

PALEXPO REGULATIONS FOR CONSTRUCTION






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1. TECHNICAL DATA OF PALEXPO

1.1 Connection of utilities to stands

Connection points are located in connection boxes at floor level. These boxes are indicated on the hall plans by the following symbols:

-  = Electricity + Telecommunication + Radio + Television
-  E = Water and drainage
-  A = Compressed air
-  G = Gas
-  E = Eau

NB: Halls 6 and 7 have a network of gutter channels connecting the floor boxes. Gutters are shown on the plan.

Exhibitors are strictly forbidden to make their own connections to the floor boxes.

Floor boxes in use must be accessible at all times.

It is forbidden to touch the electric installation of the goods entrances.

Electrical installations on the stands must comply with the Swiss Law on Electrical Installations (LIE), the Swiss Ordinance on Low-Voltage Installations (OIBT) and the Swiss Standard on Low-Voltage Installations (NIBT), Section 7, Chapter 11, and with all laws and regulations in force in Switzerland.

Electrical installations on the stands will be monitored by an official inspector with the legal authority to require alterations to be made to the installations if necessary to meet the laws, standards and regulations listed above.

According to the recommendations of the inspector, Palexpo reserves the right to cut the electrical power to the stand in the event of refusal to bring the electrical installations into conformity.

Exhibitors are responsible for the cost of modifying equipment that does not comply with the regulations.

Exhibitors are liable for any technical faults or damage that may result from non-compliance with the provisions laid down by Palexpo.

Exhibitors may not object to cables and pipes being laid over their stand site to supply neighbouring stands, if necessary.

Modular raised flooring consisting of standard wood frames can be rented from Palexpo which would facilitate the passage of cables (see relevant order form).

In areas open to the public, a raised floor is essential for covering high-voltage electricity cables, and water supply and discharge pipes.

Exhibitors must specify that their stand contractor use NON-SLIP materials to ensure that floors, floorings and other surfaces, incl. gangways, stairs, etc., have non-slip surfaces.

1.2 Floor loads (admitted: 1 kg = 10 N)

Load limits apply as follows:

1.2.1 Entrance Hall, Conference Centre and Lobby («Foyer»)

A uniformly distributed average load of $p = 4000 \text{ N/m}^2 = 4 \text{ kN/m}^2$.

1.2.2 Halls 1 and 2

The average load is 5 kN/m^2 . Uniformly distributed over an area of $9.60 \text{ m} \times 9.60 \text{ m}$, this may be replaced by one of the following alternatives:

- a) two concentrated 180 kN loads + one uniformly distributed load of 1 kN/m^2
- b) two axles of 180 kN + one uniformly distributed load of 1 kN/m^2
- c) one 240 kN load, including live load + one uniformly distributed load of 2.5 kN/m^2
- d) two axles of 120 kN + one uniformly distributed load of 2.5 kN/m^2 .

1.2.3 Hall 4

One uniformly distributed average load, similar to that allowed for road surfaces. For all loads exceeding 10 kN/m^2 the exhibitor must obtain permission from Palexpo Operations Department', which will, if necessary, seek the expert advice of civil engineers T Ingénierie SA.

1.2.4 Hall 5

One uniformly distributed average load of 10 kN/m^2 , which may be replaced by one of the following alternatives, over areas of $9.60 \text{ m} \times 7.20 \text{ m}$, or $7.20 \text{ m} \times 7.20 \text{ m}$:

- a) 2 concentrated loads of 180 kN + one uniformly distributed load of 4 kN/m^2
- b) two axles of 180 kN + one uniformly distributed load of 4 kN/m^2
- c) 1 load of 240 kN , including live load + one uniformly distributed load of 6 kN/m^2
- d) 2 axles of 120 kN + one uniformly distributed load of 6 kN/m^2 .

1.2.5 Hall 6

One uniformly distributed load of maximum 20 kN/m^2 which may be replaced by max 500 kN concentrated loads spaced by 7 m in both directions acting simultaneously with 5 kN/m^2 of distributed load on floor.

1.2.6 Hall 7

One uniformly distributed average load of 10 kN/m^2 , which may be replaced by one concentrated load of 240 kN including live load, plus one load of 6 kN/m^2 , uniformly distributed over an area of $7.20 \text{ m} \times 7.20 \text{ m}$ around the concentrated load.

1.2.7 Bars 5 et 6

Max. permitted roof load: 5 kN/m^2 .

1.3 Access-ramp loads

The access ramp to Halls 1 and 2, gates 11, 18, 21 and 28, on the Lyon side, can carry 2 180 kN axles per 9.60 m span.

The access ramp to Halls 4 and 5, gates 41, 48, 51 and 58, on the Lyon side, can accept 2 180 kN axles per 9.60 m span or 7.20 m span.

The access ramps to Halls 5 and 6, gates 54, 55, and 617 to 624, on the Lausanne side, can accept the normal loads for roads and bridges subject to normal load tolerances (article 9, SIA 160 standards, 1970 edition).

1.3.1 Special equipment

Permission must be obtained from Palexpo Operations Department for any special equipment, such as crane trucks, lifting gear etc., whose weight exceeds one of the load limits specified above. If necessary, the expert opinion of the relevant civil engineering office will be sought, viz.

a) for Halls 1 to 6:

T Ingénierie SA

Quai du Seujet, 18
CH-1201 Geneva

Tel.: +41 (0)22 716 08 00 • Fax: +41 (0)22 716 08 99
gva@t-ingenierie.com • www.t-ingenierie.com

b) for Hall 7:

INGENI SA Ingénierie Structurale

Jérôme Pochat, Ingénieur civil HES
Rue du Pont Neuf 12
CH-1227 Carouge/Geneva

Tel.: +41 (0)22 308 88 88 • Mobile: +41 (0)79 310 66 24
jerome.pochat@ingeni.ch • www.ingeni.ch

2. STAND BUILDING

2.1 General recommendations

Stands must conform to basic safety standards and must not present a danger to occupants or visitors, or to the immediate environment.

Exhibitors are responsible for the construction and decoration of their stands. They should refer first to the rules of the exhibition, which prevail.

Each exhibitor must ensure that he knows the location, dimensions and layout of the stand allocated to him. The Palexpo Operations Department is available to arrange visits.

Please also refer to Heading «[Safety and Security / Fire prevention](#)».

Technical plans for stand approval must be submitted in metric measures.

2.1.1. Stands in hall 2 located at the railing to hall 4

For multistorey stand constructions located at the railing above hall 4, a falling object back holding net for protection has to be installed during assembly and dismantling.

2.2 Floors attachments

The design and construction of the stands must render them "self-supporting", in other words without the requirement of being attached to the floor or the walls of the Palexpo buildings.

2.2.1 All halls

Holes may not be made in the floors.

2.2.2 Entrance Hall, Conference Centre and Lobby («Foyer»)

Scotch tape or adhesive stickers are forbidden on the floor.

Plants put on the marble floors should be in waterproof pots. The costly removal of water stains will be invoiced to the exhibitor.

2.3 Walls attachments

2.3.1 Entrance Hall, Conference Centre and Lobby («Foyer»)

It is forbidden to fix anything to the walls, the floor or the ceiling.

2.3.2 Halls 1, 2, 4, 5, 6 and 7

It is strictly forbidden to attach anything at all to the wall linings, walls, floors, ceilings or structural elements of the Palexpo buildings.

It is also forbidden to carry out welding or soldering work that affects the metallic structures of the building and to attach anything whatsoever to these.

2.4 Suspensions

2.4.1 Entrance hall

No suspension is permitted.

2.4.2 Conference Centre - Rooms A, B, C

A certain number of attachment points are fixed in the false ceiling. No suspension will be permitted outside these hooks. Moreover the maximum load admitted will depend on the occupancy of Hall 1.

2.4.3 Halls 1, 2, 4, 5, 6 and 7

Attachment of devices to the steelwork of Halls 1 - 6 or to the appropriate hooks in the wooden framework of Hall 7, may be authorized provided they are carried out by Palexpo Operations Department exclusively. Previously the exhibitor should submit to the Technical Services Department a plan with following indications for every attachment point:

- measurements from stand edges
- height from the hall floor
- weight per attachment.

In borderline cases, approval by a civil engineering office will be required.

Halls 1, 2, 4, 5, and 6

The maximum weight of elements suspended from the steelwork is limited to a total overall average of 30kg/m². The weight per suspension point must not exceed 6kN per point.

Hall 7

The suspension of loads from the roof structure of the hall must always be subject to a request for authorization from the Palexpo Operations Department.

2.4.4 All halls

Suspensions must conform with the Swiss static suspension safety standards.

Palexpo accepts no liability if, for reasons beyond its control, work is not completed within the deadline mentioned in the order form.

Suspension work is carried out entirely at the exhibitor's risks.

Palexpo is liable only for the cable installed by its own staff and not for damage caused by the fall of any item suspended in a manner that does not conform to safety regulations.

All work will be charged according to time involved even though an estimate has been established.

2.4.5 Veils / False ceiling

Special authorisation must be obtained from the Palexpo Operations Department for the suspension of veils and false ceilings to ensure that ventilation duct outlets are not obstructed.

2.5 Publicity displays and official information displays

During stand build-up or during any construction it is forbidden to completely nor partially hide publicity displays as well as official information displays.

2.6 Air-conditioning of stands

Only water-cooled systems are allowed. All air exchange systems are prohibited for reasons of heat build-up.

A fine of CHF 2'000.- per unit will be collected in case of non-observance and the installation put out of working.

2.7 Through-stand aisles leading to an emergency exit

See also Heading «Safety and security / Fire prevention», Article 1.4 Circulation systems / Safety zone.

2.7.1 Carpets

When a public aisle crossing a stand leads straight to an emergency exit, the exhibitor may cover the floor with plain carpet (no identification, no publicity) of his choice.

The carpet must:

- be of contrasting colour,
- or be marked at the edges by strips of a different colour or by studs of at least 10 cm in diameter in a contrasting colour to the surrounding floor, set no more than 70 cm apart.

Whatever method is used, the public aisle must be easily identified as such in the judgement of the Palexpo Security Department and on inspection by the fire service of the Department of Construction and Information Technology of the Canton of Geneva (DCTI).

2.7.2 Other aisle coverings

All other aisle coverings must be clearly shown on the stand-layout drawings: these require prior authorization by Operations Department, which is responsible for maintaining optimal conditions for free movement of vehicles in the halls, in the interest of all users.

Minimum requirements are as follows:

a) Quality of materials and their installation:

The overall structure of the gangway covering, including a 6 % access ramp, must be capable of carrying loads of 8 tonnes per wheel to allow fully loaded vehicles of any type to use the aisles.

b) Height of flooring:

The height of the flooring may reach a maximum of 15 cm as long as this matches the height of the flooring of the stand bordering the aisle.

Exhibitors are urged to seek agreement with adjacent stand-holders, where necessary, for adjusting the heights of their floorings, or for installing a connecting ramp.

The flooring must have a clean finish and a 6 % ramp at both ends.

This flooring should not bear any identification or advertising.

2.8 Structures overhanging gangways

The lowest point of structures overhanging gangways must be at a minimum height of:

- 3.20 m from hall floor, if the structures overhang gangways leading to emergency exits.
- 2.50 m from hall floor, for other gangways.

2.9 Exits

Stands with multi-level structures or enclosed space where several people can be accommodated, must be provided with exits, as follows:

- up to 50 people:
one exit, 0.90 m wide
- up to 100 people:
two exits, each 0.90 m wide
- up to 200 people:
either three exits, each 0.90 m wide or two exits, the first 0.90 m wide, the second 1.20 m wide
- more than 200 people:
two or more exits at least 1.20 m wide, where the total exit widths must be at least:
 - on the ground floor: 0.60 m wide per 100 people or part thereof,
 - on the upper floors: 0.60 m wide per 60 people or part thereof.

The number of people per level, to be computed on the basis of one per square metre, is defined by the surface area of this level (the area enclosed by its perimeter), less 15 % allowance for installations.

In addition, the lighting and marking of emergency exits must conform to current safety regulations.

See also Article 3.5 Stairways / Gangways / Platforms.

2.10 Glazing

All glazing must be designed in safety glass, either laminated or tempered, covered with film or with visualisation elements and must conform to Swiss construction standards.

2.11 Turntables

Turntables must be designed and operated in such a way as to avoid creating any risks of accident. The surrounding area must be protected so as to prevent fingers or loose clothing being caught in the machinery.

2.12 Balloons

Balloons may be admitted under the following conditions:

- helium-filled balloons (any other gas is definitely excluded) are permitted only for decoration purposes;
- for all other uses (distribution, etc.) only balloons filled with compressed air are allowed.

In all cases, written authorization must be obtained from the Organizer and the Palexpo Security Service.

If balloons have to be fetched from the ceiling, the cost of the manlift will be invoiced at the hourly rate.

2.13 Laser installations, class 1M, 2M, 3R, 3B and 4

- The use of laser beam equipment of class 1M, 2M, 3R, 3B and 4 on the Palexpo site is subject to the following regulations:
- It must be authorised by the specific regulations of the event in question
- It must be declared in advance to the police department of the Canton of Geneva, Transport and Environment Group
- It must be installed in compliance with technical directive CEI 60825-3:1995-12 and with the standard CEI 60825-1:2001-08.

3. MULTISTOREY STRUCTURES

Complementary information to paragraph 2 «Stand Building»

3.1 Approval of plans

At least two months before the opening of the show, a file in duplicate containing the following documents must be submitted to Palexpo Operations Department, for approval, viz:

- Architects' and decorators' plans showing alignments and dimensions.
- Engineering drawings, accompanied by notes of static calculations carried out by a civil engineer guaranteeing adherence to static loading standards.

- The principal hypotheses and the summary of the results must be presented in a separate file containing:
 - a summary of the calculation hypotheses in condensed form;
 - a schematic diagram for all calculations carried out;
 - a summary of the results in the form of graphics and tables showing all the loads and strains;
 - plans showing the positions, in relation to the periphery of the stand, of point loads acting at the bases of pillars.
- Exhibitors must construct the load-bearing structures in accordance with plans approved by the Palexpo Operations Department. The appropriate civil-engineering office is responsible for checking the assembly of these structures.

3.2 Floor loading calculation of structural elements

- Levels of floor loading, which depend on the use of the premises, must not exceed the following maxima:
 - offices: $p = 200 \text{ kg/m}^2$
 - exhibition space: $p = 300 \text{ kg/m}^2$
 - conference rooms: $p = 300 \text{ kg/m}^2$
 - bars: $p = 300 \text{ kg/m}^2$

P1: average excess loading on the exhibition floor

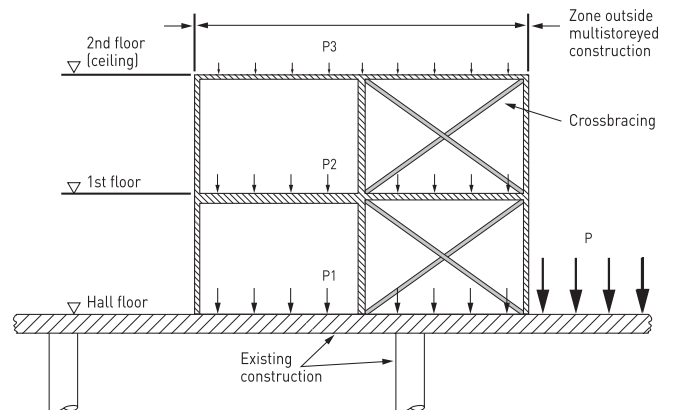
P2: average permanent loading (load-bearing structures, fittings, furniture etc.), plus average extra mobile loads

P3: average permanent loading (load-bearing structures, ceilings etc.).

The condition to be satisfied is:

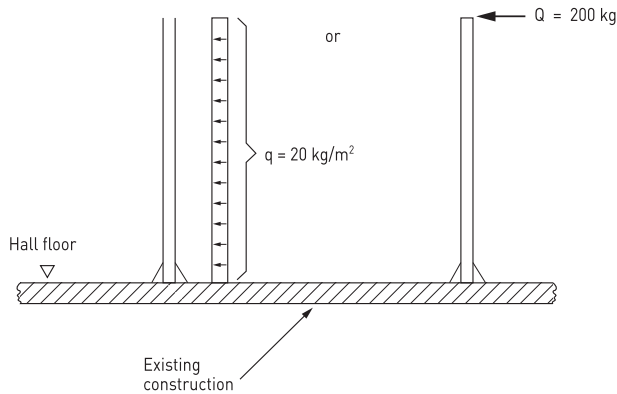
$P1 + P2 + P3 = P$ (where P is the average uniformly distributed loading (stress) according to Article 1.2 Floor loads).

The elements of load-bearing structures must be designed for the carrying capacities indicated above.



- Horizontal stability must be assured by an appropriate cross-bracing system.

A horizontal load exerting a multi-directional force at floor level and equivalent to a minimum of 10% of the live load must be taken into account in the stability calculations.
- Any vertical element inside or on the periphery of a stand must withstand either a horizontal load of 20 kg/m^2 , or a point load of 200 kg applied at its highest point.



These standards may be obtained from the following address:

**Société suisse des ingénieurs et des architectes (SIA)
Secrétariat général SIA**

Selnaustrasse 16
P.O. Box
CH - 8027 Zürich

Tel.: +41 (0)44 283 15 15

Fax: +41 (0)44 283 15 16

contact@sia.ch

www.sia.ch

This information can also be found on the following website:

www.webnorm.ch/Gruppen.aspx

3.3 Permissible local stress on the floor of Halls 4 and 5

The type of flooring in Halls 4 and 5 means that the floor support plates must be calculated for permissible local stress of:

$q \text{ loc. max.} = 6 \text{ kg/cm}^2$ (for Halls 3, 4 and 5).

3.4 Lifts - Temporary installations for the transport of people

For all mobile equipment such as lifts or service lifts (whether or not for the transport of people) and escalators.

a) applications must be made to the:

Département des Constructions et technologies de l'information (DCTI)

Police du feu
Chemin du stand 4
CH-1233 Bernex/Geneva

Tel.: +41 (0)22 727 02 02

www.ge.ch/dcti/guichet_dpc_pfeu.asp

b) installation may only be carried out by a contractor approved by the DCTI.

The SIA standards applicable are as follows:

- Cable elevators: Norme SIA 370/10
- Hydraulic elevators: Norme SIA 370/11
- Escalators: Norme SIA 370/12

3.5 Stairways / Gangways / Platforms

See also Article 2.9 Exits

Stairways must have a minimum usable width of 1.20 m and be provided with 1.00 m high handrails measured at the most dangerous point. As a general rule, stairs shall consist of straight or nearly straight flights, and the slope shall not exceed 35°.

Openings leading to a drop must be closed off by safety rails 1.00 m high and bars close enough together to prevent a sphere 12 cm in diameter from passing between them. In addition, the bars should be so designed as to discourage people, children in particular, from climbing up them.

Gangways, platforms and ladders as of 50 cm from the ground must be provided with handrails and retaining barriers 1.00 m high.

3.5.1 Spiral staircases

Spiral staircases cannot be used as the only means of escape from stands with an upper story.

The steps must have a minimum width of 1.50 m.

The French version of these Regulations is the authentic text.