



Daily fire prevention

Safety regulations S411, effective as of 1 April 2020

1 Purpose

These safety regulations set out the requirements for daily fire safety.

The planning, acquisition and implementation of fire safety need to comply with rescue and construction legislation as well as building regulations and good construction practices.

Each person is responsible for following the official regulations and instructions on fire safety. Each person must take care to avoid causing fires or other accidents and damage.

2 Obligation to comply with safety regulations

These safety regulations are part of the insurance contract. Both the policyholder and the insured must comply with the safety regulations and its provisions. 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 performing the work are familiar with the contents of these safety regulations.

3 Daily fire prevention as part of corporate safety

Fire safety precautions are part of companies' normal daily operations. Management and employees are obliged to comply with the given safety instructions and orders. Fire safety must be an integral part of the compliance monitoring conducted by supervisors. Company management is responsible for providing the necessary resources to maintain fire safety. The readiness of the company and its personnel to maintain fire safety must be kept up, involving appropriate training to the staff.

Any person who notices or learns about a fire or some other type of accident or threat and is unable to put out the fire or prevent the threat is obligated to immediately alert those in danger, to report the emergency and to carry out rescue measures to the best of their abilities.

Arson prevention

Easily flammable or other goods must not be stored in the attic, in the cellar, beneath the building or in the immediate vicinity of the building if they are in risk of catching fire or spreading a fire or if they make extinguishing a fire more difficult.

No flammable material may be stored in loading bays and shelters or near the exterior walls of the building unless unauthorised access to them has been prevented.

The waste bin shelters must be located sufficiently far away from the buildings and parking spaces. The waste bin shelter needs appropriate fire compartmentation from the rest of the building or near parking spaces.

If there is a danger that a fire may spread from the waste into the building, it must be stored in a place where unauthorised access to it is prevented.

In the absence of fire compartmentation, waste bins and other flammable material must be placed within a safe distance from the eaves in accordance with the safety distances outlined in Table 1. If the minimum distances of Table 1. are not met, a fire compartmentation of class EI30 at the very least is required.

Building attics, cellars and other common areas must be locked to prevent unauthorised access to them.

Site	Distance in metres	Comments / instructions
One waste bin	4 metres	
Two waste bins or more	6 metres	Separate waste bin shelter recommended
<ul style="list-style-type: none"> • Loading pallets and interchangeable pallets • Tyres • Waste shelter 	8 metres	Separate waste bin shelter recommended Separate tyre storeroom recommended Separate waste bin shelter recommended
<ul style="list-style-type: none"> • Loading pallets and interchangeable pallets • Tyres • Waste shelter 	less than 8 metres	The storage room needs to be separated into fire compartments in accordance with EI30.
Waste shelter attached to a garage or building		A waste shelter or garage wall and the eaves need fire compartmentation in accordance with EI30, also on the sides, for up to 4 metres.

4 Order and cleanliness

The owner and holder as well as the operator of a building must for their part ensure that the building, construction and its surroundings are kept in such a state that catching fire, arson or the spreading of fire does not present a significant risk.

Every person is responsible for ensuring the following:

- Driveways and other passages (emergency access roads) are kept passable and unobstructed, and they are appropriately marked. No vehicles are allowed to park along emergency access roads nor must they be obstructed in any way.
- The storage of goods is not allowed along the accessways of exits, attics, cellars and storage spaces. If necessary, exits and accessways need to be appropriately marked and lit.
- Municipal waste and other flammable material must be removed and delivered to a separate recycling point. Flammable waste must be stored in lidded, fireproof containers that are emptied at frequent intervals.
- Air-conditioning ducts and cable racks as well as accessways and other spaces need to be regularly dusted and cleared of any flammable material.
- Loading bays are only used for loading, not for storage.

5 Smoking

Smoking is only allowed in designated areas. The smoking areas must be clearly marked and equipped with fire-safe ashtrays which are emptied regularly to the agreed bin.

6 Structural fire prevention

The building must have fire compartmentation in order to limit the spreading of fire and smoke, to ensure safe exit, to facilitate rescue and extinguishing work and to restrict damage to property. The sizing of load-bearing structures is based on the requirements of fire classes, horizontal and vertical compartmentation and compartmentation by use.

Horizontal compartmentation

The different storeys, cellars and attic of the building need separate fire compartmentations.

Vertical compartmentation

The size of the fire compartment needs to be restricted so that an eventual fire will not cause unreasonably extensive property damage.

Compartmentation by use

Spaces that differ significantly in terms of their use or fire load must be separated into different fire compartments.

Compartment doors, windows and hatches

A door, window or other protective element of relatively small size set in a separating structural element needs to have a fire resistance period that is at least half of that of the separating structural element itself. Compartment doors must be self-closing and self-latching. If they are normally kept open, they need to be equipped with devices that close the doors in the event of fire.

Lead-throughs

Only the necessary pipes, chases, channels, cables and flues as well as lead-throughs required by conveyors may be led through the separating structural element provided that it does not significantly impair the compartmentation of the structural element. Only reliable, CE-marked and type approved pastes are used for sealing the lead-throughs.

Flues

Flues and their bushings must be inspected regularly and be kept in good condition. Sweeping must be done according to regulations and any defects immediately repaired.

The property owner is responsible for arranging sweeping in the property. Depending on usage and the fuel used, fireplaces and flues must be swept as follows:

- Solid fuel, light or heavy oil or multi-fuel stoves and flues once a year
- The fireplaces and flues of holiday homes that are not in use all year round must be swept once every three years.

Flues and especially steel flues must be inspected whenever the chimney is being swept. The inspection should ensure that the flue is compatible with the fireplace and that the flues have been installed and through-holes in the adjacent structures are made in accordance with the fire regulations and the manufacturer's installation instructions. The chimney sweeper must have a chimney-sweeper's vocational qualification.

Plastic-based products

The use of plastic-based products (eg EPS, PU or PIR products) should be avoided in constructions, since the heat value of burning plastic is very high and it forms hazardous combustion gases and sooting smoke.

7 Fire fighting equipment, fire detection and fire extinguishing systems and smoke ventilation equipment

Installation, alteration and maintenance work

The installation and maintenance of fire alarms and fire extinguishing systems are regulated by law. This work can only be carried out by a designated person with a qualification certificate employed by a company registered by the Finnish Safety and Chemicals Agency (TUKES). The company is responsible for carrying out an inspection for all its installation works.

The fire alarm company writes the final inspection report. The company installing the fire extinguishing systems prepares the installation certificate.

The owner or keeper of the system is responsible for ensuring that a maintenance programme is written for the system and that its maintenance and repair have been organised in accordance with the equipment-specific maintenance instructions in such a way that the system meets the necessary requirements for the duration of its lifecycle.

First-aid extinguishing equipment

Hand-held fire extinguishers and other first-aid fire extinguishing equipment needs to be appropriately inspected and regularly maintained. The areas in front of first-aid extinguishing equipment need to be kept clear. For each new 300 m² of floor area or each storey, there must be at least one hand-held fire extinguisher.

Using of the hose reel must be possible in the entire area that is to be protected. Assessment of the sufficiency of the hose reel must be based on the length of the hose. A space equipped with a hose reel must always be additionally equipped with an appropriate hand-held fire extinguisher.

Fire alarm and fire extinguishing system

The automatic fire alarm system needs to be tested every month and the tests need to be recorded in a log.

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Smoke exhaustion

The possibility for smoke exhaustion in the different parts of the building must be taken into account in the planning and construction.

8 Flammable liquids, gases, dangerous substances and potentially explosive dust

Flammable liquids and gases

Applicable official regulations need to be complied with in the handling and storage of hazardous and flammable chemicals. Hazardous chemicals need to be stored in a designated space that meets the necessary requirements. The holder of the chemicals needs to ensure that the chemicals can only be accessed by authorised persons and that they do not present any danger. It needs to be made sure that the space where hazardous chemicals are stored is kept in appropriate order and that it has proper ventilation and that in case of an accident the chemical can be collected and rendered harmless.

Flammable liquids and hazardous substances must be stored in a separate ventilated storage space that has fire compartmentation. The doorway must be equipped with at least a threshold to stop liquids from flowing out of the room in case of a spill. Chemicals that react with each other must be kept apart if their reaction causes fire, considerable heat, formation of hazardous gases or formation of unstable substances.

The storage of liquid gas bottles below ground level, for instance in cellars or excavations, is not allowed. Gas bottles must be carefully secured to prevent them from falling over.

Open fire and smoking is prohibited in the premises where the items listed above are stored or when handling such items.

Explosive atmospheres

In spaces where the handling of substances may create dust or gases and where those substances can mix with air to form a potentially explosive mixture, the equipment need to be suited for potentially explosive atmospheres (ATEX).

The protection of machines, equipment and pipes as well as their related structures against static electricity must be carried out with sufficient equipotential bonding and earthing.

9 Heating equipment

The safety distances and operating instructions of heating equipment must be followed. No easily flammable substances may be stored near the equipment.

Electric heaters must fulfil electrical safety requirements. Radiant heaters with an open structure must be avoided in factories and storage rooms. Permanent electric heaters must be mounted firmly. Electric heaters may not be covered and no clothes may be dried above them.

Oil-heating equipment must be properly maintained and their use monitored. Appropriate fire fighting equipment must be kept available in their vicinity. Particular attention must be paid to the fire safety of temporary heating equipment and their location. Temporary heating equipment must not be used to provide continuous heating.

10 Electrical equipment and installations

Electrical equipment and installations must fulfil electrical safety regulations, and regular inspections, maintenance and cleaning must be carried out in accordance with regulations. Thermal imaging of electrical equipment is recommended to be carried out at regular intervals.

No superfluous items may be stored in substation rooms. The areas in front of electrical equipment, such as switch boards, must be kept clear and any flammable material must be kept at a distance of at least 2 metres from the equipment.

A piece of electrical equipment must not be directly attached to a plastic-insulated panel. Electrical equipment always require a non-flammable mounting base.

Electrical equipment must be maintained and cleaned regularly. Any faults and defects must be repaired without delay. Faulty equipment may not be used until it has been repaired.

Electric motors must be kept dry and clean. The motor's cooling air vents must be kept clear to ensure proper ventilation.

The positioning of light fittings, such as halogen lamps or gas-discharge lamps, whose surface heats up, must be done with great care. They must not be placed near flammable materials so that they may cause a fire hazard. The falling over and/or falling down of such lamps must be prevented and the bulb must be equipped with a cover that prevents material from coming too close to the hot surface. Placing and storing goods near the lamps is

prohibited. Stored items must be kept at a distance of 0.5 metres from a lamp with a hot surface.

The use of low surface temperature lamps, such as LED lamps or striplights with an electronic choke, is recommended. Magnetic striplights must be equipped with a separate safety starter because, when faulty, this type of light fixture may quickly heat up to 200 degrees and cause a fire hazard.

Any electrical equipment that is not used after working hours must be switched off or equipped with a timer or time switch.

11 Construction, repair and installation sites

Fire safety supervision must be particularly good on construction, repair and installation sites owing to the high fire risk.

Hot work must comply with safety regulations Hot work S621. 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.

Fire safety must always be taken into account when, for instance, drilling or perforating plastic-insulated wall panels in connection with maintenance work. This always requires a separate hot work permit. All plastic-based panel structures should be marked with a clear sign mentioning the requirement of a hot work permit and required special measures regarding fire safety.

Waste, packaging material and other unnecessary easily flammable material must be removed daily and taken to their designated collection points, the location of which has been considered in view of the possibility for arson.

The site's electric and heating equipment must be kept in working condition at all times and the hot work permits must be valid. The site's access routes must be kept in good condition and clear to allow people out of the building and to let the fire brigade do its work. The personnel must be familiarised with all fire safety arrangements and alarm instructions at the site. Any construction, repair and installation work must be done in accordance with the Construction and Renovation Work safety regulations S450.

12 Storage

The fire safety of storage depends on the fire hazardousness, storage method and protection level of the material, and the compartmentation, size and structures of the storage room. If operations are changed in a building, the fire safety factors may also change, which means that the suitability of the building for the new operation must be inspected,

along with the building's safety level in the new situation.

No more goods may be stored in production facilities than is necessary for carrying out daily work.

No goods may be piled near hot surfaces, light fixtures and other ignition sources. The manufacturers' instructions need to be taken into account when determining the safety distances.

When putting sauna stoves in place, the safety distances specified for sauna stoves in the installation instructions must be observed. Clothes or other combustible material may not be dried above a sauna stove or its immediate vicinity.

12.1 Motor vehicles

Vehicles can be kept and stored in the spaces that on the basis of the building permit have been approved either as vehicle shelters or for keeping and storing vehicles in those indoors spaces that have been approved as separate storage areas by the officials.

Vehicles may be parked outdoors only in designated areas.

12.2 Charging of electric vehicles

The charging of electric vehicles, and the implementation and installation of charging stations, plug types and cabling must be carried out according to the relevant electrical safety laws and decrees, official regulations, standards and the vehicle manufacturer's instructions. The charging equipment must be fully functional (including the connecting cables, for example). No extension cords may be used when charging. Sufficient ventilation must be ensured.

12.2.1 Charging of light electric mobility devices

By light electric mobility devices we refer to mobility devices, electric bicycles or light electric vehicles with a maximum speed of 25 km/h and the engine's rated power of no more than 1 kW that assist or replaces walking. (The batteries of light electric vehicles may be charged using an ordinary grounded 16A/250V socket protected with a residual-current device of at least 30 mA as part of a fixed installation.)

Charging areas must be clearly marked to ensure that batteries are always charged in designated areas. No flammable material may be stored closer than 1 metre to a charging area, or above it. Flammable materials must be stored at least 2 metres from a charging area.

In the immediate vicinity of a charging area, there must be a sufficiently large extinguisher suitable for electrical fires, at least a hand-held fire extinguisher of the type 43 A 233 BC or an 89 B class extinguisher containing 5 kg of CO₂.

12.2.2 Charging of other than light electric vehicles

The batteries of other than light electric vehicles may only be charged from a self-contained power unit (such as a charging station), the safety of which has been ensured with appropriate control and protective equipment (such as a residual-current device). Charging cables must be protected from mechanical breakage.

There must be a clearance of at least two metres from any flammable materials in the charging station. The charging area should be separated from other areas with yellow lines or other markings. Cables must be protected from impacts breakage. Cables must be stored up on wall

hooks designated for them or in a similar place. There must be enough fire extinguishers in the charging station that are suitable for electrical fires, and a minimum of, for example, a hand-held fire extinguisher of the type 43 A 233 BC or an 89 B class extinguisher containing 5 kg of CO₂. Eye wash equipment must be placed in the vicinity of the charging station. User instructions, safety guidelines and warning signs must be displayed visibly in the charging station.

12.3 Forklift trucks

A well-ventilated battery charging station must be designated for electric forklift trucks in order to minimise the risk caused by the nitrogen gas. No flammable material may be stored closer than 2 metres to the loading area or above the loading area. The best place for loading is a separate loading room with fire compartmentation and ventilation.

Forklift trucks run by internal combustion engines must be kept outdoors or a motor vehicle shelter equipped with fire compartmentation.

Forklift trucks must be equipped with portable fire extinguishers.

The immediate vicinity of the charging station needs to have, for instance, a hand-held fire extinguisher of the type 43 A 233 BC or a 5 kg CO₂ extinguisher of the type 89 B suitable for electric fires as well as an eyewash station marked with a sign.

13 Safety inspections

Fire safety and its maintenance are to be seen as part of the operational safety culture where safety matters are taken into account at every level. Internal safety inspections need to be carried out regularly, and persons responsible for safety need to take part in the inspections. The purpose of safety inspections is to assess and improve fire and structural safety. The rescue plan must be kept up to date and it needs to be communicated to the residents and employees of the building or other site as well as to other people who are involved in the implementation of the rescue plan.

The rescue plan must contain, among other things, instructions on the measures to be taken in order to prevent accidents and hazardous situations, instructions on exit and rescue, on possible other precautionary measures taken independently and on the safety arrangements of the premises.

Induction training and other regular training need to be acknowledged as part of daily fire safety.

14 Duties in case of fire

14.1 First priorities (instructions for accidents)

In the event of fire:

1. ALERT – warn and rescue those at risk
2. EXTINGUISH – begin first-aid extinguishing if you can do it safely
3. CONFINE – leave the burning space, confine the fire by closing windows and doors behind you
4. GUIDE – guide the fire and rescue services to the site of fire

14.2 Handling of gas bottles and bitumen boiler in case of fire

If a fire breaks out, the valves of gas bottles need to be closed and the bottles need to be removed from the area under threat as long as these things can be done safely. The bitumen boiler must be extinguished either by using powder, not water, or by smothering.

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Domicile: Helsinki, main line of business: non-life insurance companies

Regulatory authority: Financial Supervisory Authority, finanssivalvonta.fi/en

