

## Safety rules for hot work in a temporary workplace

### Safety Rule 1 - Risk assessment and permits

The client must appoint a permit manager, in writing, who must assess whether or not the works entail a fire risk. To carry out the assessment correctly, the permit manager must be familiar and up-to-date with conditions in the workplace, and know how the work will be performed.

If there is a risk of fire, the work may only be performed if the permit manager has carried out a complete, documented risk assessment according to the requirements in Appendix 1. Together with the operator and the fire watch, the permit manager must carry out an on-site assessment of the risk of fire, and take the necessary measures to permit the work to be carried out safely. When assessing risk in building constructions, particular attention must be paid to high-risk elements.

The permit manager then issues a permit to work, which is signed by the permit manager, the operator and the fire watch. The permit is issued for as short a time as possible.

*Comment: The permit should not normally be issued for longer than one day or one shift. The aim of limiting the validity of a permit is to ensure that the conditions and risks in the workplace do not change.*

The permit manager must keep themselves actively informed and check that the safety rules are complied with, before, during and after the performance of the work. When the work is complete, the permit manager must check that safety measures have been restored and then conclude the permit by signing it. This is done when post-work monitoring is completed.

The permit manager may delegate their task only if the client has agreed to this in writing. The delegation should state whether or not further delegation may take place. Permit manager responsibility should not be delegated further than necessary.

*Comment: If the person acting as permit manager at the start of the work cannot be present for inspections during the work or upon completion of the work, permit manager responsibility may be transferred to another designated permit manager. A joint inspection of the workplace must be carried out before such a transfer. The transfer must be documented.*

The permit manager may not perform work covered by a self-issued permit.

In the case of urgent on-call work in buildings where the task cannot be carried out during ordinary working hours and a permit manager cannot be on site within a reasonable time scale, the operator can act as the permit manager themselves, and should then go through all safety rules for the risk assessment and permit issuing process according to Appendix 1.

*Comment: The aim is to prevent greater damage to the building, for example during evenings and weekends or at night.*

### Safety Rule 2 - Personal certificate

The permit manager, operator and fire watch for hot work in a temporary workplace must each hold a valid personal certificate issued by a concept owner according to SBF 2022. A person who is not regularly the permit manager for hot work in a temporary workplace can be exempt

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from holding a personal certificate. This exemption may not be used to delegate permit manager responsibility to multiple people in the same organisation who do not have personal certificates. "Not regularly" means at most three hot work operations in temporary workplaces per 12-month period.

*Comment: A tenant-owner association or small company which is not regularly a client for hot work in a temporary workplace is an example of a case in which a permit manager does not always need a personal certificate.*

*Comment: It is advisable to confirm and agree the availability of the requisite roles in good time before the work begins. If the client or operator cannot ensure this within their own organisation, the task can be delegated.*

### Safety Rule 3 - Fire watch and fire monitor

A fire watch must be appointed and be present in the workplace during hot work in a temporary workplace, including during breaks. The fire watch may not leave the workplace before the danger of fire has ceased.

Exceptionally, a fire watch is not required if the permit manager determines that the same level of safety can clearly be achieved without one. When the work is complete, the workplace must be monitored for at least one hour, or a longer period stated by the permit manager in the permit.

Post-monitoring can be carried out by someone other than the fire watch, provided they hold a personal certificate according to SBF 2022. Any other designated person must be named during the risk assessment and issuing of permits for hot work in a temporary workplace. Post-work monitoring must always be carried out, even if it has been determined that a fire watch is not necessary during the work.

*Comment: Thermography with a thermal camera can be useful during and after the work to detect fire risks.*

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### Safety Rule 4 - Flammable materials and/or explosive environments

For work in spaces that contain, or have contained, flammable materials, a permit must be obtained from the person designated as the establishment's flammable materials superintendent. If there is no flammable materials superintendent, the operations manager must be contacted for a permit.

For work in spaces where there is a risk of an explosive atmosphere, a work permit must be obtained from the person who is responsible for ATEX safety before the work begins. If there is no ATEX safety manager, the operations manager must be contacted for a permit.

*Comment: A risk of explosive atmospheres (ATEX) can occur in environments that contain or have contained flammable materials in the form of certain concentrations of gas, vapour, aerosols or dust in the air.*

### Safety Rule 5 - Fireproof the workplace

Flammable materials in and close to the workplace must be

- moved away
- protected by covering with non-flammable material, and/or
- shielded with non-flammable material.

The workplace must be tidied and, if necessary, watered.

The size of the risk area around the workplace must be determined during the risk assessment and permit issuing process.

*Comment: Without preventive measures, the appropriate horizontal and vertical safety distance to the workplace is at least 10 m. The horizontal distance should be increased to at least 15 m if the work is being carried out on a raised surface, such as a platform or mezzanine, as sparks tend to travel further in these situations. The safety distance to the workplace should also be increased with regard to the material's flammability, choice of working methods and tools (for example, for Styrofoam, 20 m is recommended).*

Flammable working material directly adjacent to the workplace must also be handled in accordance with the risk assessment and permit issuing process.

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### Safety Rule 6 - Concealed flammable building components

Thermally conductive structures and concealed flammable building components must be investigated with regard to fire risk, and where a fire risk is present

- protected and
- made accessible for immediate extinguishing measures.

If thermally conductive building components are present within the risk area and these pass through a building component, the risk area must be expanded so the other side of the building component is included in the risk area and monitored by the fire watch.

*Comment: To investigate whether there are thermally conductive structures and concealed flammable building components, a destructive intervention in the structure may be necessary. The operator and fire watch alone cannot decide on such a destructive intervention. The permit manager must first agree with the client before a destructive intervention is undertaken.*

### Safety Rule 7 - Leaks

Cracks, holes, penetrations and other openings in and in proximity to the workplace must be

- sealed and
- inspected with regard to fire risk.

### Safety Rule 8 - Drying and heating

When drying or heating, use tools and methods that do not ignite the material.

#### Laying waterproofing membrane

When laying waterproofing membrane, the material may be heated to a maximum of 300 °C. When heating is carried out by burning gas, the torch must have a fully enclosed flame or be manufactured so that the tool fulfils the requirements in SBF 2023.

*Comment: Particular attention must be paid to the presence of high-risk elements during the risk assessment and permit issuing process.*

*Comment: When a gas torch is used during the application of a waterproofing membrane, the torch must be in constant motion to prevent the material from igniting.*

#### Melting snow and ice

For the use of an open flame to be permitted when melting snow and ice, the structure must be made of non-flammable material and must not have any high-risk elements. The permit manager must have given authorisation for this. Water that forms during melting may not be dried using an open flame or torch, according to SBF 2023.

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### Safety Rule 9 - Welding and cutting equipment

Equipment must be free of defects and documented ongoing inspections must have been carried out before the work begins.

When using acetylene gas, the gas cylinder must be equipped with a flashback arrestor.

Welding torches must be equipped with non-return valves for fuel gas and oxygen. Protective gloves must be available.

In the case of electrical welding and cutting, the return cable must be attached as close to the welding point as possible, and the cabling and return cable must be inspected carefully.

*Comment: The return cable can be attached with screw clamps, spring clips or magnets. All of these can overheat in the case of poor contact, and must be inspected regularly.*

*Comment: Electrofusion couplings should be regarded as a welding method.*

*Comment: The Swedish Welding Commission can provide examples of ongoing inspection for gas welding equipment.*

### Safety Rule 10 - Melting bitumen

When melting bitumen, the equipment must be positioned and handled according to SBF 507, Rules for melting bitumen during work on roofs and balconies.

*Comment: Relevant sections of SBF 507 can also be applied when melting bitumen for works on surfaces other than roofs and balconies, for example in courtyards and over garages or terraces.*

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### Safety Rule 11 - Fire extinguishing equipment

Functional and sufficient fire extinguishing equipment must be available for immediate extinguishing measures in the temporary workplace. Minimum requirements are shown in Table 1 below:

Workplace	Option 1	Option 2	
All workplaces except during roof laying work	2 hand-held fire extinguishers <sup>1</sup>	Safe access to water to extinguish with <sup>2</sup>	
Roof laying work	3 hand-held fire extinguishers <sup>1</sup>	Safe access to water to extinguish with <sup>2</sup>	2 hand-held fire extinguishers <sup>1</sup>
	A crowbar and pocket torch must be available in the workplace		
<sup>1</sup> Hand-held fire extinguishers must be certified and of at least efficiency class 34A 233B C, minimum 6 kg powder.			
<sup>2</sup> Safe access to water to extinguish with must be provided with a dedicated/individual hose and the requisite capacity, together with a throw length that reaches surfaces which can be exposed to fire. To achieve the requisite capacity, the hose must be pressurised and at least 19 mm (3/4") in diameter.			

### Safety Rule 12 - Fire protection systems

In the case of hot work in a temporary workplace, disconnection of fire prevention systems should be avoided or limited to only the temporary workplace, and for as short a time as possible. Before disconnection is carried out, approval must be obtained from the facility supervisor or responsible person. After completion of the work, the fire prevention system must be immediately restored and put into operation.

Water-based sprinkler systems should normally be in operation and functional during the work.

### Safety Rule 13 - Giving the alarm

It must be possible to alert the emergency services within one minute of discovering a fire. A functioning telephone must be available. The person responsible for giving the alarm must know the alarm address for the workplace.