# FIRE SAFETY PRECAUTIONS AT TRADE FAIRS AND EXHIBITIONS

# 1. GENERAL REMARKS

The safety precautions against the risks of fire and panic in establishments open to the public shall be as laid down in the Order of 25 June 1980 (General Requirements).

The Order of 18 November 1987 gives the particular requirements applicable to exhibition halls. The following text consists of extracts from these regulations in order to facilitate comprehension.

The Safety Committee is very strict as far as the construction of stands is concerned (stability, construction and decoration materials, electrical installation, etc.). Decision taken by the Committee during its visit, which shall take place the day before or on the morning the event opens, shall be implemented immediately. When the Committee makes its inspection, the installation of the stands must be complete. The exhibitor (or his representative) must be present on the stand and must be able to provide fire resistance certificates for all the materials used. Non compliance with this rule may lead to the materials being removed or the stand being prohibited from being opened to the public.

Any more proposals must be submitted for the approval of the Safety Officer of the exhibition. Drawings and technical information must be submitted for this purpose to the organizer at least one month before the exhibition opens.

During the build-up period, the Safety Officer shall monitor the application of the safety measures set out below.

Any further information concerning fire safety may be obtained by telephoning to Hervé PIERRE - Tél.: 33 (0) 675 715 698 – mail : <a href="herve@hervepierre.com">herve@hervepierre.com</a>.

#### 2. STAND CONSTRUCTION AND FITTING

#### 2.1. STAND FRAMEWORK, PARTITIONS AND LARGE FURNITURE

M0, M1, M2 or M3 shall be permitted for the construction of the framework and of the partitioning of stands and for the construction of large items of furniture (cash desk, counter, display cabinets, separating screens, etc).

# CONVENTIONAL CLASSIFICATION OF WOOD BASED MATERIALS

(Order of november, 21<sup>th</sup> 2002)

The following materials shall be considered as having the characteristics of category M3 materials:

- Solid non-resinous timber 14 mm thick or more,
- Solid resinous timber 18 mm thick or more,
- Wood based panels (plywood, blockboard, fibreboard, chipboard) 18 mm thick or more.

**CAUTION:** it shall be strictly forbidden to set any type of fitting out whatsoever over the aisles (structure of signboards, walkway, etc).

### 2.2. EUROCLASSE (European Norme)

Classes selon				classes selon			
NF EN 13501-1 (hors sol)				<b>NF EN 13501-1 (hors sol)</b>			
A1	•	-	Incombustible		s1		
A2	s1	d0	M0	С	s2	d0	M2
A2	s1	d1	M1		s3	d1	
A2	s2	d0			s1		М3
	s3	d1		D	s2	d0	M4
В	s1		M1		s3	d1	non goutant
	s2	d0		E-d2 à F			M4
	s3	d1		SOL			
С	s1						
	s2	d0	M2	Bfl	s1		M4
	s3	d1			s2		

#### 2.3. FINISHING MATERIALS

# 2.3.1. Walls finishes

Wall finishes (natural fabrics or plastic) must be in M0, M1 or M2 materials5. They may be stretched or fixed with staples; Sundry finishes (fabrics, paper, plastic film) which are very thin (1 mm maximum) may be used when fixed in a full bed of adhesive to backgrounds of M0, M1 M2 or M3 materials. Embossed or textured paper, however, must be fixed in a full bed of adhesive onto M0 materials only.

Materials on display may be shown on the stands without any requirements for fire resistance. However, if thèse materials are used for decorating the partitions of false ceilings, and if they represent more than 20 % of the total area of these elements, the requirements in the above paragraphs shall be applicable to them. However, these requirements shall not apply to trade fairs and stands aimed specifically at interior decoration where fabrics and wall finishes are displayed.

#### 2.3.2. Curtains - Hangings - Net curtains

Curtains, hangings and net curtains may be left loose if they are made with M0, M1 or M2 materials (or made to meet such classification with a fireproofing treatment). They shall however be forbidden on entrances and exits to the stands, but permitted on doors to internal rooms.

# 2.3.3. Paints and varnishes

Paints and varnishes shall be strictly forbidden if they are deemed to be inflammable (based on nitro-cellulose or alkyds for example).

#### 2.3.4. Finishes to floors, podiums, platforms and steps

Floor finishes must be in M4 materials and fixed securely. Finishes, whether horizontal or not, to podiums, platforms or steps of a height greater than 0.30 m and with a total surface area greater than 20 m², must be made from M3 materials. If their total surface area is less than or equal to  $20m^2$ , these finishes may be formed from M4 materials.

**CAUTION :** For carpets classified as M3 or M4 laid onto wood, make allowance for the method of fixing. The fire resistance certificates must indicate: "Valid for fixing stretched over any M3 background".

# 2.4. **DECORATIVE ITEMS**

#### 2.4.1.Loose laid elements

Elements for decoration or cladding which are not fixed (advertising panels of a area greater than 0.50 m2, garlands, lightweight objects for decoration, etc) shall be constructed form M0 or M1 materials.

The use of signs or advertising panels using white letters on a green background shall be strictly forbidden, as the colours are reserved exclusively for indicating exits and emergency exits.

#### 2.4.2. Floral decorations

Limited use should be made of floral decorations in synthetic materials. If this is not the case, these decorations must be made from M2 materials. These rules shall not apply to specialized trade fairs and stands where such items are exhibited.

**NB**: For real plants, peat soil should preferably be used and kept permanently damp.

## 2.4.3. Furniture

There are no requirements for standard furniture (chairs, tables, desks, etc). On the other hand, display cases, counters, shelves, etc must be made from m3 materials (or made to meet such classification with a fireproofing treatment).

#### 2.5. AWNINGS - CEILINGS - FALSE CEILINGS

Stands which have a solid ceiling, false ceiling or awning must have a covered surface area of less than 300 m2. If the surface area covered is greater than 50 M2, appropriate methods of fire extinction, attended permanently by at least one safety officer, must be provided while the public is present. The total surface area of solid ceilings and false ceilings, including those over upper levels, must not be greater than 10 % of the surface area of the level concerned or of the hall.

# **2.5.1.Awnings**

Awnings will be permitted under the following conditions:

- in establishments protected by an automatic water-based fire extinction system, awnings must be in M0, M1 or M2 materials.
- In establishments not protected by an automatic water-based fire extinction system, they must be in M0 or M1 materials.

They must also be provided with an effective fixing system to prevent them from falling and must be supported by a wire mesh network so as to form meshes of a maximum of 1 m2.

In all cases, the hanging system and the fixing of ceilings and false ceilings must be in M0 materials. When insulating materials are fixed in voids in ceilings and false ceilings, they must be in M1 materials.

## 2.5.2. Ceilings and false ceilings

Ceilings and false ceilings must be in M0 or M1 materials. However, it is acceptable for 25 % of the total surface area of these ceilings and false ceilings to be in M2 materials. Light fittings and their accessories shall be included in this percentage; On the other hand, if the ceilings and false ceilings made up of open-worked or net materials, they may be M2 when the area of the solid parts is less than 50 % of the total surface area of these ceilings and false ceilings.

#### 2.6. FIREPROOFING

A guarantee of the category of fire resistance of the materials used in the exhibition halls must be provided at the request of the Safety Officer, in the form of labels of quality, official reports or certificates. Finishes and materials that comply with the safety requirements are available from specialised vendors who must provide the certificates showing the fire classification of the material; For a list of the vendors, contact: GROUPEMENT NON FEU, 37-39 rue Neuilly, BP 249, 92113 CLICHY (Tel.: +33 (0) 1.47.56.30.81).

Fireproofing may provide an M2 classification to materials which are normally fairly inflammable or easily inflammable. This can be done by spraying a special liquid, by applying a paint or special varnish with a paintbrush, or by soaking in a special bath. Fire protection treatment work can either be carried out by the decorators, who must be capable of providing all information on the treatment of the material, or by an approved contractor, who shall provide the exhibitor with a certificate of an approved type on which shall be shown: the nature, the surface area and the colour of the finish treated, the product used, the date of the operation, the stamp and the signature of the operator. Details of approved contractors may be obtained from GROUPEMENT TECHNIQUE FRANÇAIS DE L'IGNIFUGATION, 10 Rue du Débarcadère, 75017 PARIS, Tel.: +33 (0) 1.40.55.13.13.

**NB:** Fireproofing can only be used on timber panels or on fabrics that are natural or have a high proportion of natural fibres. It is impossible on synthetics and plastic.

**VERY IMPORTANT :** Reports of foreign origin cannot be taken into consideration. Only reports issued by approved French laboratories can be accepted.

#### 3. ELECTRICITY

#### 3.1. ELECTRICAL INSTALLATIONS

The electrical installation on each stand must be protected, from its entry to the stand, against overloading and against earthing faults. All metalwork must be interconnected and linked to the earth connection on the stand's electricity control panel.

Electrical connections must be made inside connecting boxes.

The electrical cut-off devices must be permanently accessible to the staff on the stand.

# **3.2. ELECTRICAL EQUIPMENT**

#### 3.2.1 Electrical cables

Only cables that do not propagate flames must be used.

These cables will consist of:

- Either C2 class cables;
- Or insulated conductors placed inside pipes that do not propagate flames or profiles that do not propagate flames.

All wiring must include on earth conductor linked to the general network via the earth terminal on the stand's electricity control panel.

#### 3.2.2 Electrical apparatus

Electrical apparatus of category 01 must be protected by differential current devices operating at no more than 30 mA.

Electrical apparatus of category I6 must be connected to the earth conductor of the cable supplying them.

Of the apparatus in category II6, those marked  $\square$  are recommended.

## 3.2.3 Multiple sockets and adaptors

Multiple sockets and adaptors are prohibited. Only connecting boxes shall be permitted.

#### 3.2.4 Halogen lamps (standard EN 60598)

Light fittings on stands which have halogen lamps shall:

- be fixed at a minimum height of 2.25 meters,
- be kept away from any inflammable materials (at least 0.50 meters from timber and other decorative materials),
- be fixed securely,
- be fitted with a safety screen (glass or fine mesh) to provide protection from a possible explosion of the lamp.

## 3.2.5 High voltage illuminated signs

High voltage illuminated signs positioned within reach of the public of staff working on the stand must be protected, particularly the electrodes, by a screen made of a material in category M3 at least. The switch to turn them off shall be indicated and the transformers shall be placed in a position that cannot cause any danger to people. Their presence may be indicated with a sign reading "Danger, haute tension" (Danger, high voltage).

# 3.3. INSTALLED ELECTRICAL POWER

For stands with more than 100kW of power supply, a plan and instructions for the insulation of the control box or the technical room must be sent to the Parc des Expositions and the Safety Officer) for approval.

# 4. ENCLOSED STANDS – ROOMS CONSTRUCTED IN THE HALLS

#### **4.1. ENCLOSED STANDS**

Exhibitions sometimes prefer to isolate themselves within enclosed stands. These stands must have exits directly onto the public aisles. The number of exits and their width shall depend on the surface area of the stand, namely:

- less than 20 m2 : 1 exit 0.90 m wide,
- from 20 to 50 m<sup>2</sup>: 2 exits, one 0.90 m wide, the other 0.60 wide,
- from 50 to 100 m<sup>2</sup>: either 2 exits 0.90 m wide, or 2 exits, one 1.40 m wide and the other 0.60 m wide,
- from 100 to 200 m2: either 2 exits, one 1.40 m wide and the other 0.90 m wide or 3 exits 0.90 m wide,
- from 200 to 300 m2 : 2 exits 1.40 m wide,
- from 300 to 400 m<sup>2</sup> : 2 exits, one 1.80 with, the other 1.40 m wide.

The exits must be carefully positioned and, if possible, be opposite each other. Only doors or sets of doors with their outer frames at least 5 meters away from each other shall be included in the number of exists or units of passage.

Each exit must be marked "Sortie" in white letters clearly visible on a green background. If the openings are closed by doors, these must open in the exit direction, without a locking system and without projecting into the public aisles.

#### 4.2. ROOMS FORMED IN THE HALLS

Independently from the areas used for display purposes, meeting rooms, restaurants, cinemas and presentation rooms with a stage or sloping floor, etc. can be set out.

Stages and sloping floors with space for people to stand shall have a load-bearing strength of 600kg per  $m^2$ . Stages and sloping floors with seats shall have a load-bearing strength of 400kg per  $m^2$ . The steps leading to spaces on the sloping floors shall be a minimum height of 0.10 m and a maximum height of 0.20 m with a tread of at least 0.20 m. In this case, flights of steps shall be limited to 10 and the slope of the treads shall not exceed 45 degrees.

As each case is particular, a detailed drawing shall be submitted to the Safety Officer who will define the measures to be applied.

# **5. EMERGENCY EQUIPMENT**

Emergency equipment must remain visible at all times. Access to the various items of emergency equipment (hydrants, hose reels, telephones, fire extinguishers, smoke vent controls, etc) must be kept clear at all times.

On stands that are provided with a hose reel, a 1 meter wide space, totally clear of any obstructions, shall be maintained between the apparatus and the public circulation aisles. The use of panels or fabrics to conceal the apparatus shall be absolutely forbidden.

#### **6. OPERATING INSTRUCTIONS**

It shall be forbidden to stock cases, wood, straw, cardboard, etc. in the exhibition halls, on the stands or in the aisles.

Regular cleaning (daily) shall be carried out in order to clear the premises of dust and rubbish of all kinds. All refuse arising from the cleaning and sweeping must be removed each day, outside public opening hours, and taken outside the establishment.

# 7. ACCESS FOR THE HADICAPPED

Stands with a floor level of 20 mm or more must be laid out in order to facilitate access for the handicapped.