

# Hot work S621

290162e 6.19

## 1 Purpose

These safety regulations contain the requirements for the purpose of preventing fire damage resulting from hot work in general and hot work connection with roofing and waterproofing in particular.

## 2 Obligation to comply with safety regulations

These safety regulations are part of the insurance contract. The policyholder must also ensure that these safety regulations are followed in all hot work that the policyholder or equivalent is having done. If the safety regulations are not complied with, the compensation may be reduced or completely denied in accordance with the Insurance Contracts Act. The policyholder must ensure that those responsible for work performance are familiar with the contents of these safety regulations.

## 3 Concepts

### Hot work training

Hot work training and roof and water insulation hot work training were merged on 1 January 2016. Training completed before 2016 is valid for the period shown on the card, entitling the bearer only to do work shown on the card: roof and water insulation hot work qualification allows you only to do roof and water insulation hot work, while hot work qualification allows you only to do other hot work.

### Hot work

By hot work we mean work in which sparks are created or in which a naked flame or other heat is used, creating a fire hazard. These include arc and gas welding, gas soldering, hot air blowing, flame-cutting and metal abrasion and cutting with a disc cutter.

### Hot work in connection with roofing and waterproofing

Hot work in connection with roofing and waterproofing consist of water insulation work in which a flame or other heat is used, posing a fire hazard. These include drying the base material to be insulated with a flame or hot air, heating bitumen in a bitumen boiler and fixing the water insulation material by heating, and any necessary related work that causes sparks.

### Hot work plan

A hot work plan must be made in writing, detailing how hot work in general and hot work in connection with roofing and waterproofing is to be performed.

The hot work plan must contain at least the following:

- Person in charge of hot work safety who keeps the hot work plan up to date and ensures that the safety regulations contained within in can be put into practice.
- Persons who are authorised to grant a hot work permit.
- Persons who are authorised to perform hot work.
- Availability of protective materials and fire extinguishing equipment, and arrangements for hot work supervision.

- Any other matters affecting hot work safety caused by the policyholder's production, operating premises, environment and other similar factors that must be taken into consideration in addition to the issues presented in these safety regulations.
- Regular hot work locations.

If the policyholder has the work done by an external contractor, the contractor's hot work plan may be applied provided the policyholder has

- ensured that the contractor has at least the kind of written hot work plan as described above and
- required that both the contractor and subcontractor follow this safety regulation.

### Regular hot work location

A regular hot work location is a specific fire compartment or other area set off from its environment in which hot work may be carried out safely.

### Temporary hot work location

Any other than regular hot work location is a temporary one. A hot work location related to roofing and waterproofing is always temporary.

### Identification and assessment of the dangers of hot work

The dangers of fire work must be identified and assessed in the hot work location and its environment in order to see how serious they are. The dangers are identified and assessed prior to whenever a hot work permit is granted or the hot work location's conditions change, resulting in measures to take in order to prevent any damage.

### Hot work permit

A hot work permit is a written permit enabling hot work to be carried out in a temporary hot work location. Before a hot work can be granted, the dangers must be identified and assessed and the necessary safety measures determined.

### Safety certificate for hot work

A safety certificate approved by the Finnish National Rescue Association to ensure that the hot work employee and party that granted to hot work permit know enough about hot work safety.

### Safety certificate for hot work in connection with roofing and waterproofing

A safety certificate approved by the Finnish National Rescue Association to ensure that an employee engaged in roofing and waterproofing and a party that granted the hot work permit know enough about hot work safety related to roofing and waterproofing.

### Hot work card

A hot work card is a fixed-period certificate for a successfully completed hot work safety certificate.

## Hot work card for roofing and waterproofing

A hot work card for roofing and waterproofing is a fixed-period certificate for a successfully completed hot work safety certificate for roofing and waterproofing.

## 4 Hot work

### 4.1 Hot work in a regular hot work location

Whenever possible, hot work must be performed in a regular hot work location that has been clearly indicated. Hot work performed in a regular hot work location must take into account the work method in question, the object of work and the safety issues determined by the environment. When work is performed in a regular hot work location, no hot work permit is required and the person performing the work does not have to have a hot work card.

The regular hot work location must fulfil the following requirements:

- The structures of the hot work location must be incombustible, or if the structures are combustible, the structures and protection must be so secure that no sparks or splashes can get outside the work area or inside the structures.
- A hot work location must have at least two hand-held fire extinguishers of the type 55 A 233 BC, one of which can be replaced by a hose reel or two hand-held fire extinguishers of the type 43 A 233 BC.
- No flammable material that is unrelated to the work at hand may be present in the hot work location.
- No flammable liquids may be handled or stored in a hot work location, nor may the location be connected to a space that may contain flammable gases.
- If the hot work object materially increases the fire hazard, the regulations for a temporary hot work location must be applied in a regular hot work location.

### 4.2 Hot work in a temporary hot work location

Hot work may only be performed in a temporary hot work location if it cannot be performed in a regular hot work location.

Hot work may be performed in a temporary hot work location only by a person who has a valid hot work card. Performing hot work in a temporary hot work location always requires a written, temporary hot work permit.

#### 4.2.1 Hot work permit

Before a hot work permit can be granted, any danger caused by hot work must be identified and assessed in the hot work location.

The party issuing the hot work permit determines the safety measures that are necessary on the basis of the identification and assessment of dangers caused by hot work. Hot work may only be started once the person doing the work and the person supervising it have ensured that the safety measures detailed in the hot work permit have been implemented. The hot work permit must name the person who issued the permit, and the person who can perform the work and supervise it.

The person issuing the hot work permit must make at least four copies of the permit, one of which is submitted to the policyholder. Before work is started, the person who issued the hot work permit must give one copy to the person doing the work, and one each to the supervisor during the work and after it. The safety measures specified in the hot work permit must be brought to the attention of all persons performing and supervising such work.

The person issuing the hot work permit must have a valid hot work card.

A hot work permit may be issued by a person referred to in the policyholder's hot work plan who, in terms of experience and familiarity with the target, is best equipped to identify and assess any dangers caused by the hot work and who can consequently specify any necessary safety measures.

If the policyholder is not in a position to issue the hot work permit, it may be issued by a person specified in the contractor's hot work plan

who may be a hot work employee with a valid hot work card. This requires that the party issuing the hot work permit must examine the location to evaluate and report any dangers that may be caused by hot work.

A hot work permit may only be granted for a fixed period and must be renewed whenever the conditions change. A hot work permit only applies for a specific location and only the type of work specified in the permit are permitted. The hot work location must always be in the condition required by the hot work permit.

#### 4.2.2 Safety measures in a temporary hot work location

On the basis of the identification and assessment of dangers in a temporary hot work location, any safety measures that have been specified must be implemented, and all of the following:

- The hot work location must be cleared of any flammable materials.
- Tools must be equipped with appropriate safety features and users must be familiar with the manufacturer's safety regulations.
- Flammable materials that cannot be removed must be covered carefully with a non-flammable tarpaulin.
- Any machinery and equipment (such as cables) in the hot work location must be covered.
- Any holes in structures must be covered and cracks sealed.
- Any flammable surfaces of the structures must be covered.
- Sparks and splashes must be prevented from spreading in the environment, and heat may not be conducted into the building's structures.
- It must be possible to measure the work area's gas content and to air the area.
- In order to prevent unnecessary alarms, fire alarms and fire extinguishing systems based on smoke detection must be switched off if they are likely to be set off by hot work and switched back on as soon as possible.
- Sprinklers are not switched off but provided with a temporary cover which must be removed immediately when the hot work has been completed.
- Fire extinguishing equipment must be made readily accessible.

#### 4.2.3 Fire extinguishing equipment

The hot work permit specifies the required fire extinguishing equipment, which is at least two hand-held fire extinguishers of the type 55 A 233 BC. One of the hand extinguishers can be replaced with a hose reel or two hand extinguishers of the type 43 A 233 BC. The fire extinguishing equipment must be at the hot work location throughout the hot work and the fire-watch.

#### 4.2.4 Hot work supervision

Hot work supervision must be carried out on the basis of the identification and assessment of the potential dangers of hot work.

Hot work supervision must be continuous, also during breaks. Following hot work, a fire watch must be observed as stated in the hot work permit, but for no less than one hour. The hot work plan must indicate how the hot work supervision must be carried out. A person performing hot work cannot act as a hot work supervisor while working.

During hot work supervision, the hot work location and its surroundings must be under continuous supervision.

The hot work supervisor must be aware of the potential dangers caused by hot work and be able to report an emergency and use the fire extinguishers provided. If necessary, the hot work supervisor must interrupt the hot work.

## 5 Hot work in connection with roofing and waterproofing

Roofing and waterproofing hot work may only be performed by a person who holds a hot work card conforming with a safety certificate for hot work available since 2016, or by a person who has a valid hot work card for hot work card for roofing and waterproofing.

## 5.1 Hot work permit for roofing and waterproofing

Roofing and water insulation hot work always requires a written, fixed-term hot work permit.

Before a hot work permit can be granted, any danger caused by hot work must be identified and assessed in the hot work location. When identifying and assessing dangers, it is particularly important to take into account any hazards posed by structures and hollow spaces under the work site.

The party issuing the hot work permit determines the safety measures that are necessary on the basis of the identification and assessment of dangers caused by hot work. Hot work may only be started once the person doing the work and the person supervising it have ensured that the safety measures detailed in the hot work permit have been implemented. The hot work permit must name the person who issued the permit, and the person who can perform the work and supervise it.

The person issuing the hot work permit must make at least four copies of the permit, one of which is submitted to the policyholder. Before work is started, the person who issued the hot work permit must give one copy to the person doing the work, and one each to the supervisor during the work and after it. The safety measures specified in the hot work permit must be brought to the attention of all persons performing and supervising such work.

The person issuing the hot work permit must have a valid hot work card for roofing and waterproofing. A hot work permit may be issued by a person referred to in the policyholder's hot work plan who, in terms of experience and familiarity with the target, is best equipped to identify and assess any dangers caused by the roofing and waterproofing hot work and who can consequently specify any necessary safety measures.

If the policyholder is not in a position to issue the hot work permit, it may be issued by an expert designated by the policyholder or a person specified in the contractor's hot work plan. A person performing roofing and waterproofing hot work cannot be the same person who issued the hot work permit.

A hot work permit may only be granted for a specified period. A hot work permit only applies for a specific location and only the type of work specified in the permit are permitted. If the conditions in the hot work location change during the permit's validity, the person who issued the permit must update the permit to correspond with the new conditions.

## 5.2 Selection of work method

Any hot work must be abandoned in favour of a method that poses no fire hazard if the structures to be insulated are flammable and the structures create hollow spaces that cannot be checked and supervised.

No waterproofing material may be attached over any sheet metal or other metal structures so that the attachment point is heated.

No naked flame or hot air may be applied in the vicinity of a hole or bushing through a structure, nor in the point where horizontal and vertical structures meet, allowing the naked flame or hot air to get inside the structure.

Frozen pipes may not be defrosted using open fire or a hot air gun.

## 5.3 Safety measures in a roofing and waterproofing hot work location

On the basis of the identification and assessment of dangers in a hot work location, any safety measures that have been specified must be implemented, and all of the following:

- Any flammable material not related to the work must be removed from the hot work location.
- Flammable materials that cannot be removed must be covered carefully with a non-flammable tarpaulin.
- Any holes in the structures must be covered and cracks sealed if it is possible for flames, spatter or sparks to spread into structures through these.
- In order to prevent unnecessary alarms, any fire alarms and fire extinguishing systems based on smoke detection must be switched off if they are likely to be set off by hot work and switched back on as soon as possible.
- Sprinklers are not switched off but provided with a temporary cover which must be removed immediately when the hot work has been completed.
- Fire extinguishing and clearance equipment and non-flammable protective material

## 5.4 Fire extinguishing and clearance equipment and protective material

The hot work permit specifies the fire-extinguishing equipment that must be available on a roofing and waterproofing building site, namely at least two hand-held fire extinguishers of the type 55 A 233 BC, one of which can be replaced by a hose reel or two hand-held fire extinguishers of the type 43 A 233 BC.

The fire extinguishing equipment must be at the hot work location throughout the hot work and the fire-watch.

A roofing work site must have non-flammable protective material and clearance equipment which can be used to make a hole in the roof to extinguish a fire.

## 5.5 Hot work supervision for roofing and waterproofing

The necessary hot work supervision must be carried out on the basis of the identification and assessment of the potential dangers of roofing hot work. During hot work and after it, a hot work supervisor must be present whenever the structures to be insulated or structures in their vicinity are flammable or the structures form hollow spaces.

A hot work supervisor must observe the hot work location, its environment and substructures without interruption. If necessary, more than one hot work supervisor must be used. Hot work supervision must be continuous, also during breaks. Following hot work, a fire-watch must be observed as stated in the hot work permit, but for no less than one hour.

The hot work supervisor must be aware of the potential dangers caused by hot work and be able to report an emergency and use the fire extinguishers provided. If necessary, the hot work supervisor must interrupt the hot work.

## 6 Rescue Act and hot work safety standards

The Rescue Act requires that necessary precautions must be taken when performing hot work.

By following these safety regulations and standards SFS 5900 (Fire precaution of hot works) and SFS 5991 (Fire precautions for hot works located on roofs and waterproofing sites) you can ensure that the necessary precautions are taken for hot work.

The person performing hot work is always responsible for performing the work without creating a fire hazard.

Pooling our resources.





## Hätänumero 112 - Yrityksen sisäisestä numerosta soittaessa, nro?

Tulityön tilaaja	Yritys		Osoite						
	Yritys/Työntekijä <input type="checkbox"/> Tulityöluvan myöntäjä on tarkastanut tulityökortin voimassaolon kaikilta tulityöntekijöiltä								
Työkohde	Yritys/Tilaaja		Osoite						
	Tulityöpaikka		Osoite						
Työsuoritus	<input type="checkbox"/> Tulityöt <input type="checkbox"/> Katto- ja vedeneristystyöt								
Tulityö	<input type="checkbox"/> Sähköhitsaus <input type="checkbox"/> Kaasuhitsaus <input type="checkbox"/> Polttoleikkaus <input type="checkbox"/> Laikkaleikkaus- ja hionta <input type="checkbox"/> Bitumikeittimen käyttö <input type="checkbox"/> Muu, mikä?								
Tulityön vaarojen selvitys ja arviointi	Ei Kyllä, suojaotoimia tarvitaan								
	<input type="checkbox"/>	<input type="checkbox"/> Tulityöpaikalla on syttyviä materiaaleja							
	<input type="checkbox"/>	<input type="checkbox"/> Tulityöpaikkaa lähellä olevan seinä-, katto- tai lattiarakenteen pinta on syttyvää							
	<input type="checkbox"/>	<input type="checkbox"/> Tulityöpaikan lähellä olevat seinä, katto tai lattiarakenteet sisältävät syttyviä materiaaleja							
	<input type="checkbox"/>	<input type="checkbox"/> Tulityöpaikalla on syttyvää pölyä tai hienojakoista ainetta							
	<input type="checkbox"/>	<input type="checkbox"/> Tulityöpaikalla on tai sinne voi muodostua syttyviä kaasuja tai höyryjä							
	<input type="checkbox"/>	<input type="checkbox"/> Tulityöpaikalla on kaapeleita tai kaapelihyllyjä							
	<input type="checkbox"/>	<input type="checkbox"/> Tulityön kohde sisältää materiaaleja, jotka voivat syttyä							
	<input type="checkbox"/>	<input type="checkbox"/> Tulityöpaikkaa rajoittavissa rakenteissa on rakoja, aukkoja tai läpivientejä, joiden kautta kipinät tai roiskeet voivat päästä seinä-, katto- tai lattiarakenteeseen tai viereiseen tilaan							
	<input type="checkbox"/>	<input type="checkbox"/> Tulityössä syntyvää lämpöä voi johtua seinä-, katto tai lattiarakenteeseen							
	<input type="checkbox"/>	<input type="checkbox"/> Tulityö joudutaan tekemään korkealla, jolloin kipinöillä ja roiskeilla on otolliset olosuhteet levitä laajalle alueelle							
	<input type="checkbox"/>	<input type="checkbox"/> Tulityöstä aiheuvat muut vaarat; mitä?							
Tulityön turvallisuus-toimenpiteet	Tilaaja		Urakoitsija						
	<input type="checkbox"/>	<input type="checkbox"/> Suojaukset on tehtävä niin lähelle tulityökohtaa, että kipinät/roiskeet eivät pääse leviämään ympäristöön							
	<input type="checkbox"/>	<input type="checkbox"/> Seinissä, katossa ja lattiassa olevat raot ja aukot sekä läpiviennit on suojattava							
	<input type="checkbox"/>	<input type="checkbox"/> Koneet ja laitteet, syttyvät rakenteet, kaapelihyllyt ym. on siirrettävä tai suojattava							
	<input type="checkbox"/>	<input type="checkbox"/> Työpaikka on kasteltava							
	<input type="checkbox"/>	<input type="checkbox"/> Työkohdetta on jäähdytettävä jatkuvasti							
	<input type="checkbox"/>	<input type="checkbox"/> Kaasupitoisuus on mitattava ja tila tuuletettava							
	<input type="checkbox"/>	<input type="checkbox"/> Tulityöpaikkaa ympäröivät sekä alapuoliset tilat on tarkastettava ja puhdistettava							
	<input type="checkbox"/>	<input type="checkbox"/> Paloilmoittimen irtikytkennästä huolehtiminen. Irtikytkentä on tehtävä laitteiston hoitajan toimesta.							
	Laitteiston hoitajan nimi		Puhelinnumero						
Tulityön edellyttämät erityis-toimenpiteet	Tilaaja		Urakoitsija						
	<input type="checkbox"/>	<input type="checkbox"/> Ympäröivien tilojen vartiointi		<input type="checkbox"/>					
	<input type="checkbox"/>	<input type="checkbox"/> Erillinen suojarakenne		<input type="checkbox"/>					
	<input type="checkbox"/> Muuta, mitä?		<input type="checkbox"/> Työn aikana syntyvän palavien materiaalien poistaminen						
<input type="checkbox"/>	<input type="checkbox"/> Lämpökamerakuvaus työn jälkeen								
Sammutuskalusto ja sammute sekä hälytystoimenpiteet	Tilaaja		Urakoitsija		Tilaaja		Urakoitsija		
	<input type="checkbox"/>	<input type="checkbox"/> Käsiammutin 55 A 233 BC _____ Kpl		<input type="checkbox"/>	<input type="checkbox"/> Sankoruisku		<input type="checkbox"/>	<input type="checkbox"/> Erityissammutuskalusto	
	<input type="checkbox"/>	<input type="checkbox"/> Käsiammutin 43A 144 BC _____ Kpl		<input type="checkbox"/>	<input type="checkbox"/> Pikapaloposti		<input type="checkbox"/>	<input type="checkbox"/> Sammutuspeite	
	<input type="checkbox"/>	<input type="checkbox"/> CO2-sammutin _____ Kpl		<input type="checkbox"/>	<input type="checkbox"/> Paineellinen paloetku		<input type="checkbox"/>	<input type="checkbox"/> Raivauskalusto	
	<input type="checkbox"/> Muuta, mitä?								
	Tulityöpaikalla on oltava vähintään kaksi 55 A 233 BC-teholuokan käsiammutinta. Käsiammuttimista toisen voi korvata pikapalopostilla tai kahdella 43 A 233 BC -teholuokan käsiammuttimella. Sammutuskaluston on oltava tulityöpaikalla koko tulityön ja tulityön jälkivartiointiin ajan.								
Tulityövartiointi	Tilaaja		Urakoitsija		Tilaaja		Urakoitsija		
	<input type="checkbox"/>	<input type="checkbox"/> Työn ja taukojen aikana			<input type="checkbox"/>	<input type="checkbox"/> Työn jälkeen _____ tuntia (vähintään yksi tunti)			
Tulityöluvan voimassaoloaika	Alkamispäivä		Päätymispäivä		Lupa on voimassa päivittäin klo				
	Päiväys								
Tulityöluvan myöntäjä	Allekirjoitus (nimenselvennys)								Puhelinnumero
	Päiväys								
Urakoitsija/ Tekijä	Allekirjoitus (nimenselvennys)								Puhelinnumero
	Päiväys								

Nestekaasupolttimia ei saa jättää palaamaan valvomatta; valvonta koskee myös kuumailmapuhaltimia. Tulitöiden, työtaukojen- sekä jälkivartiointiin aikana on huolehdittava tulityöpaikan vartiointista. Korjaustöissä on otettava huomioon sade- ja sulamisvedestä aiheutuva vahingonvaara, jonka estämiseksi on laadittava suojaussuunnitelma.