	-28.07	71.84	-18.16	81.75
409	C5H10	trans-2-PENTENE	70.134	gas	-31.76	69.91	-21.84	79.83
410	C5H10Br2	2,3-DIBROMO-2-METHYLBUTANE	229.942	gas	-138.91	-13.35	-128.99	-3.43
411	C5H10Cl2	1,5-DICHLOROPENTANE	141.040	gas	-200.00	-58.20	-187.61	-45.81
412	C5H10O	METHYL ISOPROPYL KETONE	86.134	gas	-262.40	-139.00	-251.25	-127.85
413	C5H10O	2-PENTANONE	86.134	gas	-258.65	-137.07	-247.50	-125.91
414	C5H10O	DIETHYL KETONE	86.134	gas	-259.20	-135.06	-248.05	-123.91
415	C5H10O	VALERALDEHYDE	86.134	gas	-227.82	-108.28	-216.66	-97.13
416	C5H10O2	n-BUTYL FORMATE	102.133	gas	-425.09	-283.67	-412.70	-271.28
417	C5H10O2	ETHYL PROPIONATE	102.133	gas	-463.60	-319.30	-451.21	-306.91
418	C5H10O2	ISOBUTYL FORMATE	102.133	gas	-436.30	-293.20	-423.91	-280.81
419	C5H10O2	ISOPROPYL ACETATE	102.133	gas	-481.70	-333.70	-469.31	-321.31
420	C5H10O2	n-PROPYL ACETATE	102.133	gas	-464.80	-320.40	-452.41	-308.01
421	C5H10O2	METHYL n-BUTYRATE	102.133	gas	-450.70	-305.30	-438.31	-292.91
422	C5H10O2	2-METHYLBUTYRIC ACID	102.133	gas	-498.00	-352.00	-485.61	-339.61
423	C5H10O2	ISOVALERIC ACID	102.133	gas	-514.70	-367.00	-502.31	-354.61
424	C5H10O2	VALERIC ACID	102.133	gas	-490.36	-346.00	-477.97	-333.61
425	C5H10O2	TETRAHYDROFURFURYL ALCOHOL	102.133	gas	-369.20	-216.00	-356.81	-203.61
426	C5H10O2S	3-METHYL SULFOLANE	134.199	gas	-420.00	-257.02	-407.61	-244.63
427	C5H10O3	DIETHYL CARBONATE	118.133	gas	-639.10	-464.65	-625.47	-451.02
428	C5H10O3	ETHYL LACTATE	118.133	gas	-635.00	-476.00	-621.37	-462.37
429	C5H10S	THIACYCLOHEXANE	102.194	gas	-63.26	53.05	-53.35	62.97
430	C5H10S	CYCLOPENTANETHIOL	102.194	gas	-47.91	57.03	-37.99	66.94
431	C5H11Br	1-BROMOPENTANE	151.046	gas	-129.16	-5.73	-118.01	5.42
432	C5H11Cl	1-CHLOROPENTANE	106.595	gas	-174.89	-37.40	-162.50	-25.01
433	C5H11Cl	1-CHLORO-3-METHYLBUTANE	106.595	gas	-180.33	-43.68	-167.94	-31.29
434	C5H11Cl	2-CHLORO-2-METHYLBUTANE	106.595	gas	-202.51	-56.48	-190.11	-44.09
435	C5H11N	N-METHYLPYRROLIDINE	85.149	gas	-8.12	145.00	4.27	157.39
436	C5H11N	PIPERIDINE	85.149	gas	-48.90	102.00	-36.51	114.39
437	C5H11NO	tert-BUTYLFORMAMIDE	101.148	gas	-284.00	-114.00	-270.37	-100.37
438	C5H12	ISOPENTANE	72.150	gas	-154.47	-14.81	-142.08	-2.42
439	C5H12	NEOPENTANE	72.150	gas	-165.98	-15.23	-153.59	-2.84
440	C5H12	n-PENTANE	72.150	gas	-146.44	-8.37	-134.05	4.03
441	C5H12O	2,2-DIMETHYL-1-PROPANOL	88.150	gas	-319.07	-155.38	-305.44	-141.75
442	C5H12O	tert-PENTYL-ALCOHOL	88.149	gas	-329.07	-165.77	-315.44	-152.14
443	C5H12O	2-METHYL-1-BUTANOL	88.150	gas	-302.09	-146.71	-288.46	-133.08
444	C5H12O	2-METHYL-2-BUTANOL	88.150	gas	-329.70	-165.27	-316.07	-151.64
445	C5H12O	3-METHYL-1-BUTANOL	88.150	gas	-302.09	-145.00	-288.46	-131.37
446	C5H12O	3-METHYL-2-BUTANOL	88.150	gas	-314.22	-156.36	-300.59	-142.73
447	C5H12O	1-PENTANOL	88.150	gas	-302.38	-149.75	-288.74	-136.11
448	C5H12O	2-PENTANOL	88.150	gas	-313.80	-159.29	-300.17	-145.66
449	C5H12O	3-PENTANOL	88.150	gas	-316.73	-158.16	-303.10	-144.53
450	C5H12O	METHYL sec-BUTYL ETHER	88.150	gas	-275.00	-116.80	-261.37	-103.17
451	C5H12O	METHYL tert-BUTYL ETHER	88.150	gas	-292.88	-125.44	-279.25	-111.80
452	C5H12O	METHYL ISOBUTYL ETHER	88.150	gas	-266.00	-107.00	-253.61	-94.61
453	C5H12O	ETHYL PROPYL ETHER	88.150	gas	-272.20	-115.20	-258.57	-101.57
454	C5H12O2	ETHYLENE GLYCOL MONOPROPYL ETHER	104.149	gas	-421.00	-248.00	-406.13	-233.13
455	C5H12O2	NEOPENTYL GLYCOL	104.149	gas	-447.00	-264.00	-432.13	-249.13
456	C5H12O2	1,5-PENTANEDIOL	104.149	gas	-449.00	-275.00	-434.13	-260.13
457	C5H12O3	2-(2-METHOXYETHOXY)ETHANOL	120.148	gas	-530.00	-367.00	-513.89	-350.89
458	C5H12O4	PENTAERYTHRITOL	136.148	gas	-776.70	-542.65	-759.35	-525.30
459	C5H12S	n-PENTYL MERCAPTAN	104.216	gas	-108.41	19.37	-96.01	31.77

NO	FORMULA	NAME	Mol Wt g/mol	state	ΔH_f @298 kJ/mol	ΔG_f @298 kJ/mol	ΔU_f @298 kJ/mol	ΔA_f @298 kJ/mol
460	C5H12S	BUTYL-METHYL-SULFIDE	104.210	gas	-102.17	26.65	-89.78	39.05
461	C5H12S	ETHYL-PROPYL-SULFIDE	104.210	gas	-104.60	23.56	-92.21	35.95
462	C5H12S	2-METHYL-2-BUTANETHIOL	104.210	gas	-127.03	9.20	-114.63	21.60
463	C5H13N	n-PENTYLAMINE	87.165	gas	-112.76	60.13	-97.89	75.00
464	C5H13NO2	METHYL DIETHANOLAMINE	119.164	gas	-380.00	-169.00	-362.65	-151.65
465	C6Cl6	HEXACHLOROBENZENE	284.782	gas	-33.89	44.18	-28.93	49.14
466	C6F6	HEXAFLUOROBENZENE	186.056	gas	-956.63	-879.39	-951.67	-874.44
467	C6H3ClN2O4	1-CHLORO-2,4-DINITROBENZENE	202.554	gas	35.10	186.00	45.02	195.92
468	C6H3Cl2NO2	1,2-DICHLORO-4-NITROBENZENE	192.001	gas	14.60	119.00	22.04	126.44
469	C6H3Cl3	1,2,4-TRICHLOROBENZENE	181.448	gas	-11.76	43.05	-6.80	48.01
470	C6H3N3O6	1,3,5-TRINITROBENZENE	213.106	gas	-37.40	-------	-25.01	-------
471	C6H4Br2	m-DIBROMOBENZENE	235.906	gas	125.52	149.60	128.00	152.08
472	C6H4ClNO2	m-CHLORONITROBENZENE	157.556	gas	37.20	13.70	44.64	21.14
473	C6H4ClNO2	o-CHLORONITROBENZENE	157.556	gas	37.20	138.00	44.64	145.44
474	C6H4ClNO2	p-CHLORONITROBENZENE	157.556	gas	37.20	139.00	44.64	146.44
475	C6H4Cl2	m-DICHLOROBENZENE	147.003	gas	26.44	78.58	31.40	83.53
476	C6H4Cl2	o-DICHLOROBENZENE	147.003	gas	29.96	82.68	34.92	87.63
477	C6H4Cl2	p-DICHLOROBENZENE	147.003	gas	23.01	77.15	27.97	82.11
478	C6H4F2	m-DIFLUOROBENZENE	114.094	gas	-309.99	-257.02	-305.03	-252.07
479	C6H4F2	o-DIFLUOROBENZENE	114.094	gas	-294.51	-242.00	-289.55	-237.04
480	C6H4F2	p-DIFLUOROBENZENE	114.094	gas	-307.23	-252.84	-302.27	-247.88
481	C6H4N2O4	m-DINITROBENZENE	168.109	gas	-27.60	-------	-17.68	-------
482	C6H4N2O4	o-DINITROBENZENE	168.109	gas	-1.80	-------	8.12	-------
483	C6H4N2O4	p-DINITROBENZENE	168.109	gas	-38.60	-------	-28.68	-------
484	C6H5Br	BROMOBENZENE	157.010	gas	105.02	138.53	108.74	142.25
485	C6H5Cl	MONOCHLOROBENZENE	112.558	gas	51.84	99.16	56.80	104.12
486	C6H5ClO	m-CHLOROPHENOL	128.558	gas	-153.30	-86.60	-147.10	-80.40
487	C6H5ClO	o-CHLOROPHENOL	128.558	gas	-123.00	-56.30	-116.80	-50.10
488	C6H5ClO	p-CHLOROPHENOL	128.558	gas	-145.80	-77.30	-139.60	-71.10
489	C6H5Cl2N	3,4-DICHLOROANILINE	162.018	gas	32.60	123.00	40.04	130.44
490	C6H5F	FLUOROBENZENE	96.104	gas	-116.57	-69.04	-111.61	-64.08
491	C6H5I	IODOBENZENE	204.010	gas	162.55	187.78	166.27	191.50
492	C6H5NO2	NITROBENZENE	123.111	gas	67.60	158.00	75.04	165.44
493	C6H6	BENZENE	78.114	gas	82.93	129.66	87.88	134.62
494	C6H6ClN	m-CHLOROANILINE	127.573	gas	57.30	140.00	64.74	147.44
495	C6H6ClN	o-CHLOROANILINE	127.573	gas	57.30	140.00	64.74	147.44
496	C6H6ClN	p-CHLOROANILINE	127.573	gas	57.30	140.00	64.74	147.44
497	C6H6N2	cis-DICYANO-1-BUTENE	106.127	gas	271.00	342.00	278.44	349.44
498	C6H6N2	trans-DICYANO-1-BUTENE	106.127	gas	267.00	340.00	274.44	347.44
499	C6H6N2	1,4-DICYANO-2-BUTENE	106.127	gas	261.00	328.00	268.44	335.44
500	C6H6N2O2	m-NITROANILINE	138.126	gas	58.50	190.00	68.42	199.92
501	C6H6N2O2	o-NITROANILINE	138.126	gas	63.80	195.00	73.72	204.92
502	C6H6N2O2	p-NITROANILINE	138.126	gas	59.50	192.00	69.42	201.92
503	C6H6O	PHENOL	94.113	gas	-96.36	-32.89	-90.16	-26.69
504	C6H6O2	1,2-BENZENEDIOL	110.112	gas	-272.00	-187.00	-264.56	-179.56
505	C6H6O2	1,3-BENZENEDIOL	110.112	gas	-274.70	-181.30	-267.26	-173.86
506	C6H6O2	p-HYDROQUINONE	110.112	gas	-261.71	-176.13	-254.27	-168.69
507	C6H6O3	1,2,3-BENZENETRIOL	126.112	gas	-446.00	-341.00	-437.32	-332.32
508	C6H6S	PHENYL MERCAPTAN	110.180	gas	111.55	147.61	116.50	152.57
509	C6H7N	ANILINE	93.128	gas	86.86	166.69	94.30	174.13
510	C6H7N	2-METHYLPYRIDINE	93.128	gas	98.95	177.07	106.39	184.50
511	C6H7N	3-METHYLPYRIDINE	93.128	gas	106.15	184.26	113.58	191.70
512	C6H7N	4-METHYLPYRIDINE	93.128	gas	102.13	182.08	109.57	189.52
513	C6H8	1,3-CYCLOHEXADIENE	80.130	gas	106.20	181.70	113.64	189.14
514	C6H8	METHYLCYCLOPENTADIENE	80.130	gas	100.00	171.00	107.44	178.44
515	C6H8N2	ADIPONITRILE	108.143	gas	149.50	253.31	159.42	263.23
516	C6H8N2	METHYLGLUTARONITRILE	108.143	gas	142.00	249.00	151.92	258.92
517	C6H8N2	m-PHENYLENEDIAMINE	108.143	gas	91.20	207.00	101.12	216.92
518	C6H8N2	o-PHENYLENEDIAMINE	108.143	gas	91.20	207.00	101.12	216.92
519	C6H8N2	p-PHENYLENEDIAMINE	108.143	gas	91.20	210.00	101.12	219.92
520	C6H8N2	PHENYLHYDRAZINE	108.143	gas	203.50	321.93	213.42	331.85
521	C6H8N2O	BIS(CYANOETHYL)ETHER	124.142	gas	20.40	149.00	31.55	160.15
522	C6H8O4	DIMETHYL MALEATE	144.127	gas	-620.80	-481.40	-608.41	-469.01
523	C6H8O6	ASCORBIC ACID	176.126	gas	-951.00	-731.00	-936.13	-716.13
524	C6H8O7	CITRIC ACID	192.125	gas	-1390.00	-1176.00	-1373.89	-1159.89
525	C6H10	1-METHYLCYCLOPENTENE	82.145	gas	-5.44	102.13	4.48	112.05

NO	FORMULA	NAME	Mol Wt g/mol	state	ΔH_f @298 kJ/mol	ΔG_f @298 kJ/mol	ΔU_f @298 kJ/mol	ΔA_f @298 kJ/mol
526	C6H10	3-METHYLCYCLOPENTENE	82.145	gas	8.66	114.98	18.58	124.89
527	C6H10	4-METHYLCYCLOPENTENE	82.145	gas	14.77	121.59	24.68	131.50
528	C6H10	CYCLOHEXENE	82.145	gas	-5.36	106.86	4.56	116.77
529	C6H10	2,3-DIMETHYL-1,3-BUTADIENE	82.145	gas	45.10	144.00	55.02	153.92
530	C6H10	1,5-HEXADIENE	82.145	gas	84.10	178.00	94.02	187.92
531	C6H10	cis,trans-2,4-HEXADIENE	82.145	gas	47.40	146.00	57.32	155.92
532	C6H10	trans,trans-2,4-HEXADIENE	82.145	gas	43.30	142.00	53.22	151.92
533	C6H10	1-HEXYNE	82.145	gas	123.64	218.57	133.55	228.49
534	C6H10	2-HEXYNE	82.145	gas	105.00	199.00	114.92	208.92
535	C6H10	3-HEXYNE	82.145	gas	106.00	199.00	115.92	208.92
536	C6H10O	CYCLOHEXANONE	98.145	gas	-230.12	-90.75	-218.97	-79.60
537	C6H10O	MESITYL OXIDE	98.145	gas	-195.56	-78.78	-184.41	-67.62
538	C6H10O2	epsilon-CAPROLACTONE	114.144	gas	-425.93	-267.84	-413.54	-255.45
539	C6H10O2	ETHYL METHACRYLATE	114.144	gas	-381.00	-247.00	-368.61	-234.61
540	C6H10O2	n-PROPYL ACRYLATE	114.144	gas	-364.00	-231.00	-351.61	-218.61
541	C6H10O3	ETHYLACETOACETATE	130.144	gas	-560.00	-408.00	-546.37	-394.37
542	C6H10O3	PROPIONIC ANHYDRIDE	130.144	gas	-626.50	-470.00	-612.87	-456.37
543	C6H10O4	ADIPIC ACID	146.143	gas	-865.04	-686.47	-850.17	-671.60
544	C6H10O4	DIETHYL OXALATE	146.143	gas	-739.80	-570.00	-724.93	-555.13
545	C6H10O4	ETHYLENE GLYCOL DIACETATE	146.143	gas	-807.00	-631.00	-792.13	-616.13
546	C6H10O4	ETHYLIDENE DIACETATE	146.143	gas	-812.00	-632.00	-797.13	-617.13
547	C6H11N	HEXANENITRILE	97.160	gas	-9.25	122.84	3.14	135.23
548	C6H11NO	epsilon-CAPROLACTAM	113.159	gas	-246.20	-71.11	-232.57	-57.48
549	C6H11NO	CYCLOHEXANONE OXIME	113.159	gas	-194.00	-22.90	-180.37	-9.27
550	C6H12	CYCLOHEXANE	84.161	gas	-123.14	31.76	-110.74	44.15
551	C6H12	2,3-DIMETHYL-1-BUTENE	84.161	gas	-55.73	79.04	-43.34	91.43
552	C6H12	2,3-DIMETHYL-2-BUTENE	84.161	gas	-59.20	75.86	-46.81	88.25
553	C6H12	3,3-DIMETHYL-1-BUTENE	84.161	gas	-43.14	98.16	-30.74	110.55
554	C6H12	2-ETHYL-1-BUTENE	84.161	gas	-51.55	79.96	-39.15	92.35
555	C6H12	trans-3-METHYL-2-PENTENE	84.161	gas	-58.66	71.30	-46.27	83.69
556	C6H12	1-HEXENE	84.161	gas	-41.67	87.45	-29.28	99.84
557	C6H12	cis-2-HEXENE	84.161	gas	-52.34	76.23	-39.95	88.63
558	C6H12	trans-2-HEXENE	84.161	gas	-53.89	76.44	-41.50	88.84
559	C6H12	cis-3-HEXENE	84.161	gas	-47.61	83.01	-35.22	95.40
560	C6H12	trans-3-HEXENE	84.161	gas	-54.43	77.61	-42.04	90.01
561	C6H12	METHYLCYCLOPENTANE	84.161	gas	-106.69	35.77	-94.30	48.17
562	C6H12	2-METHYL-1-PENTENE	84.161	gas	-52.26	77.61	-39.86	90.01
563	C6H12	2-METHYL-2-PENTENE	84.161	gas	-59.75	71.21	-47.35	83.61
564	C6H12	3-METHYL-1-PENTENE	84.161	gas	-45.02	86.44	-32.63	98.84
565	C6H12	3-METHYL-cis-2-PENTENE	84.161	gas	-57.74	73.22	-45.35	85.61
566	C6H12	4-METHYL-1-PENTENE	84.161	gas	-44.10	90.04	-31.71	102.43
567	C6H12	4-METHYL-cis-2-PENTENE	84.161	gas	-50.33	82.13	-37.94	94.53
568	C6H12	4-METHYL-trans-2-PENTENE	84.161	gas	-54.35	79.62	-41.96	92.02
569	C6H12N2	TRIETHYLENEDIAMINE	112.175	gas	52.70	247.00	67.57	261.87
570	C6H12O	BUTYL VINYL ETHER	100.161	gas	-183.00	-36.20	-169.37	-22.56
571	C6H12O	CYCLOHEXANOL	100.161	gas	-294.55	-117.91	-280.92	-104.27
572	C6H12O	1-HEXANAL	100.161	gas	-248.15	-100.12	-234.52	-86.49
573	C6H12O	ETHYL ISOPROPYL KETONE	100.161	gas	-286.10	-133.00	-272.47	-119.37
574	C6H12O	2-HEXANONE	100.161	gas	-279.83	-130.08	-266.20	-116.45
575	C6H12O	3-HEXANONE	100.161	gas	-277.70	-125.30	-264.07	-111.67
576	C6H12O	METHYL ISOBUTYL KETONE	100.161	gas	-288.49	-135.36	-274.86	-121.73
577	C6H12O2	n-PENTYL FORMATE	116.160	gas	-448.20	-276.00	-433.33	-261.13
578	C6H12O2	n-BUTYL ACETATE	116.160	gas	-485.60	-312.30	-470.73	-297.43
579	C6H12O2	sec-BUTYL ACETATE	116.160	gas	-503.80	-329.80	-488.93	-314.93
580	C6H12O2	tert-BUTYL ACETATE	116.160	gas	-523.00	-339.00	-508.13	-324.13
581	C6H12O2	ETHYL n-BUTYRATE	116.160	gas	-485.50	-312.20	-470.63	-297.33
582	C6H12O2	ETHYL ISOBUTYRATE	116.160	gas	-499.60	-324.00	-484.73	-309.13
583	C6H12O2	ISOBUTYL ACETATE	116.160	gas	-494.70	-322.20	-479.83	-307.33
584	C6H12O2	n-PROPYL PROPIONATE	116.160	gas	-483.10	-309.90	-468.23	-295.03
585	C6H12O2	CYCLOHEXYL PEROXIDE	116.160	gas	-220.00	-28.30	-205.13	-13.43
586	C6H12O2	DIACETONE ALCOHOL	116.160	gas	-545.80	-371.00	-530.93	-356.13
587	C6H12O2	2-ETHYL BUTYRIC ACID	116.160	gas	-517.00	-338.00	-502.13	-323.13
588	C6H12O2	n-HEXANOIC ACID	116.160	gas	-513.60	-340.00	-498.73	-325.13
589	C6H12O3	2-ETHOXYETHYL ACETATE	132.159	gas	-611.00	-422.00	-594.89	-405.89
590	C6H12O3	HYDROXYCAPROIC ACID	132.159	gas	-683.00	-487.00	-666.89	-470.89
591	C6H12O3	PARALDEHYDE	132.159	gas	-645.30	-410.38	-629.19	-394.27

NO	FORMULA	NAME	Mol Wt g/mol	state	ΔH_f @298 kJ/mol	ΔG_f @298 kJ/mol	ΔU_f @298 kJ/mol	ΔA_f @298 kJ/mol
592	C6H12O3	sec-BUTYL GLYCOLATE	132.160	gas	-------	-------	-------	-------
593	C6H12S	THIACYCLOHEPTANE	116.221	gas	-61.34	84.06	-48.94	96.45
594	C6H13N	CYCLOHEXYLAMINE	99.176	gas	-104.90	82.31	-90.03	97.18
595	C6H13N	HEXAMETHYLENEIMINE	99.176	gas	-34.18	151.38	-19.31	166.25
596	C6H14	2,2-DIMETHYLBUTANE	86.177	gas	-185.56	-9.62	-170.69	5.25
597	C6H14	2,3-DIMETHYLBUTANE	86.177	gas	-177.78	-4.10	-162.91	10.77
598	C6H14	n-HEXANE	86.177	gas	-167.19	-0.25	-152.32	14.62
599	C6H14	2-METHYLPENTANE	86.177	gas	-174.31	-5.02	-159.43	9.85
600	C6H14	3-METHYLPENTANE	86.177	gas	-171.63	-2.13	-156.75	12.74
601	C6H14N2O2	LYSINE	146.189	gas	-461.00	-218.00	-441.17	-198.17
602	C6H14O	2-ETHYL-1-BUTANOL	102.177	gas	-326.10	-140.11	-309.99	-124.00
603	C6H14O	1-HEXANOL	102.177	gas	-319.62	-137.95	-303.50	-121.83
604	C6H14O	2-HEXANOL	102.177	gas	-333.50	-150.20	-317.39	-134.09
605	C6H14O	2-METHYL-1-PENTANOL	102.177	gas	-327.15	-143.00	-311.04	-126.89
606	C6H14O	4-METHYL-2-PENTANOL	102.177	gas	-342.42	-155.67	-326.31	-139.56
607	C6H14O	n-BUTYL ETHYL ETHER	102.177	gas	-292.40	-107.00	-276.29	-90.89
608	C6H14O	DIISOPROPYL ETHER	102.177	gas	-318.82	-121.88	-302.71	-105.77
609	C6H14O	DI-n-PROPYL ETHER	102.177	gas	-292.88	-105.56	-276.77	-89.45
610	C6H14O	METHYL tert-PENTYL ETHER	102.177	gas	-312.00	-120.00	-295.89	-103.89
611	C6H14O2	ACETAL	118.176	gas	-453.50	-245.00	-436.15	-227.65
612	C6H14O2	2-BUTOXYETHANOL	118.176	gas	-441.00	-240.00	-423.65	-222.65
613	C6H14O2	1,6-HEXANEDIOL	118.176	gas	-469.82	-266.49	-452.47	-249.14
614	C6H14O2	HEXYLENE GLYCOL	118.176	gas	-534.76	-327.00	-517.41	-309.65
615	C6H14O2S	DI-n-PROPYL SULFONE	150.242	gas	-468.30	-255.00	-450.95	-237.65
616	C6H14O3	DIETHYLENE GLYCOL DIMETHYL ETHER	134.175	gas	-511.00	-286.50	-492.41	-267.91
617	C6H14O3	DIPROPYLENE GLYCOL	134.175	gas	-628.00	-406.00	-609.41	-387.41
618	C6H14O3	2-(2-ETHOXYETHOXY)ETHANOL	134.175	gas	-565.00	-345.00	-546.41	-326.41
619	C6H14O3	TRIMETHYLOLPROPANE	134.175	gas	-640.19	-411.31	-621.60	-392.72
620	C6H14O4	TRIETHYLENE GLYCOL	150.175	gas	-725.09	-486.52	-705.26	-466.69
621	C6H14O6	SORBITOL	182.174	gas	-1140.00	-866.00	-1117.69	-843.69
622	C6H14S	n-HEXYLMERCAPTAN	118.243	gas	-128.99	27.82	-114.12	42.70
623	C6H14S	BUTYL-ETHYL-SULFIDE	118.237	gas	-125.19	32.01	-110.31	46.88
624	C6H14S	ISOPROPYL-SULFIDE	118.237	gas	-141.25	27.11	-126.38	41.99
625	C6H14S	METHYL-PENTYL-SULFIDE	118.237	gas	-122.76	35.10	-107.89	49.98
626	C6H14S	PROPYL-SULFIDE	118.237	gas	-125.35	33.22	-110.48	48.09
627	C6H14S2	PROPYL-DISULFIDE	150.297	gas	-117.19	36.99	-102.32	51.86
628	C6H15Al	TRIETHYL ALUMINUN	114.167	gas	-163.60	-------	-147.49	-------
629	C6H15Al2Cl3	ETHYL ALUMINUM SESQUICHLORIDE	247.506	gas	-------	-------	-------	-------
630	C6H15N	DIISOPROPYLAMINE	101.192	gas	-150.00	57.90	-132.65	75.25
631	C6H15N	DI-n-PROPYLAMINE	101.192	gas	-116.00	86.80	-98.65	104.15
632	C6H15N	n-HEXYLAMINE	101.192	gas	-133.00	66.30	-115.65	83.65
633	C6H15N	TRIETHYLAMINE	101.192	gas	-99.58	110.29	-82.23	127.64
634	C6H15NO	6-AMINOHEXANOL	117.191	gas	-283.00	-66.50	-264.41	-47.91
635	C6H15NO2	DIISOPROPANOLAMINE	133.191	gas	-454.00	-215.00	-434.17	-195.17
636	C6H15NO3	TRIETHANOLAMINE	149.190	gas	-562.08	-299.93	-541.01	-278.86
637	C6H15N3	N-AMINOETHYL PIPERAZINE	129.205	gas	25.10	279.00	44.93	298.83
638	C6H15O4P	TRIETHYL PHOSPHATE	182.156	gas	-1244.70	-------	-1223.63	-------
639	C6H16N2	HEXAMETHYLENEDIAMINE	116.207	gas	-98.83	138.51	-79.00	158.34
640	C6H18N3OP	HEXAMETHYL PHOSPHORAMIDE	179.202	gas	-467.00	-------	-442.21	-------
641	C6H18N4	TRIETHYLENE TETRAMINE	146.236	gas	3.35	310.00	28.14	334.79
642	C6H18OSi2	HEXAMETHYLDISILOXANE	162.379	gas	-777.72	-534.80	-756.65	-513.73
643	C6H18O3Si3	HEXAMETHYLCYCLOTRISILOXANE	222.464	gas	-1770.00	-------	-1746.45	-------
644	C6H19NSi2	HEXAMETHYLDISILAZANE	161.395	gas	-476.60	-------	-454.29	-------
645	C7H3ClF3NO2	4-CHLORO-3-NITROBENZOTRIFLUORIDE	225.554	gas	-634.25	-488.67	-624.33	-478.75
646	C7H3Cl2F3	2,4-DICHLOROBENZOTRIFLUORIDE	215.001	gas	-651.45	-555.01	-644.01	-547.57
647	C7H3Cl2NO	3,4-DICHLOROPHENYL ISOCYANATE	188.012	gas	-2.97	71.90	3.23	78.10
648	C7H4ClF3	p-CHLOROBENZOTRIFLUORIDE	180.557	gas	-619.65	-526.08	-612.21	-518.64
649	C7H4Cl2O	m-CHLOROBENZOYL CHLORIDE	175.014	gas	-165.31	-97.80	-159.11	-91.60
650	C7H4F3NO2	3-NITROBENZOTRIFLUORIDE	191.110	gas	-602.00	-461.00	-592.08	-451.08
651	C7H5ClO	BENZOYL CHLORIDE	140.569	gas	-105.30	-41.97	-99.10	-35.77
652	C7H5ClO2	o-CHLOROBENZOIC ACID	156.568	gas	-325.00	-240.53	-317.56	-233.09
653	C7H5Cl3	BENZOTRICHLORIDE	195.475	gas	-12.34	76.98	-4.91	84.42
654	C7H5F3	BENZOTRIFLUORIDE	146.112	gas	-600.07	-511.28	-592.63	-503.85
655	C7H5N	BENZONITRILE	103.123	gas	218.82	260.87	223.78	265.83
656	C7H5NO	PHENYL ISOCYANATE	119.123	gas	51.40	116.00	57.60	122.20
657	C7H5N3O6	2,4,6-TRINITROTOLUENE	227.133	gas	-67.10	-------	-52.23	-------

NO	FORMULA	NAME	Mol Wt g/mol	state	ΔH_f @298 kJ/mol	ΔG_f @298 kJ/mol	ΔU_f @298 kJ/mol	ΔA_f @298 kJ/mol
658	C7H6Cl2	BENZYL DICHLORIDE	161.030	gas	13.00	93.20	20.44	100.64
659	C7H6Cl2	2,4-DICHLOROTOLUENE	161.030	gas	-13.60	68.66	-6.16	76.10
660	C7H6N2O4	2,4-DINITROTOLUENE	182.136	gas	-64.20	-------	-51.81	-------
661	C7H6N2O4	2,5-DINITROTOLUENE	182.136	gas	-34.00	-------	-21.61	-------
662	C7H6N2O4	2,6-DINITROTOLUENE	182.136	gas	-51.10	-------	-38.71	-------
663	C7H6N2O4	3,4-DINITROTOLUENE	182.136	gas	-14.00	-------	-1.61	-------
664	C7H6N2O4	3,5-DINITROTOLUENE	182.136	gas	-43.00	-------	-30.61	-------
665	C7H6O	BENZALDEHYDE	106.124	gas	-36.80	22.40	-30.60	28.60
666	C7H6O2	BENZOIC ACID	122.123	gas	-290.20	-210.41	-282.77	-202.98
667	C7H6O2	p-HYDROXYBENZALDEHYDE	122.123	gas	-213.00	-139.00	-205.56	-131.56
668	C7H6O2	SALICYLALDEHYDE	122.123	gas	-214.95	-140.73	-207.51	-133.29
669	C7H6O3	SALICYLIC ACID	138.123	gas	-466.35	-365.21	-457.67	-356.53
670	C7H7Br	p-BROMOTOLUENE	171.037	gas	80.40	143.00	86.60	149.20
671	C7H7Cl	BENZYL CHLORIDE	126.585	gas	18.70	92.40	26.14	99.84
672	C7H7Cl	o-CHLOROTOLUENE	126.585	gas	18.20	95.90	25.64	103.34
673	C7H7Cl	p-CHLOROTOLUENE	126.585	gas	18.20	97.70	25.64	105.14
674	C7H7F	p-FLUOROTOLUENE	110.131	gas	-148.03	-70.88	-140.59	-63.44
675	C7H7NO	FORMANILIDE	121.139	gas	-55.20	54.10	-46.52	62.78
676	C7H7NO2	m-NITROTOLUENE	137.138	gas	20.80	143.00	30.72	152.92
677	C7H7NO2	o-NITROTOLUENE	137.138	gas	45.50	168.00	55.42	177.92
678	C7H7NO2	p-NITROTOLUENE	137.138	gas	31.00	155.00	40.92	164.92
679	C7H7NO3	o-NITROANISOLE	153.138	gas	-84.50	64.40	-73.35	75.55
680	C7H8	TOLUENE	92.141	gas	50.00	122.01	57.44	129.44
681	C7H8	1,3,5-CYCLOHEPTATRIENE	92.140	gas	181.88	255.39	189.31	262.83
682	C7H8O	ANISOLE	108.140	gas	-68.00	22.63	-59.32	31.31
683	C7H8O	BENZYL ALCOHOL	108.140	gas	-100.40	-11.10	-91.72	-2.43
684	C7H8O	m-CRESOL	108.140	gas	-132.34	-40.54	-123.66	-31.87
685	C7H8O	o-CRESOL	108.140	gas	-128.62	-37.07	-119.94	-28.39
686	C7H8O	p-CRESOL	108.140	gas	-125.39	-30.88	-116.72	-22.20
687	C7H8O2	GUAIACOL	124.139	gas	-249.00	-139.00	-239.08	-129.08
688	C7H8O2	p-METHOXYPHENOL	124.139	gas	-249.00	-139.00	-239.08	-129.08
689	C7H9N	BENZYLAMINE	107.155	gas	62.23	171.00	72.15	180.92
690	C7H9N	2,6-DIMETHYLPYRIDINE	107.155	gas	58.70	168.40	68.62	178.32
691	C7H9N	N-METHYLANILINE	107.155	gas	88.00	202.00	97.92	211.92
692	C7H9N	m-TOLUIDINE	107.155	gas	64.00	174.00	73.92	183.92
693	C7H9N	o-TOLUIDINE	107.155	gas	58.00	170.00	67.92	179.92
694	C7H9N	p-TOLUIDINE	107.155	gas	45.00	155.00	54.92	164.92
695	C7H10	2-NORBORNENE	94.156	gas	90.00	203.00	99.92	212.92
696	C7H10N2	TOLUENEDIAMINE	122.170	gas	58.37	203.54	70.76	215.93
697	C7H11NO	CYCLOHEXYL ISOCYANATE	125.170	gas	-140.00	32.80	-126.37	46.43
698	C7H12	1-HEPTYNE	96.172	gas	103.01	226.94	115.40	239.33
699	C7H12O2	n-BUTYL ACRYLATE	128.171	gas	-395.05	-233.00	-380.18	-218.13
700	C7H12O2	ISOBUTYL ACRYLATE	128.171	gas	-394.00	-229.00	-379.13	-214.13
701	C7H12O2	n-PROPYL METHACRYLATE	128.171	gas	-402.00	-239.00	-387.13	-224.13
702	C7H12O4	DIETHYL MALONATE	160.170	gas	-781.00	-578.00	-763.65	-560.65
703	C7H14	CYCLOHEPTANE	98.188	gas	-119.33	63.01	-104.45	77.88
704	C7H14	1,1-DIMETYLCYCLOPENTANE	98.188	gas	-138.28	39.04	-123.41	53.91
705	C7H14	cis-1,2-DIMETHYLCYCLOPENTANE	98.188	gas	-129.54	45.73	-114.66	60.60
706	C7H14	trans-1,2-DIMETHYLCYCLOPENTANE	98.188	gas	-136.69	38.37	-121.82	53.24
707	C7H14	cis-1,3-DIMETHYLCYCLOPENTANE	98.188	gas	-135.85	39.20	-120.98	54.08
708	C7H14	trans-1,3-DIMETHYLCYCLOPENTANE	98.188	gas	-133.60	41.46	-118.72	56.34
709	C7H14	ETHYLCYCLOPENTANE	98.188	gas	-127.07	44.56	-112.20	59.43
710	C7H14	2-ETHYL-1-PENTENE	98.188	gas	-74.64	84.62	-59.77	99.49
711	C7H14	3-ETHYL-1-PENTENE	98.188	gas	-64.10	96.65	-49.23	111.52
712	C7H14	1-HEPTENE	98.188	gas	-62.30	95.81	-47.43	110.69
713	C7H14	cis-2-HEPTENE	98.188	gas	-69.20	89.20	-54.33	104.07
714	C7H14	trans-2-HEPTENE	98.188	gas	-74.60	83.80	-59.73	98.67
715	C7H14	cis-3-HEPTENE	98.188	gas	-68.70	89.40	-53.83	104.27
716	C7H14	trans-3-HEPTENE	98.188	gas	-73.90	84.20	-59.03	99.07
717	C7H14	METHYLCYCLOHEXANE	98.188	gas	-154.77	27.28	-139.89	42.15
718	C7H14	2-METHYL-1-HEXENE	98.188	gas	-77.23	82.51	-62.36	97.38
719	C7H14	3-METHYL-1-HEXENE	98.188	gas	-66.69	92.33	-51.82	107.20
720	C7H14	4-METHYL-1-HEXENE	98.188	gas	-66.70	92.30	-51.83	107.17
721	C7H14	2,3,3-TRIMETHYL-1-BUTENE	98.188	gas	-85.50	85.57	-70.63	100.44
722	C7H14O	DIISOPROPYL KETONE	114.188	gas	-311.40	-132.00	-295.29	-115.89
723	C7H14O	2-HEPTANONE	114.188	gas	-300.45	-121.80	-284.34	-105.69

NO	FORMULA	NAME	Mol Wt g/mol	state	ΔH_f @298 kJ/mol	ΔG_f @298 kJ/mol	ΔU_f @298 kJ/mol	ΔA_f @298 kJ/mol
724	C7H14O	1-HEPTANAL	114.188	gas	-264.01	-86.65	-247.90	-70.54
725	C7H14O	1-METHYLCYCLOHEXANOL	114.188	gas	-332.00	-128.76	-315.89	-112.65
726	C7H14O	cis-2-METHYLCYCLOHEXANOL	114.188	gas	-327.00	-128.53	-310.89	-112.42
727	C7H14O	trans-2-METHYLCYCLOHEXANOL	114.188	gas	-352.60	-154.13	-336.49	-138.02
728	C7H14O	cis-3-METHYLCYCLOHEXANOL	114.188	gas	-350.90	-152.43	-334.79	-136.32
729	C7H14O	trans-3-METHYLCYCLOHEXANOL	114.188	gas	-329.10	-130.63	-312.99	-114.52
730	C7H14O	cis-4-METHYLCYCLOHEXANOL	114.188	gas	-347.50	-145.75	-331.39	-129.64
731	C7H14O	trans-4-METHYLCYCLOHEXANOL	114.188	gas	-367.20	-165.45	-351.09	-149.34
732	C7H14O	5-METHYL-2-HEXANONE	114.188	gas	-304.00	-122.00	-287.89	-105.89
733	C7H14O2	n-BUTYL PROPIONATE	130.187	gas	-502.60	-300.50	-485.25	-283.15
734	C7H14O2	ETHYL ISOVALERATE	130.187	gas	-527.00	-325.00	-509.65	-307.65
735	C7H14O2	ISOPENTYL ACETATE	130.187	gas	-511.90	-308.30	-494.55	-290.95
736	C7H14O2	n-PENTYL ACETATE	130.187	gas	-505.50	-303.50	-488.15	-286.15
737	C7H14O2	n-PROPYL n-BUTYRATE	130.187	gas	-505.30	-303.20	-487.95	-285.85
738	C7H14O2	n-HEPTANOIC ACID	130.187	gas	-534.60	-332.00	-517.25	-314.65
739	C7H14O3	ETHYL-3-ETHOXYPROPIONATE	146.186	gas	-633.00	-416.00	-614.41	-397.41
740	C7H15Br	1-BROMOHEPTANE	179.100	gas	-168.00	13.70	-151.89	29.81
741	C7H15N	N-METHYLCYCLOHEXYLAMINE	113.203	gas	-103.00	117.00	-85.65	134.35
742	C7H16	2,2-DIMETHYLPENTANE	100.204	gas	-206.15	0.08	-188.79	17.44
743	C7H16	2,3-DIMETHYLPENTANE	100.204	gas	-199.24	0.67	-181.89	18.02
744	C7H16	2,4-DIMETHYLPENTANE	100.204	gas	-202.00	3.10	-184.65	20.45
745	C7H16	3,3-DIMETHYLPENTANE	100.204	gas	-201.54	2.64	-184.19	19.99
746	C7H16	3-ETHYLPENTANE	100.204	gas	-189.66	11.00	-172.31	28.36
747	C7H16	n-HEPTANE	100.204	gas	-187.78	7.99	-170.43	25.34
748	C7H16	2-METHYLHEXANE	100.204	gas	-194.93	3.22	-177.58	20.57
749	C7H16	3-METHYLHEXANE	100.204	gas	-192.30	4.60	-174.94	21.95
750	C7H16	2,2,3-TRIMETHYLBUTANE	100.204	gas	-204.81	4.27	-187.46	21.62
751	C7H16O	1-HEPTANOL	116.203	gas	-334.85	-124.18	-316.25	-105.59
752	C7H16O	2-HEPTANOL	116.203	gas	-355.00	-143.00	-336.41	-124.41
753	C7H16O	5-METHYL-1-HEXANOL	116.203	gas	-342.00	-127.00	-323.41	-108.41
754	C7H16O	ISOPROPYL-TERT-BUTYL-ETHER	116.203	gas	-358.15	-128.83	-339.56	-110.23
755	C7H16S	n-HEPTYL MERCAPTAN	132.270	gas	-149.62	36.19	-132.27	53.54
756	C7H16S	BUTYL-PROPYL-SULFIDE	132.263	gas	-145.94	39.87	-128.59	57.23
757	C7H16S	ETHYL-PENTYL-SULFIDE	132.263	gas	-145.81	40.38	-128.46	57.73
758	C7H16S	HEXYL-METHYL-SULFIDE	132.263	gas	-143.39	43.47	-126.03	60.82
759	C7H17N	1-AMINOHEPTANE	115.219	gas	-153.00	75.32	-133.17	95.15
760	C8H4Cl2O2	ISOPHTHALOYL CHLORIDE	203.024	gas	-302.00	-221.00	-294.56	-213.56
761	C8H4O3	PHTHALIC ANHYDRIDE	148.118	gas	-393.13	-329.00	-386.93	-322.80
762	C8H6	ETHYNYLBENZENE	102.135	gas	327.27	361.75	332.23	366.71
763	C8H6O4	ISOPHTHALIC ACID	166.133	gas	-696.30	-575.59	-686.38	-565.67
764	C8H6O4	PHTHALIC ACID	166.133	gas	-663.33	-542.48	-653.41	-532.56
765	C8H6O4	TEREPHTHALIC ACID	166.133	gas	-717.90	-599.00	-707.98	-589.08
766	C8H6S	BENZOTHIOPHENE	134.202	gas	166.30	243.00	171.26	247.96
767	C8H7N	INDOLE	117.150	gas	156.60	237.30	164.04	244.74
768	C8H8	STYRENE	104.152	gas	147.36	213.80	154.80	221.24
769	C8H8	1,3,5,7-CYCLOOCTATETRAENE	104.151	gas	298.03	369.91	305.46	377.34
770	C8H8O	ACETOPHENONE	120.151	gas	-86.60	-1.27	-77.92	7.41
771	C8H8O	p-TOLUALDEHYDE	120.151	gas	-70.70	13.30	-62.02	21.98
772	C8H8O2	METHYL BENZOATE	136.150	gas	-287.90	-181.00	-277.98	-171.08
773	C8H8O2	o-TOLUIC ACID	136.150	gas	-322.80	-213.35	-312.88	-203.43
774	C8H8O2	p-TOLUIC ACID	136.150	gas	-322.80	-213.35	-312.88	-203.43
775	C8H8O3	METHYL SALICYLATE	152.150	gas	-464.30	-339.00	-453.15	-327.85
776	C8H8O3	VANILLIN	152.150	gas	-369.00	-247.00	-357.85	-235.85
777	C8H9NO	ACETANILIDE	135.166	gas	-128.50	9.47	-117.35	20.62
778	C8H10	ETHYLBENZENE	106.167	gas	29.79	130.58	39.71	140.50
779	C8H10	m-XYLENE	106.167	gas	17.24	118.87	27.15	128.78
780	C8H10	o-XYLENE	106.167	gas	19.00	122.09	28.91	132.00
781	C8H10	p-XYLENE	106.167	gas	17.95	121.13	27.86	131.04
782	C8H10O	m-ETHYLPHENOL	122.167	gas	-------	-------	-------	-------
783	C8H10O	p-ETHYLPHENOL	122.167	gas	-144.05	-21.58	-132.90	-10.43
784	C8H10O	PHENETOLE	122.167	gas	-101.70	17.35	-90.55	28.50
785	C8H10O	2-PHENYLETHANOL	122.167	gas	-121.00	-2.85	-109.85	8.30
786	C8H10O	2,3-XYLENOL	122.167	gas	-157.19	-33.35	-146.04	-22.20
787	C8H10O	2,4-XYLENOL	122.167	gas	-162.88	-42.56	-151.73	-31.40
788	C8H10O	2,5-XYLENOL	122.167	gas	-161.63	-39.67	-150.48	-28.52
789	C8H10O	2,6-XYLENOL	122.167	gas	-161.75	-39.04	-150.60	-27.89

NO	FORMULA	NAME	Mol Wt g/mol	state	ΔH_f @298 kJ/mol	ΔG_f @298 kJ/mol	ΔU_f @298 kJ/mol	ΔA_f @298 kJ/mol
790	C8H10O	3,4-XYLENOL	122.167	gas	-156.56	-34.28	-145.41	-23.13
791	C8H10O	3,5-XYLENOL	122.167	gas	-161.54	-39.41	-150.39	-28.26
792	C8H11N	N,N-DIMETHYLANILINE	121.182	gas	100.50	247.73	112.89	260.12
793	C8H11N	o-ETHYLANILINE	121.182	gas	33.30	170.00	45.69	182.39
794	C8H11N	2,4,6-TRIMETHYLPYRIDINE	121.182	gas	23.50	138.00	35.89	150.39
795	C8H11NO	p-PHENETIDINE	137.181	gas	-103.00	53.60	-89.37	67.23
796	C8H12	1,5-CYCLOOCTADIENE	108.183	gas	102.00	245.00	114.39	257.39
797	C8H12	VINYLCYCLOHEXENE	108.183	gas	65.10	200.00	77.49	212.39
798	C8H12O4	1,4-CYCLOHEXANEDICARBOXYLIC ACID	172.181	gas	-877.00	-643.00	-859.65	-625.65
799	C8H12O4	DIETHYL MALEATE	172.181	gas	-740.00	-544.00	-722.65	-526.65
800	C8H14O2	n-BUTYL METHACRYLATE	142.198	gas	-422.00	-231.00	-404.65	-213.65
801	C8H14O3	BUTYRIC ANHYDRIDE	158.197	gas	-660.65	-446.00	-642.06	-427.41
802	C8H14O4	DIETHYL SUCCINATE	174.197	gas	-851.00	-618.00	-831.17	-598.17
803	C8H16	CYCLOOCTANE	112.214	gas	-125.77	89.91	-108.42	107.27
804	C8H16	1,1-DIMETHYLCYCLOHEXANE	112.215	gas	-181.00	35.23	-163.65	52.58
805	C8H16	cis-1,2-DIMETHYLCYCLOHEXANE	112.215	gas	-172.17	41.21	-154.82	58.56
806	C8H16	trans-1,2-DIMETHYLCYCLOHEXANE	112.215	gas	-180.00	34.48	-162.64	51.83
807	C8H16	cis-1,3-DIMETHYLCYCLOHEXANE	112.215	gas	-184.77	29.83	-167.41	47.18
808	C8H16	trans-1,3-DIMETHYLCYCLOHEXANE	112.215	gas	-176.56	36.32	-159.21	53.67
809	C8H16	cis-1,4-DIMETHYLCYCLOHEXANE	112.215	gas	-176.65	37.95	-159.30	55.30
810	C8H16	trans-1,4-DIMETHYLCYCLOHEXANE	112.215	gas	-184.60	31.71	-167.25	49.07
811	C8H16	ETHYLCYCLOHEXANE	112.215	gas	-171.75	39.25	-154.40	56.60
812	C8H16	2-ETHYL-1-HEXENE	112.215	gas	-97.00	91.28	-79.65	108.63
813	C8H16	1-METHYL-1-ETHYLCYCLOPENTANE	112.215	gas	-154.90	50.67	-137.55	68.02
814	C8H16	1-OCTENE	112.215	gas	-82.93	104.22	-65.58	121.58
815	C8H16	trans-2-OCTENE	112.215	gas	-95.30	92.10	-77.95	109.45
816	C8H16	trans-3-OCTENE	112.215	gas	-94.60	92.20	-77.25	109.55
817	C8H16	trans-4-OCTENE	112.215	gas	-94.60	94.00	-77.25	111.35
818	C8H16	n-PROPYLCYCLOPENTANE	112.215	gas	-148.07	52.59	-130.72	69.94
819	C8H16	2,4,4-TRIMETHYL-1-PENTENE	112.215	gas	-110.40	86.80	-93.05	104.15
820	C8H16	2,4,4-TRIMETHYL-2-PENTENE	112.215	gas	-104.90	93.50	-87.55	110.85
821	C8H16O	2-ETHYLHEXANAL	128.214	gas	-299.60	-91.49	-281.01	-72.90
822	C8H16O	1-OCTANAL	128.214	gas	-289.66	-83.30	-271.07	-64.71
823	C8H16O	2-OCTANONE	128.214	gas	-321.60	-113.80	-303.01	-95.21
824	C8H16O2	n-BUTYL n-BUTYRATE	144.214	gas	-524.90	-294.10	-505.07	-274.27
825	C8H16O2	n-HEXYL ACETATE	144.214	gas	-526.30	-295.30	-506.47	-275.47
826	C8H16O2	ISOBUTYL ISOBUTYRATE	144.214	gas	-547.00	-313.00	-527.17	-293.17
827	C8H16O2	n-OCTANOIC ACID	144.214	gas	-556.00	-325.00	-536.17	-305.17
828	C8H16O4	DIETHYLENE GLYCOL ETHYL ETHER ACETATE	176.213	gas	-776.00	-510.78	-753.69	-488.47
829	C8H18	2,2-DIMETHYLHEXANE	114.231	gas	-224.72	10.71	-204.89	30.54
830	C8H18	2,3-DIMETHYLHEXANE	114.231	gas	-213.93	17.70	-194.10	37.53
831	C8H18	2,4-DIMETHYLHEXANE	114.231	gas	-219.41	11.72	-199.58	31.55
832	C8H18	2,5-DIMETHYLHEXANE	114.231	gas	-222.63	10.46	-202.80	30.29
833	C8H18	3,3-DIMETHYLHEXANE	114.231	gas	-220.12	13.26	-200.29	33.09
834	C8H18	3,4-DIMETHYLHEXANE	114.231	gas	-213.01	17.32	-193.18	37.15
835	C8H18	3-ETHYLHEXANE	114.231	gas	-210.87	16.53	-191.04	36.36
836	C8H18	3-ETHYL-2-METHYLPENTANE	114.230	gas	-211.21	21.25	-191.38	41.09
837	C8H18	3-METHYL-3-ETHYLPENTANE	114.231	gas	-214.97	19.92	-195.14	39.75
838	C8H18	2-METHYLHEPTANE	114.231	gas	-215.48	12.76	-195.65	32.59
839	C8H18	3-METHYLHEPTANE	114.231	gas	-212.63	13.72	-192.80	33.55
840	C8H18	4-METHYLHEPTANE	114.231	gas	-212.09	16.74	-192.26	36.57
841	C8H18	n-OCTANE	114.231	gas	-208.45	16.40	-188.62	36.23
842	C8H18	2,2,3-TRIMETHYLPENTANE	114.231	gas	-220.12	17.11	-200.29	36.94
843	C8H18	2,2,4-TRIMETHYLPENTANE	114.231	gas	-224.14	13.68	-204.31	33.51
844	C8H18	2,3,3-TRIMETHYLPENTANE	114.231	gas	-216.44	18.91	-196.61	38.74
845	C8H18	2,3,4-TRIMETHYLPENTANE	114.231	gas	-217.44	18.91	-197.61	38.74
846	C8H18	2,2,3,3-TETRAMETHYLBUTANE	114.230	gas	-225.89	22.01	-206.06	41.84
847	C8H18O	DI-n-BUTYL ETHER	130.230	gas	-333.88	-88.53	-312.81	-67.46
848	C8H18O	DI-sec-BUTYL ETHER	130.230	gas	-360.66	-104.06	-339.59	-82.99
849	C8H18O	DI-tert-BUTYL ETHER	130.230	gas	-364.84	-97.70	-343.77	-76.63
850	C8H18O	2-ETHYL-1-HEXANOL	130.230	gas	-365.30	-118.88	-344.23	-97.81
851	C8H18O	1-OCTANOL	130.230	gas	-357.06	-117.36	-335.99	-96.29
852	C8H18O	2-OCTANOL	130.230	gas	-376.10	-135.00	-355.03	-113.93
853	C8H18O2	DI-t-BUTYL PEROXIDE	146.230	gas	-341.00	-63.40	-318.69	-41.09
854	C8H18O2S	DI-n-BUTYL SULFONE	178.296	gas	-509.80	-238.00	-487.49	-215.69
855	C8H18O3	DIETHYLENE GLYCOL DIETHYL ETHER	162.229	gas	-580.00	-299.00	-556.45	-275.45

NO	FORMULA	NAME	Mol Wt g/mol	state	ΔH_f @298 kJ/mol	ΔG_f @298 kJ/mol	ΔU_f @298 kJ/mol	ΔA_f @298 kJ/mol
856	C8H18O3	DIETHYLENE GLYCOL MONOBUTYL EHTER	162.229	gas	-606.00	-328.00	-582.45	-304.45
857	C8H18O4	TRIETHYLENE GLYCOL DIMETHYL ETHER	178.229	gas	-676.00	-375.00	-651.21	-350.21
858	C8H18O5	TETRAETHYLENE GLYCOL	194.228	gas	-882.32	-559.41	-856.29	-533.38
859	C8H18S	n-OCTYL MERCAPTAN	146.297	gas	-170.21	44.64	-150.37	64.47
860	C8H18S	tert-OCTYL MERCAPTAN	146.297	gas	-205.00	-28.50	-185.17	-8.67
861	C8H18S	BUTYL-SULFIDE	146.290	gas	-167.32	49.20	-147.49	69.03
862	C8H18S	ETHYL-HEXYL-SULFIDE	146.290	gas	-166.40	48.83	-146.57	68.66
863	C8H18S	HEPTYL-METHYL-SULFIDE	146.290	gas	-163.97	51.92	-144.14	71.75
864	C8H18S	PENTYL-PROPYL-SULFIDE	146.290	gas	-166.57	48.24	-146.73	68.07
865	C8H18S2	BUTYL-DISULFIDE	178.350	gas	-158.41	53.85	-138.58	73.68
866	C8H19N	DI-n-BUTYLAMINE	129.246	gas	-156.60	104.00	-134.29	126.31
867	C8H19N	DIISOBUTYLAMINE	129.246	gas	-179.20	88.20	-156.89	110.51
868	C8H19N	n-OCTYLAMINE	129.246	gas	-174.00	83.03	-151.69	105.34
869	C8H23N5	TETRAETHYLENEPENTAMINE	189.304	gas	12.60	413.08	44.82	445.30
870	C8H24O4Si4	OCTAMETHYLCYCLOTETRASILOXANE	296.618	gas	-2110.00	-------	-2077.78	-------
871	C9H4O5	TRIMELLITIC ANHYDRIDE	192.128	gas	-778.00	-636.00	-769.32	-627.32
872	C9H6N2O2	TOLUENE DIISOCYANATE	174.159	gas	-226.15	-95.58	-216.23	-85.67
873	C9H7N	ISOQUINOLINE	129.161	gas	208.40	279.70	215.84	287.14
874	C9H7N	QUINOLINE	129.161	gas	222.30	293.50	229.74	300.94
875	C9H7NO	8-HYDROXYQUINOLINE	145.161	gas	21.50	114.00	30.18	122.68
876	C9H8	INDENE	116.163	gas	163.28	233.97	170.72	241.41
877	C9H8O	2-METHYLBENZOFURAN	132.162	gas	-8.25	103.00	0.43	111.68
878	C9H10	INDANE	118.178	gas	60.70	201.00	70.62	210.92
879	C9H10	cis-PROPENYLBENZENE	118.178	gas	121.34	216.90	131.25	226.81
880	C9H10	trans-PROPENYLBENZENE	118.178	gas	117.15	213.72	127.07	223.63
881	C9H10	alpha-METHYLSTYRENE	118.178	gas	112.97	208.53	122.88	218.45
882	C9H10	m-METHYLSTYRENE	118.178	gas	115.48	209.28	125.39	219.20
883	C9H10	o-METHYLSTYRENE	118.178	gas	118.41	213.97	128.32	223.89
884	C9H10	p-METHYLSTYRENE	118.178	gas	114.64	210.20	124.56	220.12
885	C9H10O2	BENZYL ACETATE	150.177	gas	-309.16	-174.82	-296.77	-162.43
886	C9H10O2	ETHYL BENZOATE	150.177	gas	-284.00	-148.00	-271.61	-135.61
887	C9H10O3	ETHYL VANILLIN	166.177	gas	-404.00	-253.00	-390.37	-239.37
888	C9H11NO	p-DIMETHYLAMINOBENZALDEHYDE	149.192	gas	-27.90	131.00	-14.27	144.63
889	C9H12	CUMENE	120.194	gas	3.93	136.98	16.33	149.38
890	C9H12	m-ETHYLTOLUENE	120.194	gas	-1.92	126.44	10.47	138.83
891	C9H12	o-ETHYLTOLUENE	120.194	gas	1.21	131.08	13.61	143.48
892	C9H12	p-ETHYLTOLUENE	120.194	gas	-3.26	126.69	9.13	139.09
893	C9H12	MESITYLENE	120.194	gas	-16.07	117.95	-3.67	130.34
894	C9H12	n-PROPYLBENZENE	120.194	gas	7.82	137.24	20.22	149.63
895	C9H12	1,2,3-TRIMETHYLBENZENE	120.194	gas	-9.58	124.56	2.81	136.95
896	C9H12	1,2,4-TRIMETHYLBENZENE	120.194	gas	-13.93	116.94	-1.54	129.34
897	C9H12O	BENZYL ETHYL ETHER	136.194	gas	-115.00	33.70	-101.37	47.33
898	C9H12O	2-PHENYL-2-PROPANOL	136.194	gas	-305.00	-231.00	-291.37	-217.37
899	C9H12O2	CUMENE HYDROPEROXIDE	152.193	gas	-78.40	96.00	-63.53	110.87
900	C9H14O	ISOPHORONE	138.210	gas	-251.00	-58.30	-234.89	-42.19
901	C9H14O6	GLYCERYL TRIACETATE	218.207	gas	-1252.70	-983.00	-1230.39	-960.69
902	C9H16	1-NONYNE	124.225	gas	61.80	243.76	79.15	261.11
903	C9H16O4	AZELAIC ACID	188.224	gas	-927.00	-657.00	-904.69	-634.69
904	C9H18	BUTYLCYCLOPENTANE	126.241	gas	-168.28	61.38	-148.45	81.21
905	C9H18	cis,cis-1,3,5-TRIMETHYLCYCLOHEXANE	126.241	gas	-215.39	33.89	-195.56	53.72
906	C9H18	cis,trans-1,3,5-TRIMETHYLCYCLOHEXANE	126.241	gas	-206.56	39.87	-186.73	59.70
907	C9H18	ISOPROPYLCYCLOHEXANE	126.242	gas	-196.00	49.00	-176.17	68.83
908	C9H18	1-NONENE	126.242	gas	-103.51	112.68	-83.68	132.51
909	C9H18	n-PROPYLCYCLOHEXANE	126.242	gas	-193.30	47.32	-173.47	67.15
910	C9H18O	DIISOBUTYL KETONE	142.241	gas	-357.60	-113.00	-336.53	-91.93
911	C9H18O	1-NONANAL	142.241	gas	-310.29	-74.94	-289.22	-53.87
912	C9H18O2	n-BUTYL VALERATE	158.241	gas	-560.20	-303.80	-537.89	-281.49
913	C9H18O2	n-NONANOIC ACID	158.241	gas	-575.40	-315.00	-553.09	-292.69
914	C9H18O2	n-OCTYL FORMATE	158.241	gas	-510.60	-252.10	-488.29	-229.79
915	C9H20	3,3-DIETHYLPENTANE	128.258	gas	-231.96	35.06	-209.65	57.37
916	C9H20	2,2-DIMETHYL-3-ETHYLPENTANE	128.258	gas	-238.32	29.12	-216.01	51.43
917	C9H20	3-ETHYL-2,3-DIMETHYLPENTANE	128.257	gas	-233.55	31.17	-211.24	53.48
918	C9H20	2,4-DIMETHYL-3-ETHYLPENTANE	128.258	gas	-235.06	29.50	-212.75	51.81
919	C9H20	2,2-DIMETHYLHEPTANE	128.258	gas	-246.86	16.74	-224.55	39.05
920	C9H20	2,6-DIMETHYLHEPTANE	128.258	gas	-243.38	19.00	-221.07	41.30
921	C9H20	3-ETHYLHEPTANE	128.258	gas	-230.45	26.32	-208.15	48.63

NO	FORMULA	NAME	Mol Wt g/mol	state	ΔH_f @298 kJ/mol	ΔG_f @298 kJ/mol	ΔU_f @298 kJ/mol	ΔA_f @298 kJ/mol
922	C9H20	4-ETHYLHEPTANE	128.257	gas	-230.45	26.32	-208.15	48.63
923	C9H20	2,3-DIMETHYLHEPTANE	128.257	gas	-235.64	23.30	-213.33	45.61
924	C9H20	2,4-DIMETHYLHEPTANE	128.257	gas	-240.50	18.45	-218.19	40.76
925	C9H20	2,5-DIMETHYLHEPTANE	128.257	gas	-240.50	18.45	-218.19	40.76
926	C9H20	3,4-DIMETHYLHEPTANE	128.257	gas	-232.76	25.31	-210.45	47.62
927	C9H20	3,5-DIMETHYLHEPTANE	128.257	gas	-237.61	22.18	-215.30	44.48
928	C9H20	4,4-DIMETHYLHEPTANE	128.257	gas	-241.58	21.00	-219.27	43.31
929	C9H20	3-ETHYL-2-METHYLHEXANE	128.257	gas	-232.76	26.19	-210.45	48.50
930	C9H20	4-ETHYL-2-METHYLHEXANE	128.257	gas	-237.61	23.05	-215.30	45.36
931	C9H20	3-ETHYL-3-METHYLHEXANE	128.257	gas	-236.31	24.56	-214.00	46.87
932	C9H20	3-ETHYL-4-METHYLHEXANE	128.257	gas	-229.87	29.08	-207.56	51.39
933	C9H20	2,2,3-TRIMETHYLHEXANE	128.257	gas	-241.21	24.52	-218.90	46.83
934	C9H20	2,2,4-TRIMETHYLHEXANE	128.257	gas	-243.22	22.51	-220.91	44.82
935	C9H20	2,3,3-TRIMETHYLHEXANE	128.257	gas	-238.82	25.90	-216.51	48.21
936	C9H20	2,3,4-TRIMETHYLHEXANE	128.257	gas	-235.06	26.90	-212.75	49.21
937	C9H20	2,3,5-TRIMETHYLHEXANE	128.257	gas	-242.80	21.76	-220.49	44.07
938	C9H20	2,4,4-TRIMETHYLHEXANE	128.257	gas	-240.83	23.89	-218.52	46.20
939	C9H20	3,3,4-TRIMETHYLHEXANE	128.257	gas	-235.94	27.07	-213.63	49.38
940	C9H20	2-METHYLOCTANE	128.258	gas	-236.19	20.59	-213.88	42.89
941	C9H20	3-METHYLOCTANE	128.258	gas	-233.34	21.71	-211.03	44.02
942	C9H20	4-METHYLOCTANE	128.258	gas	-233.34	21.71	-211.03	44.02
943	C9H20	n-NONANE	128.258	gas	-229.03	24.81	-206.72	47.12
944	C9H20	2,2,3,3-TETRAMETHYLPENTANE	128.258	gas	-237.23	34.31	-214.92	56.62
945	C9H20	2,2,3,4-TETRAMETHYLPENTANE	128.258	gas	-236.98	32.64	-214.67	54.94
946	C9H20	2,2,4,4-TETRAMETHYLPENTANE	128.258	gas	-241.96	34.02	-219.65	56.33
947	C9H20	2,3,3,4-TETRAMETHYLPENTANE	128.257	gas	-236.23	34.10	-213.92	56.41
948	C9H20	2,2,5-TRIMETHYLHEXANE	128.258	gas	-254.01	13.43	-231.70	35.74
949	C9H20O	2,6-DIMETHYL-4-HEPTANOL	144.257	gas	-410.00	-130.00	-386.45	-106.45
950	C9H20O	1-NONANOL	144.257	gas	-386.89	-118.20	-363.35	-94.65
951	C9H20O	2-NONANOL	144.257	gas	-398.00	-126.00	-374.45	-102.45
952	C9H20S	n-NONYL MERCAPTAN	160.324	gas	-190.83	53.01	-168.52	75.32
953	C9H20S	BUTYL-PENTYL-SULFIDE	160.317	gas	-187.95	55.90	-165.64	78.21
954	C9H20S	ETHYL-HEPTYL-SULFIDE	160.317	gas	-187.02	57.20	-164.72	79.50
955	C9H20S	HEXYL-PROPYL-SULFIDE	160.317	gas	-187.15	56.69	-164.84	79.00
956	C9H20S	METHYL-OCTYL-SULFIDE	160.317	gas	-184.60	60.33	-162.29	82.64
957	C9H21N	n-NONYLAMINE	143.272	gas	-195.00	91.04	-170.21	115.83
958	C9H21N	TRIPROPYLAMINE	143.272	gas	-161.00	133.69	-136.21	158.48
959	C10H6O8	PYROMELLITIC ACID	254.153	gas	-1480.00	-1290.00	-1465.13	-1275.13
960	C10H7Br	1-BROMONAPHTHALENE	207.070	gas	182.00	242.97	188.20	249.17
961	C10H7Cl	1-CHLORONAPHTHALENE	162.618	gas	119.80	195.00	127.24	202.44
962	C10H8	NAPHTHALENE	128.174	gas	150.96	223.59	158.40	231.03
963	C10H8	AZULENE	128.173	gas	279.91	351.87	287.35	359.31
964	C10H9N	QUINALDINE	143.188	gas	177.00	294.00	186.92	303.92
965	C10H10	m-DIVINYLBENZENE	130.189	gas	212.00	300.92	221.92	310.84
966	C10H10	1-METHYLINDENE	130.189	gas	122.00	228.00	131.92	237.92
967	C10H10	2-METHYLINDENE	130.189	gas	115.00	219.00	124.92	228.92
968	C10H10O4	DIMETHYL PHTHALATE	194.187	gas	-663.00	-526.00	-648.13	-511.13
969	C10H10O4	DIMETHYL TEREPHTHALATE	194.187	gas	-637.00	-474.00	-622.13	-459.13
970	C10H12	DICYCLOPENTADIENE	132.205	gas	196.10	375.00	208.49	387.39
971	C10H12	1,2,3,4-TETRAHYDRONAPHTHALENE	132.205	gas	26.61	167.10	39.00	179.49
972	C10H12O	ANETHOLE	148.205	gas	-41.50	101.00	-27.87	114.63
973	C10H12O4	DIALLYL MALEATE	196.203	gas	-517.00	-335.00	-499.65	-317.65
974	C10H14	n-BUTYLBENZENE	134.221	gas	-13.81	144.68	1.07	159.56
975	C10H14	sec-BUTYLBENZENE	134.221	gas	-16.90	145.20	-2.03	160.07
976	C10H14	tert-BUTYLBENZENE	134.221	gas	-21.63	149.90	-6.76	164.77
977	C10H14	1,2,3,4-TETRAMETHYLBENZENE	134.221	gas	-41.92	123.43	-27.05	138.30
978	C10H14	m-CYMENE	134.221	gas	-30.90	130.10	-16.03	144.97
979	C10H14	o-CYMENE	134.221	gas	-26.40	136.00	-11.53	150.87
980	C10H14	p-CYMENE	134.221	gas	-29.00	133.50	-14.13	148.37
981	C10H14	m-DIETHYLBENZENE	134.221	gas	-21.84	136.69	-6.97	151.56
982	C10H14	o-DIETHYLBENZENE	134.221	gas	-18.95	141.08	-4.08	155.96
983	C10H14	p-DIETHYLBENZENE	134.221	gas	-22.26	137.86	-7.39	152.74
984	C10H14	2-ETHYL-m-XYLENE	134.221	gas	-26.23	137.90	-11.36	152.77
985	C10H14	2-ETHYL-p-XYLENE	134.221	gas	-32.18	127.30	-17.31	142.17
986	C10H14	3-ETHYL-o-XYLENE	134.221	gas	-25.65	138.40	-10.78	153.27
987	C10H14	4-ETHYL-m-XYLENE	134.221	gas	-30.80	128.60	-15.93	143.47

NO	FORMULA	NAME	Mol Wt g/mol	state	ΔH_f @298 kJ/mol	ΔG_f @298 kJ/mol	ΔU_f @298 kJ/mol	ΔA_f @298 kJ/mol
988	C10H14	4-ETHYL-o-XYLENE	134.221	gas	-32.09	127.40	-17.22	142.27
989	C10H14	5-ETHYL-m-XYLENE	134.221	gas	-35.40	127.20	-20.53	142.07
990	C10H14	ISOBUTYLBENZENE	134.221	gas	-20.34	140.00	-5.47	154.87
991	C10H14	1,2,3,5-TETRAMETHYLBENZENE	134.221	gas	-44.81	118.74	-29.94	133.61
992	C10H14	1,2,4,5-TETRAMETHYLBENZENE	134.221	gas	-45.27	119.45	-30.40	134.33
993	C10H14O	p-tert-BUTYLPHENOL	150.221	gas	-200.00	-13.10	-183.89	3.01
994	C10H14O2	p-tert-BUTYLCATECHOL	166.220	gas	-376.00	-168.00	-358.65	-150.65
995	C10H15N	N,N-DIETYHLANILINE	149.236	gas	40.20	262.40	57.55	279.75
996	C10H15N	2,6-DIETHYLANILINE	149.236	gas	-20.50	176.00	-3.15	193.35
997	C10H16	CAMPHENE	136.237	gas	-28.60	-------	-11.25	-------
998	C10H16	D-LIMONENE	136.237	gas	-6.40	-------	10.95	-------
999	C10H16	alpha-PHELLANDRENE	136.237	gas	-9.30	191.00	8.05	208.35
1000	C10H16	beta-PHELLANDRENE	136.237	gas	-5.66	197.00	11.69	214.35
1001	C10H16	alpha-PINENE	136.237	gas	28.30	216.00	45.65	233.35
1002	C10H16	beta-PINENE	136.237	gas	38.70	247.00	56.05	264.35
1003	C10H16	alpha-TERPINENE	136.237	gas	-20.60	178.00	-3.25	195.35
1004	C10H16	gamma-TERPINENE	136.237	gas	-11.70	181.00	5.65	198.35
1005	C10H16	TERPINOLENE	136.237	gas	-------	-------	-------	-------
1006	C10H16O	CAMPHOR	152.236	gas	-257.00	-14.50	-238.41	4.09
1007	C10H18	1-DECYNE	138.252	gas	41.21	252.21	61.04	272.04
1008	C10H18	cis-DECAHYDRONANPHTALENE	138.253	gas	-168.95	85.81	-149.12	105.64
1009	C10H18	trans-DECAHYDRONAPHTHALENE	138.253	gas	-182.30	73.43	-162.47	93.26
1010	C10H18O4	SEBACIC ACID	202.251	gas	-921.90	-623.00	-897.11	-598.21
1011	C10H20	n-BUTYLCYCLOHEXANE	140.269	gas	-213.17	56.44	-190.87	78.75
1012	C10H20	1-CYCLOPENTYLPENTANE	140.268	gas	-188.91	69.79	-166.60	92.10
1013	C10H20	1-DECENE	140.269	gas	-124.14	121.04	-101.83	143.35
1014	C10H20O	1-DECANAL	156.268	gas	-330.91	-66.53	-307.36	-42.98
1015	C10H20O2	n-DECANOIC ACID	172.268	gas	-594.30	-305.00	-569.51	-280.21
1016	C10H20O2	2-ETHYLHEXYL ACETATE	172.268	gas	-570.00	-283.00	-545.21	-258.21
1017	C10H20O2	ISOPENTYL ISOVALERATE	172.268	gas	-583.00	-291.07	-558.21	-266.28
1018	C10H22	n-DECANE	142.285	gas	-249.66	33.22	-224.87	58.01
1019	C10H22	2,2-DIMETHYLOCTANE	142.285	gas	-256.81	29.08	-232.03	53.87
1020	C10H22	2-METHYLNONANE	142.285	gas	-253.97	30.21	-229.18	55.00
1021	C10H22	3-ETHYLOCTANE	142.285	gas	-253.97	30.21	-229.18	55.00
1022	C10H22	4-ETHYLOCTANE	142.285	gas	-253.97	31.92	-229.18	56.71
1023	C10H22	2,3-DIMETHYLOCTANE	142.284	gas	-251.08	34.81	-226.29	59.60
1024	C10H22	2,4-DIMETHYLOCTANE	142.284	gas	-251.08	33.10	-226.29	57.88
1025	C10H22	2,5-DIMETHYLOCTANE	142.285	gas	-267.48	25.23	-242.69	50.02
1026	C10H22	2,6-DIMETHYLOCTANE	142.284	gas	-261.12	26.94	-236.34	51.73
1027	C10H22	2,7-DIMETHYLOCTANE	142.284	gas	-256.27	31.80	-231.48	56.59
1028	C10H22	3,3-DIMETHYLOCTANE	142.284	gas	-261.12	26.94	-236.34	51.73
1029	C10H22	3,4-DIMETHYLOCTANE	142.284	gas	-261.12	26.94	-236.34	51.73
1030	C10H22	3,5-DIMETHYLOCTANE	142.284	gas	-264.01	27.49	-239.22	52.28
1031	C10H22	3,6-DIMETHYLOCTANE	142.284	gas	-262.21	27.78	-237.42	52.57
1032	C10H22	4,4-DIMETHYLOCTANE	142.284	gas	-253.38	33.81	-228.59	58.59
1033	C10H22	4,5-DIMETHYLOCTANE	142.284	gas	-258.24	28.95	-233.45	53.74
1034	C10H22	4-PROPYLHEPTANE	142.284	gas	-258.24	30.67	-233.45	55.46
1035	C10H22	4-ISOPROPYLHEPTANE	142.284	gas	-262.21	27.78	-237.42	52.57
1036	C10H22	3-ETHYL-2-METHYLHEPTANE	142.284	gas	-253.38	35.52	-228.59	60.31
1037	C10H22	4-ETHYL-2-METHYLHEPTANE	142.284	gas	-251.08	37.53	-226.29	62.32
1038	C10H22	5-ETHYL-2-METHYLHEPTANE	142.284	gas	-251.12	38.66	-226.34	63.45
1039	C10H22	3-ETHYL-3-METHYLHEPTANE	142.284	gas	-253.38	34.69	-228.59	59.47
1040	C10H22	4-ETHYL-3-METHYLHEPTANE	142.284	gas	-258.24	29.83	-233.45	54.62
1041	C10H22	3-ETHYL-5-METHYLHEPTANE	142.284	gas	-258.24	31.55	-233.45	56.34
1042	C10H22	3-ETHYL-4-METHYLHEPTANE	142.284	gas	-256.94	33.05	-232.15	57.84
1043	C10H22	4-ETHYL-4-METHYLHEPTANE	142.284	gas	-250.50	36.69	-225.71	61.48
1044	C10H22	2,2,3-TRIMETHYLHEPTANE	142.284	gas	-255.39	32.68	-230.60	57.47
1045	C10H22	2,2,4-TRIMETHYLHEPTANE	142.284	gas	-250.50	37.57	-225.71	62.36
1046	C10H22	3-METHYLNONANE	142.284	gas	-256.94	33.05	-232.15	57.84
1047	C10H22	2,2,5-TRIMETHYLHEPTANE	142.284	gas	-261.83	33.01	-237.05	57.80
1048	C10H22	2,2,6-TRIMETHYLHEPTANE	142.284	gas	-263.84	31.00	-239.05	55.79
1049	C10H22	2,3,3-TRIMETHYLHEPTANE	142.284	gas	-271.75	23.10	-246.96	47.88
1050	C10H22	2,3,4-TRIMETHYLHEPTANE	142.284	gas	-274.64	21.97	-249.85	46.75
1051	C10H22	2,3,5-TRIMETHYLHEPTANE	142.284	gas	-259.45	34.43	-234.66	59.22
1052	C10H22	2,3,6-TRIMETHYLHEPTANE	142.284	gas	-255.68	35.40	-230.90	60.18
1053	C10H22	2,4,4-TRIMETHYLHEPTANE	142.284	gas	-260.54	30.54	-235.75	55.33

NO	FORMULA	NAME	Mol Wt g/mol	state	ΔH_f @298 kJ/mol	ΔG_f @298 kJ/mol	ΔU_f @298 kJ/mol	ΔA_f @298 kJ/mol
1054	C10H22	2,4,5-TRIMETHYLHEPTANE	142.284	gas	-263.42	28.53	-238.64	53.32
1055	C10H22	2,4,6-TRIMETHYLHEPTANE	142.284	gas	-261.46	32.43	-236.67	57.21
1056	C10H22	2,5,5-TRIMETHYLHEPTANE	142.284	gas	-260.54	30.54	-235.75	55.33
1057	C10H22	3,3,4-TRIMETHYLHEPTANE	142.284	gas	-253.22	40.46	-228.43	65.25
1058	C10H22	3,3,5-TRIMETHYLHEPTANE	142.284	gas	-269.37	24.52	-244.58	49.31
1059	C10H22	3,4,4-TRIMETHYLHEPTANE	142.284	gas	-256.56	35.56	-231.77	60.35
1060	C10H22	3,4,5-TRIMETHYLHEPTANE	142.284	gas	-258.57	33.56	-233.78	58.34
1061	C10H22	3-ISOPROPYL-2-METHYLHEXANE	142.284	gas	-256.56	35.56	-231.77	60.35
1062	C10H22	3,3-DIETHYLHEXANE	142.284	gas	-252.84	38.24	-228.05	63.03
1063	C10H22	3,4-DIETHYLHEXANE	142.284	gas	-255.68	37.99	-230.90	62.78
1064	C10H22	3-ETHYL-2,2-DIMETHYLHEXANE	142.284	gas	-251.67	41.05	-226.88	65.83
1065	C10H22	4-ETHYL-2,2-DIMETHYLHEXANE	142.284	gas	-247.57	43.93	-222.78	68.72
1066	C10H22	3-ETHYL-2,3-DIMETHYLHEXANE	142.284	gas	-258.95	35.90	-234.16	60.69
1067	C10H22	4-ETHYL-2,3-DIMETHYLHEXANE	142.284	gas	-260.96	35.65	-236.17	60.44
1068	C10H22	3-ETHYL-2,4-DIMETHYLHEXANE	142.284	gas	-254.18	37.95	-229.39	62.74
1069	C10H22	4-ETHYL-2,4-DIMETHYLHEXANE	142.284	gas	-252.84	39.12	-228.05	63.91
1070	C10H22	3-ETHYL-2,5-DIMETHYLHEXANE	142.284	gas	-252.84	38.24	-228.05	63.03
1071	C10H22	4-ETHYL-3,3-DIMETHYLHEXANE	142.284	gas	-256.19	37.70	-231.40	62.49
1072	C10H22	3-ETHYL-3,4-DIMETHYLHEXANE	142.284	gas	-260.54	31.42	-235.75	56.21
1073	C10H22	4-METHYLNONANE	142.284	gas	-253.68	40.21	-228.89	65.00
1074	C10H22	2,2,3,3-TETRAMETHYLHEXANE	142.284	gas	-251.29	40.84	-226.50	65.62
1075	C10H22	2,2,3,4-TETRAMETHYLHEXANE	142.284	gas	-257.86	42.80	-233.07	67.59
1076	C10H22	2,2,3,5-TETRAMETHYLHEXANE	142.284	gas	-253.34	44.56	-228.55	69.35
1077	C10H22	2,2,4,4-TETRAMETHYLHEXANE	142.284	gas	-268.99	29.75	-244.20	54.54
1078	C10H22	2,2,4,5-TETRAMETHYLHEXANE	142.284	gas	-257.32	43.35	-232.53	68.13
1079	C10H22	2,2,5,5-TETRAMETHYLHEXANE	142.284	gas	-266.14	32.59	-241.36	57.38
1080	C10H22	2,3,3,4-TETRAMETHYLHEXANE	142.284	gas	-285.27	19.83	-260.48	44.62
1081	C10H22	2,3,3,5-TETRAMETHYLHEXANE	142.284	gas	-253.80	42.22	-229.01	67.00
1082	C10H22	2,3,4,4-TETRAMETHYLHEXANE	142.284	gas	-258.70	39.04	-233.91	63.82
1083	C10H22	2,3,4,5-TETRAMETHYLHEXANE	142.284	gas	-250.96	45.06	-226.17	69.85
1084	C10H22	3,3,4,4-TETRAMETHYLHEXANE	142.284	gas	-258.03	38.66	-233.24	63.45
1085	C10H22	2,4-DIMETHYL-3-ISOPROPYLPENTANE	142.284	gas	-252.59	47.07	-227.80	71.86
1086	C10H22	3,3-DIETHYL-2-METHYLPENTANE	142.284	gas	-258.03	42.26	-233.24	67.05
1087	C10H22	3-ETHYL-2,2,3-TRIMETHYLPENTANE	142.284	gas	-248.91	47.70	-224.12	72.49
1088	C10H22	3-ETHYL-2,2,4-TRIMETHYLPENTANE	142.284	gas	-252.59	46.36	-227.80	71.15
1089	C10H22	3-ETHYL-2,3,4-TRIMETHYLPENTANE	142.284	gas	-253.34	47.32	-228.55	72.11
1090	C10H22	2,2,3,3,4-PENTAMETHYLPENTANE	142.284	gas	-251.42	46.32	-226.63	71.11
1091	C10H22	2,2,3,4,4-PENTAMETHYLPENTANE	142.284	gas	-247.19	57.36	-222.40	82.15
1092	C10H22	5-METHYLNONANE	142.284	gas	-247.02	60.25	-222.24	85.04
1093	C10H22O	1-DECANOL	158.284	gas	-403.25	-105.52	-377.23	-79.49
1094	C10H22O	DI-n-PENTYL ETHER	158.284	gas	-374.00	-72.50	-347.97	-46.47
1095	C10H22O	ISODECANOL	158.284	gas	-409.00	-108.00	-382.97	-81.97
1096	C10H22O5	TETRAETHYLENE GLYCOL DIMETHYL ETHER	222.282	gas	-884.00	-503.00	-853.01	-472.01
1097	C10H22S	n-DECYL MERCAPTAN	174.351	gas	-211.46	61.42	-186.67	86.21
1098	C10H22S	BUTYL-HEXYL-SULFIDE	174.344	gas	-208.53	64.31	-183.74	89.10
1099	C10H22S	ETHYL-OCTYL-SULFIDE	174.344	gas	-207.65	65.61	-182.86	90.39
1100	C10H22S	HEPTYL-PROPYL-SULFIDE	174.344	gas	-207.78	65.06	-182.99	89.85
1101	C10H22S	METHYL-NONYL-SULFIDE	174.344	gas	-205.23	68.70	-180.44	93.49
1102	C10H22S	PENTYL-SULFIDE	174.344	gas	-208.53	66.07	-183.74	90.85
1103	C10H22S2	PENTYL-DISULFIDE	206.404	gas	-199.62	70.67	-174.83	95.46
1104	C10H23N	n-DECYLAMINE	157.299	gas	-215.00	99.76	-187.73	127.03
1105	C11H10	1-METHYLNAPHTHALENE	142.200	gas	116.86	217.69	126.77	227.61
1106	C11H10	2-METHYLNAPHTHALENE	142.200	gas	116.11	216.15	126.02	226.06
1107	C11H14O2	n-BUTYL BENZOATE	178.231	gas	-367.00	-175.00	-349.65	-157.65
1108	C11H16	n-PENTYLBENZENE	148.248	gas	-34.43	152.93	-17.08	170.28
1109	C11H16O	p-tert-AMYLPHENOL	164.247	gas	-212.00	5.42	-193.41	24.01
1110	C11H20	1-UNDECYNE	152.279	gas	20.59	260.62	42.89	282.93
1111	C11H20O2	2-ETHYLHEXYL ACRYLATE	184.279	gas	-470.00	-192.00	-445.21	-167.21
1112	C11H22	1-UNDECENE	154.296	gas	-144.77	129.45	-119.98	154.24
1113	C11H22	1-CYCLOPENTYLHEXANE	154.295	gas	-209.49	78.20	-184.70	102.99
1114	C11H22	PENTYLCYCLOHEXANE	154.295	gas	-233.80	64.85	-209.01	89.64
1115	C11H22O	1-UNDECANAL	170.295	gas	-351.00	-58.20	-324.97	-32.17
1116	C11H24	n-UNDECANE	156.312	gas	-270.29	41.59	-243.02	68.86
1117	C11H24O	1-UNDECANOL	172.311	gas	-422.21	-95.44	-393.70	-66.93
1118	C11H24S	UNDECYL MERCAPTAN	188.378	gas	-232.04	69.83	-204.78	97.10
1119	C11H24S	BUTYL-HEPTYL-SULFIDE	188.371	gas	-229.16	72.72	-201.89	99.98

NO	FORMULA	NAME	Mol Wt g/mol	state	ΔH_f @298 kJ/mol	ΔG_f @298 kJ/mol	ΔU_f @298 kJ/mol	ΔA_f @298 kJ/mol
1120	C11H24S	DECYL-METHYL-SULFIDE	188.371	gas	-225.81	77.15	-198.54	104.42
1121	C11H24S	ETHYL-NONYL-SULFIDE	188.371	gas	-228.24	74.06	-200.97	101.32
1122	C11H24S	OCTYL-PROPYL-SULFIDE	188.371	gas	-228.28	73.60	-201.01	100.86
1123	C12H8O	DIBENZOFURAN	168.195	gas	83.40	199.00	92.08	207.68
1124	C12H9N	DIBENZOPYRROLE	167.210	gas	209.60	361.00	219.52	370.92
1125	C12H10	ACENAPHTHENE	154.211	gas	155.00	260.20	164.92	270.12
1126	C12H10	BIPHENYL	154.211	gas	182.09	280.08	192.00	289.99
1127	C12H10O	DIPHENYL ETHER	170.211	gas	44.30	165.00	55.45	176.15
1128	C12H11N	p-AMINODIPHENYL	169.226	gas	184.00	318.00	196.39	330.39
1129	C12H11N	DIPHENYLAMINE	169.226	gas	202.00	345.00	214.39	357.39
1130	C12H11N3	p-AMINOAZOBENZENE	197.240	gas	330.00	500.00	344.87	514.87
1131	C12H11N3	1,3-DIPHENYLTRIAZENE	197.240	gas	331.60	-------	346.47	-------
1132	C12H12	1,2-DIMETHYLNAPHTHALENE	156.227	gas	83.55	216.23	95.95	228.62
1133	C12H12	1,3-DIMETHYLNAPHTHALENE	156.227	gas	81.80	213.72	94.19	226.11
1134	C12H12	1,4-DIMETHYLNAPHTHALENE	156.227	gas	82.51	216.90	94.90	229.29
1135	C12H12	1,5-DIMETHYLNAPHTHALENE	156.227	gas	81.80	216.19	94.19	228.58
1136	C12H12	1,6-DIMETHYLNAPHTHALENE	156.227	gas	82.51	214.43	94.90	226.82
1137	C12H12	1,7-DIMETHYLNAPHTHALENE	156.227	gas	81.80	213.72	94.19	226.11
1138	C12H12	2,3-DIMETHYLNAPHTHALENE	156.227	gas	83.55	215.02	95.95	227.41
1139	C12H12	2,6-DIMETHYLNAPHTHALENE	156.227	gas	82.51	214.64	94.90	227.03
1140	C12H12	2,7-DIMETHYLNAPHTHALENE	156.227	gas	82.51	214.64	94.90	227.03
1141	C12H12	1-ETHYLNAPHTHALENE	156.227	gas	96.65	225.98	109.04	238.37
1142	C12H12	2-ETHYLNAPHTHALENE	156.227	gas	95.90	224.43	108.29	236.82
1143	C12H12N2	p-AMINODIPHENYLAMINE	184.241	gas	206.00	383.00	220.87	397.87
1144	C12H12N2	HYDRAZOBENZENE	184.241	gas	319.00	495.00	333.87	509.87
1145	C12H14	1,2,3-TRIMETHYLINDENE	158.243	gas	51.70	221.00	66.57	235.87
1146	C12H14O4	DIETHYL PHTHALATE	222.241	gas	-688.30	-494.00	-668.47	-474.17
1147	C12H16	CYCLOHEXYLBENZENE	160.259	gas	-20.92	183.30	-3.57	200.65
1148	C12H18	m-DIISOPROPYLBENZENE	162.275	gas	-77.60	144.53	-57.77	164.36
1149	C12H18	p-DIISOPROPYLBENZENE	162.275	gas	-77.60	147.80	-57.77	167.63
1150	C12H18	n-HEXYLBENZENE	162.275	gas	-55.02	161.34	-35.19	181.17
1151	C12H18	1,2,3-TRIETHYLBENZENE	162.274	gas	-67.99	151.54	-48.16	171.38
1152	C12H18	1,2,4-TRIETHYLBENZENE	162.274	gas	-71.09	145.23	-51.26	165.06
1153	C12H18	1,3,5-TRIETHYLBENZENE	162.274	gas	-74.73	144.68	-54.90	164.51
1154	C12H18	HEXAMETHYLBENZENE	162.274	gas	-105.69	130.21	-85.86	150.04
1155	C12H20O4	DIBUTYL MALEATE	228.288	gas	-688.00	-377.00	-660.73	-349.73
1156	C12H22	BICYCLOHEXYL	166.307	gas	-272.00	42.60	-247.21	67.39
1157	C12H22	1-DODECYNE	166.306	gas	-0.04	268.99	24.75	293.78
1158	C12H23N	DICYCLOHEXYLAMINE	181.321	gas	-185.00	170.45	-157.73	197.72
1159	C12H24	1-DODECENE	168.323	gas	-165.35	137.90	-138.08	165.17
1160	C12H24	1-CYCLOPENTYLHEPTANE	168.322	gas	-230.12	86.61	-202.85	113.88
1161	C12H24	1-CYCLOHEXYLHEXANE	168.322	gas	-254.39	73.26	-227.12	100.53
1162	C12H24O	1-DODECANAL	184.322	gas	-374.34	-52.60	-345.83	-24.09
1163	C12H24O2	n-DODECANOIC ACID	200.321	gas	-642.00	-297.00	-612.25	-267.25
1164	C12H26	n-DODECANE	170.338	gas	-290.87	50.04	-261.13	79.79
1165	C12H26O	DI-n-HEXYL ETHER	186.338	gas	-415.50	-54.70	-384.51	-23.71
1166	C12H26O	1-DODECANOL	186.338	gas	-442.83	-87.07	-411.85	-56.08
1167	C12H26O3	DIETHYLENE GLYCOL DI-n-BUTYL ETHER	218.337	gas	-662.00	-265.00	-628.54	-231.54
1168	C12H26S	n-DODECYL MERCAPTAN	202.404	gas	-252.67	78.24	-222.93	107.99
1169	C12H26S	BUTYL-OCTYL-SULFIDE	202.397	gas	-249.74	81.17	-220.00	110.92
1170	C12H26S	DECYL-ETHYL-SULFIDE	202.397	gas	-250.37	80.92	-220.62	110.66
1171	C12H26S	HEXYL-SULFIDE	202.397	gas	-249.74	82.89	-220.00	112.63
1172	C12H26S	METHYL-UNDECYL-SULFIDE	202.397	gas	-246.44	85.52	-216.69	115.27
1173	C12H26S	NONYL-PROPYL-SULFIDE	202.397	gas	-248.99	81.92	-219.24	111.67
1174	C12H26S2	HEXYL-DISULFIDE	234.457	gas	-240.83	87.49	-211.09	117.23
1175	C12H27BO3	TRI-n-BUTYL BORATE	230.156	gas	-1147.00	-------	-1112.30	-------
1176	C12H27N	DODECYLAMINE	185.353	gas	-256.00	116.49	-223.78	148.71
1177	C12H27N	TRI-n-BUTYLAMINE	185.353	gas	-233.00	146.00	-200.78	178.22
1178	C13H10	FLUORENE	166.222	gas	186.90	290.10	196.82	300.02
1179	C13H10O	BENZOPHENONE	182.222	gas	59.00	175.00	70.15	186.15
1180	C13H12	DIPHENYLMETHANE	168.238	gas	154.00	279.00	166.39	291.39
1181	C13H14	1-PROPYLNAPHTHALENE	170.254	gas	74.68	232.63	89.56	247.50
1182	C13H14	2-PROPYLNAPHTHALENE	170.254	gas	73.47	231.00	88.34	245.87
1183	C13H14	2ETHYL-3-METHYLNAPHTHALENE	170.254	gas	65.77	224.01	80.65	238.88
1184	C13H14	2ETHYL-6-METHYLNAPHTHALENE	170.254	gas	61.30	220.20	76.17	235.08
1185	C13H14	2ETHYL-7-METHYLNAPHTHALENE	170.254	gas	60.92	220.20	75.79	235.08

NO	FORMULA	NAME	Mol Wt g/mol	state	ΔH_f @298 kJ/mol	ΔG_f @298 kJ/mol	ΔU_f @298 kJ/mol	ΔA_f @298 kJ/mol
1186	C13H20	n-HEPTYLBENZENE	176.302	gas	-75.65	169.74	-53.34	192.05
1187	C13H24	1-TRIDECYNE	180.333	gas	-20.63	277.44	6.64	304.71
1188	C13H26	1-TRIDECENE	182.349	gas	-185.98	146.27	-156.23	176.02
1189	C13H26	1-CYCLOPENTYLOCTANE	182.348	gas	-250.71	95.06	-220.96	124.81
1190	C13H26	1-CYCLOHEXYLHEPTANE	182.348	gas	-275.01	81.67	-245.27	111.42
1191	C13H26O	1-TRIDECANAL	198.349	gas	-392.00	-41.20	-361.01	-10.21
1192	C13H26O2	n-BUTYL NONANOATE	214.348	gas	-627.40	-252.00	-595.18	-219.78
1193	C13H26O2	METHYL DODECANOATE	214.348	gas	-612.30	-240.00	-580.08	-207.78
1194	C13H28	n-TRIDECANE	184.365	gas	-311.50	58.45	-279.27	90.68
1195	C13H28O	1-TRIDECANOL	200.365	gas	-463.46	-78.28	-430.00	-44.82
1196	C13H28S	BUTYL-NONYL-SULFIDE	216.424	gas	-270.37	89.54	-238.15	121.76
1197	C13H28S	DECYL-PROPYL-SULFIDE	216.424	gas	-269.62	90.29	-237.39	122.52
1198	C13H28S	DODECYL-METHYL-SULFIDE	216.424	gas	-267.02	93.97	-234.80	126.20
1199	C13H28S	ETHYL-UNDECYL-SULFIDE	216.424	gas	-269.45	90.88	-237.22	123.10
1200	C13H28S	1-TRIDECANETHIOL	216.424	gas	-273.26	86.65	-241.03	118.88
1201	C14H8O2	ANTHRAQUINONE	208.216	gas	-95.20	-------	-85.28	-------
1202	C14H10	ANTHRACENE	178.233	gas	230.10	331.70	240.02	341.62
1203	C14H10	DIPHENYLACETYLENE	178.233	gas	430.12	509.78	440.04	519.70
1204	C14H10	PHENANTHRENE	178.233	gas	207.10	308.10	217.02	318.02
1205	C14H12	cis-STILBENE	180.249	gas	245.18	367.58	257.57	379.97
1206	C14H12	trans-STILBENE	180.249	gas	241.00	362.00	253.39	374.39
1207	C14H12O2	BENZYL BENZOATE	212.248	gas	-191.00	-34.80	-176.13	-19.93
1208	C14H14	1,1-DIPHENYLETHANE	182.265	gas	116.00	270.00	130.87	284.87
1209	C14H14	1,2-DIPHENYLETHANE	182.265	gas	143.00	297.00	157.87	311.87
1210	C14H14O	DIBENZYL ETHER	198.265	gas	19.30	190.00	35.41	206.11
1211	C14H16	1-n-BUTYLNAPHTHALENE	184.281	gas	53.05	240.08	70.40	257.43
1212	C14H16	2-BUTYLNAPHTHALENE	184.280	gas	52.30	238.53	69.65	255.88
1213	C14H22	n-OCTYLBENZENE	190.329	gas	-96.23	178.20	-71.44	202.98
1214	C14H22	1,2,3,4-TETRAETHYLBENZENE	190.328	gas	-123.26	155.94	-98.47	180.73
1215	C14H22	1,2,3,5-TETRAETHYLBENZENE	190.328	gas	-122.84	154.56	-98.05	179.35
1216	C14H22	1,2,4,5-TETRAETHYLBENZENE	190.328	gas	-123.26	155.35	-98.47	180.14
1217	C14H22O	p-tert-OCTYLPHENOL	206.328	gas	-291.00	22.70	-264.97	48.73
1218	C14H28	1-TETRADECENE	196.376	gas	-206.52	154.77	-174.30	186.99
1219	C14H28	1-CYCLOPENTYLNONANE	196.375	gas	-271.33	103.43	-239.11	135.65
1220	C14H28	1-CYCLOHEXYLOCTANE	196.375	gas	-295.60	90.08	-263.37	122.31
1221	C14H28O2	n-TETRADECANOIC ACID	228.375	gas	-693.80	-288.00	-659.10	-253.30
1222	C14H30	n-TETRADECANE	198.392	gas	-332.13	66.82	-297.42	101.52
1223	C14H30O	1-TETRADECANOL	214.392	gas	-484.09	-69.87	-448.15	-33.93
1224	C14H30S	BUTYL-DECYL-SULFIDE	230.451	gas	-291.00	97.95	-256.29	132.65
1225	C14H30S	DODECYL-ETHYL-SULFIDE	230.451	gas	-290.08	99.24	-255.37	133.95
1226	C14H30S	HEPTYL-SULFIDE	230.451	gas	-290.96	99.70	-256.25	134.41
1227	C14H30S	METHYL-TRIDECYL-SULFIDE	230.451	gas	-287.65	102.34	-252.95	137.04
1228	C14H30S	PROPYL-UNDECYL-SULFIDE	230.451	gas	-290.20	98.74	-255.50	133.45
1229	C14H30S	1-TETRADECANETHIOL	230.451	gas	-293.88	95.06	-259.18	129.76
1230	C14H30S2	HEPTYL-DISULFIDE	262.511	gas	-282.04	104.31	-247.34	139.01
1231	C14H31N	TETRADECYLAMINE	213.407	gas	-298.00	133.00	-260.82	170.18
1232	C15H10N2O2	DIPHENYLMETHANE-4,4'-DIISOCYANATE	250.257	gas	-55.80	-------	-40.93	-------
1233	C15H16O	p-CUMYLPHENOL	212.291	gas	-65.60	143.00	-47.01	161.59
1234	C15H16O2	BISPHENOL A	228.291	gas	-245.60	-9.42	-225.77	10.41
1235	C15H18	1-PENTYLNAPHTHALENE	198.307	gas	32.43	248.32	52.26	268.15
1236	C15H18	2-PENTYLNAPHTHALENE	198.307	gas	31.67	246.77	51.50	266.60
1237	C15H24	n-NONYLBENZENE	204.356	gas	-116.86	186.56	-89.59	213.83
1238	C15H24O	2,6-DI-tert-BUTYL-p-CRESOL	220.355	gas	-341.00	-130.00	-312.49	-101.49
1239	C15H24O	NONYLPHENOL	220.355	gas	-291.00	31.70	-262.49	60.21
1240	C15H28	1-PENTADECYNE	208.386	gas	-61.84	294.26	-29.61	326.49
1241	C15H30	1-PENTADECENE	210.403	gas	-227.23	163.05	-192.53	197.75
1242	C15H30	1-CYCLOPENTYLDECANE	210.402	gas	-291.96	111.84	-257.26	146.54
1243	C15H30	1-CYCLOHEXYLNONANE	210.402	gas	-316.23	98.49	-281.52	133.19
1244	C15H30O2	PENTADECANOIC ACID	242.402	gas	-699.00	-266.00	-661.82	-228.82
1245	C15H32	n-PENTADECANE	212.419	gas	-352.75	75.23	-315.57	112.41
1246	C15H32O	1-PENTADECANOL	228.417	gas	-504.67	-61.46	-466.25	-23.04
1247	C15H32S	BUTYL-UNDECYL-SULFIDE	244.478	gas	-311.58	106.36	-274.40	143.54
1248	C15H32S	DODECYL-PROPYL-SULFIDE	244.478	gas	-310.83	107.11	-273.65	144.29
1249	C15H32S	ETHYL-TRIDECYL-SULFIDE	244.478	gas	-310.70	107.65	-273.52	144.84
1250	C15H32S	METHYL-TETRADECYL-SULFIDE	244.478	gas	-308.28	110.75	-271.09	147.93
1251	C15H32S	1-PENTADECANETHIOL	244.478	gas	-314.51	103.47	-277.33	140.65

NO	FORMULA	NAME	Mol Wt g/mol	state	ΔH_f @298 kJ/mol	ΔG_f @298 kJ/mol	ΔU_f @298 kJ/mol	ΔA_f @298 kJ/mol
1252	C16H10	FLUORANTHENE	202.255	gas	288.90	386.20	298.82	396.12
1253	C16H10	PYRENE	202.255	gas	225.00	327.00	234.92	336.92
1254	C16H12	1-PHENYLNAPHTHALENE	204.271	gas	247.00	371.11	259.39	383.50
1255	C16H20	1-n-HEXYLNAPHTHALENE	212.335	gas	14.40	258.60	36.71	280.91
1256	C16H2204	DIBUTYL PHTHALATE	278.348	gas	-750.90	-441.40	-721.15	-411.65
1257	C16H26	n-DECYLBENZENE	218.382	gas	-137.49	194.97	-107.74	224.72
1258	C16H26	PENTAETHYLBENZENE	218.381	gas	-175.18	164.98	-145.44	194.72
1259	C16H30	1-HEXADECYNE	222.413	gas	-82.47	302.67	-47.76	337.37
1260	C16H32	n-DECYLCYCLOHEXANE	224.430	gas	-336.85	106.90	-299.67	144.08
1261	C16H32	1-CYCLOPENTYLUNDECANE	224.429	gas	-312.54	120.25	-275.36	157.43
1262	C16H32	1-HEXADECENE	224.430	gas	-247.82	171.50	-210.64	208.68
1263	C16H3202	n-HEXADECANOIC ACID	256.429	gas	-737.00	-274.00	-697.34	-234.34
1264	C16H34	n-HEXADECANE	226.446	gas	-373.34	83.68	-333.68	123.34
1265	C16H34O	DI-n-OCTYL ETHER	242.445	gas	-498.00	-23.30	-457.10	17.60
1266	C16H34O	1-HEXADECANOL	242.445	gas	-525.26	-53.01	-484.36	-12.11
1267	C16H34S	BUTYL-DODECYL-SULFIDE	258.505	gas	-332.21	114.77	-292.55	154.43
1268	C16H34S	ETHYL-TETRADECYL-SULFIDE	258.505	gas	-331.29	116.11	-291.63	155.77
1269	C16H34S	METHYL-PENTADECYL-SULFIDE	258.505	gas	-328.86	119.20	-289.20	158.86
1270	C16H34S	OCTYL-SULFIDE	258.505	gas	-332.17	116.52	-292.51	156.19
1271	C16H34S	PROPYL-TRIDECYL-SULFIDE	258.505	gas	-331.46	115.52	-291.80	155.18
1272	C16H34S	1-HEXADECANETHIOL	258.505	gas	-335.10	111.88	-295.44	151.54
1273	C16H34S2	OCTYL-DISULFIDE	290.565	gas	-323.30	121.09	-283.64	160.75
1274	C17H28	n-UNDECYLBENZENE	232.409	gas	-158.07	203.43	-125.85	235.65
1275	C17H32	1-HEPTADECYNE	236.440	gas	-103.09	311.04	-65.91	348.22
1276	C17H34	1-CYCLOPENTYLDODECANE	238.456	gas	-335.89	125.94	-296.23	165.60
1277	C17H34	1-CYCLOHEXYLUNDECANE	238.456	gas	-357.44	115.31	-317.78	154.97
1278	C17H34	1-HEPTADECENE	238.457	gas	-268.40	179.91	-228.74	219.57
1279	C17H36	n-HEPTADECANE	240.473	gas	-393.92	92.09	-351.78	134.23
1280	C17H36O	1-HEPTADECANOL	256.472	gas	-545.89	-44.64	-502.51	-1.26
1281	C17H36S	BUTYL-TRIDECYL-SULFIDE	272.531	gas	-352.79	123.22	-310.65	165.36
1282	C17H36S	ETHYL-PENTADECYL-SULFIDE	272.531	gas	-351.92	124.47	-309.78	166.61
1283	C17H36S	HEXADECYL-METHYL-SULFIDE	272.531	gas	-349.49	127.57	-307.35	169.71
1284	C17H36S	PROPYL-TETRADECYL-SULFIDE	272.531	gas	-352.04	123.97	-309.90	166.11
1285	C17H36S	1-HEPTADECANETHIOL	272.531	gas	-355.72	120.29	-313.58	162.43
1286	C18H12	CHRYSENE	228.293	gas	262.90	401.08	275.29	413.47
1287	C18H14	m-TERPHENYL	230.309	gas	277.00	423.00	291.87	437.87
1288	C18H14	o-TERPHENYL	230.309	gas	277.00	423.00	291.87	437.87
1289	C18H14	p-TERPHENYL	230.309	gas	277.00	424.00	291.87	438.87
1290	C18H15P	TRIPHENYLPHOSPHINE	262.291	gas	320.20	-------	336.31	-------
1291	C18H15O4P	TRIPHENYL PHOSPHATE	326.288	gas	-757.30	-------	-736.23	-------
1292	C18H16N2	N,N'-DIPHENYL-p-PHENYLENEDIAMINE	260.339	gas	321.00	564.00	340.83	583.83
1293	C18H22	2,3-DIMETHYL-2,3-DIPHENYLBUTANE	238.373	gas	59.20	347.00	83.99	371.79
1294	C18H2202	DICUMYL PEROXIDE	270.371	gas	-79.40	242.00	-52.13	269.27
1295	C18H30	n-DODECYLBENZENE	246.436	gas	-178.70	211.79	-144.00	246.50
1296	C18H30	HEXAETHYLBENZENE	246.435	gas	-224.26	182.46	-189.56	217.17
1297	C18H3202	LINOLEIC ACID	280.451	gas	-540.00	-94.30	-500.34	-54.64
1298	C18H34	1-OCTADECYNE	250.467	gas	-123.68	319.49	-84.02	359.15
1299	C18H3402	OLEIC ACID	282.467	gas	-671.78	-189.69	-629.64	-147.55
1300	C18H3404	DIBUTYL SEBACATE	314.466	gas	-1060.00	-538.00	-1015.38	-493.38
1301	C18H3404	DIHEXYL ADIPATE	314.466	gas	-1020.00	-474.00	-975.38	-429.38
1302	C18H36	1-CYCOPENTYLTRIDECANE	252.482	gas	-353.76	136.98	-311.62	179.12
1303	C18H36	1-CYCLOHEXYLDODECANE	252.482	gas	-378.07	123.72	-335.93	165.86
1304	C18H36	1-OCTADECENE	252.484	gas	-289.03	188.32	-246.89	230.46
1305	C18H3602	STEARIC ACID	284.483	gas	-767.00	-244.40	-722.38	-199.78
1306	C18H38	n-OCTADECANE	254.500	gas	-414.55	100.50	-369.93	145.12
1307	C18H38O	DINONYL ETHER	270.499	gas	-539.00	-6.60	-493.14	39.26
1308	C18H38O	1-OCTADECANOL	270.499	gas	-566.47	-36.19	-520.61	9.67
1309	C18H38S	BUTYL-TETRADECYL-SULFIDE	286.558	gas	-373.42	131.59	-328.80	176.21
1310	C18H38S	ETHYL-HEXADECYL-SULFIDE	286.558	gas	-372.50	132.93	-327.88	177.54
1311	C18H38S	HEPTADECYL-METHYL-SULFIDE	286.558	gas	-370.07	136.02	-325.46	180.64
1312	C18H38S	NONYL-SULFIDE	286.558	gas	-373.42	133.30	-328.80	177.92
1313	C18H38S	PENTADECYL-PROPYL-SULFIDE	286.558	gas	-372.67	132.34	-328.05	176.96
1314	C18H38S	1-OCTADECANETHIOL	286.558	gas	-376.31	128.74	-331.69	173.36
1315	C18H38S2	NONYL-DISULFIDE	318.618	gas	-364.51	137.95	-319.89	182.57
1316	C19H26	1-n-NONYLNAPHTHALENE	254.415	gas	-47.50	283.29	-17.75	313.04
1317	C19H32	n-TRIDECYLBENZENE	260.463	gas	-199.28	220.25	-162.10	257.43

NO	FORMULA	NAME	Mol Wt g/mol	state	ΔH_f @298 kJ/mol	ΔG_f @298 kJ/mol	ΔU_f @298 kJ/mol	ΔA_f @298 kJ/mol
1318	C19H36	1-NONADECYNE	264.493	gas	-144.31	327.86	-102.17	370.00
1319	C19H3602	METHYL OLEATE	296.494	gas	-626.00	-117.00	-581.38	-72.38
1320	C19H38	1-CYCLOPENTYLTETRADECANE	266.509	gas	-374.38	145.48	-329.77	190.10
1321	C19H38	1-CYCLOHEXYLTRIDECANE	266.509	gas	-398.65	132.17	-354.03	176.79
1322	C19H38	1-NONADECENE	266.511	gas	-309.62	196.73	-265.00	241.35
1323	C19H3802	NONADECANOIC ACID	298.510	gas	-785.30	-236.00	-738.20	-188.90
1324	C19H40	n-NONADECANE	268.527	gas	-435.14	108.91	-388.04	156.01
1325	C19H400	1-NONADECANOL	284.524	gas	-587.10	-27.78	-538.76	20.56
1326	C19H40S	BUTYL-PENTADECYL-SULFIDE	300.585	gas	-394.05	140.00	-346.95	187.09
1327	C19H40S	ETHYL-HEPTADECYL-SULFIDE	300.585	gas	-393.13	141.29	-346.03	188.39
1328	C19H40S	HEXADECYL-PROPYL-SULFIDE	300.585	gas	-393.25	140.79	-346.16	187.89
1329	C19H40S	METHYL-OCTADECYL-SULFIDE	300.585	gas	-390.70	144.39	-343.60	191.49
1330	C19H40S	1-NONADECANETHIOL	300.585	gas	-396.94	137.11	-349.84	184.21
1331	C20H16	TRIPHENYLETHYLENE	256.347	gas	340.00	512.00	357.35	529.35
1332	C20H28	1-n-DECYLNAPHTHALENE	268.442	gas	-68.20	291.60	-35.98	323.82
1333	C20H3002	ABIETIC ACID	302.457	gas	-537.00	-50.90	-499.82	-13.72
1334	C20H31N	DEHYDROABIETYLAMINE	285.473	gas	-123.00	387.00	-85.82	424.18
1335	C20H34	1-PHENYLTETRADECANE	274.489	gas	-219.91	228.61	-180.25	268.27
1336	C20H38	1-EICOSYNE	278.520	gas	-164.89	336.31	-120.27	380.93
1337	C20H40	1-CYCLOPENTYLPENTADECANE	280.536	gas	-395.01	153.89	-347.91	200.99
1338	C20H40	1-CYCLOHEXYLTETRADECANE	280.536	gas	-419.28	140.54	-372.18	187.64
1339	C20H40	1-EICOSENE	280.538	gas	-330.24	205.14	-283.15	252.24
1340	C20H42	n-EICOSANE	282.553	gas	-455.76	117.32	-406.19	166.90
1341	C20H420	1-EICOSANOL	298.553	gas	-607.73	-19.41	-556.91	31.40
1342	C20H42S	BUTYL-HEXADECYL-SULFIDE	314.612	gas	-414.63	148.41	-365.06	197.98
1343	C20H42S	DECYL-SULFIDE	314.612	gas	-414.63	150.16	-365.06	199.74
1344	C20H42S	ETHYL-OCTADECYL-SULFIDE	314.612	gas	-413.76	149.70	-364.18	199.28
1345	C20H42S	HEPTADECYL-PROPYL-SULFIDE	314.612	gas	-413.88	149.16	-364.30	198.74
1346	C20H42S	METHYL-NONADECYL-SULFIDE	314.612	gas	-411.33	152.80	-361.75	202.38
1347	C20H42S	1-EICOSANETHIOL	314.612	gas	-417.56	145.52	-367.99	195.10
1348	C20H42S2	DECYL-DISULFIDE	346.672	gas	-405.72	154.77	-356.15	204.34
1349	C21H2104P	TRI-o-CRESYL PHOSPHATE	368.369	gas	-851.00	-------	-822.49	-------
1350	C21H36	1-PHENYLPENTADECANE	288.515	gas	-240.54	237.02	-198.40	279.16
1351	C21H42	1-CYCLOPENTYLHEXADECANE	294.563	gas	-415.60	162.30	-366.02	211.87
1352	C21H42	1-CYCLOHEXYLPENTADECANE	294.563	gas	-439.91	148.95	-390.33	198.53
1353	C22H38	1-PHENYLHEXADECANE	302.542	gas	-261.12	245.43	-216.50	290.05
1354	C22H44	1-CYCLOHEXYLHEXADECANE	308.590	gas	-460.49	157.36	-408.44	209.42
1355	C22H4402	n-BUTYL STEARATE	340.590	gas	-819.27	-187.38	-764.74	-132.85
1356	C24H3804	DIISOOCTYL PHTHALATE	390.563	gas	-967.00	-371.00	-917.42	-321.42
1357	C24H3804	DIOCTYL PHTHALATE	390.563	gas	-966.72	-406.30	-917.14	-356.72
1358	C24H420	DINONYLPHENOL	346.597	gas	-487.00	68.20	-436.18	119.02
1359	C26H20	TETRAPHENYLETHYLENE	332.445	gas	438.00	665.00	460.31	687.31
1360	C28H4604	DIISODECYL PHTHALATE	446.671	gas	-1060.10	-358.81	-1000.61	-299.32

NOTE:

1. ΔH_f - Enthalpy of formation
2. ΔG_f - Gibbs free energy of formation
3. ΔU_f - Internal energy of formation
4. ΔA_f - Helmholtz free energy of formation
5. kJ/mol - kilojoule/mol

Table 8-2 EXAMPLE

Example A vapor cloud containing ethylene in air is ignited in a ditch (partially confined area):

$$C_2H_4 + 3\ O_2 \text{ ------> } 2\ CO_2 + 2\ H_2O$$

Determine the following for the explosion reaction:

(a) The change in Helmholtz free energy

(b) The energy of the explosion by assuming 12% of the change in Helmholtz free energy

Substitution of the tabulated values and the value for water (ΔA_f = -227.36 kJ/mol for H_2O) into the equation below provides the change in Helmholtz free energy:

$$\Delta A = \Sigma\ (n\Delta A_f)_{products} - \Sigma\ (m\Delta A_f)_{reactants}$$

$$= 2(-394.38) + 2(-227.36) - (70.59 + 3(0))$$

$$= -788.76 - 454.72 - 70.59$$

$$\underline{\Delta A = -1314.07 \text{ kJ/mol}}$$

Assuming 12% of the change in Helmholtz free energy is manifested in the explosion, substitution into the equation below provides the energy of the explosion:

$$\text{Explosion Energy} = 12\%\ (-\Delta A)$$

$$= 0.12\ (1314.07)$$

$$\underline{\text{Explosion Energy} = 157.69 \text{ kJ/mol}}$$

Table 8-3 COMPUTER PROGRAM RESULTS

```
THERMODYNAMIC PROPERTIES FOR EXPLOSION CALCULATIONS
-----------------------------------------------------------

1. Number.............................. 38
2. Formula............................. CH4
3. Name................................ METHANE
4. Molecular Weight.......................... = 16.043
5. State..................................... = gas
6. Enthalpy of Formation.............kJ/mol = -74.85
7. Gibbs Free Energy of Formation.....kJ/mol = -50.84
8. Internal Energy of Formation.......kJ/mol = -72.37
9. Helmholtz Free Energy of Formation...kJ/mol = -48.36

-----------------------------------------------------------
```

Appendix A

CONVERSION TABLES

1. Temperature

To convert from Centigrade to:
- Kelvin, add 273.15
- Rankine, multiply Kelvin by 1.8
- Fahrenheit, multiply Centigrade by 1.8 and add 32

2. Pressure

To convert from psia to:
- kPa, multiply by 6.895
- psig, subtract 14.7
- mm Hg, multiply by 51.71
- atmospheres, divide by 14.7
- bars, divide by 14.508

3. Heat of Vaporization

To convert from kJ/kg to:
- BTU/lb, multiply by 0.43
- cal/gram, multiply by 0.239

4. Density

To convert from g/ml to:
- lb/ft^3, multiply by 62.43
- lb/gallon, multiply by 8.345

5. Surface Tension

To convert from dynes/cm to:
- N/m, multiply by 0.001

6. Heat Capacity

To convert from J/g K to:
- BTU/lb R, multiply by 0.239
- cal/gram K, multiply by 0.239

7. Viscosity

To convert from micropoise to:
- lb/ft s, multiply by 0.0672E-06
- centipoise, multiply by 1.0E-04
- poise, multiply by 1.0E-06
- Pa s (pascal seconds), multiply by 1.0E-07

To convert from centipoise to:
- lb/ft s, multiply by 0.000672
- micropoise, multiply by 10,000
- poise, multiply by 0.01
- Pa s (pascal seconds), multiply by 0.001

8. Thermal Conductivity

To convert from W/m K to:
- BTU/hr ft R, multiply by 0.5770
- calorie/cm s K, multiply by 0.002388

9. Enthalpy of Formation

To convert from kJ/mol to:
- kcal/mol, multiply by 0.239

10. Gibbs Free Energy of Formation

To convert from kJ/mol to:
- kcal/mol, multiply by 0.239

11. Internal Energy of Formation

To convert from kJ/mol to:
- kcal/mol, multiply by 0.239

12. Helmholtz Free Energy of Formation

To convert from kJ/mol to:
- kcal/mol, multiply by 0.239

Appendix B

THERMODYNAMIC PROPERTIES FOR EXPLOSION CALCULATIONS - INORGANIC COMPOUNDS

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ABSTRACT

Thermodynamic properties for explosion calculations are presented for inorganic chemical compounds. The thermodynamic properties include enthalpy of formation, Gibbs free energy of formation, internal energy of formation and Helmholtz free energy of formation. The inorganic chemicals include Ag - Zr compounds.

EXPLOSION ENERGY AND THERMODYNAMIC PROPERTIES

The energy of an explosion involves work of expansion ($dW = PdV$) resulting from the explosion (1,2). As the expansion occurs, this energy is transferred from the explosion. At constant temperature, the change in Helmholtz free energy ($dA = -PdV$) is related to such expansion work. Thus, it is convenient to utilize the change in Helmholtz free energy to ascertain the energy of an explosion:

$$\text{Explosion Energy}_{\text{limit}} = -\Delta A \tag{B-1}$$

Since thermal effects and irreversibility are involved in an explosion, this equation represents a limiting or maximum value for the explosion energy.

For an explosion reaction, the change in Helmholtz free energy maybe determined from Helmholtz free energy of formation for the products and reactants according to equation given below:

$$\Delta A = \Sigma\,(n\Delta A_f)_{\text{products}} - \Sigma\,(m\Delta A_f)_{\text{reactants}} \tag{B-2}$$

The actual energy release in an explosion will be less than the limiting value given by the change in Helmholtz free energy because of thermal effects and irreversibility. In an example in Crowl and Louvar (1), 12% of the limiting value is suggested for a vapor cloud explosion in a partially confined area (ethylene explosion in a ditch). For vapor cloud explosion in an unconfined area, 2% of the limiting value is suggested by the same authors.

The results for Helmholtz free energy of formation are presented in Table B-1. The values for Helmholtz free energy of formation are useful in ascertaining the explosion energy of reactions. Other thermodynamic properties are also provided in the tabulation. The values for enthalpy of formation are useful in determining the heat effects of explosion reactions. Values for Gibbs free energy of formation are useful in ascertaining the thermodynamic equilibrium. The values for the internal energy of formation are useful in determining the internal energy changes for explosion reactions.

In the data collection, a literature search was conducted to identify data source publications (1-30) for the table. The publications were screened and copies of appropriate data were made. These data were then keyed into the computer to provide a data base for use in preparing the table.

COMPUTER PROGRAM

A computer program, containing the data for all compounds, is available for a nominal fee (Carl L. Yaws, Box 10053, Lamar University, Beaumont, TX 77710, phone/FAX 409-880-8787). The computer program (random data file) is in ASCII which can be accessed by other software.

Computer program results for a representative compound are shown in Table B-2.

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Table B-1 THERMODYNAMIC PROPERTIES

NO	FORMULA	NAME	Mol Wt g/mol	state	ΔH_f @298 kJ/mol	ΔG_f @298 kJ/mol	ΔU_f @298 kJ/mol	ΔA_f @298 kJ/mol
1	Ag	SILVER	107.868	gas	284.90	246.00	282.42	243.52
2	AgCl	SILVER CHLORIDE	143.321	gas	-------	-------	-------	-------
3	AgI	SILVER IODIDE	234.773	gas	-------	-------	-------	-------
4	Al	ALUMINUM	26.982	gas	330.00	289.40	327.52	286.92
5	AlB3H12	ALUMINUM BOROHYDRIDE	71.510	gas	13.00	147.00	25.39	159.39
6	AlBr3	ALUMINUM BROMIDE	266.694	gas	-425.10	-451.90	-427.58	-454.38
7	AlCl3	ALUMINUM CHLORIDE	133.340	gas	-583.20	-570.05	-581.96	-568.81
8	AlF3	ALUMINUM FLUORIDE	83.977	gas	-1204.60	-1188.20	-1203.36	-1186.96
9	AlI3	ALUMINUM IODIDE	407.695	gas	-207.50	-252.88	-209.98	-255.36
10	Al2O3	ALUMINUM OXIDE	101.961	gas	-------	-------	-------	-------
11	Al2S3O12	ALUMINUM SULFATE	342.154	gas	-------	-------	-------	-------
12	Ar	ARGON	39.948	gas	0.00	0.00	0.00	0.00
13	As	ARSENIC	74.922	gas	288.70	247.27	286.22	244.80
14	AsBr3	ARSENIC TRIBROMIDE	314.634	gas	-130.00	-159.00	-132.48	-161.48
15	AsCl3	ARSENIC TRICHLORIDE	181.280	gas	-261.50	-248.90	-260.26	-247.66
16	AsF3	ARSENIC TRIFLUORIDE	131.917	gas	-785.80	-770.80	-784.56	-769.56
17	AsF5	ARSENIC PENTAFLUORIDE	169.914	gas	-1069.43	-1172.36	-1065.71	-1168.64
18	AsH3	ARSINE	77.945	gas	66.40	68.90	67.64	70.14
19	AsI3	ARSENIC TRIIODIDE	455.635	gas	36.86	-------	34.38	-------
20	As2O3	ARSENIC TRIOXIDE	197.841	gas	-------	-------	-------	-------
21	At	ASTATINE	210.000	gas	-------	-------	-------	-------
22	Au	GOLD	196.967	gas	354.38	314.72	351.91	312.24
23	B	BORON	10.811	gas	565.00	521.00	562.52	518.52
24	BBr3	BORON TRIBROMIDE	250.523	gas	-205.60	-232.50	-208.08	-234.98
25	BCl3	BORON TRICHLORIDE	117.169	gas	-403.80	-388.70	-402.56	-387.46
26	BF3	BORON TRIFLUORIDE	67.806	gas	-1136.00	-1119.40	-1134.76	-1118.16
27	BH2CO	BORINE CARBONYL	40.837	gas	-------	-------	-------	-------
28	BH3O3	BORIC ACID	61.833	gas	-994.10	-------	-989.14	-------
29	B2D6	DEUTERODIBORANE	33.718	gas	12.72	-------	10.24	-------
30	B2H5Br	DIBORANE HYDROBROMIDE	106.566	gas	-------	-------	-------	-------
31	B2H6	DIBORANE	27.670	gas	35.60	86.70	40.56	91.66
32	B3N3H6	BORINE TRIAMINE	80.501	gas	-510.03	-388.40	-501.35	-379.72
33	B4H10	TETRABORANE	53.323	gas	66.10	-------	88.41	-------
34	B5H9	PENTABORANE	63.126	gas	73.20	175.00	81.88	183.68
35	B5H11	TETRAHYDROPENTABORANE	65.142	gas	103.30	-------	114.45	-------
36	B10H14	DECABORANE	122.221	gas	47.28	232.32	62.15	247.20
37	Ba	BARIUM	137.327	gas	180.00	146.00	177.52	143.52
38	Be	BERYLLIUM	9.012	gas	324.00	286.60	321.52	284.12
39	BeB2H8	BERYLLIUM BOROHYDRIDE	38.698	gas	-------	-------	-------	-------
40	BeBr2	BERYLLIUM BROMIDE	168.820	gas	-239.74	-274.34	-242.22	-276.82
41	BeCl2	BERYLLIUM CHLORIDE	79.918	gas	-361.08	-364.00	-361.08	-364.00
42	BeF2	BERYLLIUM FLUORIDE	47.009	gas	-784.50	-789.44	-784.50	-789.44
43	BeI2	BERYLLIUM IODIDE	262.821	gas	-84.94	-135.34	-87.41	-137.81
44	Bi	BISMUTH	208.980	gas	207.10	168.20	204.62	165.72
45	BiBr3	BISMUTH TRIBROMIDE	448.692	gas	-265.70	-256.00	-268.18	-258.48
46	BiCl3	BISMUTH TRICHLORIDE	315.338	gas	-265.68	-256.06	-264.44	-254.82
47	BrF5	BROMINE PENTAFLUORIDE	174.896	gas	-428.90	-350.60	-425.18	-346.88
48	Br2	BROMINE	159.808	gas	30.90	3.10	28.42	0.62
49	C	CARBON	12.011	gas	716.70	671.30	714.22	668.82
50	CCl2O	PHOSGENE	98.916	gas	-219.10	-204.90	-217.86	-203.66
51	CF2O	CARBONYL FLUORIDE	66.007	gas	-639.80	-623.36	-638.56	-622.12
52	CH4N2O	UREA	60.056	gas	-------	-------	-------	-------
53	CH4N2S	THIOUREA	76.122	gas	-------	-------	-------	-------
54	CNBr	CYANOGEN BROMIDE	105.922	gas	186.19	165.27	184.95	164.03
55	CNCl	CYANOGEN CHLORIDE	61.470	gas	138.00	131.00	138.00	131.00
56	CNF	CYANOGEN FLUORIDE	45.016	gas	-12.55	-19.34	-12.55	-19.34
57	CO	CARBON MONOXIDE	28.010	gas	-110.50	-137.20	-111.74	-138.44
58	COS	CARBONYL SULFIDE	60.076	gas	-142.00	-169.20	-143.24	-170.44
59	COSe	CARBON OXYSELENIDE	106.970	gas	-------	-------	-------	-------
60	CO2	CARBON DIOXIDE	44.010	gas	-393.50	-394.40	-393.50	-394.40
61	CS2	CARBON DISULFIDE	76.143	gas	116.60	67.10	114.12	64.62
62	CSeS	CARBON SELENOSULFIDE	123.037	gas	-------	-------	-------	-------
63	C2N2	CYANOGEN	52.035	gas	306.70	297.55	306.70	297.55

NO	FORMULA	NAME	Mol Wt g/mol	state	ΔH_f @298 kJ/mol	ΔG_f @298 kJ/mol	ΔU_f @298 kJ/mol	ΔA_f @298 kJ/mol
64	C3S2	CARBON SUBSULFIDE	100.165	gas	-------	-------	-------	-------
65	Ca	CALCIUM	40.078	gas	177.80	144.00	175.32	141.52
66	CaF2	CALCIUM FLUORIDE	78.075	gas	-786.59	-------	-786.59	-------
67	CbF5	COLUMBIUM FLUORIDE	187.898	gas	-------	-------	-------	-------
68	Cd	CADMIUM	112.411	gas	111.80	77.37	109.32	74.89
69	CdCl2	CADMIUM CHLORIDE	183.316	gas	181.17	-------	181.17	-------
70	CdF2	CADMIUM FLUORIDE	150.408	gas	-------	-------	-------	-------
71	CdI2	CADMIUM IODIDE	366.220	gas	-------	-------	-------	-------
72	CdO	CADMIUM OXIDE	128.410	gas	-------	-------	-------	-------
73	ClF	CHLORINE MONOFLUORIDE	54.451	gas	-50.30	-51.80	-50.30	-51.80
74	ClFO3	PERCHLORYL FLUORIDE	102.449	gas	-23.80	48.20	-20.08	51.92
75	ClF3	CHLORINE TRIFLUORIDE	92.448	gas	-163.20	-123.00	-160.72	-120.52
76	ClF5	CHLORINE PENTAFLUORIDE	130.445	gas	-------	-------	-------	-------
77	ClHO3S	CHLOROSULFONIC ACID	116.525	gas	-------	-------	-------	-------
78	ClHO4	PERCHLORIC ACID	100.458	gas	5.23	91.87	10.19	96.83
79	ClO2	CHLORINE DIOXIDE	67.452	gas	102.50	120.50	103.74	121.74
80	Cl2	CHLORINE	70.905	gas	0.00	0.00	0.00	0.00
81	Cl2O	CHLORINE MONOXIDE	86.905	gas	80.30	97.90	81.54	99.14
82	Cl2O7	CHLORINE HEPTOXIDE	182.901	gas	286.94	399.15	295.61	407.83
83	Co	COBALT	58.933	gas	424.70	380.30	422.22	377.82
84	CoCl2	COBALT CHLORIDE	129.839	gas	-------	-------	-------	-------
85	CoNC3O4	COBALT NITROSYL TRICARBONYL	172.971	gas	-------	-------	-------	-------
86	Cr	CHROMIUM	51.996	gas	396.60	351.80	394.12	349.32
87	CrC6O6	CHROMIUM CARBONYL	220.059	gas	-------	-------	-------	-------
88	CrO2Cl2	CHROMIUM OXYCHLORIDE	154.900	gas	-538.10	-501.60	-535.62	-499.12
89	Cs	CESIUM	132.905	gas	76.50	49.60	74.02	47.12
90	CsBr	CESIUM BROMIDE	212.809	gas	-200.83	-------	-203.31	-------
91	CsCl	CESIUM CHLORIDE	168.358	gas	-234.30	-------	-235.54	-------
92	CsF	CESIUM FLUORIDE	151.904	gas	-338.90	-------	-340.14	-------
93	CsI	CESIUM IODIDE	259.810	gas	-138.07	-------	-140.55	-------
94	Cu	COPPER	63.546	gas	337.40	297.70	334.92	295.22
95	CuBr	CUPROUS BROMIDE	143.450	gas	-------	-------	-------	-------
96	CuCl	CUPROUS CHLORIDE	98.999	gas	-------	-------	-------	-------
97	CuCl2	CUPRIC CHLORIDE	134.451	gas	-------	-------	-------	-------
98	CuI	COPPER IODIDE	190.450	gas	-------	-------	-------	-------
99	DCN	DEUTERIUM CYANIDE	28.034	gas	-------	-------	-------	-------
100	D2	DEUTERIUM	4.032	gas	0.00	0.00	0.00	0.00
101	D2O	DEUTERIUM OXIDE	20.031	gas	-249.20	-234.56	-250.44	-235.79
102	Eu	EUROPIUM	151.965	gas	175.30	142.20	172.82	139.72
103	F2	FLUORINE	37.997	gas	0.00	0.00	0.00	0.00
104	F2O	FLUORINE OXIDE	53.996	gas	24.70	41.90	25.94	43.14
105	Fe	IRON	55.847	gas	416.30	370.70	413.82	368.22
106	FeC5O5	IRON PENTACARBONYL	195.899	gas	-747.68	-704.17	-743.96	-700.45
107	FeCl2	FERROUS CHLORIDE	126.752	gas	-638.48	-568.61	-638.48	-568.61
108	FeCl3	FERRIC CHLORIDE	162.205	gas	-243.09	-243.93	-241.85	-242.69
109	Fr	FRANCIUM	223.000	gas	72.80	46.63	70.32	44.15
110	Ga	GALLIUM	69.723	gas	277.00	238.90	274.52	236.42
111	GaCl3	GALLIUM TRICHLORIDE	176.081	gas	-------	-------	-------	-------
112	Gd	GADOLINIUM	157.250	gas	397.50	359.80	395.02	357.32
113	Ge	GERMANIUM	72.610	gas	372.00	331.20	369.52	328.72
114	GeBr4	GERMANIUM BROMIDE	392.226	gas	-300.00	-318.00	-302.48	-320.48
115	GeCl4	GERMANIUM CHLORIDE	214.421	gas	-495.80	-457.30	-493.32	-454.82
116	GeHCl3	TRICHLORO GERMANE	179.976	gas	-------	-------	-------	-------
117	GeH4	GERMANE	76.642	gas	90.80	113.40	93.28	115.88
118	Ge2H6	DIGERMANE	151.268	gas	162.30	-------	167.26	-------
119	Ge3H8	TRIGERMANE	225.894	gas	226.80	-------	234.24	-------
120	HBr	HYDROGEN BROMIDE	80.912	gas	-36.30	-53.40	-37.54	-54.64
121	HCN	HYDROGEN CYANIDE	27.026	gas	135.10	124.70	135.10	124.70
122	HCl	HYDROGEN CHLORIDE	36.461	gas	-92.30	-95.30	-92.30	-95.30
123	HF	HYDROGEN FLUORIDE	20.006	gas	-273.30	-275.40	-273.30	-275.40
124	HI	HYDROGEN IODIDE	127.912	gas	26.50	1.70	25.26	0.46
125	HNO3	NITRIC ACID	63.013	gas	-135.10	-74.70	-131.38	-70.98
126	H2	HYDROGEN	2.016	gas	0.00	0.00	0.00	0.00
127	H2O	WATER	18.015	gas	-241.80	-228.60	-240.56	-227.36
128	H2O2	HYDROGEN PEROXIDE	34.015	gas	-136.30	-105.60	-133.82	-103.12
129	H2S	HYDROGEN SULFIDE	34.082	gas	-20.60	-33.40	-20.60	-33.40

NO	FORMULA	NAME	Mol Wt g/mol	state	ΔH_f @298 kJ/mol	ΔG_f @298 kJ/mol	ΔU_f @298 kJ/mol	ΔA_f @298 kJ/mol
130	H2SO4	SULFURIC ACID	98.079	gas	-------	-------	-------	-------
131	H2S2	HYDROGEN DISULFIDE	66.148	gas	15.50	-------	15.50	-------
132	H2Se	HYDROGEN SELENIDE	80.976	gas	29.70	15.90	29.70	15.90
133	H2Te	HYDROGEN TELLURIDE	129.616	gas	99.60	-------	99.60	-------
134	H3NO3S	SULFAMIC ACID	97.095	gas	-------	-------	-------	-------
135	He	HELIUM-3	3.016	gas	-------	-------	-------	-------
136	He	HELIUM-4	4.003	gas	0.00	0.00	0.00	0.00
137	Hf	HAFNIUM	178.490	gas	619.20	576.50	616.72	574.02
138	Hg	MERCURY	200.590	gas	61.40	31.80	58.92	29.32
139	HgBr2	MERCURIC BROMIDE	360.398	gas	-85.45	-112.84	-87.93	-115.32
140	HgCl2	MERCURIC CHLORIDE	271.495	gas	-146.29	-144.98	-146.29	-144.98
141	HgI2	MERCURIC IODIDE	454.399	gas	-16.13	-59.04	-18.61	-61.52
142	IF7	IODINE HEPTAFLUORIDE	259.893	gas	-956.04	-831.48	-949.85	-825.28
143	I2	IODINE	253.809	gas	62.40	19.30	59.92	16.82
144	In	INDIUM	114.818	gas	243.30	208.70	240.82	206.22
145	Ir	IRIDIUM	192.220	gas	665.30	617.90	662.82	615.42
146	K	POTASSIUM	39.098	gas	89.00	60.50	86.52	58.02
147	KBr	POTASSIUM BROMIDE	119.002	gas	-178.15	-210.91	-180.63	-213.39
148	KCl	POTASSIUM CHLORIDE	74.551	gas	-214.12	-232.84	-215.36	-234.07
149	KF	POTASSIUM FLUORIDE	58.097	gas	-325.93	-343.96	-327.17	-345.20
150	KI	POTASSIUM IODIDE	166.003	gas	-125.52	-37.24	-128.00	-39.72
151	KOH	POTASSIUM HYDROXIDE	56.106	gas	-228.45	-232.55	-228.45	-232.55
152	Kr	KRYPTON	83.800	gas	0.00	0.00	0.00	0.00
153	La	LANTHANUM	138.906	gas	431.00	393.60	428.52	391.12
154	Li	LITHIUM	6.941	gas	159.30	126.60	156.82	124.12
155	LiBr	LITHIUM BROMIDE	86.845	gas	-144.09	-179.58	-146.57	-182.06
156	LiCl	LITHIUM CHLORIDE	42.394	gas	-195.72	-217.26	-196.96	-218.50
157	LiF	LITHIUM FLUORIDE	25.939	gas	-332.63	-353.42	-333.87	-354.66
158	LiI	LITHIUM IODIDE	133.845	gas	-79.91	-123.14	-82.39	-125.61
159	Lu	LUTECIUM	174.967	gas	427.60	387.80	425.12	385.32
160	Mg	MAGNESIUM	24.305	gas	147.10	112.50	144.62	110.02
161	MgCl2	MAGNESIUM CHLORIDE	95.210	gas	-421.33	-421.81	-421.33	-421.81
162	MgO	MAGNESIUM OXIDE	40.304	gas	17.53	-5.69	16.29	-6.93
163	Mn	MANGANESE	54.938	gas	280.70	238.50	278.22	236.02
164	MnCl2	MANGANESE CHLORIDE	125.843	gas	-262.76	-275.31	-262.76	-275.31
165	Mo	MOLYBDENUM	95.940	gas	658.10	612.50	655.62	610.02
166	MoF6	MOLYBDENUM FLUORIDE	209.930	gas	-1557.70	-1467.75	-1552.75	-1462.79
167	MoO3	MOLYBDENUM OXIDE	143.938	gas	-------	-------	-------	-------
168	NCl3	NITROGEN TRICHLORIDE	120.365	gas	-------	-------	-------	-------
169	ND3	HEAVY AMMONIA	20.055	gas	-------	-------	-------	-------
170	NF3	NITROGEN TRIFLUORIDE	71.002	gas	-132.10	-90.60	-129.62	-88.12
171	NH3	AMMONIA	17.031	gas	-45.90	-16.40	-43.42	-13.92
172	NH3O	HYDROXYLAMINE	33.030	gas	-------	-------	-------	-------
173	NH4Br	AMMONIUM BROMIDE	97.943	gas	-------	-------	-------	-------
174	NH4Cl	AMMONIUM CHLORIDE	53.491	gas	-------	-------	-------	-------
175	NH4I	AMMONIUM IODIDE	144.943	gas	-------	-------	-------	-------
176	NH5O	AMMONIUM HYDROXIDE	35.046	gas	-------	-------	-------	-------
177	NH5S	AMMONIUM HYDROGENSULFIDE	51.112	gas	-------	-------	-------	-------
178	NO	NITRIC OXIDE	30.006	gas	90.25	86.57	90.25	86.57
179	NOCl	NITROSYL CHLORIDE	65.459	gas	51.71	66.02	52.95	67.26
180	NOF	NITROSYL FLUORIDE	49.005	gas	-66.53	-51.04	-65.29	-49.81
181	NO2	NITROGEN DIOXIDE	46.006	gas	33.20	51.30	34.44	52.54
182	N2	NITROGEN	28.013	gas	0.00	0.00	0.00	0.00
183	N2F4	TETRAFLUOROHYDRAZINE	104.007	gas	-8.40	79.90	-3.44	84.86
184	N2H4	HYDRAZINE	32.045	gas	95.40	159.40	100.36	164.36
185	N2H4C	AMMONIUM CYANIDE	44.056	gas	-------	-------	-------	-------
186	N2H6CO2	AMMONIUM CARBAMATE	78.071	gas	-------	-------	-------	-------
187	N2O	NITROUS OXIDE	44.013	gas	82.10	104.20	83.34	105.44
188	N2O3	NITROGEN TRIOXIDE	76.012	gas	83.70	139.50	87.42	143.22
189	N2O4	NITROGEN TETRAOXIDE	92.011	gas	9.20	97.90	14.16	102.86
190	N2O5	NITROGEN PENTOXIDE	108.010	gas	11.30	115.10	17.50	121.30
191	Na	SODIUM	22.990	gas	107.50	77.00	105.02	74.52
192	NaBr	SODIUM BROMIDE	102.894	gas	-143.93	-177.78	-146.41	-180.26
193	NaCN	SODIUM CYANIDE	49.008	gas	-------	-------	-------	-------
194	NaCl	SODIUM CHLORIDE	58.442	gas	-181.42	-201.32	-182.66	-202.56
195	NaF	SODIUM FLUORIDE	41.988	gas	-293.30	-312.59	-294.54	-313.83

NO	FORMULA	NAME	Mol Wt g/mol	state	ΔH_f @298 kJ/mol	ΔG_f @298 kJ/mol	ΔU_f @298 kJ/mol	ΔA_f @298 kJ/mol
196	NaI	SODIUM IODIDE	149.894	gas	-------	-------	-------	-------
197	NaOH	SODIUM HYDROXIDE	39.997	gas	-233.63	-------	-233.63	-------
198	Na2SO4	SODIUM SULFATE	142.043	gas	-------	-------	-------	-------
199	Nb	NIOBIUM	92.906	gas	725.90	681.10	723.42	678.62
200	Nd	NEODYMIUM	144.240	gas	327.60	292.40	325.12	289.92
201	Ne	NEON	20.180	gas	0.00	0.00	0.00	0.00
202	Ni	NICKEL	58.693	gas	429.70	384.50	427.22	382.02
203	NiC4O4	NICKEL CARBONYL	170.735	gas	-------	-------	-------	-------
204	NiF2	NICKEL FLUORIDE	96.690	gas	-------	-------	-------	-------
205	Np	NEPTUNIUM	237.000	gas	-------	-------	-------	-------
206	O2	OXYGEN	31.999	gas	0.00	0.00	0.00	0.00
207	O3	OZONE	47.998	gas	142.70	163.20	143.94	164.44
208	Os	OSMIUM	190.230	gas	791.00	745.00	788.52	742.52
209	OsOF5	OSMIUM OXIDE PENTAFLUORIDE	301.221	gas	-------	-------	-------	-------
210	OsO4	OSMIUM TETROXIDE - YELLOW	254.228	gas	-337.20	-292.80	-334.72	-290.32
211	OsO4	OSMIUM TETROXIDE - WHITE	254.228	gas	-337.20	-292.80	-334.72	-290.32
212	P	PHOSPHORUS - WHITE	30.974	gas	316.50	280.10	314.02	277.62
213	PBr3	PHOSPHORUS TRIBROMIDE	270.686	gas	-139.30	-162.80	-141.78	-165.28
214	PCl2F3	PHOSPHORUS DICHLORIDE TRIFLUORIDE	158.874	gas	-------	-------	-------	-------
215	PCl3	PHOSPHORUS TRICHLORIDE	137.332	gas	-287.00	-267.80	-285.76	-266.56
216	PCl5	PHOSPHORUS PENTACHLORIDE	208.237	gas	-374.90	-305.00	-371.18	-301.28
217	PH3	PHOSPHINE	33.998	gas	5.40	13.40	6.64	14.64
218	PH4Br	PHOSPHONIUM BROMIDE	114.910	gas	-------	-------	-------	-------
219	PH4Cl	PHOSPHONIUM CHLORIDE	70.458	gas	-------	-------	-------	-------
220	PH4I	PHOSPHONIUM IODIDE	161.910	gas	-------	-------	-------	-------
221	POCl3	PHOSPHORUS OXYCHLORIDE	153.331	gas	-558.50	-512.90	-556.02	-510.42
222	PSBr3	PHOSPHORUS THIOBROMIDE	302.752	gas	-263.59	-290.32	-266.07	-292.80
223	PSCl3	PHOSPHORUS THIOCHLORIDE	169.398	gas	-363.17	-347.69	-361.93	-346.45
224	P4O6	PHOSPHORUS TRIOXIDE	219.891	gas	-2144.47	-2036.90	-2139.51	-2031.94
225	P4O10	PHOSPHORUS PENTOXIDE	283.889	gas	-2824.62	-2607.09	-2814.70	-2597.17
226	P4S10	PHOSPHORUS PENTASULFIDE	444.555	gas	-------	-------	-------	-------
227	Pb	LEAD	207.200	gas	195.20	162.20	192.72	159.72
228	PbBr2	LEAD BROMIDE	367.008	gas	-101.15	-139.27	-103.63	-141.75
229	PbCl2	LEAD CHLORIDE	278.105	gas	-169.91	-179.72	-169.91	-179.72
230	PbF2	LEAD FLUORIDE	245.197	gas	-445.30	-------	-445.30	-------
231	PbI2	LEAD IODIDE	461.009	gas	0.65	-53.88	-1.83	-56.36
232	PbO	LEAD OXIDE	223.199	gas	42.26	20.92	41.02	19.68
233	PbS	LEAD SULFIDE	239.266	gas	-------	-------	-------	-------
234	Pd	PALLADIUM	106.420	gas	378.20	339.70	375.72	337.22
235	Po	POLONIUM	209.000	gas	144.14	106.55	141.66	104.08
236	Pt	PLATINUM	195.080	gas	565.30	520.50	562.82	518.02
237	Ra	RADIUM	226.000	gas	159.00	130.00	156.52	127.52
238	Rb	RUBIDIUM	85.468	gas	80.90	53.10	78.42	50.62
239	RbBr	RUBIDIUM BROMIDE	165.372	gas	-184.10	-------	-186.57	-------
240	RbCl	RUBIDIUM CHLORIDE	120.921	gas	-234.30	-------	-235.54	-------
241	RbF	RUBIDIUM FLUORIDE	104.466	gas	-------	-------	-------	-------
242	RbI	RUBIDIUM IODIDE	212.372	gas	-133.89	-------	-136.37	-------
243	Re	RHENIUM	186.207	gas	769.90	724.60	767.42	722.12
244	Re2O7	RHENIUM HEPTOXIDE	484.410	gas	-1100.00	-994.00	-1093.80	-987.80
245	Rh	RHODIUM	102.906	gas	556.90	510.80	554.42	508.32
246	Rn	RADON	222.000	gas	-------	-------	-------	-------
247	Ru	RUTHENIUM	101.070	gas	642.70	595.80	640.22	593.32
248	RuF5	RUTHENIUM PENTAFLUORIDE	196.062	gas	-------	-------	-------	-------
249	S	SULFUR	32.066	gas	277.20	236.70	274.72	234.22
250	SF4	SULFUR TETRAFLUORIDE	108.060	gas	-763.20	-722.00	-760.72	-719.52
251	SF6	SULFUR HEXAFLUORIDE	146.056	gas	-1220.50	-1116.50	-1215.54	-1111.54
252	SOBr2	THIONYL BROMIDE	207.873	gas	-74.06	-------	-75.30	-------
253	SOCl2	THIONYL CHLORIDE	118.971	gas	-212.50	-198.30	-211.26	-197.06
254	SOF2	SULFUROUS OXYFLUORIDE	86.062	gas	-713.51	-696.05	-712.27	-694.81
255	SO2	SULFUR DIOXIDE	64.065	gas	-296.80	-300.10	-296.80	-300.10
256	SO2Cl2	SULFURYL CHLORIDE	134.970	gas	-364.00	-320.00	-361.52	-317.52
257	SO3	SULFUR TRIOXIDE	80.064	gas	-395.70	-371.10	-394.46	-369.86
258	S2Cl2	SULFUR MONOCHLORIDE	135.037	gas	262.30	222.10	262.30	222.10
259	Sb	ANTIMONY	121.757	gas	262.34	222.17	259.86	219.69
260	SbBr3	ANTIMONY TRIBROMIDE	361.469	gas	-194.60	223.90	-197.08	221.42
261	SbCl3	ANTIMONY TRICHLORIDE	228.115	gas	-313.80	-301.25	-312.56	-300.01

NO	FORMULA	NAME	Mol Wt g/mol	state	ΔH_f @298 kJ/mol	ΔG_f @298 kJ/mol	ΔU_f @298 kJ/mol	ΔA_f @298 kJ/mol
262	SbCl5	ANTIMONY PENTACHLORIDE	299.021	gas	-394.34	-334.34	-390.62	-330.63
263	SbH3	STIBINE	124.781	gas	145.10	147.80	146.34	149.04
264	SbI3	ANTIMONY TRIIODIDE	502.470	gas	-------	-------	-------	-------
265	Sb2O3	ANTIMONY TRIOXIDE	291.512	gas	-------	-------	-------	-------
266	Sc	SCANDIUM	44.956	gas	377.80	336.00	375.32	333.52
267	Se	SELENIUM	78.960	gas	227.10	187.00	224.62	184.52
268	SeCl4	SELENIUM TETRACHLORIDE	220.771	gas	-------	-------	-------	-------
269	SeF6	SELENIUM HEXAFLUORIDE	192.950	gas	-1117.00	-1017.00	-1112.04	-1012.04
270	SeOCl2	SELENIUM OXYCHLORIDE	165.865	gas	-25.10	-------	-23.86	-------
271	SeO2	SELENIUM DIOXIDE	110.959	gas	-168.62	-132.04	-168.62	-132.04
272	Si	SILICON	28.086	gas	450.00	405.50	447.52	403.02
273	SiBrCl2F	BROMODICHLOROFLUOROSILANE	197.893	gas	-------	-------	-------	-------
274	SiBrF3	TRIFLUOROBROMOSILANE	164.985	gas	-------	-------	-------	-------
275	SiBr2ClF	DIBROMOCHLOROFLUOROSILANE	242.345	gas	-------	-------	-------	-------
276	SiClF3	TRIFLUOROCHLOROSILANE	120.533	gas	-1317.96	-1280.54	-1315.48	-1278.06
277	SiCl2F2	DICHLORODIFLUOROSILANE	136.988	gas	-------	-------	-------	-------
278	SiCl3F	TRICHLOROFLUOROSILANE	153.442	gas	-------	-------	-------	-------
279	SiCl4	SILICON TETRACHLORIDE	169.896	gas	-657.00	-617.00	-654.52	-614.52
280	SiF4	SILICON TETRAFLUORIDE	104.079	gas	-1615.00	-1572.80	-1612.52	-1570.32
281	SiHBr3	TRIBROMOSILANE	268.805	gas	-317.60	-328.50	-318.84	-329.74
282	SiHCl3	TRICHLOROSILANE	135.452	gas	-513.00	-482.00	-510.52	-479.52
283	SiHF3	TRIFLUOROSILANE	86.089	gas	-1184.07	-1151.16	-1181.59	-1148.68
284	SiH2Br2	DIBROMOSILANE	189.909	gas	-------	-------	-------	-------
285	SiH2Cl2	DICHLOROSILANE	101.007	gas	-364.01	-338.07	-361.53	-335.59
286	SiH2F2	DIFLUOROSILANE	68.098	gas	-811.70	-784.50	-809.22	-782.02
287	SiH2I2	DIIODOSILANE	283.910	gas	-------	-------	-------	-------
288	SiH3Br	MONOBROMOSILANE	111.013	gas	-23.25	-------	-22.02	-------
289	SiH3Cl	MONOCHLOROSILANE	66.562	gas	-171.54	-148.95	-169.07	-146.47
290	SiH3F	MONOFLUOROSILANE	50.108	gas	-439.32	-416.33	-436.84	-413.85
291	SiH3I	IODOSILANE	158.014	gas	-------	-------	-------	-------
292	SiH4	SILANE	32.117	gas	34.30	56.90	36.78	59.38
293	SiO2	SILICON DIOXIDE	60.084	gas	-318.82	-320.28	-318.82	-320.28
294	Si2Cl6	HEXACHLORODISILANE	268.887	gas	-------	-------	-------	-------
295	Si2F6	HEXAFLUORODISILANE	170.161	gas	-------	-------	-------	-------
296	Si2H5Cl	DISILANYL CHLORIDE	96.663	gas	-------	-------	-------	-------
297	Si2H6	DISILANE	62.219	gas	80.30	127.30	85.26	132.26
298	Si2OCl3F3	TRICHLOROTRIFLUORODISILOXANE	235.524	gas	-------	-------	-------	-------
299	Si2OCl6	HEXACHLORODISILOXANE	284.887	gas	-------	-------	-------	-------
300	Si2OH6	DISILOXANE	78.218	gas	-------	-------	-------	-------
301	Si3Cl8	OCTACHLOROTRISILANE	367.878	gas	-------	-------	-------	-------
302	Si3H8	TRISILANE	92.320	gas	120.90	-------	128.34	-------
303	Si3H9N	TRISILAZANE	107.335	gas	-------	-------	-------	-------
304	Si4H10	TETRASILANE	122.421	gas	-------	-------	-------	-------
305	Sm	SAMARIUM	150.360	gas	206.70	172.80	204.22	170.32
306	Sn	TIN	118.710	gas	301.20	266.20	298.72	263.72
307	SnBr4	STANNIC BROMIDE	438.326	gas	-------	-------	-------	-------
308	SnCl2	STANNOUS CHLORIDE	189.615	gas	-------	-------	-------	-------
309	SnCl4	STANNIC CHLORIDE	260.521	gas	-471.50	-432.20	-469.02	-429.72
310	SnH4	STANNIC HYDRIDE	122.742	gas	162.80	188.30	165.28	190.78
311	SnI4	STANNIC IODIDE	626.328	gas	-------	-------	-------	-------
312	Sr	STRONTIUM	87.620	gas	164.40	130.90	161.92	128.42
313	SrO	STRONTIUM OXIDE	103.619	gas	-59.41	439.74	-60.65	438.50
314	Ta	TANTALUM	180.948	gas	782.00	739.30	779.52	736.82
315	Tc	TECNNETIUM	98.000	gas	678.00	604.55	675.52	602.07
316	Te	TELLURIUM	127.600	gas	196.70	157.10	194.22	154.62
317	TeCl4	TELLURIUM TETRACHLORIDE	269.411	gas	-206.69	-------	-204.21	-------
318	TeF6	TELLURIUM HEXAFLUORIDE	241.590	gas	-1318.00	-------	-1313.04	-------
319	Ti	TITANIUM	47.880	gas	473.00	428.40	470.52	425.92
320	TiCl4	TITANIUM TETRACHLORIDE	189.691	gas	-763.20	-726.30	-760.72	-723.82
321	Tl	THALLIUM	204.383	gas	182.20	147.40	179.72	144.92
322	TlBr	THALLOUS BROMIDE	284.287	gas	-37.70	-------	-40.18	-------
323	TlI	THALLOUS IODIDE	331.288	gas	7.10	-------	4.62	-------
324	Tm	THULIUM	168.934	gas	232.20	197.50	229.72	195.02
325	U	URANIUM	238.029	gas	533.00	488.40	530.52	485.92
326	UF6	URANIUM FLUORIDE	352.019	gas	-2147.40	-2063.70	-2142.44	-2058.74
327	V	VANADIUM	50.942	gas	514.20	754.40	511.72	751.92

NO	FORMULA	NAME	Mol Wt g/mol	state	ΔH_f @298 kJ/mol	ΔG_f @298 kJ/mol	ΔU_f @298 kJ/mol	ΔA_f @298 kJ/mol
328	VCl4	VANADIUM TETRACHLORIDE	192.752	gas	-525.50	-492.00	-523.02	-489.52
329	VOCl3	VANADIUM OXYTRICHLORIDE	173.299	gas	-------	-------	-------	-------
330	W	TUNGSTEN	183.840	gas	849.40	807.10	846.92	804.62
331	WF6	TUNGSTEN FLUORIDE	297.830	gas	-1721.70	-1632.10	-1716.74	-1627.14
332	Xe	XENON	131.290	gas	-------	-------	-------	-------
333	Yb	YTTERBIUM	173.040	gas	152.30	118.40	149.82	115.92
334	Yt	YTTRIUM	88.906	gas	421.30	381.10	418.82	378.62
335	Zn	ZINC	65.390	gas	130.40	94.80	127.92	92.32
336	ZnCl2	ZINC CHLORIDE	136.295	gas	-------	-------	-------	-------
337	ZnF2	ZINC FLUORIDE	103.387	gas	-------	-------	-------	-------
338	ZnO	ZINC OXIDE	81.389	gas	-------	-------	-------	-------
339	ZnSO4	ZINC SULFATE	161.454	gas	-------	-------	-------	-------
340	Zr	ZIRCONIUM	91.224	gas	608.80	566.50	606.32	564.02
341	ZrBr4	ZIRCONIUM BROMIDE	410.840	gas	-642.66	-663.99	-645.14	-666.47
342	ZrCl4	ZIRCONIUM CHLORIDE	233.035	gas	-866.21	-831.76	-863.73	-829.28
343	ZrI4	ZIRCONIUM IODIDE	598.842	gas	-355.22	-405.88	-357.70	-408.36

NOTE:

1. ΔH_f - Enthalpy of formation
2. ΔG_f - Gibbs free energy of formation
3. ΔU_f - Internal energy of formation
4. ΔA_f - Helmholtz free energy of formation
5. kJ/mol - kilojoule/mol

Table B-2 COMPUTER PROGRAM RESULTS

THERMODYNAMIC PROPERTIES FOR EXPLOSION CALCULATIONS

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1. Number..... 127
2. Formula..... H2O
3. Name..... WATER
4. Molecular Weight..... = 18.015
5. State..... = gas
6. Enthalpy of Formation.....kJ/mol = -241.80
7. Gibbs Free Energy of Formation.....kJ/mol = -228.60
8. Internal Energy of Formation.....kJ/mol = -240.56
9. Helmholtz Free Energy of Formation...kJ/mol = -227.36

Appendix C

EXPOSURE LIMITS FOR HEALTH - INORGANIC COMPOUNDS

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ABSTRACT

Results for recommended and permissible exposure limits in air for safeguarding health are presented for major inorganic chemical compounds. The results are displayed in an easy-to-use table which is especially applicable for rapid engineering usage. The inorganic chemicals encompass Ag - Zr compounds.

EXPOSURE LIMITS FOR SAFEGUARDING HEALTH

The results for recommended (REL) and permissible (PEL) exposure limits in air for safeguarding health in the workplace are presented in Table C-1. The REL value is the recommended exposure limit by the NIOSH (National Institute for Occupational Safety and Health). The PEL value is the permissible exposure limit for maintaining health as provided by OSHA (Occupational Safety and Health Act). Both REL and PEL values apply to a 40 hour workweek. The last column in the tabulation provides IDLH (immediately dangerous to life or health) values. The tabulation also provides the freezing and boiling point temperatures which are helpful in determining whether the substance is a gas, liquid or solid at ambient conditions.

Threshold limit values (TLV) which also apply to a 40 hour workweek are published by the American Conference of Governmental Industrial Hygienists. The PEL values of OSHA are frequently based on the TLV values issuing from the American Conference of Governmental Industrial Hygienists (7).

In the data collection, a literature search was conducted to identify data source publications (1-15) for the table. The publications were screened and copies of appropriate data were made. These data were then keyed into the computer to provide a data base for use in preparing the tabulation.

If more than one substance is present in the workplace, then exposure limits are needed for gas mixtures. The following equation (1) maybe used for exposure limits of gas mixtures:

$$PEL_{mixture} = \Sigma\, y_i \,/\, \Sigma\, (y_i/PEL_i) \qquad \text{(C-1)}$$

where $PEL_{mixture}$ = permissible exposure limit of mixture, ppm

y_i = mole fraction of component i, ppm

COMPUTER PROGRAM

A computer program, containing the data for all compounds, is available for a nominal fee (Carl L. Yaws, Box 10053, Lamar University, Beaumont, TX 77710, phone/FAX 409-880-8787). The computer program (random data file) is in ASCII which can be accessed by other software.

Computer program results for a representative compound are shown in Table C-2.

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Table C-1 EXPOSURE LIMITS

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	REL - Recommended Exposure Limit (NIOSH)		PEL - Permissible Exposure Limit (OSHA)		IDLH - Immediately Dangerous to Life or Health	
						ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3
1	Ag	SILVER	107.868	1761.53	4013.33	----	0.01	----	0.01	-----	10
2	Al	ALUMINUM	26.982	1219.73	3732.80	----	10	----	15	-----	-----
3	Al2O3	ALUMINUM OXIDE	101.961	3725.33	5396.00	----	-----	----	15	-----	-----
4	As	ARSENIC	74.922	1502.60	1133.33	----	-----	----	0.01	-----	5
5	AsH3	ARSINE	77.945	-178.37	-80.46	----	-----	0.05	-----	3	-----
6	BF3	BORON TRIFLUORIDE	67.806	-196.78	-147.64	----	-----	----	-----	25	-----
7	B2H6	DIBORANE	27.670	-265.90	-134.50	0.1	-----	0.1	-----	15	-----
8	B5H9	PENTABORANE	63.126	-52.24	137.12	0.005	-----	0.005	-----	1	-----
9	Be	BERYLLIUM	9.012	2348.60	4479.53	----	-----	----	0.002	-----	4
10	Br2	BROMINE	159.808	18.95	137.75	0.1	-----	0.1	-----	3	-----
11	C	CARBON	12.011	7184.93	7105.73	----	-----	----	15	-----	-----
12	C	CARBON BLACK	12.011	-----	-----	----	3.5	----	0.1	-----	1750
13	CCl2O	PHOSGENE	98.916	-198.00	45.61	0.1	-----	0.1	-----	2	-----
14	CO	CARBON MONOXIDE	28.010	-337.00	-312.61	35	-----	35	-----	1200	-----
15	CO2	CARBON DIOXIDE	44.010	-69.83	-109.21	5000	-----	5000	-----	40000	-----
16	CS2	CARBON DISULFIDE	76.143	-168.83	115.20	1	-----	20	-----	500	-----
17	Cd	CADMIUM	112.411	609.62	1418.00	----	-----	----	0.005	-----	9
18	CdO	CADMIUM OXIDE	128.410	-----	2838.20	----	-----	----	0.005	-----	9
19	ClFO3	PERCHLORYL FLUORIDE	102.449	-233.93	-51.99	3	-----	3	-----	100	-----
20	ClF3	CHLORINE TRIFLUORIDE	92.448	-117.40	52.70	----	-----	----	-----	20	-----
21	ClO2	CHLORINE DIOXIDE	67.452	-75.28	51.62	0.1	-----	0.1	-----	5	-----
22	Cl2	CHLORINE	70.905	-149.85	-29.25	----	-----	----	-----	10	-----
23	Co	COBALT	58.933	2723.00	4090.73	----	0.05	----	0.1	-----	20
24	Cr	CHROMIUM	51.996	3464.60	4652.33	----	0.5	----	1	-----	250
25	Cu	COPPER	63.546	1984.32	5210.33	----	1	----	1	-----	100
26	F2	FLUORINE	37.997	-363.32	-306.76	0.1	-----	0.1	-----	25	-----
27	F2O	FLUORINE OXIDE	53.996	-371.02	-228.28	----	-----	0.05	-----	0.5	-----
28	FeC5O5	IRON PENTACARBONYL	195.899	-5.80	221.00	0.1	-----	----	-----	-----	-----
29	FeCl2	FERROUS CHLORIDE	126.752	1241.60	1878.80	----	1	----	-----	-----	-----
30	FeCl3	FERRIC CHLORIDE	162.205	579.20	606.20	----	1	----	-----	-----	-----
31	HBr	HYDROGEN BROMIDE	80.912	-124.26	-88.06	----	-----	3	-----	30	-----
32	HCN	HYDROGEN CYANIDE	27.026	8.17	78.26	----	-----	10	-----	50	-----
33	HCl	HYDROGEN CHLORIDE	36.461	-173.52	-121.00	----	-----	----	-----	50	-----
34	HF	HYDROGEN FLUORIDE	20.006	-118.05	67.14	3	-----	3	-----	30	-----
35	HNO3	NITRIC ACID	63.013	-42.88	181.40	2	-----	2	-----	25	-----
36	H2O2	HYDROGEN PEROXIDE	34.015	31.23	302.36	1	-----	1	-----	75	-----
37	H2S	HYDROGEN SULFIDE	34.082	-121.85	-76.63	----	-----	----	-----	100	-----
38	H2SO4	SULFURIC ACID	98.079	50.56	638.33	----	1	----	1	-----	15
39	H2Se	HYDROGEN SELENIDE	80.976	-83.20	-41.98	0.05	-----	0.05	-----	1	-----
40	Hf	HAFNIUM	178.490	4051.40	10268.3	----	0.5	----	0.5	-----	50
41	I2	IODINE	253.809	236.48	365.43	----	-----	----	-----	2	-----
42	In	INDIUM	114.818	313.88	3721.73	----	0.1	----	-----	-----	-----
43	KCN	POTASSIUM CYANIDE	65.100	1173.00	2957.00	----	-----	----	5	-----	25
44	KOH	POTASSIUM HYDROXIDE	56.106	762.53	2420.33	----	2	----	-----	-----	-----
45	LiH	LITHIUM HYDRIDE	7.950	1256.00	1256.00	----	0.025	----	0.025	-----	0.5
46	MgO	MAGNESIUM OXIDE	40.304	5129.33	6512.09	----	-----	----	15	-----	750
47	Mn	MANGANESE	54.938	2274.80	3845.93	----	1	----	-----	-----	500
48	Mo	MOLYBDENUM	95.940	4751.60	8686.40	----	-----	----	15	-----	5000
49	NF3	NITROGEN TRIFLUORIDE	71.002	-340.22	-200.31	10	-----	10	-----	1000	-----
50	NH3	AMMONIA	17.031	-107.93	-28.17	25	-----	----	-----	300	-----
51	NH4Cl	AMMONIUM CHLORIDE	53.491	968.09	641.93	----	10	----	-----	-----	-----
52	NO	NITRIC OXIDE	30.006	-257.80	-241.19	25	-----	25	-----	100	-----
53	NO2	NITROGEN DIOXIDE	46.006	11.84	69.53	----	-----	----	-----	20	-----
54	N2H4	HYDRAZINE	32.045	34.77	236.30	----	-----	1	-----	50	-----
55	N2O	NITROUS OXIDE	44.013	-131.48	-127.26	25	-----	----	-----	-----	-----
56	NaCN	SODIUM CYANIDE	49.008	1046.66	2724.80	----	-----	----	5	-----	25
57	NaF	SODIUM FLUORIDE	41.988	1824.53	3109.23	----	2.5	----	2.5	-----	250
58	NaOH	SODIUM HYDROXIDE	39.997	613.13	2534.00	----	-----	----	2	-----	10
59	Ni	NICKEL	58.693	2651.00	3887.33	----	0.015	----	1	-----	10
60	NiC4O4	NICKEL CARBONYL	170.735	-13.00	108.50	0.001	-----	0.001	-----	2	-----

NO	FORMULA	NAME	Mol Wt	$T_{freezing}$ F	$T_{boiling}$ F	REL - Recommended Exposure Limit (NIOSH)		PEL - Permissible Exposure Limit (OSHA)		IDLH - Immediately Dangerous to Life or Health	
						ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3
61	O3	OZONE	47.998	-315.40	-168.34	----	-----	0.1	-----	5	-----
62	OsO4	OSMIUM TETROXIDE - WHITE	254.228	107.60	266.00	----	0.002	----	0.002	-----	1
63	P	PHOSPHORUS - WHITE	30.974	111.38	536.54	----	0.1	----	0.1	-----	5
64	PCl3	PHOSPHORUS TRICHLORIDE	137.332	-133.60	168.98	0.2	-----	0.5	-----	25	-----
65	PCl5	PHOSPHORUS PENTACHLORIDE	208.237	320.00	319.73	----	1	----	1	-----	70
66	PH3	PHOSPHINE	33.998	-208.80	-125.93	0.3	-----	0.3	-----	50	-----
67	POCl3	PHOSPHORUS OXYCHLORIDE	153.331	34.12	221.90	0.1	-----	----	-----	-----	-----
68	P4S10	PHOSPHORUS PENTASULFIDE	444.555	550.40	957.20	----	1	----	1	-----	250
69	Pb	LEAD	207.200	621.43	3183.53	----	0.1	----	0.05	-----	100
70	Pt	PLATINUM	195.080	3215.12	6704.33	----	1	----	-----	-----	-----
71	Rh	RHODIUM	102.906	3567.20	6632.33	----	0.1	----	0.1	-----	100
72	SF6	SULFUR HEXAFLUORIDE	146.056	-59.26	-83.02	1000	-----	1000	-----	-----	-----
73	SO2	SULFUR DIOXIDE	64.065	-99.67	13.96	2	-----	5	-----	100	-----
74	SO2F2	SULFURYL FLUORIDE	102.100	-212.00	-68.00	5	-----	5	-----	200	-----
75	S2F10	SULFUR PENTAFLUORIDE	254.100	-134.00	84.00	----	-----	0.025	-----	1	-----
76	Sb	ANTIMONY	121.757	1167.13	2956.73	----	0.5	----	0.5	-----	50
77	SbH3	STIBINE	124.781	-126.40	-0.40	0.1	-----	0.1	-----	5	-----
78	Se	SELENIUM	78.960	429.80	1214.33	----	0.2	----	0.2	-----	1
79	SeF6	SELENIUM HEXAFLUORIDE	192.950	-30.46	-50.44	0.05	-----	0.05	-----	2	-----
80	Si	SILICON	28.086	2573.33	5865.17	----	10	----	15	-----	-----
81	SiH4	SILANE	32.117	-301.00	-169.87	5	-----	----	-----	-----	-----
82	SiO2	SILICON DIOXIDE	60.084	2929.73	4046.09	----	6	----	-----	-----	3000
83	Sn	TIN	118.710	449.47	4931.33	----	2	----	2	-----	100
84	Ta	TANTALUM	180.948	5462.60	9557.33	----	5	----	5	-----	2500
85	Te	TELLURIUM	127.600	841.12	1853.33	----	0.1	----	0.1	-----	25
86	TeF6	TELLURIUM HEXAFLUORIDE	241.590	-36.04	-37.48	----	0.1	----	0.1	-----	25
87	U	URANIUM	238.029	2075.00	6983.33	----	0.2	----	0.25	-----	10
88	W	TUNGSTEN	183.840	6191.60	9701.33	----	5	----	-----	-----	-----
89	Yt	YTTRIUM	88.906	2778.80	5039.33	----	1	----	1	-----	500
90	ZnCl2	ZINC CHLORIDE	136.295	689.00	1349.60	----	1	----	1	-----	50
91	ZnO	ZINC OXIDE	81.389	3587.09	-----	----	5	----	5	-----	500
92	Zr	ZIRCONIUM	91.224	3371.00	7816.73	----	5	----	5	-----	50

NOTE:

1. Recommended and permissible exposure limits (REL and PEL values) apply for 40 hour workweek.
2. REL and PEL values are time weighted average concentrations.
3. ppm - parts per million by volume.
4. mg/m^3 - milligrams per cubic meter (68 F, 1 atm)
5. NIOSH - National Institue for Occupational Safety and Health.
6. OSHA - Occupational Safety and Health Act.
7. Threshold limit values (TLV) which also apply to a 40 hour workweek are published by the American Conference of Governmental Industrial Hygientists. The PEL values of OSHA are frequently based on the TLV values issuing from the American Conference of Governmental Industrial Hygientists (7).

Table C-2 COMPUTER PROGRAM RESULTS

EXPOSURE LIMITS FOR HEALTH

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1. Number..... 34
2. Formula..... HF
3. Name..... HYDROGEN FLUORIDE
4. Molecular Weight..... = 20.006
5. Freezing Point..... F = -118.05
6. Boiling Point..... F = 67.14
7. Recommended Exposure Limit (NIOSH), ppm..... = 3
8. Permissible Exposure Limit (OSHA), ppm..... = 3
9. Immediately Dangerous to Life/Health, ppm.... = 30

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ppm - parts per million, volume.
mg/m3 - milligrams per cubic meter.
NIOSH - National Institute of Occupational Safety and Health.
OSHA - Occupational Safety and Health Act.
REL - Recommended Exposure Limit.
PEL - Permissible Exposure Limit.
IDLH - Immediately Dangerous to Life/Health.
PEL values are often identical to Threshold Limit Values (TLV).

Appendix D

VAPOR PRESSURE - INORGANIC COMPOUNDS*

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$\log_{10} P = A + B/T + C \log_{10} T + D T + E T^2$ (P - mm Hg, T - K)

NO	FORMULA	NAME	A	B	C	D	E	TMIN	TMAX
1	Ag	SILVER	23.6822	-1.6026E+04	-4.5239E+00	4.0517E-04	1.0895E-16	1234.00	6410.00
2	AgCl	SILVER CHLORIDE	35.4158	-1.2320E+04	-8.7445E+00	1.7514E-03	-1.4905E-07	1185.15	1837.15
3	AgI	SILVER IODIDE	69.1111	-1.3908E+04	-1.9966E+01	4.3499E-03	-3.9755E-07	1093.15	1779.15
4	Al	ALUMINUM	9.9884	-1.3837E+04	-3.4595E-01	1.1361E-11	-1.2182E-15	933.00	2329.10
5	AlB3H12	ALUMINUM BOROHYDRIDE	65.4884	-2.8974E+03	-2.4421E+01	2.8261E-02	-1.3715E-05	220.95	319.05
6	AlBr3	ALUMINUN BROMIDE	5597.9805	-1.5335E+05	-2.2913E+03	2.1944E+00	-8.0708E-04	354.45	529.45
7	AlCl3	ALUMINUM CHLORIDE	27.8613	-6.7364E+03	-3.8080E+00	-1.3181E-05	5.2521E-09	373.15	465.75
8	AlF3	ALUMINUM FLUORIDE	4703.8748	-4.6135E+05	-1.5238E+03	3.4062E-01	-3.0079E-05	1511.15	1810.15
9	AlI3	ALUMINUM IODIDE	585.1783	-2.6198E+04	-2.1938E+02	1.3820E-01	-3.5008E-05	451.15	658.65
10	Al2O3	ALUMINUM OXIDE	14.1611	-2.8238E+04	-7.3843E-01	-3.7413E-07	2.2086E-11	2421.10	3253.10
11	Al2S3O12	ALUMINUM SULFATE	-464.7417	4.9953E+04	1.3895E+02	5.7398E-04	-1.0158E-07	845.15	1043.20
12	Ar	ARGON	14.9138	-4.5675E+02	-3.5895E+00	3.5490E-08	2.1907E-05	83.78	150.86
13	As	ARSENIC	70.7356	-9.6421E+03	-2.2451E+01	1.3810E-02	-3.8579E-06	420.00	885.00
14	AsBr3	ARSENIC TRIBROMIDE	69.8773	-4.4831E+03	-2.4415E+01	1.8936E-02	-6.1554E-06	314.95	493.15
15	AsCl3	ARSENIC TRICHLORIDE	93.9840	-4.4550E+03	-3.5080E+01	3.3505E-02	-1.3338E-05	261.75	403.55
16	AsF3	ARSENIC TRIFLUORIDE	27.7465	-2.4305E+03	-7.8250E+00	7.8140E-03	-3.3333E-06	270.65	329.45
17	AsF5	ARSENIC PENTAFLUORIDE	1944.5157	-3.0430E+04	-9.1148E+02	1.8231E+00	-1.4325E-03	155.25	220.35
18	AsH3	ARSINE	-10.3462	-7.7134E+02	9.1086E+00	-2.4654E-02	2.0673E-05	156.23	373.00
19	AsI3	ARSENIC TRIIODIDE	96.0056	-6.8120E+03	-3.3239E+01	2.0112E-02	-5.0888E-06	437.15	602.65
20	As2O3	ARSENIC TRIOXIDE	-2811.4735	7.9643E+04	1.1255E+03	-9.0385E-01	2.6735E-04	485.65	730.35
21	At	ASTATINE	-17.3579	-4.5040E+03	1.3457E+01	-2.2096E-02	9.7987E-06	279.00	607.00
22	Au	GOLD	126.1594	-2.9160E+04	-3.7975E+01	8.0922E-03	-6.6670E-07	1226.00	3120.00
23	B	BORON	38.5877	-3.6230E+04	-7.5640E+00	-1.1450E-04	5.1894E-08	1821.00	4133.00
24	BBr3	BORON TRIBROMIDE	104.0215	-4.2744E+03	-3.9717E+01	3.9970E-02	-1.6726E-05	273.15	361.05
25	BCl3	BORON TRICHLORIDE	35.3538	-2.3048E+03	-1.0108E+01	5.5834E-10	5.1455E-06	166.15	451.95
26	BF3	BORON TRIFLUORIDE	75.2534	-2.4715E+03	-2.6531E+01	8.5366E-08	4.2709E-05	144.78	260.90
27	BH2CO	BORINE CARBONYL	433.1860	-6.8163E+03	-2.0499E+02	4.5121E-01	-3.7515E-04	133.95	209.15
28	BH3O3	BORIC ACID	-81.1257	2.1815E+03	2.9986E+01	-2.2693E-05	1.0956E-08	293.15	401.15
29	B2D6	DEUTERODIBORANE	120.8038	-2.4092E+03	-5.4329E+01	1.1943E-01	-1.0820E-04	118.25	179.25
30	B2H5Br	DIBORANE HYDROBROMIDE	488.4916	-8.8892E+03	-2.2351E+02	4.1313E-01	-2.9011E-04	179.85	289.45
31	B2H6	DIBORANE	11.5597	-9.4549E+02	-1.3754E+00	-2.3575E-03	2.6782E-06	107.65	289.80
32	B3N3H6	BORINE TRIAMINE	58.7997	-2.8667E+03	-2.1466E+01	2.5002E-02	-1.2241E-05	210.15	323.75
33	B4H10	TETRABORANE	23.0730	-1.7369E+03	-6.6041E+00	8.4552E-03	-4.6056E-06	182.25	289.25
34	B5H9	PENTABORANE	-163.4159	1.4743E+03	7.5896E+01	-1.0578E-01	5.0905E-05	232.75	568.45
35	B5H11	TETRAHYDROPENTABORANE	7.6486	-1.8417E+03	2.8719E-01	-3.0007E-04	1.3472E-07	222.95	340.15
36	B10H14	DECABORANE	4813.9118	-1.2837E+05	-1.9845E+03	1.9935E+00	-7.8068E-04	333.15	436.95
37	Ba	BARIUM	-18.1369	-8.1603E+03	1.0107E+01	-5.9955E-03	9.8349E-07	638.00	1907.00
38	Be	BERYLLIUM	-4.7459	-1.6799E+04	5.4503E+00	-2.6044E-03	2.8638E-07	1097.00	2744.00
39	BeB2H8	BERYLLIUM BOROHYDRIDE	-94.5732	2.2630E+02	4.1281E+01	-2.7627E-02	8.9618E-06	274.15	363.15
40	BeBr2	BERYLLIUM BROMIDE	2669.4633	-9.8679E+04	-1.0326E+03	7.2331E-01	-1.9329E-04	562.15	747.15
41	BeCl2	BERYLLIUM CHLORIDE	-289.7317	1.0348E+04	1.0311E+02	-1.6198E-02	-9.9081E-06	564.15	760.15
42	BeF2	BERYLLIUM FLUORIDE	224.7647	-2.8762E+04	-7.0897E+01	1.7991E-02	-1.8955E-06	1145.55	1372.15
43	BeI2	BERYLLIUM IODIDE	3417.9820	-1.2770E+05	-1.3156E+03	8.8819E-01	-2.2863E-04	556.15	760.15
44	Bi	BISMUTH	1449.1712	-8.3717E+04	-5.1359E+02	2.0492E-01	-2.9858E-05	569.00	1700.00
45	BiBr3	BISMUTH TRIBROMIDE	216.7751	-1.3734E+04	-7.6683E+01	3.9665E-02	-8.4421E-06	534.15	734.15
46	BiCl3	BISMUTH TRICHLORIDE	-6.1334	-3.1936E+03	5.2620E+00	-2.4866E-03	5.0977E-07	503.65	710.55
47	BrF5	BROMINE PENTAFLUORIDE	51.1403	-2.6286E+03	-1.8290E+01	2.1840E-02	-1.0991E-05	203.85	313.55
48	Br2	BROMINE	23.7200	-2.2840E+03	-5.6145E+00	2.2602E-09	1.7888E-06	265.85	584.15
49	C	CARBON	-2.0686	-2.5987E+04	3.5504E+00	-5.3440E-04	2.9310E-08	3259.10	4399.10
50	CCl2O	PHOSGENE	46.6551	-2.4657E+03	-1.5351E+01	9.2288E-03	-4.9658E-14	145.37	455.00
51	CF2O	CARBONYL FLUORIDE	-70.1866	-3.8315E+02	4.1225E+01	-1.2049E-01	1.1291E-04	161.89	297.00
52	CH4N2O	UREA	6.7305	-4.4855E+03	1.5588E+00	-1.7855E-03	8.4006E-07	340.65	368.05
53	CH4N2S	THIOUREA	-35.4224	-2.3772E+03	1.9025E+01	-2.0819E-02	6.8609E-06	454.15	854.00
54	CNBr	CYANOGEN BROMIDE	2302.7452	-4.9937E+04	-9.9806E+02	1.3391E+00	-7.0662E-04	273.01	313.09
55	CNCl	CYANOGEN CHLORIDE	-9.0018	-1.2842E+03	8.2222E+00	-1.6105E-02	9.5986E-06	266.65	449.00

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$\log_{10} P = A + B/T + C \log_{10} T + D T + E T^2$ (P - mm Hg, T - K)

NO	FORMULA	NAME	A	B	C	D	E	TMIN	TMAX
56	CNF	CYANOGEN FLUORIDE	179.8136	-4.3677E+03	-7.6561E+01	1.1639E-01	-7.2513E-05	196.75	226.35
57	CO	CARBON MONOXIDE	51.8145	-7.8824E+02	-2.2734E+01	5.1225E-02	4.6603E-11	68.15	132.92
58	COS	CARBONYL SULFIDE	36.8556	-1.7187E+03	-1.2036E+01	8.9612E-03	2.0283E-13	134.30	378.80
59	COSe	CARBON OXYSELENIDE	525.5520	-9.1072E+03	-2.4172E+02	4.5341E-01	-3.1974E-04	156.05	251.25
60	CO2	CARBON DIOXIDE	35.0187	-1.5119E+03	-1.1335E+01	9.3383E-03	7.7626E-10	216.58	304.19
61	CS2	CARBON DISULFIDE	25.1475	-2.0439E+03	-6.7794E+00	3.4828E-03	3.4373E-15	161.11	552.00
62	CSeS	CARBON SELENOSULFIDE	-101.6898	-4.5082E+02	5.2520E+01	-1.0400E-01	6.9601E-05	225.85	358.75
63	C2N2	CYANOGEN	4016.4115	-5.9887E+04	-1.9008E+03	3.9066E+00	-3.0816E-03	177.35	252.15
64	C3S2	CARBON SUBSULFIDE	-243.5223	3.1498E+03	1.0795E+02	-1.3131E-01	5.9581E-05	287.15	403.95
65	Ca	CALCIUM	-75.9862	-4.9573E+03	3.0625E+01	-1.3574E-02	1.9938E-06	625.00	1762.00
66	CaF2	CALCIUM FLUORIDE	49.0700	-2.7912E+04	-1.0510E+01	1.4288E-08	-1.0745E-12	1691.00	2806.50
67	CbF5	COLUMBIUM FLUORIDE	-42.2353	-1.1915E+03	2.0862E+01	-2.2002E-02	8.8506E-06	359.45	498.15
68	Cd	CADMIUM	-145.3985	-8.3891E+02	6.0509E+01	-4.3639E-02	1.1003E-05	393.00	1043.00
69	CdCl2	CADMIUM CHLORIDE	-4189.3798	2.2619E+05	1.4896E+03	-5.9464E-01	9.0541E-05	891.15	1240.15
70	CdF2	CADMIUM FLUORIDE	-1738.0052	1.5268E+05	5.6319E+02	-1.1301E-01	7.8517E-06	1385.15	2024.15
71	CdI2	CADMIUM IODIDE	-899.5410	3.5567E+04	3.3430E+02	-1.6865E-01	3.2257E-05	689.15	1069.15
72	CdO	CADMIUM OXIDE	42.8498	-1.5443E+04	-1.0651E+01	2.0649E-03	-1.7038E-07	1273.15	1832.15
73	ClF	CHLORINE MONOFLUORIDE	44.9140	-1.6526E+03	-1.6727E+01	3.3592E-02	-2.8601E-05	129.75	172.65
74	ClFO3	PERCHLORYL FLUORIDE	40.5028	-1.8544E+03	-1.3458E+01	9.9792E-03	3.8242E-13	125.41	368.40
75	ClF3	CHLORINE TRIFLUORIDE	25.4578	-1.6807E+03	-7.7581E+00	9.8092E-03	-5.2739E-06	192.75	284.65
76	ClF5	CHLORINE PENTAFLUORIDE	131.4931	-3.7893E+03	-5.3872E+01	7.2145E-02	-3.9712E-05	193.95	297.95
77	ClHO3S	CHLOROSULFONIC ACID	-5.6040	-2.7604E+03	8.4466E+00	-2.2029E-02	1.1699E-05	193.15	700.00
78	ClHO4	PERCHLORIC ACID	7.5448	-2.0352E+03	1.0732E+00	-7.2499E-03	4.2925E-06	171.95	631.00
79	ClO2	CHLORINE DIOXIDE	121.9791	-5.2893E+03	-4.1838E+01	-2.0950E-08	2.6848E-05	213.55	465.00
80	Cl2	CHLORINE	28.8659	-1.6745E+03	-8.5216E+00	5.3792E-03	-7.7867E-13	172.12	417.15
81	Cl2O	CHLORINE MONOXIDE	20.7506	-1.6377E+03	-5.5984E+00	7.4816E-03	-4.2600E-06	174.65	275.35
82	Cl2O7	CHLORINE HEPTOXIDE	5.5051	-1.7898E+03	1.0930E+00	-1.1071E-03	4.8227E-07	227.85	351.95
83	Co	COBALT	16.7750	-1.8953E+04	-1.7830E+00	2.8243E-05	-6.2846E-08	1095.00	2528.00
84	CoCl2	COBALT CHLORIDE	90.9544	-1.2963E+04	-2.7733E+01	7.3497E-03	-8.1551E-07	1043.15	1323.15
85	CoNC3O4	COBALT NITROSYL TRICARBONYL	-2295.1356	4.3067E+04	1.0148E+03	-1.4317E+00	7.7031E-04	271.85	353.15
86	Cr	CHROMIUM	-80.3456	-1.2221E+04	2.9746E+01	-6.8400E-03	5.2454E-07	1229.00	2840.00
87	CrC6O6	CHROMIUM CARBONYL	-3135.3223	6.6813E+04	1.3443E+03	-1.6151E+00	7.4196E-04	309.15	424.15
88	CrO2Cl2	CHROMIUM OXYCHLORIDE	226.3675	-7.6454E+03	-9.0472E+01	9.3809E-02	-3.9753E-05	254.75	390.25
89	Cs	CESIUM	-2.9708	-3.6286E+03	4.1641E+00	-3.6632E-03	7.9575E-07	295.00	959.00
90	CsBr	CESIUM BROMIDE	1537.6463	-1.0591E+05	-5.2949E+02	1.7992E-01	-2.3362E-05	1021.15	1573.15
91	CsCl	CESIUM CHLORIDE	438.8475	-3.4903E+04	-1.5008E+02	5.3499E-02	-7.3394E-06	1017.15	1573.15
92	CsF	CESIUM FLUORIDE	1768.1436	-1.1822E+05	-6.1137E+02	2.1264E-01	-2.8322E-05	985.15	1524.15
93	CsI	CESIUM IODIDE	276.4031	-2.6150E+04	-9.2366E+01	3.0791E-02	-4.0411E-06	1011.15	1553.15
94	Cu	COPPER	-82.6254	-1.1231E+04	3.1336E+01	-8.9074E-03	7.5663E-07	1130.00	3150.00
95	CuBr	CUPROUS BROMIDE	208.6672	-2.0301E+04	-6.8060E+01	1.9026E-02	-2.1495E-06	845.15	1628.15
96	CuCl	CUPROUS CHLORIDE	27.2556	-7.5654E+03	-6.1858E+00	1.2376E-10	-1.7508E-14	703.00	1763.10
97	CuCl2	CUPRIC CHLORIDE	-238.6809	1.7213E+04	7.5807E+01	2.5333E-05	-6.1652E-09	582.85	794.15
98	CuI	COPPER IODIDE	855.8840	-5.7746E+04	-2.9506E+02	1.0189E-01	-1.3492E-05	883.15	1609.15
99	DCN	DEUTERIUM CYANIDE	798.8279	-1.7354E+04	-3.4780E+02	4.9610E-01	-2.8192E-04	204.25	299.35
100	D2	DEUTERIUM	6.1037	-6.7085E+01	-5.7226E-01	1.6894E-02	-1.7612E-11	18.73	38.35
101	D2O	DEUTERIUM OXIDE	-12.8257	-2.1886E+03	1.0645E+01	-1.9029E-02	9.1375E-06	276.97	643.89
102	Eu	EUROPIUM	-55.5456	-6.4880E+03	2.3529E+01	-1.0970E-02	1.6487E-06	640.00	1742.00
103	F2	FLUORINE	27.1409	-5.7201E+02	-1.0015E+01	2.1078E-02	8.9567E-13	53.48	144.31
104	F2O	FLUORINE OXIDE	-24.8186	-1.9007E+02	1.5985E+01	-4.1421E-02	4.8042E-05	77.05	128.55
105	Fe	IRON	11.5549	-1.9538E+04	-6.2549E-01	-2.7182E-09	1.9086E-13	1808.15	3008.20
106	FeC5O5	IRON PENTACARBONYL	317.6618	-9.3157E+03	-1.2965E+02	1.3467E-01	-4.8175E-05	266.65	378.15
107	FeCl2	FERROUS CHLORIDE	-1350.9354	6.2772E+04	4.8764E+02	-2.0598E-01	3.2434E-05	973.15	1299.15
108	FeCl3	FERRIC CHLORIDE	64969.7167	-1.9169E+06	-2.6114E+04	2.2347E+01	-7.3076E-03	467.15	592.15
109	Fr	FRANCIUM	-38.3826	-2.2043E+03	1.8322E+01	-1.5441E-02	4.4042E-06	267.00	879.00
110	Ga	GALLIUM	-4.4968	-1.2924E+04	4.3403E+00	-9.5226E-04	2.3443E-08	954.00	2517.00
111	GaCl3	GALLIUM TRICHLORIDE	54.9805	-4.8102E+03	-1.6009E+01	-8.4664E-09	3.9331E-06	350.90	694.00
112	Gd	GADOLINIUM	9.6612	-1.0909E+04	-4.7131E-01	1.2082E-03	-3.9062E-07	728.00	1770.00
113	Ge	GERMANIUM	24.3265	-1.9756E+04	-4.9583E+00	9.5753E-04	-8.0668E-08	1230.00	3125.00
114	GeBr4	GERMANIUM BROMIDE	151.2941	-6.5181E+03	-5.7438E+01	4.8303E-02	-1.6731E-05	316.45	462.15
115	GeCl4	GERMANIUM CHLORIDE	207.3749	-6.4745E+03	-8.4232E+01	9.6332E-02	-4.5015E-05	228.15	357.15
116	GeHCl3	TRICHLORO GERMANE	175.3633	-5.9201E+03	-7.0301E+01	7.9543E-02	-3.7043E-05	231.85	348.15
117	GeH4	GERMANE	32.2743	-1.3704E+03	-9.9425E+00	5.1455E-10	1.6203E-05	107.26	308.00
118	Ge2H6	DIGERMANE	45.6425	-2.1567E+03	-1.6528E+01	2.1047E-02	-1.1265E-05	184.45	304.65
119	Ge3H8	TRIGERMANE	36.7997	-2.5324E+03	-1.2064E+01	1.1954E-02	-5.0050E-06	236.25	383.95
120	HBr	HYDROGEN BROMIDE	34.4939	-1.6379E+03	-1.0909E+01	7.5732E-03	-2.5521E-12	185.15	363.15
121	HCN	HYDROGEN CYANIDE	-57.0540	-3.6256E+02	2.9415E+01	-4.7528E-02	2.8406E-05	259.83	456.65

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$\log_{10} P = A + B/T + C \log_{10} T + D T + E T^2$ (P - mm Hg, T - K)

NO	FORMULA	NAME	A	B	C	D	E	TMIN	TMAX
122	HCl	HYDROGEN CHLORIDE	43.5455	-1.6279E+03	-1.5214E+01	1.3783E-02	-1.4984E-11	158.97	324.65
123	HF	HYDROGEN FLUORIDE	23.7347	-1.7996E+03	-6.1764E+00	-5.0046E-10	6.1500E-06	189.79	461.15
124	HI	HYDROGEN IODIDE	21.4282	-1.4515E+03	-5.5756E+00	3.3878E-03	-8.9335E-12	222.38	423.85
125	HNO3	NITRIC ACID	71.7653	-4.3768E+03	-2.2769E+01	-4.5988E-07	1.1856E-05	231.55	376.10
126	H2	HYDROGEN	3.4132	-4.1316E+01	1.0947E+00	-6.6896E-10	1.4589E-04	13.95	33.18
127	H2O	WATER	29.8605	-3.1522E+03	-7.3037E+00	2.4247E-09	1.8090E-06	273.16	647.13
128	H2O2	HYDROGEN PEROXIDE	33.3222	-3.7350E+03	-8.3458E+00	-1.2351E-10	1.6917E-06	272.74	730.15
129	H2S	HYDROGEN SULFIDE	18.6383	-1.3446E+03	-4.1034E+00	3.1815E-09	2.4664E-06	187.68	373.53
130	H2SO4	SULFURIC ACID	2.0582	-4.1924E+03	3.2578E+00	-1.1224E-03	5.5371E-07	283.15	603.15
131	H2S2	HYDROGEN DISULFIDE	22.3747	-2.4043E+03	-5.5539E+00	5.8402E-03	-2.6241E-06	229.95	337.15
132	H2Se	HYDROGEN SELENIDE	573.9933	-1.0568E+04	-2.6071E+02	4.7258E-01	-3.4316E-04	157.85	232.05
133	H2Te	HYDROGEN TELLURIDE	532.0079	-1.0876E+04	-2.3540E+02	3.7306E-01	-2.3649E-04	176.75	271.15
134	H3NO3S	SULFAMIC ACID	0.1130	-6.8449E+02	5.2613E-05	-6.8934E-08	3.4587E-11	293.15	373.15
135	He	HELIUM-3	2.1239	-1.1769E+00	2.0493E+00	-1.7652E-10	9.4980E-03	1.01	3.31
136	He	HELIUM-4	2.8838	-3.9043E+00	6.7240E-01	1.1913E-01	-2.1010E-11	1.76	5.20
137	Hf	HAFNIUM	-187.3128	-4.7256E+03	5.9397E+01	-7.1673E-03	2.6648E-07	2117.00	5960.00
138	Hg	MERCURY	11.3169	-3.3515E+03	-1.1296E+00	-2.9698E-13	1.1699E-07	234.31	1735.00
139	HgBr2	MERCURIC BROMIDE	-6001.9471	1.6586E+05	2.4352E+03	-2.1646E+00	7.2767E-04	409.65	592.15
140	HgCl2	MERCURIC CHLORIDE	8091.0938	-2.3113E+05	-3.2811E+03	2.9716E+00	-1.0294E-03	409.35	577.15
141	HgI2	MERCURIC IODIDE	-9817.2743	2.9088E+05	3.9308E+03	-3.2560E+00	1.0229E-03	430.65	627.15
142	IF7	IODINE HEPTAFLUORIDE	2.2894	-1.4949E+03	2.7875E+00	-3.5044E-03	1.9005E-06	186.15	277.15
143	I2	IODINE	46.9335	-5.1763E+03	-1.1170E+01	-1.0130E-02	7.7500E-06	242.00	819.15
144	In	INDIUM	112.3721	-1.8894E+04	-3.5777E+01	1.1333E-02	-1.3444E-06	850.00	2323.00
145	Ir	IRIDIUM	-197.4829	-6.5755E+03	6.4387E+01	-9.6603E-03	5.0122E-07	1944.00	4450.00
146	K	POTASSIUM	10.8410	-4.6934E+03	-1.1916E+00	1.5875E-04	1.7454E-17	336.35	2223.00
147	KBr	POTASSIUM BROMIDE	86.7862	-1.5677E+04	-2.5680E+01	5.9097E-03	-5.6987E-07	1068.15	1656.15
148	KCl	POTASSIUM CHLORIDE	-8.0224	-9.3722E+03	6.4641E+00	-3.1639E-03	3.2745E-07	1044.00	3470.00
149	KF	POTASSIUM FLUORIDE	86.1553	-1.7030E+04	-2.5138E+01	5.3564E-03	-4.7879E-07	1158.15	1775.15
150	KI	POTASSIUM IODIDE	88.6708	-1.5026E+04	-2.6513E+01	6.3780E-03	-6.4206E-07	1018.15	1597.15
151	KOH	POTASSIUM HYDROXIDE	20.9787	-9.5262E+03	-3.8001E+00	-2.9030E-10	1.2312E-08	679.00	1600.00
152	Kr	KRYPTON	-12.6883	-3.1111E+02	1.0610E+01	-3.8518E-02	5.0870E-05	115.78	209.35
153	La	LANTHANUM	190.2107	-4.1131E+04	-5.7186E+01	9.9276E-03	-6.4353E-07	1441.50	3643.00
154	Li	LITHIUM	12.1182	-8.4301E+03	-1.3510E+00	2.2909E-04	-6.2641E-18	453.69	4085.00
155	LiBr	LITHIUM BROMIDE	65.3934	-1.3245E+04	-1.8782E+01	4.4647E-03	-4.4694E-07	1021.15	1583.15
156	LiCl	LITHIUM CHLORIDE	1659.2051	-1.1514E+05	-5.7029E+02	1.9064E-01	-2.4324E-05	1056.15	1655.15
157	LiF	LITHIUM FLUORIDE	69.3367	-1.8147E+04	-1.9178E+01	3.6011E-03	-2.8544E-07	1320.15	1954.15
158	LiI	LITHIUM IODIDE	72.2997	-1.4450E+04	-2.0834E+01	5.2464E-03	-5.5773E-07	996.15	1444.15
159	Lu	LUTETIUM	-47.6746	-1.1929E+04	1.8989E+01	-4.5961E-03	3.5367E-07	1057.00	2535.00
160	Mg	MAGNESIUM	-72.6513	-4.2014E+03	3.0264E+01	-1.5558E-02	2.6429E-06	517.00	1376.00
161	MgCl2	MAGNESIUM CHLORIDE	1239.2680	-9.0236E+04	-4.2304E+02	1.3654E-01	-1.6884E-05	1051.15	1691.15
162	MgO	MAGNESIUM OXIDE	-41.2727	-1.4025E+04	1.5392E+01	-2.3614E-03	1.1265E-07	3105.00	5950.00
163	Mn	MANGANESE	-123.9176	-5.9845E+03	4.6074E+01	-1.4659E-02	1.5195E-06	924.00	2392.00
164	MnCl2	MANGANESE CHLORIDE	1275.0362	-8.8381E+04	-4.3842E+02	1.4858E-01	-1.9347E-05	1009.15	1463.15
165	Mo	MOLYBDENUM	74.9735	-4.1955E+04	-2.0072E+01	3.2166E-03	-2.2507E-07	1677.00	5100.00
166	MoF6	MOLYBDENUM FLUORIDE	300.7229	-7.9655E+03	-1.2644E+02	1.6582E-01	-8.8423E-05	207.65	309.15
167	MoO3	MOLYBDENUM OXIDE	3015.8551	-2.1859E+05	-1.0259E+03	3.1920E-01	-3.8938E-05	1007.15	1424.15
168	NCl3	NITROGEN TRICHLORIDE	88.8600	-4.2008E+03	-3.1565E+01	1.8305E-02	-6.0409E-11	246.15	367.15
169	ND3	HEAVY AMMONIA	125.5395	-3.5614E+03	-5.1766E+01	7.4954E-02	-4.4958E-05	199.15	239.75
170	NF3	NITROGEN TRIFLUORIDE	8.4514	-7.4300E+02	3.9105E-01	-1.1295E-02	1.7758E-05	66.36	233.85
171	NH3	AMMONIA	37.1575	-2.0277E+03	-1.1601E+01	7.4625E-03	-9.5811E-12	195.41	405.65
172	NH3O	HYDROXYLAMINE	2.4590	-4.0142E+03	6.3297E+00	-1.8547E-02	1.1266E-05	306.25	383.00
173	NH4Br	AMMONIUM BROMIDE	23.7261	-5.2014E+03	-5.1721E+00	2.6919E-03	-5.9955E-07	471.45	669.15
174	NH4Cl	AMMONIUM CHLORIDE	-893.5430	1.9484E+04	3.6716E+02	-3.2056E-01	1.0034E-04	553.15	793.15
175	NH4I	AMMONIUM IODIDE	0.4097	-4.4032E+03	3.5216E+00	-1.7562E-03	3.7842E-07	484.05	678.05
176	NH5O	AMMONIUM HYDROXIDE	42.3381	-2.3577E+03	-1.3597E+01	8.5486E-03	4.7298E-11	203.15	353.15
177	NH5S	AMMONIUM HYDROGENSULFIDE	178.9587	-6.0657E+03	-7.2004E+01	8.7809E-02	-4.4365E-05	222.05	306.45
178	NO	NITRIC OXIDE	61.2046	-1.5365E+03	-2.3621E+01	2.9377E-02	-1.3066E-09	109.50	180.15
179	NOCl	NITROSYL CHLORIDE	24.1469	-1.8469E+03	-6.0513E+00	9.2881E-09	4.5319E-06	213.55	440.65
180	NOF	NITROSYL FLUORIDE	478.8331	-7.7441E+03	-2.2562E+02	4.9213E-01	-4.2279E-04	141.15	217.15
181	NO2	NITROGEN DIOXIDE	32.1203	-2.2563E+03	-9.7702E+00	8.6560E-03	-5.1036E-11	261.95	431.35
182	N2	NITROGEN	23.8572	-4.7668E+02	-8.6689E+00	2.0128E-02	-2.4139E-11	63.15	126.10
183	N2F4	TETRAFLUOROHYDRAZINE	16.4473	-9.6387E+02	-4.3123E+00	5.9876E-03	2.2680E-13	111.65	309.35
184	N2H4	HYDRAZINE	31.2541	-3.1466E+03	-8.2200E+00	2.6734E-03	4.6004E-13	274.68	653.15
185	N2H4C	AMMONIUM CYANIDE	179.6608	-6.1294E+03	-7.2215E+01	8.8090E-02	-4.4545E-05	222.55	304.85
186	N2H6CO2	AMMONIUM CARBAMATE	93.9638	-4.8160E+03	-3.4502E+01	3.6858E-02	-1.6578E-05	247.05	331.45
187	N2O	NITROUS OXIDE	61.5168	-2.1016E+03	-2.2337E+01	1.8232E-02	-1.1348E-10	182.30	309.57

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$\log_{10} P = A + B/T + C \log_{10} T + D T + E T^2$ (P - mm Hg, T - K)

NO	FORMULA	NAME	A	B	C	D	E	TMIN	TMAX
188	N2O3	NITROGEN TRIOXIDE	-2.5932	-1.8582E+03	7.4627E+00	-2.7402E-02	2.0570E-05	170.00	425.00
189	N2O4	NITROGEN TETRAOXIDE	-197.7926	7.7599E+02	9.9702E+01	-2.0780E-01	1.4907E-04	261.90	320.65
190	N2O5	NITROGEN PENTOXIDE	-270.4814	4.6851E+02	1.3740E+02	-2.9833E-01	2.3064E-04	236.35	305.55
191	Na	SODIUM	7.2828	-5.4249E+03	1.5358E-01	-2.0200E-04	3.7007E-08	370.97	2573.00
192	NaBr	SODIUM BROMIDE	18.4164	-1.0501E+04	-2.8637E+00	8.9249E-10	-1.1019E-13	1020.00	1720.00
193	NaCN	SODIUM CYANIDE	-2.2303	-8.2019E+03	3.8990E+00	-2.3458E-03	3.9325E-07	836.85	1769.10
194	NaCl	SODIUM CHLORIDE	22.4317	-1.1358E+04	-4.2035E+00	3.4674E-04	-3.9472E-12	1073.90	1738.10
195	NaF	SODIUM FLUORIDE	11.6744	-1.1663E+04	-9.6084E-01	1.2957E-04	-1.1232E-14	1269.00	2060.00
196	NaI	SODIUM IODIDE	69.6407	-1.4137E+04	-2.0041E+01	4.7338E-03	-4.7106E-07	1040.15	1577.15
197	NaOH	SODIUM HYDROXIDE	-48.2774	-1.9340E+03	1.7000E+01	2.9640E-11	-8.7510E-07	596.00	1830.00
198	Na2SO4	SODIUM SULFATE	-2.2687	-1.5051E+04	3.5005E+00	-1.2712E-03	1.7716E-07	1173.10	1223.10
199	Nb	NIOBIUM	-64.3485	-2.9438E+04	2.3622E+01	-3.9155E-03	2.0660E-07	2250.00	5115.00
200	Nd	NEODYMIUM	130.3312	-2.6812E+04	-3.9789E+01	8.4714E-03	-6.7800E-07	1144.00	3384.00
201	Ne	NEON	0.0175	-5.9863E+01	3.6341E+00	-8.8025E-09	-1.8115E-04	24.56	44.40
202	Ni	NICKEL	-57.4301	-1.3533E+04	2.3611E+01	-7.6670E-03	7.8143E-07	1061.00	2415.00
203	NiC4O4	NICKEL CARBONYL	24.7530	-1.9573E+03	-7.0802E+00	7.4594E-03	-3.3536E-06	250.15	315.65
204	NiF2	NICKEL FLUORIDE	634.6103	-7.2704E+04	-2.0233E+02	4.4627E-02	-3.9862E-06	1350.15	1556.15
205	Np	NEPTUNIUM	88.3172	-3.1522E+04	-2.5083E+01	4.1165E-03	-2.8679E-07	1617.99	2073.99
206	O2	OXYGEN	20.6695	-5.2697E+02	-6.7062E+00	1.2926E-02	-9.8832E-13	54.35	154.58
207	O3	OZONE	38.6910	-1.4144E+03	-1.2543E+01	-1.3045E-10	2.4393E-05	80.15	261.00
208	Os	OSMIUM	-252.0332	-6.3868E+03	8.1758E+01	-1.2735E-02	7.0592E-07	2234.00	4880.00
209	OsOF5	OSMIUM OXIDE PENTAFLUORIDE	18125.3278	-4.6581E+05	-7.4493E+03	6.8812E+00	-2.0309E-03	304.80	330.90
210	OsO4	OSMIUM TETROXIDE - YELLOW	-6976.1921	1.3882E+05	3.0478E+03	-4.0659E+00	2.0494E-03	276.35	403.15
211	OsO4	OSMIUM TETROXIDE - WHITE	-1362.6815	2.3640E+04	6.0656E+02	-8.6236E-01	4.5669E-04	267.55	403.15
212	P	PHOSPHORUS - WHITE	37.5747	-4.5200E+03	-9.8304E+00	-1.4385E-06	1.4357E-06	404.15	590.15
213	PBr3	PHOSPHORUS TRIBROMIDE	75.1763	-4.1298E+03	-2.7120E+01	2.3495E-02	-8.5043E-06	280.95	448.45
214	PCl2F3	PHOSPHORUS DICHLORIDE TRIFLUORIDE	41.7838	-2.0432E+03	-1.4841E+01	2.0345E-02	-1.1817E-05	193.35	250.35
215	PCl3	PHOSPHORUS TRICHLORIDE	56.7046	-3.2295E+03	-1.8915E+01	1.0097E-02	-7.5546E-13	181.15	374.15
216	PCl5	PHOSPHORUS PENTACHLORIDE	30.0396	-6.2579E+03	-7.4964E-01	-2.9515E-02	1.0957E-05	433.15	465.00
217	PH3	PHOSPHINE	17.6034	-1.0512E+03	-4.0706E+00	-1.5186E-09	5.1920E-06	139.37	324.75
218	PH4Br	PHOSPHONIUM BROMIDE	79.2715	-4.0989E+03	-2.8848E+01	3.2807E-02	-1.5741E-05	229.45	311.45
219	PH4Cl	PHOSPHONIUM CHLORIDE	255.9276	-6.5388E+03	-1.0929E+02	1.6761E-01	-1.0572E-04	182.15	246.15
220	PH4I	PHOSPHONIUM IODIDE	90.3833	-4.6958E+03	-3.3063E+01	3.5026E-02	-1.5625E-05	247.95	335.45
221	POCl3	PHOSPHORUS OXYCHLORIDE	89.5904	-4.4038E+03	-3.1847E+01	1.8570E-02	1.2780E-08	274.33	378.65
222	PSBr3	PHOSPHORUS THIOBROMIDE	100.8066	-6.1441E+03	-3.5921E+01	2.9018E-02	-9.8408E-06	323.15	448.15
223	PSCl3	PHOSPHORUS THIOCHLORIDE	30.9267	-2.9337E+03	-8.3323E+00	2.4967E-03	-3.2735E-11	236.95	398.15
224	P4O6	PHOSPHORUS TRIOXIDE	-9.1727	-1.7181E+03	6.7269E+00	-5.0441E-03	1.6463E-06	312.85	446.25
225	P4O10	PHOSPHORUS PENTOXIDE	-55.9316	-2.8529E+03	2.7900E+01	-2.9138E-02	9.4669E-06	693.15	758.15
226	P4S10	PHOSPHORUS PENTASULFIDE	18.3195	-5.1772E+03	-3.3346E+00	1.0110E-03	-6.7993E-14	561.15	1291.00
227	Pb	LEAD	-17.6204	-8.5777E+03	9.2106E+00	-3.9318E-03	5.4789E-07	708.00	2024.00
228	PbBr2	LEAD BROMIDE	-392.9133	9.8716E+03	1.4928E+02	-7.7340E-02	1.4423E-05	786.15	1187.15
229	PbCl2	LEAD CHLORIDE	178.2156	-1.8711E+04	-5.7943E+01	1.8346E-02	-2.4020E-06	820.15	1227.15
230	PbF2	LEAD FLUORIDE	797.7308	-6.5142E+04	-2.6816E+02	8.0837E-02	-9.4270E-06	1134.15	1566.15
231	PbI2	LEAD IODIDE	1790.0196	-9.5547E+04	-6.4509E+02	2.9522E-01	-5.2262E-05	752.15	1145.15
232	PbO	LEAD OXIDE	-357.2600	1.4278E+04	1.2467E+02	-3.7266E-02	4.2118E-06	1216.15	1745.15
233	PbS	LEAD SULFIDE	-2243.0170	1.5079E+05	7.6189E+02	-2.1739E-01	2.2835E-05	1125.15	1554.15
234	Pd	PALLADIUM	90.8138	-2.9630E+04	-2.5363E+01	3.7450E-03	-2.0394E-07	1336.00	3385.00
235	Po	POLONIUM	220.5827	-1.5775E+04	-7.8208E+01	3.8994E-02	-7.4047E-06	448.00	1235.00
236	Pt	PLATINUM	87.6383	-4.0548E+04	-2.2701E+01	1.8600E-03	-1.5887E-08	1744.00	3980.00
237	Ra	RADIUM	31.4507	-1.0221E+04	-7.3958E+00	4.1178E-04	1.3090E-07	593.00	1809.00
238	Rb	RUBIDIUM	13.7111	-4.4634E+03	-2.1307E+00	-7.2787E-05	1.8422E-07	310.00	978.00
239	RbBr	RUBIDIUM BROMIDE	78.4584	-1.4856E+04	-2.2965E+01	5.3426E-03	-5.2198E-07	1054.15	1625.15
240	RbCl	RUBIDIUM CHLORIDE	95.4464	-1.6358E+04	-2.8542E+01	6.6137E-03	-6.4090E-07	1065.15	1654.15
241	RbF	RUBIDIUM FLUORIDE	4858.3696	-3.9369E+05	-1.6193E+03	4.3432E-01	-4.5433E-05	1194.15	1681.15
242	RbI	RUBIDIUM IODIDE	87.3359	-1.5106E+04	-2.6017E+01	6.2775E-03	-6.3467E-07	1021.15	1577.15
243	Re	RHENIUM	-31.5392	-3.2254E+04	1.2215E+01	-1.2695E-03	3.7363E-08	2480.00	5915.00
244	Re2O7	RHENIUM HEPTOXIDE	-50918.9674	1.6274E+06	2.0103E+04	-1.5444E+01	4.5207E-03	485.65	635.55
245	Rh	RHODIUM	-83.3270	-2.3619E+04	3.2126E+01	-8.8651E-03	7.4827E-07	1735.00	3940.00
246	Rn	RADON	168.4046	-3.3600E+03	-7.5618E+01	1.4923E-01	-1.2016E-04	128.95	211.75
247	Ru	RUTHENIUM	3.1324	-3.5567E+04	3.0770E+00	-1.1098E-03	6.9449E-08	2051.00	4500.00
248	RuF5	RUTHENIUM PENTAFLUORIDE	253.0895	-1.0396E+04	-9.8031E+01	8.5375E-02	-3.0601E-05	322.75	429.95
249	S	SULFUR	86.7925	-7.8894E+03	-2.7433E+01	7.5706E-03	5.7656E-15	388.36	1313.00
250	SF4	SULFUR TETRAFLUORIDE	340.1740	-6.8405E+03	-1.5222E+02	2.6997E-01	-1.9417E-04	160.85	223.95
251	SF6	SULFUR HEXAFLUORIDE	10.5389	-1.0352E+03	-1.1341E+00	-1.8565E-07	1.1504E-10	223.15	318.69
252	SOBr2	THIONYL BROMIDE	1.5135	-1.9716E+03	2.6530E+00	-2.2814E-03	8.4571E-07	266.45	412.65
253	SOCl2	THIONYL CHLORIDE	66.4546	-3.3385E+03	-2.3318E+01	1.5153E-02	-8.4247E-12	172.00	372.15

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254	SOF2	SULFUROUS OXYFLUORIDE	238.2631	-5.2181E+03	-1.0431E+02	1.7358E-01	-1.1781E-04	174.42	229.05
255	SO2	SULFUR DIOXIDE	19.7418	-1.8132E+03	-4.1458E+00	-4.4284E-09	8.4918E-07	197.67	430.75
256	SO2Cl2	SULFURYL CHLORIDE	5.9028	-2.0407E+03	2.2796E+00	-1.0358E-02	6.0161E-06	222.00	545.00
257	SO3	SULFUR TRIOXIDE	114.0529	-6.4619E+03	-3.6784E+01	-1.7530E-07	1.1919E-05	289.95	490.85
258	S2Cl2	SULFUR MONOCHLORIDE	162.6274	-6.2944E+03	-6.3327E+01	6.1401E-02	-2.4506E-05	265.75	411.15
259	Sb	ANTIMONY	-14.9322	-1.3754E+04	1.5738E+01	-2.3835E-02	5.1947E-06	617.00	1898.00
260	SbBr3	ANTIMONY TRIBROMIDE	-68.4797	-6.2413E+02	3.0034E+01	-2.0378E-02	4.6884E-06	367.05	548.15
261	SbCl3	ANTIMONY TRICHLORIDE	68.0484	-5.1047E+03	-2.1724E+01	7.4742E-03	5.7270E-13	346.55	794.00
262	SbCl5	ANTIMONY PENTACHLORIDE	73.6650	-4.3530E+03	-2.6389E+01	2.3832E-02	-9.0652E-06	295.85	387.25
263	SbH3	STIBINE	65.7241	-2.2895E+03	-2.5586E+01	3.4766E-02	-1.7809E-05	177.87	440.35
264	SbI3	ANTIMONY TRIIODIDE	-1834.2309	5.3081E+04	7.3328E+02	-5.9001E-01	1.8014E-04	436.75	674.15
265	Sb2O3	ANTIMONY TRIOXIDE	3557.6905	-2.2934E+05	-1.2298E+03	4.1528E-01	-5.3009E-05	847.15	1698.15
266	Sc	SCANDIUM	-410.3222	1.5184E+04	1.4020E+02	-3.6544E-02	3.4523E-06	1110.00	2700.00
267	Se	SELENIUM	994.5705	-4.3994E+04	-3.7357E+02	2.2452E-01	-5.1145E-05	397.00	930.00
268	SeCl4	SELENIUM TETRACHLORIDE	62.7934	-5.6601E+03	-2.0127E+01	1.5021E-02	-4.7573E-06	347.15	464.65
269	SeF6	SELENIUM HEXAFLUORIDE	-13.7376	-9.6701E+02	1.0083E+01	-1.4935E-02	9.6551E-06	154.55	227.35
270	SeOCl2	SELENIUM OXYCHLORIDE	-31.1449	-1.5960E+03	1.5901E+01	-1.1690E-02	3.7904E-06	307.95	441.15
271	SeO2	SELENIUM DIOXIDE	-26.7091	-2.9884E+03	1.3896E+01	-7.6193E-03	1.8305E-06	430.15	590.15
272	Si	SILICON	315.0687	-7.1384E+04	-8.9680E+01	8.3445E-03	-2.5806E-09	1997.10	2560.10
273	SiBrCl2F	BROMODICHLOROFLUOROSILANE	221.2325	-5.5951E+03	-9.3501E+01	1.2431E-01	-6.0950E-05	186.65	474.30
274	SiBrF3	TRIFLUOROBROMOSILANE	-316.1829	5.0196E+03	1.4386E+02	-2.1246E-01	1.1958E-04	203.35	354.90
275	SiBr2ClF	DIBROMOCHLOROFLUOROSILANE	114.7880	-3.9867E+03	-4.5478E+01	5.1723E-02	-2.2118E-05	207.95	515.92
276	SiClF3	TRIFLUOROCHLOROSILANE	102.6712	-2.5416E+03	-4.3347E+01	7.1921E-02	-4.5231E-05	129.15	308.83
277	SiCl2F2	DICHLORODIFLUOROSILANE	65.5754	-2.0450E+03	-2.6643E+01	4.5134E-02	-2.8299E-05	148.45	367.35
278	SiCl3F	TRICHLOROFLUOROSILANE	106.0275	-3.4770E+03	-4.2166E+01	5.0626E-02	-2.3053E-05	180.55	434.85
279	SiCl4	SILICON TETRACHLORIDE	28.4503	-2.3911E+03	-7.3965E+00	-9.3193E-10	2.7569E-06	204.30	507.00
280	SiF4	SILICON TETRAFLUORIDE	250.9551	-6.9843E+03	-9.4613E+01	-5.3053E-05	1.3121E-04	186.35	259.00
281	SiHBr3	TRIBROMOSILANE	29.8264	-2.6956E+03	-8.0772E+00	2.0334E-03	1.0063E-06	242.65	617.50
282	SiHCl3	TRICHLOROSILANE	8.8008	-1.6896E+03	5.0043E-01	-6.9024E-03	5.1631E-06	144.95	479.00
283	SiHF3	TRIFLUOROSILANE	-122.7759	5.7853E+01	6.9914E+01	-2.1980E-01	2.2343E-04	121.15	276.65
284	SiH2Br2	DIBROMOSILANE	63.8405	-2.9308E+03	-2.3568E+01	2.4715E-02	-9.7683E-06	212.25	559.24
285	SiH2Cl2	DICHLOROSILANE	30.1827	-2.0844E+03	-8.2717E+00	-3.7469E-10	4.5636E-06	151.15	449.00
286	SiH2F2	DIFLUOROSILANE	23.8427	-1.5675E+03	-4.4921E+00	-1.9742E-02	3.1144E-05	126.45	310.75
287	SiH2I2	DIIODOSILANE	-132.4973	2.1632E+03	5.6398E+01	-4.9010E-02	1.6020E-05	276.95	683.81
288	SiH3Br	MONOBROMOSILANE	48.9247	-2.1416E+03	-1.7831E+01	2.1780E-02	-1.0087E-05	187.45	455.15
289	SiH3Cl	MONOCHLOROSILANE	97.0716	-3.0578E+03	-3.8232E+01	4.4033E-02	-1.8687E-05	155.35	396.79
290	SiH3F	MONOFLUOROSILANE	262.3858	-5.0922E+03	-1.1579E+02	1.8678E-01	-1.1081E-04	120.15	285.87
291	SiH3I	IODOSILANE	81.5431	-3.3034E+03	-3.0771E+01	3.1175E-02	-1.1973E-05	220.15	524.59
292	SiH4	SILANE	49.8037	-1.3946E+03	-1.8981E+01	2.2497E-02	3.0530E-13	88.48	269.70
293	SiO2	SILICON DIOXIDE	-378.5210	6.5473E+03	1.3150E+02	-3.5774E-02	3.4220E-06	1883.00	2503.20
294	Si2Cl6	HEXACHLORODISILANE	28.0093	-2.9842E+03	-7.7427E+00	6.7458E-03	-2.5044E-06	277.15	412.15
295	Si2F6	HEXAFLUORODISILANE	-3.5918	-1.9401E+03	6.6355E+00	-8.5356E-03	4.7603E-06	192.15	254.25
296	Si2H5Cl	DISILANYL CHLORIDE	50.2854	-2.4890E+03	-1.8081E+01	2.1374E-02	-1.0671E-05	226.95	291.15
297	Si2H6	DISILANE	19.4083	-1.5000E+03	-4.5432E+00	-2.0804E-10	3.3390E-06	143.85	432.00
298	Si2OCl3F3	TRICHLOROTRIFLUORODISILOXANE	-39.7219	-2.7322E+02	1.9305E+01	-1.7428E-02	7.2191E-06	235.15	316.35
299	Si2OCl6	HEXACHLORODISILOXANE	173.0145	-6.6562E+03	-6.7483E+01	6.5445E-02	-2.6121E-05	268.15	408.75
300	Si2OH6	DISILOXANE	23.4097	-1.5324E+03	-6.9541E+00	1.0056E-02	-6.1820E-06	160.65	257.75
301	Si3Cl8	OCTACHLOROTRISILANE	0.9548	-2.4388E+03	2.9120E+00	-2.1105E-03	6.5985E-07	319.45	484.55
302	Si3H8	TRISILANE	61.7030	-2.7796E+03	-2.2974E+01	2.7178E-02	-1.3469E-05	204.25	326.25
303	Si3H9N	TRISILAZANE	77.8169	-3.1701E+03	-2.9814E+01	3.5861E-02	-1.8007E-05	204.45	321.85
304	Si4H10	TETRASILANE	72.5811	-3.7126E+03	-2.6507E+01	2.6806E-02	-1.1367E-05	245.45	373.15
305	Sm	SAMARIUM	-63.3814	-6.9759E+03	2.5576E+01	-9.5945E-03	1.2128E-06	733.00	1874.00
306	Sn	TIN	-11.8452	-1.3744E+04	6.4004E+00	-9.7861E-04	-4.2795E-10	1096.00	2995.00
307	SnBr4	STANNIC BROMIDE	62.0925	-4.1212E+03	-2.1351E+01	1.6385E-02	-5.2861E-06	331.45	477.85
308	SnCl2	STANNOUS CHLORIDE	430.9683	-2.2551E+04	-1.5874E+02	9.2347E-02	-2.1208E-05	589.15	896.15
309	SnCl4	STANNIC CHLORIDE	146.4762	-5.5847E+03	-5.7244E+01	5.8634E-02	-2.4782E-05	250.45	386.15
310	SnH4	STANNIC HYDRIDE	7.8482	-9.7474E+02	-2.7435E-01	4.6026E-04	-3.3081E-07	133.15	220.85
311	SnI4	STANNIC IODIDE	-5.9850	-2.4424E+03	5.1095E+00	-2.7912E-03	6.6165E-07	429.15	621.15
312	Sr	STRONTIUM	-111.2297	-2.8962E+03	4.3785E+01	-2.0560E-02	3.2941E-06	582.00	1630.00
313	SrO	STRONTIUM OXIDE	2848.9447	-4.0303E+05	-8.7252E+02	1.3051E-01	-7.7456E-06	2341.15	2683.15
314	Ta	TANTALUM	90.4608	-5.3107E+04	-2.4076E+01	2.9553E-03	-1.3908E-07	2511.00	5565.00
315	Tc	TECHNETIUM	-240.5191	-5.7928E+03	7.8794E+01	-1.3112E-02	7.4635E-07	1660.00	5000.00
316	Te	TELLURIUM	-130.9948	-5.2810E+03	5.7873E+01	-4.6486E-02	1.0781E-05	497.00	1285.00
317	TeCl4	TELLURIUM TETRACHLORIDE	225.5681	-1.3194E+04	-8.0899E+01	4.5316E-02	-1.0441E-05	506.15	665.15
318	TeF6	TELLURIUM HEXAFLUORIDE	103.1152	-3.1620E+03	-4.2245E+01	6.7520E-02	-4.5015E-05	161.85	234.55
319	Ti	TITANIUM	-194.8742	-8.2733E+03	6.8261E+01	-1.7329E-02	1.5517E-06	1508.00	3442.00

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$\log_{10} P = A + B/T + C \log_{10} T + D T + E T^2$ (P - mm Hg, T - K)

NO	FORMULA	NAME	A	B	C	D	E	TMIN	TMAX
320	TiCl4	TITANIUM TETRACHLORIDE	65.9073	-4.0187E+03	-2.2002E+01	1.0422E-02	-8.7715E-13	249.05	638.00
321	Tl	THALLIUM	149.2845	-1.7175E+04	-4.9494E+01	1.8084E-02	-2.5186E-06	636.00	1745.00
322	TlBr	THALLOUS BROMIDE	65.7795	-9.3154E+03	-1.9913E+01	6.6371E-03	-9.3147E-07	763.15	1092.15
323	TlI	THALLOUS IODIDE	107.4718	-1.2047E+04	-3.4449E+01	1.2081E-02	-1.7669E-06	713.15	1096.15
324	Tm	THULIUM	581.9203	-4.0634E+04	-2.0847E+02	9.8996E-02	-1.8204E-05	661.00	1237.00
325	U	URANIUM	5.1916	-2.3655E+04	1.4051E+00	-6.7084E-04	6.4472E-08	1600.00	4135.00
326	UF6	URANIUM FLUORIDE	141.7284	-5.4522E+03	-5.5519E+01	6.2879E-02	-2.9623E-05	234.35	328.85
327	V	VANADIUM	52.0677	-3.1989E+04	-1.2620E+01	1.6179E-03	-1.0505E-07	1604.00	3665.00
328	VCl4	VANADIUM TETRACHLORIDE	12.7215	-2.2338E+03	-1.7693E+00	-9.8525E-11	3.4861E-07	247.45	697.00
329	VOCl3	VANADIUM OXYTRICHLORIDE	31.8135	-2.8585E+03	-8.5879E+00	3.9375E-09	3.4924E-06	193.65	400.00
330	W	TUNGSTEN	-19.5111	-3.8683E+04	8.6887E+00	-7.1355E-04	2.1195E-08	2667.00	5645.00
331	WF6	TUNGSTEN FLUORIDE	354.8192	-8.8753E+03	-1.5107E+02	2.0875E-01	-1.1715E-04	201.55	290.45
332	Xe	XENON	15.6530	-8.1035E+02	-3.9013E+00	4.7985E-03	-1.7020E-11	161.36	289.74
333	Yb	YTTERBIUM	-61.8092	-5.3349E+03	2.5566E+01	-1.1528E-02	1.7104E-06	599.00	1660.00
334	Yt	YTTRIUM	-198.7054	-2.2991E+03	6.8766E+01	-1.6442E-02	1.3848E-06	1246.00	3055.00
335	Zn	ZINC	-20.3143	-4.6362E+03	1.0073E+01	-3.8085E-03	4.8860E-07	692.70	3170.00
336	ZnCl2	ZINC CHLORIDE	256.5500	-1.7845E+04	-9.1583E+01	4.9680E-02	-1.0787E-05	701.15	1005.15
337	ZnF2	ZINC FLUORIDE	-17799.4171	1.2561E+06	6.0444E+03	-1.7915E+00	2.0155E-04	1243.15	1770.15
338	ZnO	ZINC OXIDE	10.0724	-1.5790E+04	-3.0065E-02	6.5659E-06	-5.4927E-10	1773.10	2223.10
339	ZnSO4	ZINC SULFATE	8.7415	-2.2158E+03	-5.1178E-04	6.6577E-07	-3.3159E-10	293.15	378.15
340	Zr	ZIRCONIUM	95.1134	-4.3264E+04	-2.5683E+01	2.9830E-03	-1.1696E-07	1975.00	4598.00
341	ZrBr4	ZIRCONIUM BROMIDE	35.8920	-6.9028E+03	-8.7767E+00	4.6821E-03	-1.0688E-06	480.15	630.15
342	ZrCl4	ZIRCONIUM CHLORIDE	80.7853	-8.5643E+03	-2.5618E+01	1.4577E-02	-3.5146E-06	463.15	604.15
343	ZrI4	ZIRCONIUM IODIDE	95.3927	-1.0449E+04	-3.0444E+01	1.5025E-02	-3.1340E-06	537.15	704.15

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Appendix E

PHYSICAL PROPERTIES - INORGANIC COMPOUNDS*

Carl L. Yaws
Lamar University, Beaumont, Texas

NO	FORMULA	NAME	MW g/mol	T_F K	T_B K	T_C K	P_C bar	V_C cm³/mol	ρ_C g/cm³	Z_C	ω	SOURCE
1	Ag	SILVER	107.868	1234.00	2485.00	7480.00	5066.0	58.20	1.8534	0.474	0.150	1,6
2	AgCl	SILVER CHLORIDE	143.321	728.15	1837.15	---	---	---	---	---	---	2
3	AgI	SILVER IODIDE	234.773	825.15	1779.15	---	---	---	---	---	---	2
4	Al	ALUMINUM	26.982	933.00	2329.15	7151.00	5458.0	39.00	0.6918	0.358	---	1
5	AlB3H12	ALUMINUM BOROHYDRIDE	71.510	209.15	319.05	---	---	---	---	---	---	2
6	AlBr3	ALUMINUN BROMIDE	266.694	390.15	529.45	763.00	---	124.20	2.1473	---	---	3,6
7	AlCl3	ALUMINUM CHLORIDE	133.340	465.70	453.15	629.00	26.35	261.45	0.5100	0.132	---	1
8	AlF3	ALUMINUM FLUORIDE	83.977	1313.15	1810.15	---	---	---	---	---	---	2
9	AlI3	ALUMINUM IODIDE	407.695	464.15	658.65	---	---	---	---	---	---	2,10
10	Al2O3	ALUMINUM OXIDE	101.961	2325.00	3253.15	5335.00	---	---	---	---	---	1
11	Al2S3O12	ALUMINUM SULFATE	342.154	1043.20	---	---	---	---	---	---	---	1
12	Ar	ARGON	39.948	83.80	87.28	150.86	48.98	74.59	0.5356	0.291	0.000	1
13	As	ARSENIC	74.922	1090.15	885.00	1673.15	---	---	---	---	---	4,5
14	AsBr3	ARSENIC TRIBROMIDE	314.634	306.15	493.15	---	---	---	---	---	---	2,10
15	AsCl3	ARSENIC TRICHLORIDE	181.280	255.15	403.55	---	---	---	---	---	---	2
16	AsF3	ARSENIC TRIFLUORIDE	131.917	267.25	329.45	---	---	---	---	---	---	2
17	AsF5	ARSENIC PENTAFLUORIDE	169.914	193.35	220.35	---	---	---	---	---	---	2
18	AsH3	ARSINE	77.945	156.28	210.67	373.00	65.50	97.80	0.7970	0.207	0.006	1
19	AsI3	ARSENIC TRIIODIDE	455.635	419.15	676.15	---	---	---	---	---	---	2,5
20	As2O3	ARSENIC TRIOXIDE	197.841	585.95	730.35	---	---	---	---	---	---	3
21	At	ASTATINE	210.000	575.15	607.00	---	---	---	---	---	---	4,5
22	Au	GOLD	196.967	1337.33	3120.00	4398.00	---	50.30	3.9158	---	---	4,5,6
23	B	BORON	10.811	2348.15	4133.00	---	---	---	---	---	---	4,5
24	BBr3	BORON TRIBROMIDE	250.523	228.15	364.85	---	---	---	---	---	---	2
25	BCl3	BORON TRICHLORIDE	117.169	166.15	285.65	451.95	38.71	148.34	0.7899	0.153	0.151	1
26	BF3	BORON TRIFLUORIDE	67.806	146.05	173.35	260.90	49.85	123.61	0.5485	0.284	0.430	1
27	BH2CO	BORINE CARBONYL	40.837	136.15	209.15	---	---	---	---	---	---	3
28	BH3O3	BORIC ACID	61.833	458.15	---	---	---	---	---	---	---	1
29	B2D6	DEUTERODIBORANE	33.718	---	179.87	---	---	---	---	---	---	2
30	B2H5Br	DIBORANE HYDROBROMIDE	106.566	168.95	289.45	---	---	---	---	---	---	3
31	B2H6	DIBORANE	27.670	107.65	180.65	289.80	40.53	173.10	0.1598	0.291	0.125	1
32	B3N3H6	BORINE TRIAMINE	80.501	214.95	323.75	---	---	---	---	---	---	2
33	B4H10	TETRABORANE	53.323	153.25	289.25	---	---	---	---	---	---	2
34	B5H9	PENTABORANE	63.126	226.35	331.55	568.45	46.41	285.1	0.2214	0.280	---	2,8
35	B5H11	TETRAHYDROPENTABORANE	65.142	---	340.15	---	---	---	---	---	---	2
36	B10H14	DECABORANE	122.221	372.75	486.15	---	---	---	---	---	---	2,10
37	Ba	BARIUM	137.327	1000.15	1907.00	---	---	---	---	---	---	2,4,5
38	Be	BERYLLIUM	9.012	1560.15	2744.00	---	---	---	---	---	---	4,5
39	BeB2H8	BERYLLIUM BOROHYDRIDE	38.698	396.15	363.15	---	---	---	---	---	---	2
40	BeBr2	BERYLLIUM BROMIDE	168.820	763.15	747.15	---	---	---	---	---	---	3
41	BeCl2	BERYLLIUM CHLORIDE	79.918	678.15	760.15	---	---	---	---	---	---	3
42	BeF2	BERYLLIUM FLUORIDE	47.009	1073.15	---	---	---	---	---	---	---	2,10
43	BeI2	BERYLLIUM IODIDE	262.821	761.15	760.15	---	---	---	---	---	---	3
44	Bi	BISMUTH	208.980	544.15	1698.15	4620.00	---	79.40	2.6320	---	---	3,6
45	BiBr3	BISMUTH TRIBROMIDE	448.692	491.15	734.15	1220.00	---	302.00	1.4857	---	---	2,6
46	BiCl3	BISMUTH TRICHLORIDE	315.338	503.15	714.15	1178.00	---	261.70	1.2050	---	---	2,6
47	BrF5	BROMINE PENTAFLUORIDE	174.896	211.75	313.55	470.00	---	---	---	---	---	2,6
48	Br2	BROMINE	159.808	265.90	331.90	584.15	103.35	135.00	1.1838	0.287	0.119	1
49	C	CARBON	12.011	4247.00	4203.00	6810.00	2230.0	18.80	0.6389	0.074	1.566	1
50	CCl2O	PHOSGENE	98.916	145.37	280.71	455.00	56.74	190.22	0.5200	0.285	0.201	1
51	CF2O	CARBONYL FLUORIDE	66.007	161.89	188.58	297.00	57.60	141.00	0.4681	0.329	0.283	1
52	CH4N2O	UREA	60.056	405.85	465.00	705.00	90.50	218.00	0.2755	0.337	---	1
53	CH4N2S	THIOUREA	76.122	454.15	536.00	854.00	82.30	248.00	0.3069	0.287	0.359	1
54	CNBr	CYANOGEN BROMIDE	105.922	331.15	334.65	---	---	---	---	---	---	2
55	CNCl	CYANOGEN CHLORIDE	61.470	266.65	286.00	449.00	59.90	163.00	0.3771	0.262	0.320	1
56	CNF	CYANOGEN FLUORIDE	45.016	---	227.17	---	---	---	---	---	---	2
57	CO	CARBON MONOXIDE	28.010	68.15	81.70	132.92	34.99	93.10	0.3009	0.295	0.066	1
58	COS	CARBONYL SULFIDE	60.076	134.35	223.00	378.80	63.49	135.10	0.4447	0.272	0.097	1

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NO	FORMULA	NAME	MW g/mol	T_F K	T_B K	T_C K	P_C bar	V_C cm^3/mol	ρ_C g/cm^3	Z_C	ω	SOURCE
59	COSe	CARBON OXYSELENIDE	106.970	---	251.25	---	---	---	---	---	---	3
60	CO2	CARBON DIOXIDE	44.010	216.58	194.70	304.19	73.82	94.00	0.4682	0.274	0.228	1
61	CS2	CARBON DISULFIDE	76.143	161.58	319.37	552.00	79.03	160.00	0.4759	0.276	0.108	1
62	CSeS	CARBON SELENOSULFIDE	123.037	197.95	358.75	---	---	---	---	---	---	3
63	C2N2	CYANOGEN	52.035	238.75	252.15	399.90	60.60	---	---	---	---	3,6
64	C3S2	CARBON SUBSULFIDE	100.165	273.55	---	---	---	---	---	---	---	3
65	Ca	CALCIUM	40.078	1115.15	1762.00	---	---	---	---	---	---	4,5
66	CaF2	CALCIUM FLUORIDE	78.075	1691.00	2806.50	---	---	---	---	---	---	1
67	CbF5	COLUMBIUM FLUORIDE	187.898	348.65	498.15	---	---	---	---	---	---	3
68	Cd	CADMIUM	112.411	594.05	1043.15	2291.00	---	37.90	2.9660	---	---	3,6
69	CdCl2	CADMIUM CHLORIDE	183.316	841.15	1240.15	---	---	---	---	---	---	3
70	CdF2	CADMIUM FLUORIDE	150.408	793.15	2024.15	---	---	---	---	---	---	3
71	CdI2	CADMIUM IODIDE	366.220	658.15	1069.15	---	---	---	---	---	---	3
72	CdO	CADMIUM OXIDE	128.410	---	1832.15	---	---	---	---	---	---	2
73	ClF	CHLORINE MONOFLUORIDE	54.451	128.15	172.65	---	---	---	---	---	---	2
74	ClFO3	PERCHLORYL FLUORIDE	102.449	125.41	226.49	368.40	53.70	161.00	0.6363	0.282	0.173	1
75	ClF3	CHLORINE TRIFLUORIDE	92.448	190.15	284.65	---	---	---	---	---	---	2
76	ClF5	CHLORINE PENTAFLUORIDE	130.445	---	260.05	415.90	52.60	230.40	0.5662	0.350	---	2,6
77	ClHO3S	CHLOROSULFONIC ACID	116.525	193.15	427.00	700.00	85.00	195.00	0.5976	0.285	0.301	1
78	ClHO4	PERCHLORIC ACID	100.458	171.95	385.00	631.00	38.60	168.00	0.5980	0.124	0.050	1
79	ClO2	CHLORINE DIOXIDE	67.452	213.55	284.05	465.00	86.13	---	---	---	0.356	1
80	Cl2	CHLORINE	70.905	172.12	239.12	417.15	77.11	123.75	0.5730	0.275	0.069	1
81	Cl2O	CHLORINE MONOXIDE	86.905	157.15	275.35	---	---	---	---	---	---	2
82	Cl2O7	CHLORINE HEPTOXIDE	182.901	182.15	351.95	---	---	---	---	---	---	2
83	Co	COBALT	58.933	1768.15	2528.00	---	---	---	---	---	---	4,5
84	CoCl2	COBALT CHLORIDE	129.839	1008.15	1323.15	---	---	---	---	---	---	2
85	CoNC3O4	COBALT NITROSYL TRICARBONYL	172.971	262.15	353.15	---	---	---	---	---	---	3
86	Cr	CHROMIUM	51.996	2180.15	2840.00	---	---	---	---	---	---	2,4,5
87	CrC6O6	CHROMIUM CARBONYL	220.059	423.65	424.15	---	---	---	---	---	---	3,10
88	CrO2Cl2	CHROMIUM OXYCHLORIDE	154.900	176.65	390.25	---	---	---	---	---	---	2,10
89	Cs	CESIUM	132.905	301.65	963.15	2048.10	116.50	316.40	0.4201	0.216	---	2,6
90	CsBr	CESIUM BROMIDE	212.809	909.15	1573.15	---	---	---	---	---	---	3
91	CsCl	CESIUM CHLORIDE	168.358	919.15	1573.15	---	---	---	---	---	---	3
92	CsF	CESIUM FLUORIDE	151.904	956.15	1524.15	---	---	---	---	---	---	3
93	CsI	CESIUM IODIDE	259.810	894.15	1553.15	---	---	---	---	---	---	3
94	Cu	COPPER	63.546	1357.77	3150.00	5123.00	---	61.00	1.0417	---	---	4,5,6
95	CuBr	CUPROUS BROMIDE	143.450	777.15	1628.15	---	---	---	---	---	---	2
96	CuCl	CUPROUS CHLORIDE	98.999	703.00	1763.15	2435.00	---	---	---	---	---	1
97	CuCl2	CUPRIC CHLORIDE	134.451	906.15	1266.15	2010.00	---	---	---	---	---	1
98	CuI	COPPER IODIDE	190.450	878.15	1609.15	---	---	---	---	---	---	3
99	DCN	DEUTERIUM CYANIDE	28.034	261.15	299.35	---	---	---	---	---	---	2
100	D2	DEUTERIUM	4.032	18.73	23.65	38.35	16.64	60.26	0.0669	0.314	-0.145	1
101	D2O	DEUTERIUM OXIDE	20.031	276.96	374.55	643.89	219.41	56.30	0.3558	0.231	0.368	1
102	Eu	EUROPIUM	151.965	1095.15	1742.00	5150.00	---	---	---	---	---	4,5,6
103	F2	FLUORINE	37.997	53.53	84.95	144.31	52.15	66.20	0.5740	0.288	0.059	1
104	F2O	FLUORINE OXIDE	53.996	49.25	128.55	215.10	49.50	97.60	0.5532	0.270	---	2,6
105	Fe	IRON	55.847	1808.15	3000.00	9340.00	10150	28.00	1.9945	0.366	-0.298	1
106	FeC5O5	IRON PENTACARBONYL	195.899	252.15	378.15	---	---	---	---	---	---	3
107	FeCl2	FERROUS CHLORIDE	126.752	945.15	1299.15	---	---	---	---	---	---	3,10
108	FeCl3	FERRIC CHLORIDE	162.205	577.15	592.15	---	---	---	---	---	---	3
109	Fr	FRANCIUM	223.000	300.15	879.00	---	---	---	---	---	---	4,5
110	Ga	GALLIUM	69.723	302.91	2517.00	7620.00	---	75.30	0.9259	---	---	4,5,6
111	GaCl3	GALLIUM TRICHLORIDE	176.081	350.90	474.15	694.00	38.20	263.00	0.6695	0.174	0.458	1
112	Gd	GADOLINIUM	157.250	1587.15	1770.00	---	---	---	---	---	---	4,5
113	Ge	GERMANIUM	72.610	1211.40	3125.00	8400.00	---	---	---	---	---	4,5,6
114	GeBr4	GERMANIUM BROMIDE	392.226	299.25	462.15	---	---	---	---	---	---	2
115	GeCl4	GERMANIUM CHLORIDE	214.421	223.65	357.15	---	---	---	---	---	---	2
116	GeHCl3	TRICHLORO GERMANE	179.976	202.05	348.15	---	---	---	---	---	---	2
117	GeH4	GERMANE	76.642	107.26	185.00	308.00	55.50	140.00	0.5474	0.303	0.151	1
118	Ge2H6	DIGERMANE	151.268	164.15	304.65	---	---	---	---	---	---	2
119	Ge3H8	TRIGERMANE	225.894	167.55	383.95	---	---	---	---	---	---	2
120	HBr	HYDROGEN BROMIDE	80.912	186.34	206.45	363.15	85.52	100.26	0.8070	0.284	0.069	1
121	HCN	HYDROGEN CYANIDE	27.026	259.91	298.85	456.65	53.91	138.59	0.1950	0.197	0.410	1
122	HCl	HYDROGEN CHLORIDE	36.461	158.97	188.15	324.65	83.09	81.02	0.4500	0.249	0.132	1
123	HF	HYDROGEN FLUORIDE	20.006	189.79	292.67	461.15	64.85	69.00	0.2899	0.117	0.383	1
124	HI	HYDROGEN IODIDE	127.912	222.38	237.55	423.85	83.10	121.94	1.0490	0.288	0.038	1
125	HNO3	NITRIC ACID	63.013	231.55	356.15	520.00	68.90	145.00	0.4346	0.231	0.714	1
126	H2	HYDROGEN	2.016	13.95	20.39	33.18	13.13	64.15	0.0314	0.305	-0.215	1
127	H2O	WATER	18.015	273.15	373.15	647.13	220.55	55.95	0.3220	0.229	0.345	1

* A computer program, containing data for all compounds, is available for a nominal fee (Carl L. Yaws, Box 10053, Lamar University, Beaumont, TX 77710, phone/FAX 409-880-8787). The computer program is in ASCII which can be accessed by other software.

NO	FORMULA	NAME	MW g/mol	T_F K	T_B K	T_C K	P_C bar	V_C cm³/mol	ρ_C g/cm³	Z_C	ω	SOURCE
128	H2O2	HYDROGEN PEROXIDE	34.015	272.72	423.35	730.15	216.84	77.70	0.4378	0.278	0.360	1
129	H2S	HYDROGEN SULFIDE	34.082	187.68	212.80	373.53	89.63	98.49	0.3460	0.284	0.083	1
130	H2SO4	SULFURIC ACID	98.079	283.46	610.00	925.00	64.00	177.03	0.5540	0.147	---	1
131	H2S2	HYDROGEN DISULFIDE	66.148	183.45	337.15	---	---	---	---	---	---	2
132	H2Se	HYDROGEN SELENIDE	80.976	209.15	232.05	411.10	90.30	---	---	---	---	2,6
133	H2Te	HYDROGEN TELLURIDE	129.616	224.15	271.15	---	---	---	---	---	---	2
134	H3NO3S	SULFAMIC ACID	97.095	478.00	---	---	---	225.00	0.4315	---	---	1
135	He	HELIUM-3	3.016	1.01	3.20	3.31	1.17	72.50	0.0416	0.308	-0.472	1
136	He	HELIUM-4	4.003	1.76	4.22	5.20	2.28	57.30	0.0699	0.302	-0.390	1
137	Hf	HAFNIUM	178.490	2506.15	5960.00	---	---	---	---	---	---	4,5
138	Hg	MERCURY	200.590	234.29	629.73	1735.00	1608.0	56.35	3.5597	0.628	-0.164	1
139	HgBr2	MERCURIC BROMIDE	360.398	510.15	592.15	---	---	---	---	---	---	3
140	HgCl2	MERCURIC CHLORIDE	271.495	550.15	577.15	---	---	---	---	---	---	3
141	HgI2	MERCURIC IODIDE	454.399	532.15	627.15	1078.10	100.00	---	---	---	---	3,6
142	IF7	IODINE HEPTAFLUORIDE	259.893	278.65	277.15	---	---	---	---	---	---	2
143	I2	IODINE	253.809	386.75	458.39	819.15	116.54	155.00	1.6375	0.265	0.117	1
144	In	INDIUM	114.818	429.75	2323.00	6730.00	2432.0	82.60	1.3900	0.359	---	4,5,6
145	Ir	IRIDIUM	192.220	2719.15	4450.00	---	---	---	---	---	---	4,5
146	K	POTASSIUM	39.098	336.35	1037.00	2223.00	162.12	209.00	0.1871	0.183	-0.183	1
147	KBr	POTASSIUM BROMIDE	119.002	1003.15	1656.15	---	---	---	---	---	---	2
148	KCl	POTASSIUM CHLORIDE	74.551	1044.00	1688.87	3470.00	180.00	625.00	0.1193	0.390	-0.121	1
149	KF	POTASSIUM FLUORIDE	58.097	1153.15	1775.15	---	---	---	---	---	---	2
150	KI	POTASSIUM IODIDE	166.003	996.15	1597.15	---	---	---	---	---	---	2
151	KOH	POTASSIUM HYDROXIDE	56.106	679.00	1600.00	---	---	---	---	---	---	1
152	Kr	KRYPTON	83.800	115.78	119.80	209.35	55.02	91.20	0.9189	0.288	0.000	1
153	La	LANTHANUM	138.906	1193.15	3643.00	9511.00	5460.0	36.50	3.8056	0.252	---	4,5,6
154	Li	LITHIUM	6.941	453.69	1597.00	4085.00	1722.5	47.00	0.1477	0.238	-0.045	1
155	LiBr	LITHIUM BROMIDE	86.845	820.15	1583.15	---	---	---	---	---	---	2
156	LiCl	LITHIUM CHLORIDE	42.394	887.15	1655.15	---	---	---	---	---	---	3
157	LiF	LITHIUM FLUORIDE	25.939	1143.15	1954.15	---	---	---	---	---	---	2
158	LiI	LITHIUM IODIDE	133.845	719.15	1444.15	---	---	---	---	---	---	2
159	Lu	LUTECIUM	174.967	1936.15	2535.00	---	---	---	---	---	---	4,5
160	Mg	MAGNESIUM	24.305	923.15	1376.00	---	---	---	---	---	---	4,5
161	MgCl2	MAGNESIUM CHLORIDE	95.210	985.15	1691.15	---	---	---	---	---	---	3
162	MgO	MAGNESIUM OXIDE	40.304	3105.00	3873.20	5950.00	33.91	209.50	0.1924	0.014	0.214	1
163	Mn	MANGANESE	54.938	1519.15	2392.00	---	---	---	---	---	---	4,5
164	MnCl2	MANGANESE CHLORIDE	125.843	923.15	1463.15	---	---	---	---	---	---	3
165	Mo	MOLYBDENUM	95.940	2895.15	5081.15	9620.00	---	38.30	2.5050	---	---	3,6
166	MoF6	MOLYBDENUM FLUORIDE	209.930	290.15	309.15	---	---	---	---	---	---	2
167	MoO3	MOLYBDENUM OXIDE	143.938	1068.15	1424.15	---	---	---	---	---	---	2
168	NCl3	NITROGEN TRICHLORIDE	120.365	246.15	344.15	564.00	104.00	---	---	---	---	1
169	ND3	HEAVY AMMONIA	20.055	199.15	239.75	---	---	---	---	---	---	2
170	NF3	NITROGEN TRIFLUORIDE	71.002	66.36	144.09	233.85	45.30	118.75	0.5979	0.277	0.126	1
171	NH3	AMMONIA	17.031	195.41	239.72	405.65	112.78	72.47	0.2350	0.242	0.252	1
172	NH3O	HYDROXYLAMINE	33.030	306.25	383.00	574.00	137.00	---	---	---	0.694	1
173	NH4Br	AMMONIUM BROMIDE	97.943	---	669.15	---	---	---	---	---	---	2
174	NH4Cl	AMMONIUM CHLORIDE	53.491	793.20	612.00	882.00	16.40	---	---	---	---	1
175	NH4I	AMMONIUM IODIDE	144.943	---	678.05	---	---	---	---	---	---	2
176	NH5O	AMMONIUM HYDROXIDE	35.046	194.15	---	---	---	---	---	---	---	1
177	NH5S	AMMONIUM HYDROGENSULFIDE	51.112	---	306.45	---	---	---	---	---	---	2
178	NO	NITRIC OXIDE	30.006	112.15	121.38	180.15	64.85	57.70	0.5200	0.250	0.585	1
179	NOCl	NITROSYL CHLORIDE	65.459	213.55	267.77	440.65	91.19	139.30	0.4699	0.347	0.307	1
180	NOF	NITROSYL FLUORIDE	49.005	139.15	217.15	---	---	---	---	---	---	3
181	NO2	NITROGEN DIOXIDE	46.006	261.95	294.00	431.35	101.33	82.49	0.5577	0.233	0.849	1
182	N2	NITROGEN	28.013	63.15	77.35	126.10	33.94	90.10	0.3109	0.292	0.040	1
183	N2F4	TETRAFLUOROHYDRAZINE	104.007	111.65	198.95	309.35	37.10	213.00	0.4883	0.307	0.223	1
184	N2H4	HYDRAZINE	32.045	274.69	386.65	653.15	146.92	158.00	0.2028	0.427	0.314	1
185	N2H4C	AMMONIUM CYANIDE	44.056	309.15	304.85	---	---	---	---	---	---	2
186	N2H6CO2	AMMONIUM CARBAMATE	78.071	---	331.45	---	---	---	---	---	---	2
187	N2O	NITROUS OXIDE	44.013	182.33	184.67	309.57	72.45	97.37	0.4520	0.274	0.142	1
188	N2O3	NITROGEN TRIOXIDE	76.012	170.00	275.15	425.00	69.90	195.00	0.3898	0.386	0.431	1
189	N2O4	NITROGEN TETRAOXIDE	92.011	261.90	302.22	431.15	101.33	82.49	1.1154	0.233	1.007	1
190	N2O5	NITROGEN PENTOXIDE	108.010	---	---	---	---	---	---	---	---	1
191	Na	SODIUM	22.990	370.98	1156.00	2573.00	354.64	116.00	0.1982	0.192	-0.102	1
192	NaBr	SODIUM BROMIDE	102.894	1020.00	1663.82	4287.00	192.52	398.00	0.2585	0.215	-0.800	1
193	NaCN	SODIUM CYANIDE	49.008	836.85	1769.15	2900.00	---	---	---	---	---	1
194	NaCl	SODIUM CHLORIDE	58.442	1073.95	1738.15	3400.00	355.00	266.00	0.2197	0.334	0.134	1
195	NaF	SODIUM FLUORIDE	41.988	1269.00	1982.72	5530.00	531.96	185.00	0.2270	0.214	-1.115	1
196	NaI	SODIUM IODIDE	149.894	924.15	1577.15	---	---	---	---	---	---	2

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NO	FORMULA	NAME	MW g/mol	T_F K	T_B K	T_C K	P_C bar	V_C cm^3/mol	ρ_C g/cm^3	Z_C	ω	SOURCE
197	NaOH	SODIUM HYDROXIDE	39.997	596.00	1663.15	2820.00	253.31	200.00	0.2000	0.216	---	1
198	Na2SO4	SODIUM SULFATE	142.043	1157.00	---	---	---	---	---	---	---	1
199	Nb	NIOBIUM	92.906	2750.15	5115.00	---	---	---	---	---	---	4,5
200	Nd	NEODYMIUM	144.240	1289.15	3384.00	---	---	---	---	---	---	4,5
201	Ne	NEON	20.180	24.55	27.09	44.40	26.53	41.70	0.4839	0.300	-0.041	1
202	Ni	NICKEL	58.693	1728.15	2415.00	---	---	---	---	---	---	4,5
203	NiC4O4	NICKEL CARBONYL	170.735	248.15	315.65	---	---	---	---	---	---	2
204	NiF2	NICKEL FLUORIDE	96.690	---	---	---	---	---	---	---	---	2
205	Np	NEPTUNIUM	237.000	913.15	---	---	---	---	---	---	---	2,10
206	O2	OXYGEN	31.999	54.36	90.17	154.58	50.43	73.40	0.4360	0.288	0.022	1
207	O3	OZONE	47.998	80.15	161.85	261.00	55.73	89.00	0.5393	0.229	0.227	1
208	Os	OSMIUM	190.230	3306.15	4880.00	---	---	---	---	---	---	4,5
209	OsOF5	OSMIUM OXIDE PENTAFLUORIDE	301.221	---	---	---	---	---	---	---	---	2
210	OsO4	OSMIUM TETROXIDE - YELLOW	254.228	329.15	403.15	---	---	---	---	---	---	3
211	OsO4	OSMIUM TETROXIDE - WHITE	254.228	315.15	403.15	---	---	---	---	---	---	3
212	P	PHOSPHORUS - WHITE	30.974	870.00	553.45	993.75	83.29	---	---	---	---	1
213	PBr3	PHOSPHORUS TRIBROMIDE	270.686	233.15	448.45	---	---	---	---	---	---	2
214	PCl2F3	PHOSPHORUS DICHLORIDE TRIFLUORIDE	158.874	---	---	---	---	---	---	---	---	2
215	PCl3	PHOSPHORUS TRICHLORIDE	137.332	181.15	349.25	563.15	56.70	260.00	0.5282	0.315	0.234	1
216	PCl5	PHOSPHORUS PENTACHLORIDE	208.237	433.15	433.00	646.15	---	---	---	---	---	1
217	PH3	PHOSPHINE	33.998	139.37	185.41	324.75	65.36	113.32	0.3000	0.274	0.036	1
218	PH4Br	PHOSPHONIUM BROMIDE	114.910	---	311.45	---	---	---	---	---	---	2
219	PH4Cl	PHOSPHONIUM CHLORIDE	70.458	244.65	246.15	---	---	---	---	---	---	2
220	PH4I	PHOSPHONIUM IODIDE	161.910	291.65	335.45	---	---	---	---	---	---	2,10
221	POCl3	PHOSPHORUS OXYCHLORIDE	153.331	274.33	378.65	602.15	---	---	---	---	---	1
222	PSBr3	PHOSPHORUS THIOBROMIDE	302.752	311.15	448.15	---	---	---	---	---	---	2
223	PSCl3	PHOSPHORUS THIOCHLORIDE	169.398	236.95	398.15	---	---	---	---	---	---	1
224	P4O6	PHOSPHORUS TRIOXIDE	219.891	295.65	446.25	---	---	---	---	---	---	2
225	P4O10	PHOSPHORUS PENTOXIDE	283.889	693.15	---	---	---	---	---	---	---	1
226	P4S10	PHOSPHORUS PENTASULFIDE	444.555	561.15	787.15	1291.00	232.00	---	---	---	0.594	1
227	Pb	LEAD	207.200	600.61	2024.00	5400.00	861.30	93.20	2.2232	0.179	---	4,5,6
228	PbBr2	LEAD BROMIDE	367.008	646.15	1187.15	---	---	---	---	---	---	3
229	PbCl2	LEAD CHLORIDE	278.105	774.15	1227.15	---	---	---	---	---	---	2
230	PbF2	LEAD FLUORIDE	245.197	1128.15	1566.15	---	---	---	---	---	---	3
231	PbI2	LEAD IODIDE	461.009	675.15	1145.15	---	---	---	---	---	---	3
232	PbO	LEAD OXIDE	223.199	1163.15	1745.15	---	---	---	---	---	---	3
233	PbS	LEAD SULFIDE	239.266	1387.15	1554.15	---	---	---	---	---	---	3
234	Pd	PALLADIUM	106.420	1828.05	3385.00	---	---	---	---	---	---	4,5
235	Po	POLONIUM	209.000	527.15	1235.00	---	---	---	---	---	---	4,5
236	Pt	PLATINUM	195.080	2041.55	3980.00	6983.00	---	759.10	0.2570	---	---	4,5,6
237	Ra	RADIUM	226.000	973.15	1809.00	---	---	---	---	---	---	4,5
238	Rb	RUBIDIUM	85.468	312.46	978.00	2111.10	134.00	247.00	0.3460	0.189	---	4,5,6
239	RbBr	RUBIDIUM BROMIDE	165.372	955.15	1625.15	---	---	---	---	---	---	2
240	RbCl	RUBIDIUM CHLORIDE	120.921	988.15	1654.15	---	---	---	---	---	---	2
241	RbF	RUBIDIUM FLUORIDE	104.466	1033.15	1681.15	---	---	---	---	---	---	2
242	RbI	RUBIDIUM IODIDE	212.372	915.15	1577.15	---	---	---	---	---	---	2
243	Re	RHENIUM	186.207	3459.15	5915.00	---	---	32.10	5.8008	---	---	4,5,6
244	Re2O7	RHENIUM HEPTOXIDE	484.410	569.15	635.55	---	---	---	---	---	---	3
245	Rh	RHODIUM	102.906	2237.15	3940.00	---	---	---	---	---	---	4,5
246	Rn	RADON	222.000	202.15	211.35	377.40	63.00	140.00	1.5857	0.281	---	2,6
247	Ru	RUTHENIUM	101.070	2607.15	4500.00	---	---	---	---	---	---	4,5
248	RuF5	RUTHENIUM PENTAFLUORIDE	196.062	---	---	---	---	---	---	---	---	2
249	S	SULFUR	32.066	388.36	717.82	1313.00	182.08	158.00	0.2029	0.264	0.262	1
250	SF4	SULFUR TETRAFLUORIDE	108.060	149.15	233.15	---	---	---	---	---	---	2,10
251	SF6	SULFUR HEXAFLUORIDE	146.056	222.45	209.25	318.69	37.60	198.52	0.7357	0.282	0.215	1
252	SOBr2	THIONYL BROMIDE	207.873	220.95	412.65	---	---	---	---	---	---	2
253	SOCl2	THIONYL CHLORIDE	118.971	172.00	348.75	567.00	---	203.00	0.5861	---	---	1
254	SOF2	SULFUROUS OXYFLUORIDE	86.062	---	228.90	---	---	---	---	---	---	2
255	SO2	SULFUR DIOXIDE	64.065	200.00	263.13	430.75	78.84	122.00	0.5251	0.269	0.245	1
256	SO2Cl2	SULFURYL CHLORIDE	134.970	222.00	342.55	545.00	46.10	224.00	0.6025	0.228	0.176	1
257	SO3	SULFUR TRIOXIDE	80.064	289.95	317.90	490.85	82.07	127.08	0.6300	0.256	0.422	1
258	S2Cl2	SULFUR MONOCHLORIDE	135.037	193.15	411.15	---	---	---	---	---	---	2
259	Sb	ANTIMONY	121.757	903.78	1898.00	5070.00	---	---	---	---	---	4,5,6
260	SbBr3	ANTIMONY TRIBROMIDE	361.469	369.75	548.15	---	---	---	---	---	---	3
261	SbCl3	ANTIMONY TRICHLORIDE	228.115	346.55	493.40	794.00	48.20	270.00	0.8449	0.197	0.171	1
262	SbCl5	ANTIMONY PENTACHLORIDE	299.021	275.95	413.15	---	---	---	---	---	---	2,11
263	SbH3	STIBINE	124.781	185.15	255.15	440.35	73.06	157.2	0.7938	0.314	---	7
264	SbI3	ANTIMONY TRIIODIDE	502.470	440.15	674.15	---	---	---	---	---	---	3
265	Sb2O3	ANTIMONY TRIOXIDE	291.512	929.15	1698.15	---	---	---	---	---	---	3

* A computer program, containing data for all compounds, is available for a nominal fee (Carl L. Yaws, Box 10053, Lamar University, Beaumont, TX 77710, phone/FAX 409-880-8787). The computer program is in ASCII which can be accessed by other software.

NO	FORMULA	NAME	MW g/mol	T_F K	T_B K	T_C K	P_C bar	V_C cm³/mol	ρ_C g/cm³	Z_C	ω	SOURCE
266	Sc	SCANDIUM	44.956	1814.15	2700.00	---	---	---	---	---	---	4,5
267	Se	SELENIUM	78.960	494.15	930.00	1766.00	380.00	62.30	1.2674	0.161	---	4,5,6
268	SeCl4	SELENIUM TETRACHLORIDE	220.771	---	464.65	---	---	---	---	---	---	2
269	SeF6	SELENIUM HEXAFLUORIDE	192.950	238.45	227.35	---	---	---	---	---	---	2
270	SeOCl2	SELENIUM OXYCHLORIDE	165.865	281.65	441.15	---	---	---	---	---	---	2
271	SeO2	SELENIUM DIOXIDE	110.959	613.15	590.15	---	---	---	---	---	---	2
272	Si	SILICON	28.086	1685.00	3513.80	5159.00	537.00	233.00	0.1205	0.292	---	1
273	SiBrCl2F	BROMODICHLOROFLUOROSILANE	197.893	160.85	308.55	---	---	---	---	---	---	3
274	SiBrF3	TRIFLUOROBROMOSILANE	164.985	202.65	231.45	---	---	---	---	---	---	2
275	SiBr2ClF	DIBROMOCHLOROFLUOROSILANE	242.345	173.85	332.65	---	---	---	---	---	---	2
276	SiClF3	TRIFLUOROCHLOROSILANE	120.533	131.15	203.15	---	---	---	---	---	---	2
277	SiCl2F2	DICHLORODIFLUOROSILANE	136.988	133.45	241.35	---	---	---	---	---	---	2
278	SiCl3F	TRICHLOROFLUOROSILANE	153.442	152.35	285.35	---	---	---	---	---	---	2
279	SiCl4	SILICON TETRACHLORIDE	169.896	204.30	330.00	507.00	35.93	326.00	0.5212	0.278	0.232	1
280	SiF4	SILICON TETRAFLUORIDE	104.079	186.35	178.35	259.00	37.19	165.00	0.6308	0.285	0.385	1
281	SiHBr3	TRIBROMOSILANE	268.805	199.65	384.95	---	---	---	---	---	---	2
282	SiHCl3	TRICHLOROSILANE	135.452	144.95	305.00	479.00	41.70	268.00	0.5054	0.281	0.203	1
283	SiHF3	TRIFLUOROSILANE	86.089	141.75	178.15	---	---	---	---	---	---	2
284	SiH2Br2	DIBROMOSILANE	189.909	202.95	343.65	---	---	---	---	---	---	2
285	SiH2Cl2	DICHLOROSILANE	101.007	151.15	281.45	449.00	44.30	228.00	0.4430	0.271	0.177	1
286	SiH2F2	DIFLUOROSILANE	68.098	---	195.35	---	---	---	---	---	---	2
287	SiH2I2	DIIODOSILANE	283.910	272.15	422.65	---	---	---	---	---	---	2
288	SiH3Br	MONOBROMOSILANE	111.013	179.25	275.55	---	---	---	---	---	---	2
289	SiH3Cl	MONOCHLOROSILANE	66.562	155.05	242.75	396.65	48.43	174.00	0.3822	0.256	0.136	3,9
290	SiH3F	MONOFLUOROSILANE	50.108	---	175.15	---	---	---	---	---	---	2
291	SiH3I	IODOSILANE	158.014	216.15	318.55	---	---	---	---	---	---	2
292	SiH4	SILANE	32.117	88.15	161.00	269.70	48.43	132.70	0.2420	0.287	0.097	1
293	SiO2	SILICON DIOXIDE	60.084	1883.00	2503.20	---	---	---	---	---	---	1
294	Si2Cl6	HEXACHLORODISILANE	268.887	271.95	412.15	---	---	---	---	---	---	2
295	Si2F6	HEXAFLUORODISILANE	170.161	254.55	254.25	---	---	---	---	---	---	2
296	Si2H5Cl	DISILANYL CHLORIDE	96.663	---	314.70	---	---	---	---	---	---	2
297	Si2H6	DISILANE	62.219	140.65	259.00	432.00	51.30	198.00	0.3142	0.283	0.102	1
298	Si2OCl3F3	TRICHLOROTRIFLUORODISILOXANE	235.524	---	315.89	---	---	---	---	---	---	2
299	Si2OCl6	HEXACHLORODISILOXANE	284.887	239.95	408.75	---	---	---	---	---	---	2
300	Si2OH6	DISILOXANE	78.218	128.95	257.75	---	---	---	---	---	---	2
301	Si3Cl8	OCTACHLOROTRISILANE	367.878	---	484.55	---	---	---	---	---	---	2
302	Si3H8	TRISILANE	92.320	155.95	326.25	---	---	---	---	---	---	2
303	Si3H9N	TRISILAZANE	107.335	167.45	321.85	---	---	---	---	---	---	2
304	Si4H10	TETRASILANE	122.421	179.55	373.15	---	---	---	---	---	---	2
305	Sm	SAMARIUM	150.360	1345.15	1874.00	---	---	---	---	---	---	4,5
306	Sn	TIN	118.710	505.08	2995.00	7400.00	---	115.10	1.0314	---	---	4,5,6
307	SnBr4	STANNIC BROMIDE	438.326	304.15	477.85	---	---	---	---	---	---	2
308	SnCl2	STANNOUS CHLORIDE	189.615	519.95	896.15	---	---	---	---	---	---	3
309	SnCl4	STANNIC CHLORIDE	260.521	242.95	386.15	---	---	---	---	---	---	2
310	SnH4	STANNIC HYDRIDE	122.742	123.25	220.85	---	---	---	---	---	---	2
311	SnI4	STANNIC IODIDE	626.328	417.65	621.15	---	---	---	---	---	---	2
312	Sr	STRONTIUM	87.620	1050.15	1630.00	---	---	---	---	---	---	4,5
313	SrO	STRONTIUM OXIDE	103.619	2703.15	---	---	---	---	---	---	---	2
314	Ta	TANTALUM	180.948	3290.15	5565.00	---	---	---	---	---	---	4,5
315	Tc	TECNNETIUM	98.000	2430.15	5000.00	---	---	---	---	---	---	4,5
316	Te	TELLURIUM	127.600	722.66	1285.00	4840.00	---	---	---	---	---	4,5,6
317	TeCl4	TELLURIUM TETRACHLORIDE	269.411	497.15	665.15	---	---	---	---	---	---	2
318	TeF6	TELLURIUM HEXAFLUORIDE	241.590	235.35	234.55	---	---	---	---	---	---	2
319	Ti	TITANIUM	47.880	1941.15	3442.00	6400.00	---	---	---	---	---	4,5,6
320	TiCl4	TITANIUM TETRACHLORIDE	189.691	249.05	409.00	638.00	46.61	340.00	0.5579	0.299	0.284	1
321	Tl	THALLIUM	204.383	577.15	1745.00	---	---	---	---	---	---	4,5
322	TlBr	THALLOUS BROMIDE	284.287	733.15	1092.15	---	---	---	---	---	---	2
323	TlI	THALLOUS IODIDE	331.288	713.15	1096.15	---	---	---	---	---	---	2
324	Tm	THULIUM	168.934	1818.15	2219.15	---	---	---	---	---	---	4,5
325	U	URANIUM	238.029	1408.15	4135.00	---	---	---	---	---	---	4,5
326	UF6	URANIUM FLUORIDE	352.019	342.35	328.85	---	---	---	---	---	---	2
327	V	VANADIUM	50.942	2183.15	3665.00	---	---	---	---	---	---	4,5
328	VCl4	VANADIUM TETRACHLORIDE	192.752	247.45	425.00	697.00	60.30	268.00	0.7192	0.279	0.186	1
329	VOCl3	VANADIUM OXYTRICHLORIDE	173.299	193.65	400.00	636.00	---	290.00	0.5976	---	---	1
330	W	TUNGSTEN	183.840	3695.15	5645.00	14756.0	---	33.90	5.4230	---	---	4,5,6
331	WF6	TUNGSTEN FLUORIDE	297.830	272.65	290.45	---	---	---	---	---	---	2
332	Xe	XENON	131.290	161.36	165.03	289.74	58.40	118.00	1.1126	0.286	0.000	1
333	Yb	YTTERBIUM	173.040	1097.15	1660.00	---	---	---	---	---	---	4,5
334	Yt	YTTRIUM	88.906	1799.15	3055.00	---	---	---	---	---	---	4,5

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NO	FORMULA	NAME	MW g/mol	T_F K	T_B K	T_C K	P_C bar	V_C cm^3/mol	ρ_C g/cm^3	Z_C	ω	SOURCE
335	Zn	ZINC	65.390	692.70	1181.15	3170.00	2904.0	33.00	1.9815	0.364	0.078	1
336	ZnCl2	ZINC CHLORIDE	136.295	638.15	1005.15	---	---	---	---	---	---	3
337	ZnF2	ZINC FLUORIDE	103.387	1145.15	1770.15	---	---	---	---	---	---	3
338	ZnO	ZINC OXIDE	81.389	2248.20	---	---	---	---	---	---	---	1
339	ZnSO4	ZINC SULFATE	161.454	953.00	---	---	---	---	---	---	---	1
340	Zr	ZIRCONIUM	91.224	2128.15	4598.00	8802.00	---	---	---	---	---	4,5,6
341	ZrBr4	ZIRCONIUM BROMIDE	410.840	723.15	630.15	---	---	---	---	---	---	2
342	ZrCl4	ZIRCONIUM CHLORIDE	233.035	710.15	604.15	---	---	---	---	---	---	2
343	ZrI4	ZIRCONIUM IODIDE	598.842	772.15	704.15	---	---	---	---	---	---	2

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NOTE:

1. Sources for the property data are:

1. Daubert, T. E. and R. P. Danner, DATA COMPILATION OF PROPERTIES OF PURE COMPOUNDS, Parts 1, 2, 3 and 4, Supplements 1 and 2, DIPPR Project, AIChE, New York, NY (1985-1992).
2. Ohe, S., COMPUTER AIDED DATA BOOK OF VAPOR PRESSURE, Data Book Publishing Company, Tokyo, Japan (1976).
3. PERRY'S CHEMICAL ENGINEERING HANDBOOK, 6th ed., McGraw-Hill, New York, NY (1984).
4. Nesmeyanov, A. N., VAPOR PRESSURE OF THE CHEMICAL ELEMENTS, Elsevier, New York, NY (1963).
5. CRC HANDBOOK OF CHEMISTRY AND PHYSICS, 66th - 75th eds., CRC Press, Inc., Boca Raton, FL (1985-1994).
6. Simmrock, K. H., R. Janowsky and A. Ohnsorge, CRITICAL DATA OF PURE SUBSTANCES, Vol. II, Parts 1 and 2, Dechema Chemistry Data Series, 6000 Frankfurt/Main, Germany (1986).
7. Yaws, C. L. and others, Solid State Technology, 17, No. 1, 47 (1974).
8. Yaws, C. L. and others, Solid State Technology, 18, No. 1, 35 (1975).
9. Yaws, C. L. and others, Solid State Technology, 16, No. 1, 39 (1973).
10. CONDENSED CHEMICAL DICTIONARY, 10th (G. G. Hawley) and 11th eds. (N. I. Sax and R. J. Lewis, Jr.), Van Nostrand Reinhold Co., New York, NY (1981,1987).
11. LANGE'S HANDBOOK OF CHEMISTRY, 13th and 14th eds., McGraw-Hill, New York, NY (1985, 1992).

2. Very limited experimental data for critical constants and acentric factor are available for inorganic compounds and elements which are solids at room temperature. Thus, the estimates for these substances should be considered rough approximations in the absence of experimental data.