

# Load Document

In the European construction industry, directives from both BKR and EKS 10 are currently used in construction. The tables below show content according to these standards. Of course, we help sizing and product selection depending on which directives to use. Contact us before planning your project on +44 (0)7710 406906 or [subfloor@flslimited.com](mailto:subfloor@flslimited.com).

## BKR 2010

**Table 3:14a Characteristic Load and Load Reduction Factor**

Load Group Premises/space	Widespread Load kN/m <sup>2</sup> Bound Load Part	Tested Load kN/m <sup>2</sup> Free Load Part		Concentrated Load 4.5 kN
	q <sub>k</sub> (= 1)	q <sub>k</sub>		q <sub>k</sub> (=0)
1. Residential Load Rooms in residential buildings and in hotels included basements. Patient room and staff room in care facilities. Furnished attics.	0.5	1.5	0.33	1.5
2. Gathering Load Classrooms in schools, rooms in day care centres, lecture halls. Office rooms without archives. Premises for restaurants, cafes and dining rooms and kitchens adjacent to these. Laboratories. Free spaces in libraries. Spaces with fixed seating in assembly rooms such as churches, concert halls, theatres and cinemas.	1.0	1.5	0.5	3.0
3. Crowd Load Spaces <sup>2</sup> without fixed seating in churches, concert halls, theatres and cinemas. Museums, exhibition rooms. Sales premises in department stores and stores. Gyms, sports halls, dance rooms. Platforms with seating only. Corridors <sup>1</sup> in schools. Walkways, except for room type 5:2 and 5:3. Stairs except for room type 5:2 and 5:3.	0	4.0	0.5	3.0
4. Heavy Load Platform with standing room only. Premises with light industry and crafts.	0	5.0	0.5	3.0
5. Special Loads 5:1 Balconies, Patios, Roof Terraces	0	2.0	0.5	1.5 <sup>2</sup>
5: 2 Attic space with a minimum height of 0.6 meters and with fixed stairs to the attic.	0.5	0.5	0	0.5
Attic space with a minimum height of 0.6 meters and with access through a limited size door (max. 1 x 1 meter).	0	0.55	0.5	0.5
5: 3 Stairs and attics in one and two storeys residential buildings, also stairs within the apartment.	0	2.0	0.33	1.5

<sup>1</sup> For other corridors, the same load values shall be assumed to apply to the type of premises in which a corridor is included.

<sup>2</sup> For small houses,  $Q_k$  may be set to 1.0 kN.

(BFS 2010: 2)

## EKS 10

**Table C-1 Useful load on the joists etc. in buildings**

Category	$q_k$ [kN/m <sup>2</sup> ]	$Q_k$ [kN]
A: Rooms and spaces in housing		
- Beams	2.0	2.0
- Stairs	2.0	2.0
- Balconies <sup>b</sup>	3.5	2.0
- Attic Floor I	1.0	1.5
- Attic Floor II	0.5	0.5
B: Office Space	2.5	3.0
C: Assembly Location		
- C1: Spaces with tables, e.g. rooms in schools, cafes, restaurants, dining rooms, reading rooms, receptions.	2.5	3.0
- C2: Spaces with fixed seating. e.g. churches, theatres, cinemas, conference rooms, lecture rooms, meeting rooms, waiting rooms and waiting rooms at railway stations.	2.5	3.0
- C3: Spaces without obstacles for people in motion, e.g. museums, showrooms, communication spaces in public buildings, hotels, hospitals, railway stations, etc.	3.0	3.0
- C4: spaces where physical activities can occur, e.g. dance rooms, gymnasiums, theatre scenes.	4.0	4.0
- C5: spaces where large crowds of people can be found, eg in buildings intended for public gatherings such as concert halls, sports halls including stand stands, terrace as well as communication spaces and rail platforms.	5.0	4.5
D: Premises		
- D1: Retail premises	4.0	4.0
- D2: Department stores	5.0	7.0

<sup>a</sup> Note 6.3.1.1 (2) of EN 1991-1-1. The values in the table do not contain dynamic effects.

<sup>b</sup> On balconies, stands and terraces, no useful load is assumed to operate at the same time as snow loads.

(BFS 2015:6)

# Load Tables EKS 10



## SubFloor

Load Category according to EKS 10		A	B	C1
q <sub>k</sub>		2.0 kN/m <sup>2</sup>	2.5 kN/m <sup>2</sup>	2.5 kN/m <sup>2</sup>
Q <sub>k</sub>		2.0 kN	3.0 kN	3.0 kN
Chipboard Thickness		22 mm	38 mm	38 mm
Article Number	Floor Construction	c/c = joist distance		
10450	Wooden Joist 45x45x3600 mm			
21100	Plastic Screw 100 mm Black	c/c 600 mm		
21120	Plastic Screw 100 mm Grey		c/c 600 mm	c/c 600 mm
10450	Wooden Joist 45x45x3600 mm			
21200	Plastic Screw 200 mm Black	c/c 600 mm		
21220	Plastic Screw 200 mm Grey		c/c 600 mm	c/c 600 mm
10450	Wooden Joist 45x45x3600 mm			
21300	Plastic Screw 300 mm Grey	c/c 600 mm	c/c 600 mm	c/c 600 mm
10700	Wooden Joist 45x70x3600 mm			
21100	Plastic Screw 100 mm Black	c/c 600 mm		
21120	Plastic Screw 100 Grey		c/c 800 mm	c/c 800 mm
10700	Wooden Joist 45x70x3600 mm			
21200	Plastic Screw 200 mm Black	c/c 600 mm		
21220	Plastic Screw 200 mm Grey		c/c 800 mm	c/c 800 mm
10700	Wooden Joist 45x70x3600 mm			
21300	Plastic Screw 300 mm Grey	c/c 600 mm	c/c 800 mm	c/c 800 mm

## SubFloor Acoustic (with acoustic screw foot)

Load Category according to EKS 10		A	B	C1
q <sub>k</sub>		2.0 kN/m <sup>2</sup>	2.5 kN/m <sup>2</sup>	2.5 kN/m <sup>2</sup>
Q <sub>k</sub>		2.0 kN	3.0 kN	3.0 kN
Chipboard Thickness		22 mm	38 mm	38 mm
Article Number	Floor Construction with acoustic foot	c/c = joist distance		
10450	Wooden Joist 45x45x3600 mm			
21100	Plastic Screw 100 mm Black	c/c 600 mm		
21120	Plastic Screw 100 mm Grey		c/c 600 mm	c/c 600 mm
10450	Wooden Joist 45x45x3600 mm			
21200	Plastic Screw 200 mm Black	c/c 600 mm		
21220	Plastic Screw 200 mm Grey		c/c 600 mm	c/c 600 mm
10450	Wooden Joist 45x45x3600 mm			
21300	Plastic Screw 300 mm Grey	c/c 600 mm	c/c 600 mm	c/c 600 mm
10700	Wooden Joist 45x70x3600 mm			
21100	Plastic Screw 100 mm Black	c/c 600 mm		
21120	Plastic Screw 100 Grey		c/c 800 mm	c/c 800 mm
10700	Wooden Joist 45x70x3600 mm			
21200	Plastic Screw 200 mm Black	c/c 600 mm		
21220	Plastic Screw 200 mm Grey		c/c 800 mm	c/c 800 mm
10700	Wooden Joist 45x70x3600 mm			
21300	Plastic Screw 300 mm Grey	c/c 600 mm	c/c 800 mm	c/c 800 mm

The basis for SubFloor type approval is, among other things, the construction regulations EKS 10. Which means that P- or CE-marked chipboard with a thickness of 22 mm or 38 mm, in the lowest P6 class that is shall be used on top the SubFloor system.

Questions and technical support: Tel +44 (0)7710 406906 or [subfloor@flslimited.com](mailto:subfloor@flslimited.com)

## SubFloor Steel Joists

Load Category according to EKS 10		A	B
q <sub>k</sub>		2.0 kN/m <sup>2</sup>	2.5 kN/m <sup>2</sup>
Q <sub>k</sub>		2.0 kN	3.0 kN
Chipboard Thickness		22 mm	38 mm
Article Number	Floor Construction	c/c = joist distance	
11300	Steel Joist 45x30x3800 mm		
21100	Plastic Screw 100 mm Black	c/c 600 mm	
21120	Plastic Screw 100 mm Grey	c/c 600 mm	c/c 800 mm
11300	Steel Joist 45x30x3800 mm		
21200	Plastic Screw 200 mm Black	c/c 600 mm	
21220	Plastic Screw 200 mm Grey	c/c 600 mm	c/c 800 mm
11300	Steel Joist 45x30x3800 mm		
21300	Plastic Screw 300 mm Grey	c/c 600 mm	c/c 600 mm

## SubFloor Steel Joist Acoustic (with acoustic screw foot)

Load Category according to EKS 10		A	B
q <sub>k</sub>		2.0 kN/m <sup>2</sup>	2.5 kN/m <sup>2</sup>
Q <sub>k</sub>		2.0 kN	3.0 kN
Chipboard Thickness		22 mm	38 mm
Article Number	Floor Construction with acoustic foot	c/c = joist distance	
11300	Steel Joist 45x30x3800 mm		
21100	Plastic Screw 100 mm Black		
21120	Plastic Screw 100 mm Grey	c/c 600 mm	c/c 800 mm
11300	Steel Joist 45x30x3800 mm		
21200	Plastic Screw 200 mm Black		
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11300	Steel Joist 45x30x3800 mm		
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The basis for SubFloor type approval is, among other things, the construction regulations EKS 10. Which means that P- or CE-marked chipboard with a thickness of 22 mm or 38 mm, in the lowest P6 class that is shall be used on top the SubFloor system