

Fire Safety Regulations

Part B

According to DIN 14096-2

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Scope:
Rheinische Friedrich-Wilhelms-Universität Bonn (ausgenommen Universitätsklinikum
Bonn)

These Fire Safety Regulations Part B are intended for all individuals (employees, students, interns, visiting scholars, etc.) not using the building only temporarily. Fire Safety Regulations Part B includes rules for preventing fires, instructions for how to behave and the measures for when a fire starts.

These Fire Safety Regulations are comprised of a Part A and a Part B described above. Part A of the Fire Safety Regulations (see pp. 4 and 5) must be posted by the building operator in all University of Bonn buildings and facilities in a visible manner.

All individuals listed above shall participate in effective fire prevention, act according to these rules, and promptly report any fire to the entities responsible listed in this safety information.

The safety information shall be disseminated by the persons responsible in a suitable format.

In order to ensure appropriate response in case of a fire, the rules and behaviors listed in these Fire Safety Regulations shall be reviewed and practiced during instruction taking place periodically. Related information can be obtained from Sachgebiet Brandschutz (Abt. 4.5 – Baumanagement, Ph.: 5932).

In addition, Sachgebiet Brandschutz (Abteilung 4.5 – Baumanagement) offers fire drills for the individual University facilities, during which the correct behavior in case of fire, the use of fire extinguishers, and proper exiting from the building are taught.

Responsibilities

All persons responsible (including, but not limited to, executive directors, professors, adjunct faculty, heads of working groups and shops, administrative area and department heads) shall initiate and supervise all necessary measures, and in individual cases further measures, within their areas of responsibility. All persons responsible must prohibit actions in their workplace that may result in a fire, and/or take all precautionary measures that are apt to prevent fires.

Effective date:

Fire Safety Regulations Part B (BIN 14096-2) of the Rheinische Friedrich-Wilhelms-Universität Bonn shall take effect on 01/01/2012.

(Signed:)

Dr. Reinhardt Lutz

Chancellor of the University of Bonn
(For the Administrative part)

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1. Fire Safety Regulations Part A

These Fire Safety Regulations must be posted in all access areas and other central areas of buildings. Available from: Sachgebiet Brandschutz (Abteilung 4.5 – Baumanagement), Ph.: 5800.

Brände verhüten



Feuer, offenes Licht und Rauchen verboten!

Verhalten im Brandfall

Ruhe bewahren

Brand melden



Notruf 112



Brandmelder betätigen.

In Sicherheit bringen



Gefährdete Personen warnen.

Hilflose mitnehmen.

Türen schließen.

Gekennzeichneten Fluchtwegen folgen

Aufzüge nicht benutzen.

Auf Anweisungen achten.

Feuerlöscher benutzen.

Löschversuch unternehmen



Wandhydrant benutzen.



Fire Safety Regulations



Open fires and smoking are forbidden.

In the event of fire:

Keep calm!

Alarm the fire department!



emergency call 112



Press the fire alarm button.

Get to safety!

Warn others in the vicinity.

Take people needing help with you.

Close doors.



Follow the indicated escape route.

Don't use the lift.

Follow instructions

Try to extinguish the fire



Use fire extinguisher.



Use wall hydrants.

2. Fire prevention

General fire prevention principles

- 2.1 In all buildings of the University of Bonn, smoking is prohibited throughout the building and in all building areas.
- 2.2 Work on electrical systems must be performed by skilled personnel only.
- 2.3 Any and all so-called mobile electrical equipment, including coffee makers, water kettles, immersion heaters must be inspected periodically. Faulty machines, equipment and connecting cables must be removed from use immediately. Repairs must be performed by skilled personnel only (s. safety information "Prüfung ortsveränderlicher elektrischer Geräte").
- 2.4 If possible, electrical equipment should be unplugged after hours. This shall apply in particular for coffee makers.
- 2.5 Fire extinguishers and fire alarms are provided in various locations. Their locations may be marked by pictograms. All persons not in the building temporarily only shall inform themselves where these devices are in their work area, and how to use them.

Special fire prevention principles

- 2.6 So-called hot work (welding, cutting, soldering and cut-off grinding) must not be performed outside the shops, except with a written permit. When performing hot work, the procedure required at the University of Bonn (see third party guidelines) must be complied with.
- 2.7 Highly flammable and flammable substances must be stored only in the cabinets and rooms specifically marked for and dedicated to this purpose.
- 2.8 In labs, flammable liquids may be kept at hand at the workplace only in containers of no more than 1-liter capacity. The number of containers shall be limited to the absolutely necessary. For labs that require large amounts of flammable liquids on an ongoing basis, breakable containers for up to 5 liters and/or non-breakable containers for up to 10 liters may be kept in a protected location; e.g., a safety cabinet for flammable liquids. The safety cabinet doors must be closed after hours. Additional supplies of flammable liquids must be stored in storage rooms dedicated to this purpose. Highly flammable jetting liquids kept at hand must never be stored in thin-wall glass containers.
- 2.9 Flammable waste must be stored only in a dedicated storage room. The collection or transportation containers must only be kept in locations dedicated for this purpose, such as in under-counter cabinets. The lids of such containers must be kept closed at all times.
- 2.10 Heating, cooking and warming equipment must be placed on nonflammable, mineral pads.
- 2.11 After work has been completed, gas points of use such as taps and Bunsen burners must be shut off.
- 2.12 There must be no ignition sources in the interiors of refrigerators and freezers in which hazardous explosive atmospheres may develop. Retrofitted refrigerators must be identified by a label.

3. Fire and smoke behavior

- 3.1 Fire compartment and smoke doors must be kept closed. They must not be propped open by using wedges or other objects.
- 3.2 Doors with so-called permissible opening mechanisms (e.g., holding magnets with smoke alarms) may be open during hours. Depositing objects within the

pivoting angle of the door leaves shall be prohibited. After hours, these doors shall be closed, but not locked. These doors shall be inspected periodically according to their certificate. The inspection results shall be documented.

- 3.3 In case of a fire or smoke, all doors and windows shall be promptly closed, but not locked.
- 3.4 Flammable materials such as paper, furniture etc., as well as electrical work equipment (e.g., copiers, beverage machines) must not be placed or operated on escape and rescue routes.
- 3.5 Existing smoke and heat exhaust systems shall be operated by the firefighters, if necessary.
- 3.6 Inspection doors must be opened by authorized persons only.

4. Escape and rescue routes

- 4.1 Emergency exits, emergency hatches and other escape and rescue routes must be marked. The signage must not be blocked from view. Signs may be obtained from Sachgebiet Brandschutz (Abteilung 4.5 – Baumangement), Mr. Weber, Ph.: 5800).
- 4.2 Lighted escape route signage must be checked periodically, defective signs must be reported. In case of problems, a service application should be filed via the Web portal.
- 4.3 Emergency exits, emergency hatches, corridors, access and egress ways, staircases and escape balconies must be kept free of objects at all times.
- 4.4 Doors must be kept unlocked and freely accessible at all times as long as individuals need these escape doors in case of danger. Doors may only be locked if equipped with panic handles or other permissible devices that can be used by individuals at all times without special difficulties. In case of problems, a service application (Dienstleistungsantrag) should be filed via the Web portal.
- 4.5 Windows usually serve as a second escape route, which is why they must not have grates. If grate is necessary to prevent burglaries, it must be installed such that it can be opened from the inside without using a tool (e.g., a key). In case of problems, a service application (Dienstleistungsantrag) should be filed via the Web portal.
- 4.6 Sign-posted fire lanes, staging areas for fire engines and rescue vehicles, as well as fire hydrants must be kept free. Encroachment of any kind from parked vehicles or other deposits are prohibited in these areas. Informational signs and markings must be complied with.
- 4.7 Safety warnings and devices must not be blocked from view or access by objects.
- 4.8 All individuals must inform themselves about escape and rescue routes in their buildings. Existing escape and rescue plans must be complied with.

5. Fire alarm and extinguishing equipment

Fire alarm and extinguishing equipment must not be disabled.

Fire alarm equipment

- 5.1 In the buildings, phones are available. The fire emergency call number is: 112. It can also be dialed from phones that do not have access to an outside line.
- 5.2 Some buildings have automated fire alarm systems.

- 5.3 Everyone must educate themselves on the locations of the push-button fire alarms.
- 5.4 In case of fire, the firefighters must be notified by phone – independently of whether there is a fire alarm system.
- 5.5 Only authorized personnel is allowed to disable fire alarm systems (e.g., in order to prevent false alarms during hot work). The framework condition for this case must absolutely be complied with.

Fire extinguishing equipment

- 5.6 Everyone must thoroughly educate themselves on the locations of fire extinguishing devices.
- 5.7 The fire extinguishing devices are located in the corridor and staircase areas, as well as in certain work areas (labs, shops, etc.). The locations may be marked with a pictogram. Everyone must educate themselves on the exact locations and operation of the fire extinguishing devices. The locations of the fire extinguisher must not be changed.
- 5.8 The locations of the wall hydrants are marked.
- 5.9 In special work areas where experiments are conducted, containers with sand for extinguishing metal fires are provided.
- 5.10 The fire extinguishing blankets available in some areas will not be sufficient to fight fires affecting humans. If possible, the emergency showers (full-body showers) found in labs should also be used for this purpose.
- 5.11 In some buildings or special parts of building (e.g., hazardous material storage), built-in, automated gas fire extinguishing systems (e.g., carbon dioxide) with alarm and trigger devices are available. The person responsible for these areas must instruct employees about these.
- 5.12 After any use, fire extinguishers must be checked by Dep./Abteilung 4.3 Technical Facility Management. This also applies for fire extinguishers whose seal is broken.
- 5.13 After a fire, activities must generally not be resumed until approved by Sachgebiet Brandschutz (Abt. 4.5 – Baumanagement). Before such approval it must be ensured that the required number of fire extinguishers is available and operational again.

Notes that Abteilung 4.3 – Technical Facility Management must post above fire extinguishers.



How to Use Fire Extinguishers

First:

Call 112 to notify firefighters !

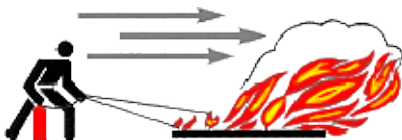
Warn persons in danger and rescue them, if necessary!

Call for additional assistance!

Make sure you are safe!

Then:

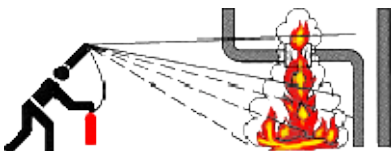
Try to extinguish the fire!



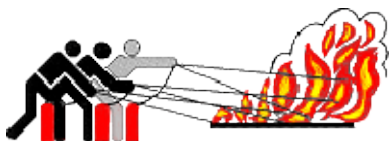
Take the direction of the wind into account and keep a safe distance. Do not aim directly at the flames; extinguish the burning substances.



Extinguish areal fires from front to back. Do not aim directly at the flames; extinguish the burning substances.



Extinguish fires dripping or flowing from above from the top (exit location) down (burning puddle).



Always use a sufficient number of fire extinguishers simultaneously, not one after the other !



Watch for reignition! Do not leave the location of a fire; keep watch!



Never put fire extinguishers back where they came from; they must be refilled and tested by Dept. 4.3 - Technical Facility Management!

6. Behavior in case of fire

- 6.1 Remain calm! Impulsive action may result in doing the wrong thing and/or panic!
- 6.2 Report the fire!
- 6.3 Close windows and doors, but do not lock them!
- 6.4 Warn people! Assist and help invalids get out!
- 6.5 In case of fire, do not use elevators!
- 6.6 Rescuing people takes precedence over fighting the fire!
- 6.7 Whatever you do, your own safety should come first!
- 6.8 If possible, turn OFF energy carriers, equipment, machines and experiments before leaving a room. Use emergency-OFF push-button, if applicable.
- 6.9 Only interrupt the water supply if it is not required for cooling etc. Check with someone first.
- 6.10 Make attempts to extinguish the fire (using fire extinguishers)!
- 6.11 Provide guides/pilots for the firefighters!
- 6.12 Notify those responsible and Sachgebiet Brandchutz (Abt. 4.5 – Baumanagement).

NOTRUF

112	Feuerwehr, Notarzt, Rettungsdienst
110	Polizei
0 19240	Information bei Vergiftungen (nur von sog. amtsberechtigten Telefonapparaten)
88-33211	Information bei Vergiftungen (für sog. nicht amtsberechtigte Telefonapparate)

NOTRUFANGABEN:

Wo geschah es?

Institut _____
Strasse _____
Ort _____
Etage _____
Raum _____

Was geschah? Kurze Beschreibung der
Notfallsituation wie z.B. Feuer, Unfall

Wie viele Verletzte? Zahl der Verletzten angeben

Welche Arten von Verletzungen?
z.B. Verbrennung, Verbrühung, Verätzung, Schnittverletzung

Warten auf Rückfragen!

Telefonhörer erst auflegen, wenn die Notrufzentrale das
Gespräch beendet!!

Diesen Hinweis ist im Blickfeld jedes Telefonapparats bzw. mindestens einmal pro Raum anzubringen. Die
Ortsangaben sind entsprechend einzutragen.

Emergency call

0 112 Ambulance, fire department

0 110 Police

0-19240 Poison information center
(Only telephones with an outside line can call this number)

88-33211 Poison information center
(Number can be called from any telephone)

INFORMATION TO BE GIVEN

Where did it happen?

Institute _____
Street, address _____
City _____
Floor _____
Room _____

What happened?

Short description of the situation; fire; number of injured;
what kind of injuries?

Who is phoning?

Give your name.

Wait for further questions!

Do not hang up until the person you called tells you to.

8. Comply with alarm signals instructions

- 8.1 Some buildings have alarm systems, PA systems of megaphones. The persons responsible for each area must appoint individuals who will activate these systems in an emergency.
- 8.2 Posted or other area specific instructions must absolutely be complied with.
- 8.3 In some buildings or special parts of building (e.g., hazardous material storage) with built-in, automated gas fire extinguishing systems (e.g., carbon dioxide) these building areas must be promptly evacuated due to the asphyxiation hazard!
- 8.4 Upon arrival of firefighters, their instructions shall be followed exclusively.
- 8.5 In case of a fire, the authority to issue directives may be assumed by administrative employees.

9. Get to safety

- 9.1 Use the marked rescue routes! Leave hazardous areas in the fastest way possible; do not use elevators.
- 9.2 Assist endangered, handicapped or injured individuals out!
- 9.3 Crawl along the floor in smoke-filled rooms.
- 9.4 When rescue routes are blocked, go to a room that is not on fire yet and has an outside window to make yourself seen/heard to rescue personnel.
- 9.5 Remain calm!
- 9.6 Has everyone left the building? If not, report this to the firefighters!

10. Attempt to extinguish the fire

- 10.1 Rescuing individuals takes precedence over fighting the fire!
- 10.2 Only attempt to extinguish the fire if you are not in danger!
- 10.3 If possible, fight the fire with the available fire extinguishing equipment until firefighters arrive.
- 10.4 If possible, fight the fire with several fire extinguishers at the same time. This works better than using them one after another.
- 10.5 Make individuals whose clothes have caught fire drop to the floor, do not let them run away! Then use emergency showers, fire extinguishers and/or extinguishing blankets to put out the fire.

Locations	Type of fire extinguishers that can be used
Corridor & office areas	Fire extinguishers with ABC powder
Laboratories	Carbon dioxide fire extinguishers, fire extinguishers with ABC powder, sand, fire extinguishers with powder for extinguishing metal fires.

11. Special rules of behavior

- 11.1 The firefighter command central must be notified of special hazards. Special hazards can result, e.g., from the following being present.
1. Flammable liquids,
 2. Compressed gas cylinders of any kind including in their dedicated storage cabinets;
 3. Radioactive substances;
 4. Toxic substances;
 5. Microbiological/genetically engineered organisms.
- 11.2 If there are several institutes in one building, the person responsible must ensure that all adjacent institutes are also notified of potential hazards as fast as possible.

After a fire, the following measures will be necessary:

- 11.3 The location of the fire must be secured against access by unauthorized persons. Fire alarm systems, fire extinguishing systems, equipment and devices must immediately be made operable again. Your contact for inspections is Abteilung 4.3 – Technical Facility Management; Zentrale Störungsannahme, Ph. 7600. Electrical systems and equipment as well as other supply lines must be tested before recommissioning. Your contact for testing is Abteilung 4.3 – Technical Facility Management, Zentrale Störungsannahme, Ph. 7600.
- 11.4 After a fire, necessary measures (such as closures, cleaning, remediation, recommissioning) will be managed and coordinated, if necessary, by Sachgebiet Brandschutz (Abt. 4.5 Baumanagement) of Dezernat 4.

Appendix I Hot work permit

Hot work permit for welding, cutting and related processes in areas with fire- and explosion risks valid within the University of Bonn (except Universitätsklinikum facilities), **as of 07/2010**

1.	Building (floor/room)	
2.1	Customer (AG)/ Subject area contact	" Universität Bonn – Abteilung 4.3 - Betriebstechnik/Energieversorgung " Bau- und Liegenschaftsbetrieb NRW Niederlassung Bonn " _____
2.2	Contractor (AN) Name, address, phone	
3.	Work order	
4.	Process	" Welding " Soldering " Warming " Cutting " Flame straightening " _____
5.	Work duration	Date _____ from _____ until _____ h
6.	Measures for eliminating fire and explosion risks to be taken by Contractor before start of work	" 6.1 Removing movable flammable substances and objects – if applicable, also dust deposits – in an area with a diameter of _____ m and – if necessary, also in adjacent rooms. " 6.2 Covering immovable flammable substances and objects (e.g., wooden beams/walls/floors/objects, plastic parts) by suitable means and moistening them, if necessary. " 6.3 Sealing openings such as joints, cracks, wall penetrations, pipe openings, channels, chimneys, shafts, against adjacent spaces by means of clay, plaster, mortar, damp soil, etc. " 6.4 Removing wall/ceiling cladding, such as dampening mats and insulation material " 6.5 Removing any and all explosive substances and objects – incl. dust deposits and containers with hazardous contents or residue " 6.6 Removing explosion hazards in piping " 6.7 Sealing immovable containers, equipment or piping containing flammable liquids, gases or dust, or which used to contain same, in conjunction with ventilation measures " 6.8 Ventilation measures according to Explosion Protection Guidelines (ExRL) in conjunction with measuring & monitoring " 6.9 Other measures: _____ _____ " Addition / variance / special notes see „Additional Notes“
7.	Extinguishing agent to be kept at hand by Contractor at worksite	_____ x _____ kg fire extinguishers with " powder or " CO ₂ " ext. blanket " mounted water hose " bucket filled with water
8.	Fire alarm system (turned off by AG at Contractor's request)	" Turning off of line(s) _____ of the fire alarm system required – Requested by (Name): _____ at _____ h – Performed by (Name): _____ at _____ h
9.	Fire watch to be provided by Contractor (turned on by AG at Contractor's request)	" Not necessary since automated fire alarm system present, turning on of line(s) _____ – Requested by (Name): _____ at _____ h – Performed by (Name): _____ at _____ h " Necessary during work; performed by (Name): _____ " Necessary after work; performed by (Name): _____ until _____ h
10.	Alarm triggered	Fire emergency phone: 112 Location of nearest alarm _____ Location of nearest phone _____
11.	<p>Permit: Work must not be started/performed until the above precautionary measures and the user-specific requirements of the onsite contact listed in the "Additional Notes" have been implemented/complied with onsite. The instructions printed on the reverse have been acknowledged. AG instructs the Contractor to perform the work according to the requirements listed.</p> <p>Name of person responsible at AG (in print): _____</p> <p>Date and signature of person responsible at AG: _____ Contractor (AN) warrants performance of the work according to the requirements listed.</p> <p>Name of person responsible at AN (in print): _____</p> <p>Date and signature of person responsible at AN: _____</p>	

Additional Notes for the Hot Work Permit

Abteilung _____ of the University of Bonn has named Mr./Mrs. _____ at the Institute _____ as the onsite contact for Customer. the onsite contact is authorized to give contractor instructions if required for avoiding potential hazards. Work must not be performed unless the contact is available, it must be scheduled with contact in advance.

Customer and Contractor have been instructed by the onsite contact regarding the following potential user-specific hazards, as well as the corresponding safety measures and behaviors before the start of work:

- .. In gene-technologgy facilities (from Level S2) and work areas according to Radiation Protection Ordinance, express written permission is required before the start of work.
- .. All signs containing warnings, prohibitions and instructions as well as escape and rescue routes, optical and/or acoustical alarms and signals must be complied with.
- .. Eating, drinking and smoking are prohibited in labs, practicum rooms and shops.
- .. In case of accidents or contact with substances that have resulted in malaise or skin reactions, a physician must be seen or called via the emergency number; the contact must be notified accordingly.
- .. Irregularities or potential hazards in the work area, such as spilled liquids, strong odors, escaping gas, etc. caused by damage, regardless of type, must promptly be reported to the onsite contact.
- ..

In addition to / in variance from No. 6, the following measures have been agreed on that must be performed by contact before hot work begins:

- .. Chemicals (hazardous substances), compressed gas cylinders or equipment will be removed according to No. 6.1
- .. Piping will be emptied, flushed, if necessary rendered inert, cf. No. 6/6.
- ..

Date and signature of the above contact: _____

General rules for hot work

When welding or performing other hot work in areas with fire and explosion hazards, certain measures must be complied with and implemented. Hot work includes welding, cutting, soldering, warming, hardening, metal spraying and similar processes for working on metal using combustion gas, as well as electrical welding and cutting processes and thermite welding. Hot work also includes thawing, burning off, heating and other work using an open flame, tar boiling, grinding, cut-off grinding, working with hot air blowers and other work processes involving high temperatures. If the fire risk has not been completely eliminated for structural or operational reasons, work must not be started until Customer has issued a so-called hot work permit and the safety measures specified therein have been implemented. This can include e.g.,

- Hot work in areas with a high fire load; e.g., dust deposits, paper, cardboard, packaging material, textiles, fibers, insulation, wood wool, fiber board, wood parts; in case of longer heat exposures, also wooden beams;
- Hot work in areas with explosion risk; i.e. in areas that can have a hazardous atmosphere constituting an explosion risk; e.g., if there are flammable liquids (labs, hazardous substance storage), gases or dusts;
- Hot work outside the shops and welding stations equipped for the purpose.

Process steps

For hot work falling under the above conditions, the hot work permit printed on the reverse must be completed. The decision whether a hot work permit is required shall be made by Customer. Before the work is performed, it will be coordinated between Customer, Contractor and the named contact from the University. Customer will decide whether the University must name a contact.

1. Work location (floor/room): Enter floor and room
- 2.1 Customer (subject-area contact)
- 2.2 Contractor: Company name and address, names of company workers
3. Work order: Brief description of work to be done
4. Work process: Check or add process
5. Work duration: Day and duration in hours or minutes
6. Measures for eliminating fire or explosion hazard: These measures shall be performed by Contractor before the start of work. For areas at particular risk, e.g., areas where experiments are conducted, or hazardous substance storage areas, Institutes will name an onsite contact (see below).
7. Extinguishing agents: These must be kept at hand by Contractor at the place of work. Extinguishing agents provided by the University must not be used for this purpose.
8. Fire alarm system: Turning off of alarm loops; the fire alarm system will be turned off by Customer (subject-area contact) at Contractor's request.
9. Fire watch: Must be provided by Contractor; requirement is waived if there is an automated fire alarm system.
10. Alarm triggered: Location and type of triggers
11. Permit
Name/signature of Customer's employee responsible
Name/signature of Contractor's employee authorized to sign

Hot work permit retention

Customer shall keep all hot work permits issued ready in a centralized location until further notice; a copy shall automatically be submitted to Sachgebiet Brandschutz (Abt. 4.5 - Baumanagement) of the University. Sachgebiet Brandschutz (Abteilung 4.5 – Baumanagement) of the University of Bonn will randomly monitor their implementation by inspecting the hot work permits as part of the University Chancellor's control responsibility.