

# FIRE AND SAFETY REGULATIONS

The bylaws of 25 June 1980 and 18 November 1987 lay down safety regulations to prevent risk of fire and panic in establishments open to the public. Exhibitors must comply with these.

This document provides a practical interpretation of the principal safety precautions that exhibitors must observe when designing and constructing their stand at MANUTENTION 2010.

You can have all information about fire and safety regulations at :

**Cabinet Watteau**

41 rue Lazare Carnot – 77340 Pontault Combault  
Tél. : +33 (0)6 85 94 49 57 – Fax : +33 (0)3 44 55 54 03  
E-mail : [cab.watteau@orange.fr](mailto:cab.watteau@orange.fr)

In the text that follows :

- M0 means « fireproof »
- M1 means « permanently non-flammable »
- M2 means « low flammability »
- M3 means « average flammability »
- M4 means « high flammability »

**Important :**

Standard classification of wood-based materials (decree dated 30 June 1983)

The following materials are deemed to fall within category M3 :

- Non-resinous solid wood of thickness greater than or equal to 14 mm,
- Resinous solid wood of thickness greater than or equal to 18mm,
- Panels derived from wood (plywood, wood core plywood, fibreboard, particle board) of thickness greater than or equal to 18mm.

## ■ 1. Double-decker stands

• **Certificate of conformity to safety standards :**

Exhibitors wishing to build a double-decker stand must apply for permission to build of the organiser by 30 September 2010 at the latest.

As soon as they have received building permission, exhibitors should draw up their plans, taking into account the surface area allocated, and send them to the organiser which will confirm its final approval and forward copies to the safety department.

For solid horizontal structures such as the floors of upper levels and solid ceilings, there must be a 2 m clearance from the partitioning in order to leave a distance of at least 4 m between two adjoining double-decker stands or solid ceilings. Fascias must not extend higher than 2.50 m above the floor.

If a sign or logo exceeding the 2.50 m limit is to be fixed to the fascia, it must be the prescribed distance from the edges of the stand and dividing partitions in particular.

• **Surface area :**

300 sqm maximum for the upper level itself.  
Only one upper level per stand is permitted.

• **Weight limits :**

250 kg/sqm for upper levels under 50 sqm  
350 kg/sqm for upper levels over 50 sqm

**Important :**

Exhibitors shall produce their calculations for their doubledecker stand and have them checked during build-up by a registered inspector. It's imperative that these documents are presented to the safety committee when they inspect the stand to approve the upper level for opening to the public.

• **Stairs :**

Careful consideration must be given to the exact position of staircases leading to upper levels, their number and width being dependent on the surface area of such levels :

- Up to 19 sqm : 1 staircase of 0.90 m wide
- From 20 to 50 sqm : 2 staircases, one 0.90 m wide, the other 0.60 m wide
- From 51 to 100 sqm : either 2 staircases 0.90 m wide, or 2 staircases one 1.40 m wide, the other 0.60 m wide
- From 101 to 200 sqm : 2 staircases, one 1.40 m wide, the other 0.90 m wide
- From 201 to 300 sqm : 2 staircases 1.40 m wide.

Only staircases whose closest outer uprights are at least 5 m apart can be taken into account in the number of exits and stair widths.

Exits must be clearly pointed out by a sign bearing the word «Sortie» (exit) in white letters on a green background.

- **Straight staircases :**

Straight staircases for public use must be constructed such that the steps comply with the customary regulations, each flight of stairs having no more than 25 steps. As far as possible, the direction of the flights should alternate.

The height of the steps must be 13 cm minimum and 17 cm maximum. Steps must be at least 28 cm but no more than 36 cm wide.

The relationship between the height and width of steps is governed by the equation  $0.60 < 2H + G < 0.64$  m.

The steps in one flight must be of uniform height and width, although an exception may be made for the first step.

Landings should be the same width as the staircase. In the case of flights not continuing in a different direction, landings should be longer than 1 m.

Single-width staircases must be fitted with one handrail. Double-width staircases or wider must have one handrail on each side.

- **Spiral staircases :**

Standard or additional spiral staircases shall be continuous, with no other landings apart from those serving upper levels. The tread and the height of the steps on the line of flight, 0.60 m from the newel or central void, shall conform to the regulations mentioned in the previous article.

In addition, the outer stair tread must not exceed 0.42 m.

The handrail for single-width staircases must be located on the outside.

- **Stair railings and banisters :**

In accordance with French standards NF P 01-012 and NF P 01-013, stair railings must withstand a pressure of 100 kg per linear metre. Protective glass panels must be either reinforced or made of compound glass.

So-called Securit glass is not permitted.

Stairs must be located at least 1 m from the stand's common partitioning in order to avoid overlooking the neighbouring stand. When two staircases are necessary, they shall be diametrically opposed.

- **Fire prevention :**

Each stand shall be equipped with fire extinguishing facilities, including : one sprayed water extinguisher placed at the bottom of each staircase and a CO<sub>2</sub>-type extinguisher placed near the electricity switchboard.

If the surface area of the upper level is greater than 50 sqm, appropriate additional fire extinguishing facilities shall be constantly ensured by at least one safety officer while the public is present.

- **Transparent upper levels :**

Upper levels may be used to display a sign while remaining open-work.

Not more than half the sides of the upper level may be filled in. The part of sides left open shall be fitted with guard-rails in compliance with safety regulations.

- **Ceilings :**

Upper levels must not be covered with a solid ceiling or canopy.

- **2. Fire-fighting facilities**

The layout of stands must not hinder access to fire-fighting facilities such as fire hoses and smoke extraction controls indicated on the plans.

All such facilities must remain in view and fully accessible at all times.

- **3. Stand shells**

Partitions shall be made of M0, M1, M2 or M3 materials.

Panels made of particle board or wood core plywood 18 mm thick or over as well as hardwood panels 14 mm thick or over, are permitted without any particular protection. Panels of a lesser thickness must be fireproofed on both sides.

**Important :**

It is forbidden to install structures of any kind over the aisles (structure, signboard, walkway...).

- **4. Partition coverings**

The following must be used : M0, M1 or M2 coverings.

- The following may be affixed to the partition (stapled) : coverings (natural textiles or plastics) as long as they are category M0, M1 or M2.

- The following may hang loose (as long as the lower edge is 0.20 m above the ground) : curtains, draperies and net curtains (natural textiles or plastics) as long as they are category M0, M1 or M2.
- The following must be affixed to a stiff backing of category M0, M1 or M2 : miscellaneous wall coverings (cloth and paper) of average or high flammability on condition that they are extremely thin (about 1 mm). This also applies to oilcloth-type wall coverings.

The following are not permitted as partition coverings under any circumstances :

- Carpeting, whether hanging loose, stapled or glued,
  - Plates, panels or sheets of expanded plastic which are not at least of low flammability (M2). This applies particularly to embossed materials such as decorative designs, signs and marketing or advertising text.
  - Soft cellulose chipboard.
- Draperies, door curtains and net curtains : these are not permitted for stand entrances and exits. They are permitted for office doors, on condition that they are category M0, M1 or M2 and that the lower edge is 0.20 m above the ground.

#### ■ **5. Carpeting**

- Carpeting of category M4 may be used on the ground and on platforms 0 to 0.30 m high.
- Category M3 carpeting must be used on platforms over 0.30 m high, stairs and upper levels.

#### ■ **6. Canopies, ceilings, false ceilings**

The covered area of stands with a ceiling, false ceiling or solid canopy must be less than 30 sqm. If the covered area is greater than 50 sqm, appropriate fire extinguishing facilities, constantly attended by at least one safety officer, must be provided while the public is present.

#### ■ **7. Canopies**

Canopies are permitted in the following circumstances :

- In buildings protected by a sprinkler system, canopies must be made from category M0, M1 or M2 materials, or made so by means of fireproofing treatment.
- In buildings not protected by a sprinkler system, they must be made from category M0 or M1 materials. They must also be firmly fixed so as to prevent them from falling down and be supported by wire netting with 1 sqm meshes maximum.

In all cases, the suspension post and fixings holding up ceilings and false ceilings must be made of category M0 materials.

If any insulating materials are introduced into the cavities of the ceilings or false ceilings, they must be made of category M1 materials.

#### ■ **8. Ceilings and false ceilings**

Ceilings and false ceilings must be made of category M0 or M1 materials.

It is, however, acceptable for 25% of the overall surface area of such ceilings and false ceilings to be of category M2 materials. Light fittings and associated accessories are included in this percentage. Furthermore they may be classed in category M2.

Reminder: area of the canopies and the ceilings is limited to 300 sqm.

For any special requests, please contact the safety officer.

#### ■ **9. Paints and varnishes**

Only water-based paints are permitted.

Paints and varnishes reputed to be inflammable are forbidden. Oil paint may, however, be used for counter tops.

The colour combination of white letters on a green background may only be used for exit signs.

#### ■ **10. Transparent or translucent items**

In a general rule, only toughened safety glass should be used, made visible by the addition of text or stickers.

Some plastics are nonetheless permitted on condition that they are at least of low flammability (category M0, M1 or M2).

#### ***Important :***

Ordinary plastic panels that do not comply with these conditions shall only be permitted for areas of one square metre maximum (such as signs and advertising boards) on condition that the edges are framed with a metal rim.

#### ■ **11. Furniture and fittings**

All fittings, with the exception of the usual office furniture, must be made of category M0, M1 M2 or M3 materials (racks, counters, shelvings...

#### ■ **12. Floral decorations**

Plants and flowers made of plastic or paper are not permitted. Plants and flowers made of natural textiles may be allowed on condition that they are fireproofed (M2).

Preferably, real plants and flowers planted in compost should be used. Peat is not recommended.

#### ■ **13. Electrical fittings**

The electrical system on each stand must be protected at its source against excess current and earth faults.

All metallic masses must be interconnected and linked to the earth connection of the stand's junction box.

All electrical connections must be inside branch boxes. The electrical cut-off switches must be accessible to the personnel on the stand at all times.

Equipment :

- Electrical cables : they must be isolated to withstand a minimum of 500 V, which precludes in particular H-03-VHH cables (scindex). Only cables with individually sheathed conductors inside a single outer sheath should be used.
- Wiring : wires of less than 1.5 mm<sup>2</sup> cross-section are forbidden.
- Electrical appliances: Category 0 (in the sense of French standard NF C 20-030) electrical appliances must be protected by a rated differential current device at least equal to 30 MA.

Category I electrical appliances must be connected to the safety conductor in the supply duct.

Category II electrical appliances bearing the symbol are recommended.

- Multiple sockets : only multi-way adapters connected to a fixed socket are permitted (moulded multi-way adapters).
- Halogen lamps (standard EN 60598) : stand lighting including halogen lamp must be :
  - Placed at a minimum height of 2.25 m,
  - Kept away from all inflammable materials (at least 0.50 m from wood and other decorative materials),
  - Firmly fixed,
  - Fitted with a protective screen (glass or fine wire mesh) to guard against the possible effects of the lamp exploding.

#### ■ **14. Liquid gas**

One bottle of butane or propane gas weighing up to 13 kg is permitted per 10 sqm of stand space up to a maximum of 6 bottles per stand.

#### ■ **15. Compressed stand**

Cylinders of air, nitrogen, helium, argon and carbon dioxide are permitted without restriction.

Cylinders of oxygen, hydrogen and acetylene are not permitted unless a special dispensation is granted.

#### ■ **16. Inflammable liquids**

The use of inflammable liquids is regulated.

The special instructions relating to them will be supplied to exhibitors on request.

#### ■ **17. Helium-filled balloons**

No helium bottles, whether full or empty, must be stored in the pavilion. No filling in the presence of members of the public.

Balloon to fit in stand limitations.

In the case of lighting balloon, M2-class covering required.

#### ■ **18. Operational machinery**

Machinery and equipment operated on the stands must be expressly declared in advance. They must not present any danger to visitors. All operational machinery must be set back by one metre from the edge of the stand, unless it is protected by a firmly fixed screen. In all cases, it is recommended that visitors be kept at a distance behind barriers or red and white chains.

#### ■ **19. Storage of materials**

It is forbidden to encumber cubicles on the stands with items of packaging and miscellaneous merchandise which might prove hazardous in the event of fire.

#### ■ **20. Fire-proofing**

Materials that are normally of average or high flammability can be raised to category M2 by fire-proofing.

This can be done by spraying on a special fluid, applying a special paint or varnish with a brush or soaking in a special bath.

Fire-proofing may be carried out either by the decorators, who must be able to provide the necessary information relating to the treatment of the material, or by an approved contractor who will issue the exhibitor with a certificate in an approved format giving the following information:

- Type, area and colour of surface treated,
- Product used,
- Date of application,
- Stamp and signature of contractor.

Approved contractors normally operate in exhibition halls in Paris.

Their names, addresses and telephone numbers can be obtained from : Groupement Technique contre l'Incendie – 10 rue du Débarcadère – 75852 Paris cedex 17 – Tél. : +33 (0)1 40 55 13 13

Fire-proofing may only be applied to wood panels and natural textiles or textiles having a high proportion of natural fibres. Bales of straw and forage may also be fireproofed.

The following cannot be fire-proofed :

- Compact or expanded plastics,
- Fabrics made entirely of synthetic fibres,
- Oil-cloth,
- Natural or synthetic rubbers,
- Synthetic carpeting and carpeting with a backing of rubber or similar.

## ■ 21. Safety department

Installation and fitting must be completed and exhibitors must be present on the stand when the Safety Committee makes its rounds.

They must be in a position to provide the Safety Committee with certificates and reports relating to the burning behaviour of materials used in the construction and fitting out of their stand.

## ■ 22. Authorised materials and certificates

Foreign certificates are not acceptable. Only reports issued by approved French laboratories will be accepted.

In agreement with the Prefecture, the MANUTENTION organizers' department has appointed an approved representative to assist exhibitors in the application of safety precautions.

He may be contacted for further details while the stand is being designed.

During set-up and throughout the exhibition, a safety officer will visit the stands and point out any problems.

The exhibitors or stand fitters must take into account any comments made by the safety officer.

In order to avoid disputes, we recommend that you submit a plan of the layout of your stand to the exhibition organizers. Stands must be constructed strictly according to the approved plans.

In the event that stands do not comply, exhibitors will be forbidden from using the stand and requests for electrical and other connections will be refused by MANUTENTION (in accordance with the decision of 11 January 2000).

### ***Important :***

A guarantee of the degree of fire resistance for the materials used in the exhibition halls must be provided to the safety officer on demand, in the form of quality labels, reports or certificates.

Coverings and materials that meet the safety requirements are sold by specialist suppliers who are obliged to provide the relevant certificates relating to the material's fire resistance classification.

For a list of such suppliers, please contact :

### **Groupement non feu**

37-39 rue de Neuilly – 92585 Clichy

Tél. : +33 (0)1 47 56 30 81 – Fax : +33 (0)1 47 37 06 20

E-mail : [securofeu@textile.fr](mailto:securofeu@textile.fr) – Web : [www.securofeu.com](http://www.securofeu.com)

It is in exhibitors' interests to use such fire-resistant coverings and materials in order to avoid on site fire-proofing which has certain drawbacks (e.g. the salts used can attack metals).



**MANUTENTION**  
EQUIPEMENTS & SYSTÈMES  
22-25 Novembre 2010  
Paris-Nord Villepinte - FRANCE  
[www.manutention.com](http://www.manutention.com)

## REITERATION OF FRENCH CLASSIFICATION OR EUROPEAN EQUIVALENCE

- M0 or European A standards = incombustible
- M1 or European B standards = fire retardant
- M2 or European C standards = flameproof
- M3 or European D standards = moderately inflammable
- M4 or European E standards = highly inflammable.

MATERIAUX	AUTORISE	DOCUMENTS A FOURNIR
Wood (or wood-based composite) > 18 mm non-laminated	Pressed wood chipboard (non-laminated), plywood	None (Materials equated to M3)
Wood < 18 mm and > 5 mm Laminated wood > 18 mm	Originally M3 or D	Official M3 reports (or material quality labels)
Plywood, chipboard < 5 mm or wood-based composite	M1 or treated on both sides with fireproof paint, varnish, fire-inhibiting salts, by an approved contractor, or B	Official M1 reports or fireproofing certificate containing the product name, specification sheet, date of application
Floor carpeting	Natural : M4 or E Synthetic : M3 or D	Official reports
Wall covering and fabrics	M1 or fireproofed or B	Official reports or fireproofing certificate containing the product name, specification sheet, date of application
Plastic materials (plaques, letters)	M1 or B	Official M1 reports
Paints	On M0 or M1, or authorized wood supports (nitrocellulose paint banned)	Official back-up reports
Suspended decorations (paper, cardboard)	M1 or fireproofed or B	Official reports or fireproofing certificate containing the product name, specification sheet, date of application
Floral decorations made of synthetic materials	Originally M1 (fireproofing banned) Or B	Official M1 reports
Affixed or stapled decorations (paper)	Without support documentation if affixed along the entire area or stapled every 5 cm separate installation	
Furnishing	Large pieces of furniture : M3 or D Light-weight structures : M3 or D Upholstery filling : M4 or E Covering : M1 or B	Official reports or fireproofing certificate (without support documentation if furniture is rented)
Glass partitions	Reinforced, tempered, laminated	Official reports, certificates or with a supporting document such as the invoice
Other materials	Approval to be requested	Written reply from the Head of Safety

**NB :** Official reports : reports issued by approved French laboratories solely as the statutory controls dated November 1998 now stand or by officially recognized equivalence by any report corresponding to European standards applicable to member countries of the economic union.

## FRENCH RECOGNISED LABORATORIES FOR FIRE RATING

### Laboratoire d'essais du CSTB

84 avenue Jean Jaurès  
77420 Champs sur Marne  
Tél : +33 (0)1 64 68 82 82

### Laboratoire d'essais (LNE)

29 avenue Roger Hennequin  
ZA Trappes Elancourt  
78197 Trappes cedex  
Tél : +33 (0)1 30 69 10 00

### Institut Français Textile et Habillement (IFTH)

Avenue Guy de Collongues  
69134 Ecully  
Tél : +33 (0)4 72 86 16 00

### Laboratoire de l'institut national de l'environnement industriel et des risques (INERIS)

Parc technologique Alata – BP 2  
60550 Verneuil en Halatte  
Tél : +33 (0)3 44 55 66 77

### Laboratoire central de la préfecture de police (LCPP)

39bis rue Dantzig  
75015 Paris  
Tél : +33 (0)1 55 76 20 00

### Centre d'étude du Bouchet

5 rue Lavoisier  
91710 Vert le Petit  
Tél : +33 (0)1 69 90 82 00