

Safety regulations for preventing electrical fires, S331

Your obligation to prevent damage, valid as of 1 January 2023

Welcome to read these safety regulations!

Your business has an obligation to prevent damage. In these safety regulations, we explain what your business must do and take into consideration to prevent electric fires.

ⓘ If you do not comply with the regulations, we may reduce or deny your insurance compensation. Please read these safety regulations carefully to avoid unpleasant surprises in a compensation situation.

These safety regulations are part of your insurance contract

Your insurance contract consists of the policy document, insurance terms and conditions, safety regulations, and the general contract terms and conditions.

The **policy document** lists your company's insurance policies and the terms and conditions applicable to them.

The **insurance terms and conditions** describe the terms under which your property is insured.

The **safety regulations** describe your company's obligations to prevent damage.

The **general contract terms and conditions** list terms that apply to all insurance policies issued by Pohjola Insurance.

We interpret the policy document, insurance terms and conditions, safety regulations, and general contract terms and conditions as a whole.



Policy document



Insurance terms and conditions



Safety Regulations
This document



General contract terms and conditions

CONTENTS

1 Purpose of the safety regulations: prevention of electrical fire damage	2
2 Perform electrical work safely	2
3 Inspect the electrical devices and equipment on time	3
4 Perform maintenance on the electrical devices and equipment on time	3
5 Follow these steps to prevent electrical damage	4

1 Purpose of the safety regulations: prevention of electrical fire damage

The purpose of these safety regulations is to reduce electric fires, diminish the risk of fires caused by electrical equipment and electrical installations, and to make people in your company more aware of the risks of electric fires.

Electrical fire refers to a situation where the energy source of a fire has been an electrical one.

Your business has an obligation to ensure that

- ✓ the safety regulations are followed in all activities carried out by the policyholder or its equivalent.
- ✓ those responsible for performing the work are familiar with the contents of the safety regulations.

2 Perform electrical work safely

⚠ Electrical work can be carried out only by persons and companies fulfilling the requirements issued by virtue of the relevant acts, decrees and official regulations.

By electrical work, we refer to separate electrical installation work as well as the installation, repair, and maintenance of electrical devices and equipment.

The following must be performed before and after connecting electrical equipment to the voltage:

- ✓ **Inspections** and
- ✓ **Measurements** that ensure the safety and correctness of the installation.

By **electrical equipment** we refer to

- fixed installations or
- other corresponding operational elements comprised of electrical equipment and other possible devices, equipment, or structures.

Initial inspections

- ✓ **Order** an initial inspection always before using the device for the first time.
- ✓ **Make** sure that an inspection record is drawn up during the initial inspection.
- ✓ **Request** an inspection record for your company.

Verification inspections

- ✓ **Order** a verification inspection:
 - for property larger than a semi-detached house
 - when performing reconstruction
 - for the significant change or expansion of the aforementioned equipment.

3 Inspect the electrical devices and equipment on time

ⓘ The statutory periodic inspections laid down for each electrical device and piece of equipment must be performed on time. This obligation applies to both the owner and holder of the electrical device or equipment.

The intervals between and performers of regular inspections of electrical devices and equipment are determined by the current Electrical Safety Act and by equipment category as follows:

Equipment category	Equipment asset	Inspection interval
Category 3	Electricity networks of network companies	5 years
Category 2	<ul style="list-style-type: none">• equipment including parts with a voltage higher than 1,000V• low-voltage equipment with a kVA value over 1,600	10 years
Category 1	Electrical equipment with main fuses of more than 35A (commercial, public, and industrial buildings, agricultural buildings, installations in general public locations)	10 years

4 Perform maintenance on the electrical devices and equipment on time

ⓘ Use electrical devices and equipment only for their intended purpose. Maintain the electrical devices and equipment so that they remain safe to use for the entirety of their service life. This obligation applies to both the owner and holder of the electrical equipment and the installation work performed on said equipment.

Take care of the following matters:

- ✓ Prepare a care and maintenance programme for protection and safety systems that require regular maintenance.
- ✓ Include all issues related to maintaining electrical safety in the programme.
- ✓ Define the protection and safety systems to be included in the care and maintenance plan of your company.
- ✓ Repair any faults and defects in electrical equipment and installations immediately.
- ✗ Do not use faulty equipment.

5 Follow these steps to prevent electrical damage

Cleanliness and order

- ✓ **Keep** electrical equipment and cable installations such as cable racks, ducts, and tunnels and raised access floors clear of inflammable materials and dust.
- ✓ **Remove** unnecessary cables to reduce the fire load.

Thermal imaging

ⓘ The thermal imaging must be performed by a trained professional.

- ✓ **Order** thermal imaging for the main distribution board at least once a year.
- ✓ **Order** thermal imaging for the segment controllers of the main distribution board at least once every three years.
- ✓ **Analyse** and document the results after the imaging.
- ✓ **Repair** any defects observed during the imaging.
- ✓ **Ensure** that a thermographic examination is performed on the installation again after the repairs.

Cable bushings

- ✓ **Establish** a procedure for the maintenance and insulation of cable bushings.
- ✓ **Make sure** that the cable bushing of separate elements are made in a way that does not significantly reduce the separating element.
- ✓ **Make sure** that the cable bushing is insulated already during installation and finally when all cable installations are complete in the area.
- ✓ **Alternatively**, outsource the bushing insulation work.
- ✓ **Use** only reliable CE-marked and type approved pastes for sealing the lead-throughs.
- ✓ **Determine** the approval conditions of the product when using extruded firefighting foams as well as the application and target use of the firefighting foam.

Protection of electricity rooms

- ✓ **Make sure** that the electricity rooms are protected with separating elements, an automatic fire alarm system, or with an automatic fire extinguishing system
 - Please note that the level of protection and the method chosen depends on the target!
- ✓ **Make sure** that targets such as cable tunnels which cannot be easily accessed by firefighters with their fire and rescue equipment must be equipped with an automatic extinguishing system and smoke ventilation.
- ✓ **Make sure** that the interior spaces equipped with oil-cooler transformers are also equipped with automatic fire extinguishing system and with a mechanised smoke removal system that can be switched on manually.
 - Please note that this requirement does not apply to transformers within a separating element that has been fitted on the outside wall of a building, with the doors opening straight outwards.

Safe use of electrical equipment

⚠ Electrical equipment may be operated only within the limits specified by the manufacturer and without exceeding the maximum operating temperature.

- ✓ **Make sure** that the equipment has sufficient cooling throughout the year and at any load.
- ✓ **Monitor** the temperature of the device through measurements (e.g., thermal imaging)
 - in the event that there is not enough information available on the equipment load and
 - immediately after the equipment is back in operation after any modifications have been made.
- ✓ **Consider** the effect of any accumulation of insulating and/or flammable material from processes on electrical equipment, and ensure the safe operation of the equipment by taking measurements.

ATEX – Electrical equipment for potentially explosive atmospheres

What is an explosive atmosphere?

In an explosive atmosphere, flammable gas, fog, steam or dust can cause an explosive mixture of air with normal-pressure air.

Explosive atmospheres are mainly found in connection with handling flammable liquids, gases and dust. These handling situations happen in

- energy production,
- chemical, medical, food, and wood processing industries and
- usually in the preparation, processing or storage of flammable liquids or gases.

ATEX explosion protection document

The explosion protection document is based on

- danger assessments concerning the substances handled at the site and their properties,
- safety inspections and
- instructions on the handling and storage of chemicals, as well as fire safety.

These obligations concern the employer and entrepreneurs as applicable:

- ✓ **Assess** the danger of explosion and
- ✓ **Prepare** an explosion protection document based on the assessment if the work may include dangers caused by explosive mixtures of air.

ATEX – Electrical equipment for potentially explosive atmospheres

- ✓ **Ensure** that the electrical equipment and protection systems used in the potentially explosive atmosphere fulfil the health and safety requirements and the demands laid down in the ATEX directives.

TUKES provides additional information on ATEX legislation and equipment compliance.

Electrical vehicles and transportation devices and charging them

By **electric vehicles**, we refer to vehicles that use an electric motor as their power source and which use batteries as their energy reserves.

By **plug-in hybrid electric vehicles**, we refer to vehicles equipped with an electrical engine to supplement its petrol or diesel engine and traction batteries that can be charged with grid electricity.

By **electrical methods of transportation**, we refer to the following:

Method of transportation	Maximum speed	Engine power	Traffic rules
A method of transportation that assists or replaces walking	15 km/h	1 kW	Walking
Light electric vehicle	25 km/h	1 kW	Bicycle*
Electric bicycle	25 km/h (electric)**	250 W	Bicycle
Motorised bike	25 km/h (with an electric engine)	1 kW	Bicycle
Moped	45 km/h	4 kW	Moped
Light quadricycle	45 km/h	6 kW	Moped

* A self-balanced light electric vehicle may also be transported on the sidewalk.

** Electric bicycles may have a startup speed of up to 6 km/h without pedalling.

✓ **Make sure** that the charging of electric vehicles and methods of transportation, the charging stations, the electrical socket types, and the installation of cables complies with

- electrical safety laws,
- electrical safety regulations,
- orders and regulations issued by the authorities,
- standards,
- as well as the instructions of the manufacturer.

✓ **Make sure** that the charging equipment is fully functional (including the connecting cables, for example).

✓ **Protect** the charging cables from mechanical breakage.

✓ **Make sure** that there is sufficient ventilation.

✓ **Place** a sufficiently large extinguisher suitable for electrical fires in the immediate vicinity of a charging area: at minimum, a hand-held fire extinguisher of the type 43 A 233 BC (6 kg) or an 89 B class CO₂ extinguisher (5 kg).

✓ **Separate** the charging area from other areas with yellow lines or other markings.

✓ **Charge** batteries only 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).

✓ **Hang** the cables on wall hooks designated for them or in a similar place.

✓ **Display** the user instructions, safety guidelines, and warning signs visibly in the charging station.

By following these regulations, you will ensure occupational safety
and avoid unpleasant surprises in the event of an insurance claim!

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