

Event construction and safety at Messukeskus, Expo and Convention Centre Helsinki

The event organiser is responsible for the general safety of the event and for monitoring compliance with guidelines.

The event organiser is responsible for overall safety.

Exhibitors are responsible for safety at their stands. This applies to the structures and exhibited items of the stand as well as to any activities organised there.

Stand builders are responsible for the safety of the stands they build. This applies to both property and personal damage.

These guidelines must be passed on to designers and builders.

Information is based on the National Building Code of Finland as well as on fire and rescue legislation. These guidelines cover only the key regulatory requirements.

Contact persons at the Finnish Fair Corporation:

Floor Managers, tel. +358 40 450 3253
hallimestari@messukeskus.com

Technical Advisers, tel. +358 40 450 3250
Hall Service Manager Pertti Mörö, tel. +358 40 450 3250
Real Estate Director Patrik Kuhlman, +358 40 450 3250
Occupational Safety Manager Jari Hallamaa, +358 40 450 3250

firstname.lastname@messukeskus.com

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1. Building materials & decorations

Materials must meet the following requirements:

- building materials must meet the requirements for public premises
- floor materials must have low ignitability, (minimum class D_{fl-s1})
- the use of EPS insulation (e.g. styrofoam) as a building material in places where people assemble is possible. The material must always be class S. A certificate on the quality of the material as well as a fire-classification certificate must be submitted to the floor manager's office.
- fabrics used for covering, upholstery and decoration should preferably be made of a fire-retardant material, class SL-2 (B-s1, d0). Otherwise, they must be fire-protected on site.
- if pyrotechnics are used or hot work is done, materials must be class SL-1 (A2-s1, d0) in the immediate vicinity. Proximity will be evaluated on a case-by-case basis.
- exceptional building materials and props (such as cardboard, paperboard and bales of hay) that do not meet the requirements of SL-2 (B-s1, d0) must be fire-protected on site.
- reliable proof of fire protection must be presented.

Materials must have fire-classification certificates. If decorations or other materials do not have certificates, they must be fire-protected on site.

If a material used in a decoration has been fire-protected elsewhere, there must be records of its protection and it must be tagged for identification. This includes fabrics used in interior decoration, for example.

The Technical Research Centre of Finland can issue statements concerning materials that do not have a certificate.

A report on the fire-classification of interior decorations must be submitted to the Finnish Fair Corporation's floor manager for approval no less than 45 days before the event.

2. Stand canopies

Messukeskus, Expo and Convention Centre Helsinki has an automatic sprinkler system, which places restrictions on stand coverings. Stand canopies or other covering items must not compromise the functioning of the automatic sprinkler system.

Fire-classified gauze fabric or fire-retardant grating meets requirements. Gratings must form a regular pattern on the covered surface.

Tents do not meet the requirements applied to gauze coverings and are instead considered total covers.

Information concerning other types of covering must be submitted to the Finnish Fair Corporation's technical adviser for approval no later than 45 days before the event. The need caused by an exhibition canopy for fire extinguishing equipment or smoke alarms will be determined by the floor manager. Fire extinguishers must be at least class 27A144BC.

3. Construction of two-storey stands

A two-storey stand can be built on the following conditions:

- the Finnish Fair Corporation will give its opinion concerning stand construction, but the builder is responsible for the safety of the structure and construction as well as work supervision.
- the headroom of the ground floor to the upper storey must be no more than 2,500 mm and no less than 2,200 mm.
- the number of persons in the upper storey is limited to a maximum of 60 at any time, with a minimum of 1 m² per person.
- if the upper storey is larger than 99 m² or if necessitated by other special reasons (fire load, etc.), the stand must have sprinklers or the exhibitor must arrange a fire guard outside the exhibition's opening hours. The guard's minimum competence requirement is participation in voluntary fire department activities or other suitable training (e.g. hot work classification).
- the railings on the upper floor and on stairways must be 1,100 mm from the floor level to the upper edge of the handrail. The gap between railing structures on the upper floor must be no more than 100 mm both horizontally and vertically. The railing must not have horizontal structures that allow climbing. Intermediate railings must be constructed so that the distance between railings or between railings and the floor does not exceed 500 mm.
- a two-storey stand must have at least one class 27A144BC fire extinguisher both upstairs and downstairs. Smoke alarms must also be installed in each section. The need caused by a two-storey stand for fire extinguishing equipment or smoke alarms will be determined by the floor manager.
- structural drawings and strength calculations must be submitted to the Finnish Fair Corporation's technical adviser for comment at least 45 days before the event.

Additional information on dimension and load requirements as well as requirements concerning railings can be obtained from the National Building Code of Finland.

4. Special structures and programme areas

Special structures include, for example:

- Climbing frames
- Platform areas
- Raised floors (12 cm or more)

Testing and trial areas

Testing and trial areas are zones that have been set aside for customers to try out products independently or under instruction;

- testing various vehicles
- testing sports gear and other equipment (golf, rollerblading, etc.)
- testing machinery or equipment items

Vehicles, which are used in demonstrations, and vehicles that are available for testing by the public must be covered by a valid road insurance policy.

The technical adviser must be informed of special structures at least 45 days before their construction begins. Structures must comply with the National Building Code of Finland and be safe for their users.

The notification must indicate the following;

- the general layout (the area's borders and passages)
- planned measures to ensure safety
- contact persons and their contact details.

5. Exit routes

The hall exit routes must be planned according to the following principles:

- hall aisles must be well defined and sufficiently wide in the vicinity of the exit doors.
- if only part of a hall is used, planners must ensure that exit routes can be arranged through the empty areas.
- aisles must be at least 2,000 mm wide (between stands).
- All exit routes must be marked with official exit route indicators by the builder.

One-storey stands must have sufficient exit routes to the aisles.

The number of exits depends on the size of the stand:

- up to 20 m², one 900 mm exit route
- from 21 m² to 49 m², two separate 900 mm exit routes
- from 50 m² to 99 m², one 900 mm exit route and one separate 1,200 mm exit route
- from 100 m² to 199 m², two separate 1,200 mm exit routes
- from 200 m², the exit routes will be determined case-specifically.

Instructions concerning exit routes for two-storey stands:

The distance to the nearest exit stairway on the second storey must not exceed 20 metres.

The number of exits depends on the floor area of the second storey:

- up to 20 m², one at least 900 mm exit route
- from 21 m² to 49 m², one 1,200 mm exit route or two 900 mm exit routes
- from 50 m² to 99 m², one 1,200 mm exit route and one 900 mm exit route
- from 100 m², the exit routes will be determined case-specifically.

Circular stairs are possible if a stand has more than one exit route and at least one of them is a direct exit route. (Building Code of Finland F2:2)

6. Hot work

Hot work is work involving sparks or the use of a flame or high heat, which can cause a fire. This includes, among other things,

- gas and arc welding
- flame and arc cutting
- metal cutting and grinding
- the use of a gas burner or a hot air blower

Persons doing hot work during construction and dismantling hours must have a HOT WORK CARD as well as a written HOT WORK PERMIT issued by the floor manager's office.

Persons doing hot work or demonstrations during the fair's opening hours do not need to have a hot work card. The demonstration venue or hot work place must meet the requirements set for a PERMANENT HOT WORK PLACE. Fire, water and sparks must not be allowed to reach other exhibition areas or the aisles.

Gas welding equipment and liquid gas equipment must be equipped with safety devices conforming to regulations.

Written notifications concerning hot work and demonstration locations as well as available fire extinguishing equipment and implemented safety measures must be made to the floor manager's office at least 45 days before the event.

Additional information:

Federation of Finnish Insurance Companies, Safety guidelines for hot work 01/2002.

Helsinki City Rescue Department, fire inspectors, tel. +358 9 310 1651

7. Pyrotechnics and performances involving fire

Performances involving fire include, among other things

- torch performances
- fire-eating performances
- the use of a naked flame

Pyrotechnical equipment includes, among other things

- fireworks
- theatre effects
- distress rockets
- flares
- emergency torches and smoke devices that develop fire or heat when ignited.

Packages of pyrotechnical equipment on display in public facilities must be empty and this must be clearly indicated on packages.

Packages must be placed in display cases, especially after ready-to-use packages have been emptied, in which case small amounts of substances may remain in the package.

We recommend that exhibitors use new and empty factory-supplied packages.

The actual use of pyrotechnical equipment in public facilities always requires advance notification to fire and rescue authorities using the links presented below. A copy of the information submitted in the form must be delivered to the floor manager's office at least 45 days before the event.

Notification about a demonstration using fire:

http://www.hel.fi/hki/Pela/fi/Onnettomuuksien+ehk_isy/Yleisotapahtumat/Tuliesitys

Notification about the use of pyrotechnical effects:

http://www.hel.fi/hki/Pela/fi/Onnettomuuksien+ehk_isy/Yleisotapahtumat/Pyrotekniset+tehosteet

8. Candles

We recommend the use of LED candles.

Only safety candles may be used in exhibition facilities. No other types of candle may be used.

The casing of a safety candle is made of a non-flammable material and the fuel is mineral oil. Safety candles must be placed so that the public does not come in contact with them.

9. Liquefied gas, other flammable liquids and gases, hazardous substances and heaters

Chemicals legislation places restrictions on the indoor use of liquefied gas. Equipment must be suitable for indoor use. The facility's ventilation system as well as noise-abatement concerns may impose further restrictions.

The following should be taken into account in planning:

- quantities are limited according to fire section (hall/fire section). This means that an early request has a better chance of winning approval.
- the size of liquefied gas bottles is 5 kg (steel) or 6 kg (composite), we recommend the use of composite bottles.
- liquefied gas bottles must be installed with access to proper ventilation.
- spare or empty bottles may not be stored indoors.
- liquefied gas equipment and pipes must conform with regulations and their condition must be checked in advance.
- the minimum safety requirement is a fire blanket and a class 27A144BC powder fire extinguisher.
- permission to use liquid gas must be requested from the floor manager at least 45 days before the exhibition.

The above materials may only be kept in fair and exhibition facilities with special permission from the floor manager's office.

Heaters using paraffin (kerosene), petrol (gasoline), diesel oil or gas must be suitable for indoor use. The type of fuel must be visibly marked. Items of equipment, which use fuel, must be placed on an overflow container. The party using the equipment item must also bring adsorption agents in case of accidental spills.

Permission must also be obtained to use and store pressure vessels containing non-flammable gases (for example gases used to inflate balloons).

Pressurised vessels must be attached to something that prevents them from falling down and special care must be observed when moving them.

Empty gas bottles must be clearly marked as such. Only so-called factory empty gas bottles can be marked in this way.

A notification concerning the use and storage of the above materials must be submitted to the floor manager's office at least 45 days before the exhibition. On the basis of the notification, the floor manager will evaluate the need to obtain a permit from the Helsinki City Rescue Department.

Please consult legislation on hazardous substances as well.

10. Motor vehicles

Motor vehicles, transport equipment and work machines (hereinafter "equipment") on display in the exhibition or conference area must have the power turned off at the main switch or have the battery disconnected.

The power can be turned on, however, on the following conditions:

- power must be turned on for a proper demonstration
- equipment is new and unused
- keys are kept out of the public's reach
- fire extinguishers of at least class 27A144BC (powder) or at least class 21A 144B (foam or fluid) must be located in the demonstration space as follows:
 - 1-3 pieces of equipment, 1 extinguisher
 - 4-7 pieces of equipment, 2 extinguishers
 - 8-10 pieces of equipment, 3 extinguishers
 - over 10 pieces of equipment, determined case-specifically.
- a written notification concerning the need to demonstrate equipment and the quantity of equipment to be showcased must be made to the Finnish Fair Corporation's floor manager's office at least 45 days before the event.

Permission to continuously keep the power of used or self-built equipment switched on can be granted by the floor manager's office.

Equipment on display in the lobbies or gallery facilities must always have the power turned off.

The organiser of the event will monitor compliance with regulations.

If regulations are not complied with, equipment can be removed from the premises at the owner's expense.

11. Occupational safety

Only ladders and scaffoldings, which comply with Construction Decree VNa 205/2009, may be used at Messukeskus, Expo and Convention Centre Helsinki. Exhibition builders must observe safe work practices.

Operators of machinery must wear the personal protection gear detailed in the machinery item's user manual.

Forklift and personal lifter operators must have their employer's written permit to operate said equipment. Before granting permission, the employer must verify that the operator has the skills and abilities needed to use the equipment safely.

An operator of a telescope or an articulated boom lift must always use a helmet and a safety restraint that protects against falling. We recommend use also in the case of scissor lifts.

Material containing further information on occupational safety is available from the floor manager's office.

If anyone is observed working using dangerous methods or defective tools, work will be interrupted until the shortcomings have been rectified.

Further information: Occupational Safety Manager Jari Hallamaa, tel. +358 50 387 0060 and from the floor manager's office during the construction and dismantling period.

12. Equipment demonstrations

If a demonstration requires hot work, please see section 6 as well.

All demonstrations must be performed in a manner that does not endanger bystanders.

Objects presenting a risk of crushing or cutting must be equipped with fixed protectors that prevent anyone standing near the demonstration area from reaching the object with, for example, their hands or feet. Alternatively, the demonstration area can be equipped with a fence at least 2 m high (for example wire netting), provided that the work does not involve flying matter or sparks.

Additional information:

Occupational Safety and Health Inspectorate of Uusimaa, tel. +358 9 774 711 or

Occupational Safety Manager Jari Hallamaa

13. Heavy exhibition items

If the load imposed by exhibition items exceeds 10 kN/ m² (1,000 kg/m²) in halls 1, 2, 3, 6 and 7 or exceeds 7 kN/m² (700 kg/m²) in hall 4 or 5, their placement must always be agreed separately with the real estate director.

14. Electrical safety

All electrical installations at exhibitions must conform with the requirements of Standard SFS 6000-7-711 (EXHIBITIONS, SHOWS AND EXHIBITION STANDS).

Standard specifications are sold by the Finnish Standards Association SFS (www.sfs.fi)

- if you use your own on-site or equivalent electric distribution boxes, note that all 32A and smaller sockets must be equipped with 30mA fault current protection.
- equipment brought to exhibition stands must have a cord cable equipped with an attachment plug.
- only grounded extension cords ready-equipped with attachment plugs and extension sockets may be used in exhibition sections.
- exhibitors are not permitted to perform any wiring measures independently at Messukeskus, Expo and Convention Centre Helsinki/the Finnish Fair Corporation; if necessary, wiring services can be ordered for a separate fee.
- if the electrical installations of an exhibition stand have to be inspected by the Finnish Fair Corporation, a separate fee will be charged for the work.
- halogen lamps, heaters and other equipment items that generate a lot of heat may not be installed without appropriate safeguards against burn injury or the spread of fire.
- on aisles and passages, all wiring must be attached/covered in a way that protects against tripping. Wires may also be installed in an aisle overpass duct, provided that the height of the passages is at least 2,100 mm.

15. Laser equipment

The Finnish Radiation and Nuclear Safety Authority issues guidelines and monitors the use of laser equipment at public occasions.

The Authority does not conduct on-site inspections of low-power laser equipment (under 5 mW) used at public occasions. These must, however:

- be used in a professional manner

- in the case of battery-operated or electrical equipment (voltage under 50V), be approved by the Department for Occupational Safety and Health at the Ministry of Social Affairs and Health
- in the case of other equipment, be approved by an EU or EEA country
- have the required warning labels and type and approval marks
- have the required installation, warning and operating instructions in Finnish and, if necessary, in Swedish.

The Finnish Radiation and Nuclear Safety Authority must always be contacted concerning the use or presentation of high-power laser equipment which is in safety class 3B and has an output power of over 5mW.

Additional information:

Radiation and Nuclear Safety Authority Finland, tel. +358 9 759 881.

16. Lobbies and galleries

The planning of advertising spots and other spaces in lobbies and galleries must observe the separate instructions pertaining to them. Flammable liquids or gases may not be placed in lobbies and galleries. If a motor vehicle is on display, the battery must be disconnected or the power must be turned off at the main switch.

Consult the event's technical adviser when planning activities or designing stands.

17. Other matters to keep in mind

- chairs installed for spectators must comply with section F2 of the Building Code of Finland (building use safety, regulations and instructions 2005).
- if food is prepared, it is important to protect the public from coming in contact with hot surfaces. The minimum requirement when food is prepared is a fire blanket or, in special cases, a powder fire extinguisher of at least class 27A144BC. Requirements set by the Environment Centre must also be met.
- Deep-fat fryers may be used on the following conditions:
 - the same protective measures are observed as are required of these fryers in restaurant premises.
 - the fryer must be placed in an open space (not under a canopy).
 - used fat must be disposed of appropriately.
 - the placement and safeguard plan must be submitted to the floor manager's office for approval at least 45 days before the event.
- saunas and sauna stoves can be on display (with the power connected), provided the following conditions are met
 - when the sauna is turned on, a guard must be on constant duty. After the power has been turned off, the guard must remain on duty for one hour.
 - brochures or flammable materials must not be placed inside the sauna or near the stove.
 - demonstrations must be supervised and the necessary railings must be installed to prevent contact with hot surfaces.
 - saunas and sauna stoves must be notified to the floor manager for approval at least 45 days before the event. The notification must show the sauna floor plan and the location of the stove.
- A notification of a consumer service as required under Section 6 of the Consumer Safety Act must be submitted if the service/programme clearly involves a risk of injury to consumers.

- The programme organiser/subcontractor is responsible for the services it provides and must draft a separate safety document. Further information is available from the City of Helsinki Environment Centre ymparistoterveys@hel.fi, and their website contains instructions on these matters.

<http://www.hel.fi/hki/Ymk/fi/Yritykset%2C+toiminnanharjoittajat/Kuluttajaturvallisuusvalvonta>

18. Schedule for advance notifications

Subject	Deadline	Notification recipient
Fire-classification of decorations and fabrics, advertising banners	45 days before the event	Floor manager
Stand canopies	45 days before the event	Technical adviser
Two-storey structures	45 days before the event	Technical adviser
Special structures and programme areas	45 days before the event	Technical adviser
Exit routes for stands larger than 200 m ²	45 days before the event	Floor manager
Hot work	45 days before the event	Floor manager
Pyrotechnics and demonstrations using fire	45 days before the event	Floor manager
Use of liquid gas	45 days before the event	Floor manager
Flammable liquids and gases	45 days before the event	Floor manager
Non-flammable gases and pressurised containers	45 days before the event	Floor manager
Hazardous substances (chemicals)	45 days before the event	Floor manager
Demonstrating the use of heating equipment	45 days before the event	Floor manager
Showcasing motor vehicles with power switched on	45 days before the event	Floor manager
Use of deep-fat fryer	45 days before the event	Floor manager
Showcasing saunas and sauna stoves	45 days before the event	Floor manager

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We reserve the right to make changes.

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Messukeskus

Finnish Fair Corporation
 PL 21, Messuaukio 1
 00521 Helsinki
 Tel. +358 9 040 450 3250
 Internet: www.messukeskus.com