

Platforms, stairs, ladders

The purpose of this document is to explain the Technical Regulations for trade fairs and exhibitions of Hamburg Messe und Congress GmbH, Section 5.6

Platforms on fair stands and their means of access require special attention, because they increase the risk of accidents. This is particularly important if fair visitors are to have access to them. The safety goal is to prevent people from falling.

Structure of platforms

The supporting structure for platforms must be made of non-flammable materials. The floor must be flush and free of obstacles which could cause people to trip.

If the area is accessible for visitors, from a platform height of 20 cm suitable safety measures are required to prevent people from falling.

Precautions to prevent falls

In the visitor area, precautions are required in all cases to prevent falls, normally in the form of a handrail, a surrounding barrier, a solid wall, glass wall or grid-type barrier. The required minimum height is 1.10m. If children are expected to be present, the precautions are to be designed in such a way as to make it hard to climb over. The maximum distance between side support to a railing is 12 cm.

Necessary load capacity

Pursuant to DIN 1055, platforms and stairs must have a certain load capacity, depending on their use (extract from DIN standard):

Use	Load capacity
Office room – not public	2 kN/m ²
Platform, accessible to visitors, fixed seating positions	5 kN/m ²
Platform, accessible to visitors, no fixed seating positions	7,5 kN/m ²
Stairs	5 kN/m ²

The safety barrier must be capable of withstanding the pressure of a group of persons. Pursuant to DIN 1055, that is at least 1 kN/m at handrail height. Where there may be more pressure from the public, this value is not sufficient. 2 kN/m is a good basis for planning, provided that no extreme situations are to be expected.

Use of areas below platforms

The area below a platform may naturally be used. If it is used, the rules on stand roofing are applicable, in accordance with the Technical Regulations 5.4.2, or for multi-storey stands item 5.9 That also applies if the area is used for storage.

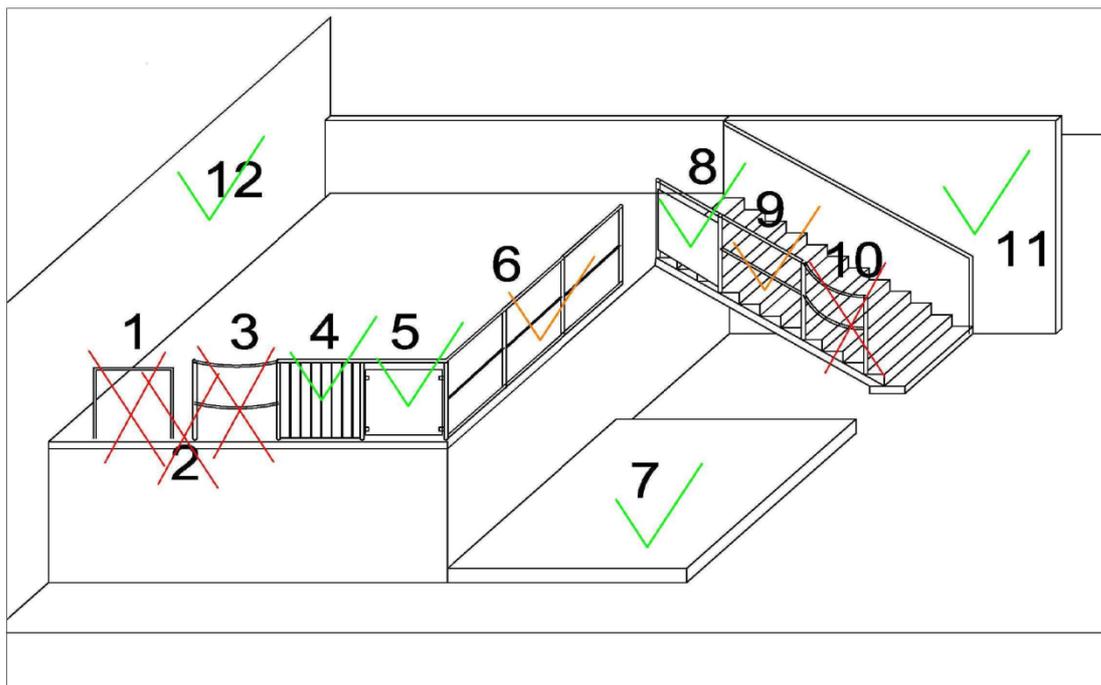
Access to platforms

Access for visitors must be via stairs. A staircase requires a fixed handrail on both sides, without free ends. The requirements for the handrail with respect to structural strength and construction are the same as for barriers to prevent falling (see above). The maximum permitted step height (rise) is 19 cm. Depth of treads must be at least 26 cm. From a platform size of 100 m² a minimum tread width of 120 cm is required. In this case a second, independent escape route must also be provided from the platform to the hall.

Areas without visitor access

The health and safety regulations are applicable here. In particular the requirement for a safety barrier is different from the requirement indicated above, and is specified in the regulations of the employer's liability insurance organisation BGV C1 Art.6. You can obtain these regulations from the relevant employer's liability insurance organisation.

Sketch for explanation



- Legend:
- | | |
|--------|---|
| 1 | Not admissible. Too low. Central strut missing. |
| 2 | Not admissible. Distance between elements of barrier is too great. |
| 3 + 10 | Not admissible. Use of ropes as handrails. Does not give safe grip. |
| 4 | Admissible. Posts make it hard to climb over. |
| 5 + 8 | Admissible. Filled space below a handrail with good grip. Harder to climb over. |
| 6 + 9 | Admissible with restrictions. Not admissible if presence of children is to be expected. |
| 7 | Admissible. Low platform up to 20cm does not require barrier. |
| 11 | Admissible. Continuous handrail on both sides of stairs. |
| 12 | Admissible. Rear wall to prevent falling. Please note that evidence is required that it can withstand the load from a group of persons. |

Ladders

Ladders are not permissible for visitors. For use of ladders in other cases, the relevant accident prevention regulations must be observed.