



## Foreword

Special fire protection requirements are made of buildings in which events with large numbers of people are held, in particular in view of the protection of these persons. This applies to exhibitions, events centres, sales areas and also to the terminal buildings of airports. The reasons for this are as follows:

- The premises are usually not constructed as small units but as a single hall. This means that in the case of fire a much larger area is affected than in a residential building, for example.
- Air passengers and visitors do not usually know their way around, i.e. they often take a while to recognise danger and do not know how to react and how to reach safety.
- Fittings such as stands and stages are usually installed by a number of different companies which makes co-ordination of the work and co-ordination with existing safety facilities difficult.

For these reasons special requirements in the selection of building materials and the construction and finishing of fittings are made of events held in the buildings listed above.

These regulations contain a summary of these requirements drawn up for events at Düsseldorf International Airport by the Department for Fire Prevention. The fulfilment of all the requirements set out here does not however release the organisers of all events or promotions from the obligation to obtain the approval of the Department for Fire Prevention at least two weeks before the event begins.

In addition to the special features of buildings with large congregations of people, further peculiarities must be borne in mind at Düsseldorf Airport. These include the complex fire protection plans drawn up for the terminal buildings, in which constructional and technical safety measures combine to ensure a very high degree of protection.

In order to maintain this level during events it is essential not only to observe this standard but also to complete the "Application for the approval of building materials for events and promotions".

The Department for Preventive Fire Protection is happy to answer any further questions at Tel.: (++49-211) 4 21-38 08 or Fax: (++49-211) 4 21-38 69.

## **Explanation of terms**

The distinction between the terms "event" and "promotion" is defined below.

### **Event**

An event within the meaning of these regulations is defined as an activity by an organization at which music, dancing, a film or other kind of performance is provided to an invited audience for the purpose of advertising or entertainment.

Typical of an event is its previously agreed time and restricted location. If stages are set up in the terminals then this is always for an event.

### **Promotion**

A promotion within the meaning of these regulations is the activity of an organization at which, for advertising purposes, advertising material or information is given to air passengers and visitors by one or more specific persons. Typical of a promotion is its limited duration, its location is limited as soon as fittings are used which are not designed to be carried always by a single person.

## **The organisation of events and promotions**

For reasons of fire prevention, certain regulations must be adhered to during events and promotions. These are

- The use, storage, display or sale of combustible liquids or gases, flammable materials, pyrotechnical products or other goods representing a fire hazard is forbidden.
- If stocks of brochures, magazines or similar products are kept these must be stored at the end of the event every day in a suitable storeroom. Only the quantity required for that day may be kept at the stand itself.
- No performances involving the use of naked flame are permitted. The use of candles, sparklers or other objects which must be set alight is forbidden – not least because of the automatic fire detectors.
- Food may be heated or kept warm by means of electrical appliances only. Section 4 of these regulations must be observed here.
- The Department for Fire Prevention must give its approval for any electronic amplifiers, sound mixers etc. required for performances after their installation and before they go into operation.
- If personnel are to be present at the stand during an event or promotion they must have read the leaflet "Behaviour in Emergencies" (enclosed) and have signed that they have read it. Confirmation of this (the reverse

of the leaflet) must be sent by fax (+49-211 / 4 21-38 69) to the Department for Fire Prevention at least two weeks before the event begins. Fittings made of combustible materials and electrical devices must be constantly supervised during the event. In individual cases the Department for Fire Prevention may demand that accompanying personnel are provided.

Smoking is prohibited in the terminal building of Düsseldorf International Airport. This is to be indicated at the stands through symbols as requested by the Department for Fire Prevention. Exceptions from the non-smoking rule must be discussed and approved in advance.

### What materials may be used?

The danger caused by a fire in the stand installations or other temporary installations depends to a large extent on the materials used. The classification of building materials according to their behaviour in fire is made in Germany in DIN 4102, which divides building materials into flammable and non-flammable materials. Flammable materials are also further divided up into easily-flammable, normally-flammable and hardly-flammable materials.

Within the framework of European joint agreements, the regulation DIN EN 13501 for evaluation of fire behavior can also be used. Not only are the stages of flammability differentiated into the Classes A1, A2, B, C, D, E and F, but also according to the criteria of smoke development (s1, s2, s3), as well as burning/dripping waste products (d0, d1, d2).

Building materials used in connection with events or promotions in the terminal buildings of Düsseldorf International Airport must be non-flammable or at least hardly-flammable. The following requirements are also made of the materials:

- The use of easily flammable and normal flammable materials is prohibited.
- Building materials which drip when burned or form burning drops may not be used.
- If combustible materials (hardly-flammable according to DIN 4102) are used they must be stored in a suitable storeroom every day at the end of the promotion. This must be agreed in advance with the Department for Fire Prevention.
- Fittings made exclusively of non-flammable materials (DIN 4102 classification A1 or A2) may also be kept in the terminal buildings outside of the times of the event.

- All building materials used in the course of the event – this includes fabrics for banners, large posters, curtains, floor coverings, lanterns etc. must be approved by the Department for Fire Prevention. Applications for approval can be made using the "Application for the Approval of Building Materials for Events and Promotions" (FDG Org. No. 00.00.004) The building authorities' test certificates for the materials (copies of all pages) must be attached to the application. This is not necessary for materials which are obviously not flammable (sheet aluminium or steel, mineral building materials).

According to the requirements mentioned you can use the materials with the following classification.

	DIN 4102	DIN EN 13501
non- flammable	A1, A2	A1 A2-s1,d0
hardly-flammable	B1 – no burning drops	A2-s1,d0 A2-s2, d0 A2-s3, d0 B-s1, d0 B-s2, d0 B-s3, d0 C-s1, d0 C-s2, d0 C-s3, d0
floor coverings		
non-flammable	A1, A2	A1 <sub>n</sub> A2 <sub>n</sub> -s1
hardly-flammable	B1	B <sub>n</sub> -s1 C <sub>n</sub> -s1

## The erection of stand constructions and other temporary fittings

Escape and emergency routes are an important part of the fire prevention plans for the terminal buildings. In order to ensure that they are kept clear the positioning of all temporary constructions must always be agreed in advance with the department for Fire Prevention.

Constructions and other objects erected in terminal buildings for an event or promotion may not obstruct an escape route. Escape route sign-posting may not be covered or concealed. Facilities along the escape route which are necessary for the evacuation of the building (e.g. door terminals with emergency release) must remain accessible at all times.

## Electrical devices or installations

The following must be observed for the installation and operation of electrical devices in temporary fittings:

- Appliances must comply with the valid VDE regulations and bear the CE emblem
- Installation must be carried out in accordance with VDE regulations
- If lighting additional to the lighting of the building is used it must be energy-saving lighting with an electronic start-up device in order to prevent the release of large amounts of heat.
- It must be possible to interrupt the power supply to electrical appliances immediately. This can be by means of a freely visible mains plug (distance from stand or other construction  $\geq 50$  cm) or through an emergency switch.
- If electrical appliances may be expected to generate heat they must be kept at a sufficient distance from combustible materials and from the wall.

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