# FIRE & SAFETY REGULATIONS



## 1. - GENERAL

**Very important: Only French or Euroclass laboratories are authorized to deliver certificates.**

The rules covering safety against fire and panic risks in establishments receiving the public are laid down in the Decree dated 25th June 1980 (general arrangements). The Decree of 18th November 1987 describes the special arrangements applicable in exhibition halls. The text below is made up of extracts from these regulations, so as to make their comprehension easier.

The Safety Committee is very strict as regards the construction of stands (stability, materials used for construction and decoration, electrical installations etc.). The decisions which it takes during its inspection, which is conducted the day before or the morning the event opens, are immediately enforceable. Installation of stands must be completed by the time this committee comes to make its inspection. The exhibitor (or his representative) must be present on the stand and be able to provide the fire behavior certificates for all the materials used. Failure to abide by this rule may lead to the materials being removed or the stand being forbidden to open to the public.

Any major project must be submitted for the approval of the exhibition safety manager. Plans and technical information must be supplied for this purpose to the exhibition organizer **at least two months before the event opens.**

**During the build-up period, the safety manager will check the application of the safety measures recalled below. Furthermore, any information regarding fire safety may be obtained by telephoning:**

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Fire rating of materials (Decree of 30th June 1983).
Materials are classified according to 5 categories:
M0, M1, M2, M3, and M4.
M0 corresponds to an incombustible material.

## 2. – STAND LAYOUT

### 2.1. FRAMEWORK AND PARTITIONING OF STANDS – MAIN FURNITURE

All materials in categories M0, M1, M2 or M3 (1) are authorized for the construction of the framework and partitioning of stands and for the construction of their main furniture (shell, counter, bar, display cabinet, separating screen etc...).

Conventional classification of wood-based materials (Decree of 30th June 1983).
The following are considered as corresponding to the characteristics of category M3 materials:

- solid non-resinous wood of a thickness greater than or equal to 14 mm,
- solid resinous wood of a thickness greater than or equal to 18 mm,
- panels made of wood (plywood, laths, fibers, particles) of a thickness greater than or equal to 18 mm.

ATTENTION : it is strictly forbidden to place dry equipment whatsoever over the alleyways (structural or identification banner, gangway etc...).

### 2.2. COVERING MATERIALS

#### 2.2.1 Wall Coverings

Wall coverings (textile, natural or plastic) must be made of category M0, M1 or M2 materials (1). They may then be stretched out or held in place by staples.
Various coverings (fabric, paper, plastic film) of a very low thickness (maximum 1 mm) may be used if attached continuously to supports made of materials M0, M1, M2 or M3. However, embossed and relief papers must be stuck continuously to materials made of category M0 only.
The materials displayed may be presented on stands without any requirements governing their reaction to fire. However, if these materials are used to decorate partitions or false ceilings and if they represent more than 20 % of the total surface area of the latter, the provisions of the preceding paragraphs are applicable to them.

#### 2.2.2. Curtains – Hangingd – Net Curtains

Curtains, hangings and net curtains may be free-hanging if they are of category M0, M1 or M2 (1). They are, however, prohibited, on stand entrance and exit doors, though authorized on cubicle doors..

#### 2.2.3. Paints and Varnishes

Paints and varnishes are strictly prohibited if classified as inflammable (nitrocellulosic or glycerophthalic, for example).

#### 2.2.4. Floor coverings, podiums, rostrums, tiers

Floor coverings must be made of category M4 materials and solidly attached.
The coverings, whether horizontal or not, of podiums, rostrums and tiers of a height greater than 0.30 meter and a total surface area greater than 20 sq.m, must be made of category M3 materials. If their total surface area is less than or equal to 20 sq.m, these coverings may be made of category M4 materials.
Caution: For carpets which are classified M3 or M4 and lay on top of wood, the way in which they are laid should be taken into account. The reaction to fire certificates should indicate «Valid for laying stretched out on any M3 support».

### 2.3. DECORATIONS

#### 2.3.1. – Free-Hanin decorations

Free-hanging decorations or trims (advertising signs with a total surface area greater than 0.50 sq.m, garlands, small decorative objects etc.) must be made of category M0 or M1 materials. The use of signs or advertisements in white lettering on a green background is strictly forbidden, these colors being reserved solely for indicating exits and emergency exits.

#### 2.3.2. – Floral decoration

Floral decorations made of synthetic materials must be limited. If this is not the case, these decorations must be made of category M2 materials.
These provisions do not apply to exhibitions and stands given over specially to floral activities. Note: as regards natural plants, use compost in preference to peat as the latter has to be kept constantly damp.

#### 2.3.3. - Furniture

No requirements are imposed regarding basic furniture (chairs, tables, desks etc.). However, drawers, counters, shelves etc. must be made of category M3 (1) materials.

## 2.4. CANOPIES – CEILINGS – FALSE CEILINGS

Stands fitted with a ceiling, a false ceiling or a full canopy must have a covered surface area of less than 300 sq.m. If the covered surface area is greater than 50 sq.m, appropriate extinguishing facilities manned permanently by at least one safety steward, must be provided throughout the period that the public is present.

### 2.4.1. - Canopies

Canopies are authorized under the following conditions:
- in establishments protected by an automatic water extinguishing network:
Canopies must be made of category M0, M1 or M2 materials (1),
- in establishments not protected by an automatic water extinguishing network: they must be made of category M0 or M1 materials.

They must furthermore be fitted with an effective attachment system to prevent them from possibly falling, and be supported by wire network crossworked in such a way as to form mails measuring a maximum of 1 sq.m.

In all cases, the suspenders and attachments of the ceilings and false ceilings must be made of category M0 materials.
When insulating materials are placed in the plenum chamber of the ceilings and false ceilings, they must be made of category M1 materials.

### 2.4.2. Ceilings and false ceilings

Ceilings and false ceilings must be made of category M0 or M1 materials. Nevertheless it is permitted for 25% of the total area of these ceilings and false ceilings to be made of M2 material. Lighting and associated accessories are included in this percentage.
On the other hand, if the component elements of ceilings and false ceilings are ornamented with openwork or fretted lead, they may be made of category M2 materials when the surface area of the solid areas is below 50 % of the total surface area of these ceilings and false ceilings.

## 2.5. FIREPROOFING

The reaction to fire classification guarantee for the materials employed in the exhibition halls must be supplied on request to the safety manager in the form of labels or certificates. Coverings and materials satisfying the safety requirements are on sale at specialist dealers who must supply certificates corresponding to the classification of the material.
Fireproofing may bestow M2 quality on materials which, in their normal state, are of average or easy inflammability.
This can be carried out by spraying with a special liquid, applying a special paint or varnish with a paintbrush, or by soaking in a special bath.
Fireproofing work may be executed either by decorators, who must be able to provide all information concerning the processing of the material, or by an approved treatment contractor, who will issue the exhibitor with a certificate in an approved format stating: the nature, surface and color of the surface treated, the product used, the date the operation was carried out, the seal and signature of the contractor

**Please contact the company below to obtain materials suppliers' addresses that conform to safeguards classification required :**

GROUPEMENT NON FEU
37-39 rue de Neuilly
92110 CLICHY
Tél. : +33 (0)1 47 56 30 80

The names and addresses of approved treatment contractors may be obtained from the :

GROUPEMENT TECHNIQUE FRANCAIS DE L'IGNIFUGATION
10, rue du Débarcadère
75852 PARIS
Tél. : +33 (0)1 40 55 13 26 Fax : + 33 (0)1 40 55 13 19

Note: Fireproofing can only be undertaken on wooden panels or natural fabrics or those which include a high proportion of natural fibers. It is not possible on synthetic and plastic fabrics.

## 3. - ELECTRICITY

## 3.1. ELECTRICAL INSTALLATION

The electrical installation on each stand must be protected at its point of origin against excess current and earth faults.
All metallic masses must be interconnected and linked to the earth plug of the electrical connection cabinet for the stand. Electrical connections must be laid out inside branch boxes.
The devices for switching off the electric power must be permanently accessible to the stand personnel.

## 3.2. ELECTRICAL EQUIPMENT

### 3.2.1. – Electrical cables

The electric cables must be insulated for a voltage of 500 volts, which in particular rules out the H-03 VHH (Scindex) cable. Only use cables on which each conductor is fitted with its own protective sheath, all conductors being housed inside a single protective sheath.

### 3.2.2. - Conductors

The use of conductors with a section less than 1.5.mm is prohibited.

### 3.2.3. – Electrical appliances

Category 0 (2) electrical appliances must be protected by devices for a nominal differential current equal to a maximum of 30 mA.
Category I (2) electrical appliances must be linked to the protective conductor of the cable tubing providing them with power.
As regards category II (2) electrical appliances, those bearing the sign are recommended.

### 3.2.4. – Multiple plugs

Only adaptors or multiple housings attached to a fixed socket (moulded multi-plug blocks) are authorized.

### 3.2.5. – Halogen lamp (standard EN 60598)

Stand lighting which incorporates halogen lamps must:
- be placed at a minimum height of 2.25 meters,
- be placed away from all inflammable materials (at least 0.50 meter from wood and other decorative materials),
- be solidly attached,
- be fitted with a safety screen (glass or fine mesh grid) providing protection against effects due to a possible explosion of the lamp.

### 3.2.6. - High tension illuminated signs

High tension illuminated signs located within reach of the public or personnel working on the stand, and particularly their electrodes, must be protected by a screen made of at least category M3 material. The switch-off control must be indicated by a sign, and the transformers placed in a location which presents no danger to personnel. If appropriate, indicate their presence with a «Danger, High Tension» sign.

## 4. – CLOSED STANDS – ROOMS ARRANGED INSIDE HALLS

### 4.1. CLOSED STANDS

Exhibitors sometimes prefer to isolate themselves within closed stands.
In this case, the stands must have direct exits onto the aisles. Their number and width depend on the surface area of the stand, i.e. :
- less than 20 sq.m: one x 0.90 m exit
- between 20 sq.m and 50 sq.m : two exits, one of 0.90 m, the other of 0.60 m,
- between 50 sq.m and 100 sq. m : either two x 0.90 m exits, or one of 1.40 m and the other of 0.60 m,
- between 100 sq.m and 200 sq. m : either two exits, one of 1.40 m, the other of 0.90 m, or three x 0.90 m exits,
- between 200 sq.m and 300 sq.m : two x 1.40 m exits,
- between 300 sq.m and 400 sq.m: two exits, one of 1.80 m, the other of 1.40 m.

The exits must be carefully spread out and if possible face one another
Each must be indicated by an «Exit» sign in white letters clearly visible on a green background. If the stand is closed by doors, these must open outwards, without a blocking off system and without interfering with the flow of the public within the aisles.

### 4.2. ROOMS ARRANGED INSIDE HALLS

Independently of the surface areas reserved for exhibiting, rooms to be used for meetings, as restaurants, and for cinema and other presentations may be arranged with rostrums, tiers etc.
Platforms and tiers for standing persons must have a ground resistance of 600 kilos per sq. m. Platforms and tiers for seated persons must have a ground resistance of 400 kilos per sq. m.
The steps giving access to places in the tiers may have a minimum height of 0.10 m and a maximum of 0.20 m, with a tread of at least 0.20 m. In this case, the flights of steps are limited to 10 and the alignment of the nosing of the stairs must not exceed 45°.
Each case being a special one, a detailed plan must be submitted to the safety manager who will define the measures to be applied.

### 4.3. STANDS WITH A SECOND FLOOR

For the construction, you must absolutely:
- Respect the maximum height of 5 m for structures and signs.
- Respect loads on the ground :
  - If S<50 sq.m resistance must be 250 kg/sq.m
  - If S≥50sq.m resistance must be 350 kg/sq.m
- Provide guardrails according to NF P01-012 and NF P 01-013.
- Up to 20 sq.m : 1 staircase of 0,90 ml
- From 21 to 100 sq.m: 2 staircases, one of 1,40 ml and one of 0,90 ml.
- If workforce >19 people on the mezzanine, provide 2 intervention staircases.

## 5. – LIQUID GAS

### 5.1. GENERAL

Bottles of gas, butane or propane are authorized up to a maximum of 13 kilos per 10 sq. m of stand, with a maximum of six per stand.
The following precautions are to be taken:
– there must be a gap of 5 m between each two bottles, unless they are separated by a rigid, incombustible screen which is 1 cm thick,
– no bottle, whether full or empty, must remain inside the exhibition hall if it is not connected up to service piping,
– bottles may be linked up to the appliance with which they are being used by a flexible tube which is in conformity with the standards.
These tubes must:
• be renewed when the expiry date for their use comes around,
• be suited to the diameter of the connecting piece and have band clamp fittings,
• not exceed a length of 2 meters,
• permit inspection along their full length and be suspended freely without being flanged,
• be out of reach of the flames from burners or products of combustion.

### 5.2. SUPPLY OF GAS TO APPLIANCES

If, contrary to general practice, a bottle is to supply several appliances, the tubing must be made of metal (copper or steel). The use of soft cop per-based brazing alloy is prohibited.
The bottles must always be placed upright and the on/off tap must remain accessible under all circumstances. Any enclosed area used to accommodate them must be fitted at the top and bottom with ventilation apertures arranged in such a way as not to be obstructed by a wall, an item of furniture or a neighboring appliance.

### 5.3. INSTALLATION OF COOKING EQUIPMENT

As well as the rules referred to above, the following measures must be observed :
– The floor (or table) bearing the cooking equipment must be made of incombustible materials or covered by M0 materials. The cooking equipment must be kept at an appropriate distance from any combustible material and installed in such a way as to prevent any danger of fire.
– If this equipment is positioned close to a partition, a M0 covering must be provided to a height of one meter above the equipment.
– Hoods and exhaust ducts leading to the exterior of the hall must be installed above equipment releasing fumes or condensation.
– Electrical meters must be a least 1 meter away from water points.
– Each stand must:
• have a copy of the safety instructions (action to take in the event of fire, procedure for calling the fire brigade).
• be equipped with one or more fire extinguishers.

## 6. FUNCTIONING EQUIPEMENT - THERMAL OR COMBUSTION ENGINES

For each item of machinery fixed station within the hall of an exhibition, an advance notification must be sent to the exhibition organizer **at least one month before the event opens**. Only installations for which the **Declaration of Material displayed in operation** has been submitted can be authorized.
All equipment must be properly stabilized to avoid any risk of it falling over. All protective measures must have been completed by the time the safety committee comes to make its inspection. A responsible person must be present on the stand at the time of this inspection.
No machinery may be started up or presented in working order without the presence on the stand of a qualified person.
All the presentations and demonstrations are undertaken at the full responsibility of the exhibitor.
The supply of electric power will be totally suspended, at the expense of the exhibitor concerned, to any stand on which the machinery in operation might present dangers to the public and where no measures have been taken to eliminate these.

### 6.1. EQUIPMENT PRESENTED IN STATIONARY OPERATION

When equipment is presented in operation in stationary operation, it must either be fitted with screens or rigid casings which surround it properly, putting all dangerous parts out of reach of the public, or be arranged in such a way that the dangerous parts are kept out of reach of the public, and at the very least, at a distance of one meter from the public aisles.

### 6.2. EQUIPEMENT PRESENTED IN MOTION

Lorsque des matériels sont présentés en évolution, une aire protégée doit être réservée de façon à ce que le public ne puisse s'en approcher à moins d'1mètre, cette distance pouvant être augmentée compte tenu des caractéristiques des matériels présentés. Ces dispositions sont valables pour tous les stands, y compris ceux à l'air libre.

### 6.3. EQUIPMENT WITH HYDRAULIC JACKS

If equipment fitted with hydraulic jacks is exhibited in the static elevated position, the hydraulic safety mechanisms must be complemented by mechanical devices preventing any untoward operation.

### 6.4. THERMAL OR COMBUSTION ENGINES

For thermal or combustion engines, a request for authorization must be sent to the organizer at least 30 days before the event opens. This request, written on plain paper (The form **Material displayed in operation**, available on your Exhibitor Area must also be enclosed), must specify the nature and quantity of fuel used per day, and be accompanied by technical instructions for the appliance and a plan showing the siting of the appliance on the stand. No appliance of this type may be put into service if the request for authorization has not been submitted in due time.

**Caution: In all cases, gases which are the products of combustion must be evacuated outside the halls.**

## 7. – INFLAMMABLE LIQUIDS

### 7.1. GENERAL

The use of inflammable liquids per stand is limited to the following quantities:
- 10 liters of category 2 inflammable liquids per 10 sq.m of stand, with a maximum of 80 liters,
- 5 liters of category 1 inflammable liquids.

The use of particularly inflammable liquids per (carbon disulphide, ethyl oxide etc.) is prohibited.
The following precautions are to be taken:
- place a receptacle which can accommodate the total amount of fuel beneath the canisters or the tank,
- refuel the appliance when the public is not present,
- close by, locate extinguishers of an appropriate type for the risk.

### 7.2. EXHIBITING MOTOR VEHICLES INSIDE HALLS

The fuel tanks of engines presented not running must be empty or fitted with locking screwdriver caps. The clips of accumulator batteries must be protected so as to be inaccessible.

### 7.3. PRESENTING INFLAMMABLE LIQUIDS

All receptacles of inflammable liquids presented on stands (cans of paint, varnish, bottles, aerosol spray cans etc.) must be empty except for a few sample units containing a limited quantity to be used for demonstration purposes.

### 7.4. COMPRESSED GASES

Bottles of air, nitrogen and carbon dioxide are authorized without any restrictions.

The use of acetylene, oxygen, hydrogen or gases presenting the same risks must be the subject of a request for authorization sent to the organizer **at least 30 days before the event opens**. This request, written on plain paper (The form **Material displayed in operation**, available on your Exhibitor Area, must also be enclosed), must specify the nature of the gas and the capacity of each bottle, and be accompanied by technical instructions for the appliance and a plan showing the siting of the appliance on the stand.
No gas of this type may be used if the request for authorization has not been submitted in due time.

Caution: Storage of empty or full bottles is strictly prohibited inside the halls.

### 7.5. PYROTECHNIC DEVICES AND FIREWORKS

Pyrotechnic effects which generate detonation noises, sparks and flames are strictly prohibited.
The use of smoke generators to create fog or light effects must be the subject of a request for authorization sent to the **organizer at least 30 days before the event opens**. This request, written on plain paper (The form **Material displayed in operation**, available on your Exhibitor Area must also be enclosed), must specify the nature and quantity of the gas used per day and be accompanied by technical instructions for the appliance and a plan showing the siting of the appliance on the stand. No appliance of this type may be used if the request for authorization has not been submitted in due time.

## 8. – RADIOACTIVE SUBSTANCES – X RAYS

### 8.1. RADIOACTIVE SUBSTANCES

Authorization to present radioactive substances on exhibition stands can only be granted for demonstration of appliances and when the activities for these substances are less than:
- 37 kilobecquerels (1 microcurie) for those comprising or containing group I radio-elements (4).
- 370 kilobecquerels (10 microcuries) for those comprising or containing group II radio-elements (4).
- 3,700 kilobecquerels (100 microcuries) for those comprising or containing group III radio-elements (4).

Waivers may be granted for the use of substances which have a higher activity subject to the following measures being:
- the radioactive substances must be effectively protected:
- their presence must be indicated by means of basic ionising radiation diagrams as defined by standard NF M 60-101, together with their nature and activity,
- their removal by the public must be rendered materially impossible either by attachment to an appliance for use which requires dismantling with a tool, or by being placed at a distance,
- they must be continuously supervised by one or more specially designated exhibitors,
- when this supervision ceases, even in the absence of the public, the radioactive substances must be stored inside a container which will withstand fire, and which carries very clearly the conventional sign for ionizing radiation,
- the equivalent dose rate, at all points on the stand, must remain below 7.5 microsieverts per hour (0.75 millirads equivalent per man per hour).

The use of radioactive substances must be the subject of a request for authorization (or a waiver) sent to the organizer **at least 30 days before the event opens**.

This request, written on plain paper (The form **Material displayed in operation**, available on your Exhibitor Area must also be enclosed), must specify the nature and activity of the substances, and the group to which they belong, the names and capacities of the persons responsible for supervising them, and be accompanied by technical instructions for the appliance, a plan showing the siting of the appliance on the stand, and a document drawn up and signed by the installing contractor certifying conformity to these arrangements.
No appliance of this type may be put into service if the request for authorization has not been submitted in due time.

**Caution: Stands on which radioactive substances are presented must be constructed of and decorated with M1 category materials.**

### 8.2. X-RAYS

Authorization to present appliances which emit X-rays on exhibition stands can only be granted if they and their accessories comply with the rules set by standard NF C 74-100. In particular, the following measures must be taken:

- removal of superfluous objects in the neighborhood of the ray generator and the sample to be examined,
- cordoning off and marking with signs of the zone not accessible to the public,
- the leakage radiation exposure rate must not exceed 0.258 microcoulomb per kilo per hour (1 millirontgen per hour) at a distance of 0.10 m from the radiogenic focal area.

The use of appliances emitting X-rays must be covered by a request for authorization sent to the organizer **at least 30 days before the event opens**.
This request, written on plain paper (The form **Material displayed in operation**, available on your Exhibitor Area must also be enclosed), must be accompanied by technical instructions for the appliance, a plan showing the siting of the appliance on the stand, and a document drawn up and signed by the installing contractor certifying conformity to these arrangements.
No appliance of this type may be put into service if the request for authorization has not been submitted in due time

## 9. – LASERS

The use of lasers inside exhibition halls is authorized subject to the following measures being taken :
- the public must under no circumstances be subjected to the direct or reflected beam of the laser,
- the appliance and its related equipment must be solidly attached to stable mountings,
- the surroundings of the appliance and the area swept by the beam must not contain items reflecting the wavelengths in question,
- the casing containing the laser and its possible optical deviation system must be of category I or II (5),
- during tests conducted whilst the public are not present, exhibitors must make sure that the exhibition and decoration materials, and fireprotection equipment do not react to the calorific energy given out by the light beams.

All laser installations must be covered by a notification sent to the organizer **at least 30 days before the event opens**. This notification, written on plain paper (The form **Material displayed in operation**, available on your Exhibitor Area must also be enclosed), must be accompanied by technical instructions for the appliance, a plan showing the siting of the appliance on the stand, and a document drawn up and signed by the installing contractor certifying conformity to these arrangements.

Any installation, must be subject to a demand of authorization with the Administration (**2 months, in minima, before opening of the exhibition**). Inform the person in charge of security at the AFS cabinet for notice.

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No appliance of this type may be put into service if the notification has not been submitted in due time.

## 10. – SMOKE AND FOG GENERATORS

The use of smoke and fog generators inside the exhibition halls must be subject to a request for authorization (like lasers) sent **at least 2 months before the event opens**, and a file must be sent to the Cabinet AFS (Technical Adviser on fire safety) for opinion.

## 11. – SAFETY FACILITIES

Safety facilities must remain constantly visible.
Access to the various safety facilities (fire hydrants and stand pipes, fire plugs with hose and spout, telephones, extinguishers, controls for smoke evacuation openings etc.) must constantly remain free.

Fire plug with hose and spout
On stands equipped with a fire plug with hose and spout, an open area of one meter around the appliance must be left free of any material as far as the public aisle.
Panels or fabric hangings hiding the appliance are strictly prohibited.

## 12. – OPERATING INSTRUCTIONS

Leaving cartons, wood, straw, cardboard etc. on the exhibition areas, within stands and within open areas, is prohibited.
Regular (daily) cleaning must be undertaken to rid the premises of dust and waste material of all kinds.
All waste material and rubbish collected during cleaning and sweeping up must be removed each day, before the exhibition opens up to the public, and be taken outside the establishment.

(1) Or rendered such by fireproofing.
(2) In the sense of standard NF C 20-030.
(3) The classification of radio-elements, according to their radiotoxicity, is that defined by decree No. 66-450 dated 20th June 1966 relative to the general principles of protection against ionizing radiation.
(4) In accordance with standard NF C 20-030: electrical equipment at low voltage. Protection against electric shocks: safety rules.
(5) In accordance with NF C
20-030: electrical equipment low
voltage. Protection against shocks
Power: safety rules.