

Novopan Subfloor

22 mm Spaandex K-floor



Installation manual

22 mm Spaandex K-floor and Unipan K-floor are used in renovation and new buildings as:

- Load-bearing subfloors on joists and beams
- Floating subfloor - see separate installation instructions

Read the instructions carefully before you start.

Mounting a load-bearing 22 mm subfloor

NOVOPAN SPAANDEX K-FLOORS 22 MM - FOR NEW BUILDINGS AND RENOVATION

Spaandex K-floor EN 312 P6 comes with a cover size of 1800/2400 × 600 mm. Spaandex Unipan K-floor EN312 P6/P5 comes with a cover size of 1800 × 600 mm. With a thickness of 22 mm, the boards provide a stable base for most floor coverings, such as parquet, linoleum or carpet.

Load-bearing subfloor assembled on joists and beams

Particleboards are mounted on joists or beams with end joints and can be used for all flooring applications in permanently heated rooms.

Load-bearing subfloor laid with flying joists

Particleboards are mounted on joists or beams with end joints between joists or beams (flying joists). Flying joist joints may ONLY be used in rooms with a maximum load of 2 kN, e.g. ordinary living spaces. Maximum distance between supports 600 mm c-c.

The constructions provide good opportunities to run pipes and electrical installations between the joists or in the beam layer.

APPLICATION

Spaandex K-floor EN312 P6 is classified for use as a subfloor in permanently heated rooms with an annual relative humidity exceeding 65% for only a few weeks, i.e. in ordinary homes, offices and similar. Support and blocking spacing, see table 1.

Spaandex Unipan K-floor EN312 P6/P5 is classified for use as a subfloor in unheated rooms with an annual relative humidity exceeding 85% for only a few weeks, i.e. in unutilised attics, ventilated unheated constructions, holiday homes etc.

MOISTURE BARRIER

A moisture barrier should always be installed on concrete ground and floor slabs to prevent moisture damage to joists and floors, e.g. at least 0.20 mm PE membrane. Moisture barriers must be CE labelled according to EN 13984.

The moisture barrier is laid with at least 50 mm overlap and must be taped over all joints. It is run along walls and clamped/taped behind skirting boards, see figure 1.

Never place a moisture barrier on top of or between organic materials, e.g. never between K-flooring and wood flooring.

RADON SAFETY

A shrinkage-reinforced concrete slab is normally considered to be radon-tight. A moisture barrier provides extra protection against radon ingress.

Before installing the moisture barrier, radon sealing must be done with a suitable radon foil at cold bridge breaks along the foundation, over expansion joints in the concrete slab and around pipe penetrations, adhered with butyl tape, see figure 1.



Figure 1 Subfloors on ground floors should always have a moisture barrier and radon barrier on the concrete surface.

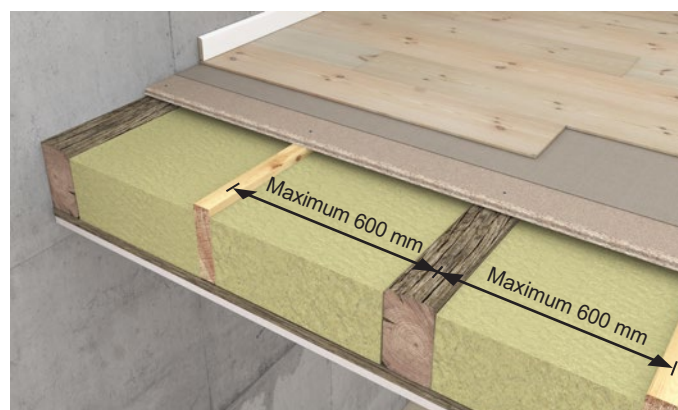


Figure 2 Older floor slabs constructed with an extra beam between the existing floor joists to reduce the span to a maximum of 600 mm. Alternatively, the floor slab can be reinforced, see Fact sheet #1 Reinforcement of older floor slabs, at kronospan-dk.dk.

Table 1 Maximum support and blocking spacing for subfloors on joists.

Application based on point load given for load categories A-D, see National Annex to Eurocode 1, Part 1-1.	Punktlast Q_k			
	A1 2.0 kN Residential and internal access roads	B: 2.5 kN Office and light commercial	C1, C2: 3.0 kN Assembly rooms with tables or fixed seating	C3-C5, D1 4.0 kN ¹⁾ Gathering spaces without fixed seating, small shops
Maximum joist distance, c-c in mm				
Particleboard assembled with flying joists	600 mm	²⁾	²⁾	²⁾
Particleboard assembled over joists	600 mm	600 mm	360/450/480 mm	300 mm
Maximum blocking spacing - LVL floor joists with stiffness at least 10.000 MPa. Joists, width × height in mm				
40 × 39 mm	500 mm	400 mm	²⁾	²⁾
40 × 63 mm	800 mm	730 mm	660 mm	500 mm
45 × 95 mm	1270 mm	1180 mm	1110 mm	1010 mm

¹⁾ Also applies to access routes to premises in load category B, C1-C5 and D1

²⁾ Load capacity insufficient

MOUNTING THE SUBFLOOR

Spaandex K-floor and Unipan K-floor are mounted on joists or beams with the right side up (the labelled side). The free edges of the chipboard against walls and openings must be supported on the edge joist or beam.

Where the floor boards are mounted with the end joints assembled on the centre of joists or beams, the centre distance can be a maximum of 600 mm, see also table 1. The floor boards are mounted with an offset of one bay.

Where the floor boards are end-jointed between joists or beams (flying joists), the centre distance can be up to 600 mm. The boards are mounted with an offset of min. 300 mm. Laying with flying joists may only be used in ordinary living spaces - maximum load 2 kN.

MOUNTING OF JOISTS AND BEAMS

Board edges along walls must be supported by edge joists, see figure 3. Other joists are distributed with a maximum centre distance of 600 mm, see figure 4.

Joists and beams must be dimensioned and supported correctly. It is recommended to use LVL joists that are straight and with low moisture content. Maximum moisture content of joists and beams, see page 4.

CHOCKS

Support under joists can be done with plastic wedges, plywood pieces, hard wood fibre boards or similar. Plastic wedges and plastic towers must have proven durability and be dimensioned for the load.

Chocks are placed with a centre distance as specified in Table 1. Wood-based chocking pieces must be at least 100×100 mm and secured against moisture with a base of e.g. asphalt cardboard.

Joists are fastened to the chocks with screws or nails.

ADHESION

Glue is applied to the K-floor boards after they are in place. For bonding in application class 1, a 1-component D3 PVAc adhesive is recommended. Approximately ¾ litres of adhesive should be used per 25 running metres. For gluing on wet joists/beams, see stricter rules at page 4.

Apply adhesive to both upper sides of the tongue with double glue spigots, see figure 5. Apply enough glue so that it is visible in the joints. Remove excess glue. Follow the glue supplier's instructions carefully.

The glued particleboard must cure for approximately 24 hours. During this period, the floor must not be loaded or trafficked.

ASSEMBLY AND FASTENING

Fix the particleboards to joists or beams with self-tapping screws with split thread, see table 2. Number of screws/m²: approx. 12 pcs.

The floor boards are screwed with a maximum spacing of 150 mm at all supported board edges and with 4 screws evenly spaced at all intermediate supports. Screws are countersunk 1-2 mm. Do NOT fill the holes.

Table 2 Recommended fastening of 22 mm Spaandex K-floor.

Self-tapping screw with split thread	4.5/5.0 × 60 mm
Plata-flex	4.2 × 55 mm
Paslode full-headed ring nail	2.8 × 63 mm

EXPANSION JOINTS

To allow for expansion of the floor surface when exposed to moisture, keep a minimum distance of 12 mm from walls, columns and pipe penetrations. When mounting floors with a length of more than 15 metres, expansion joints of at least 15 mm must be made. The expansion joint can be made in several ways, e.g. with aluminium profiles from MIGUA or similar.

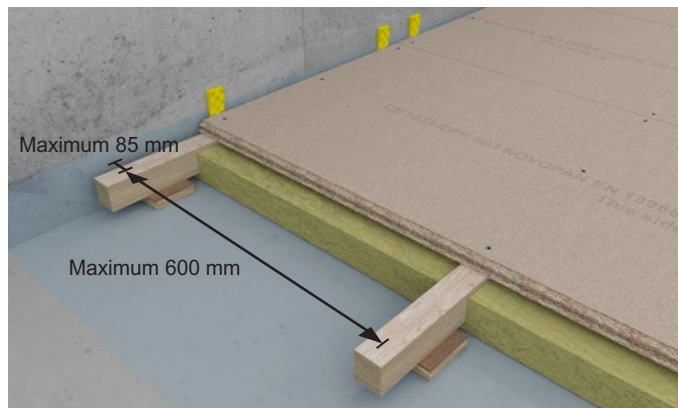


Figure 3 Subfloors are mounted with edge joists maximum 85 mm c-c along all walls. Joist and blocking spacing is shown in table 1.

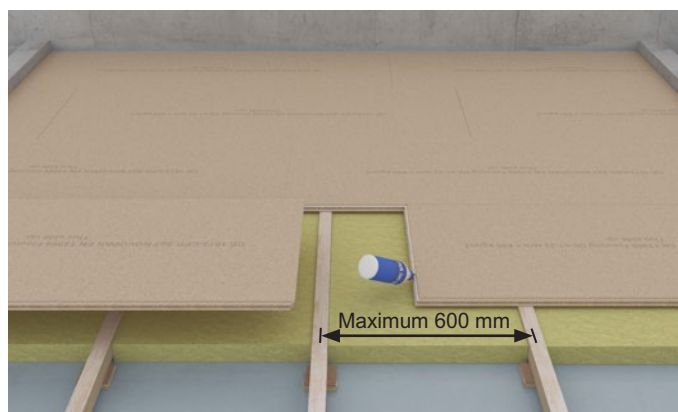


Figure 4 Spaandex K-floor boards mounted with flying joists and with a minimum offset of 300 mm. Spacing maximum 600 mm, see table 1.



Figure 5 Before assembling the boards, apply plenty of adhesive to both upper sides of the tongue. Remove any glue that is pressed up.

SPAANDEX UNIPAN K FLOOR - STRICTER RULES

Where Unipan K-floor boards and beams may be exposed to precipitation during the construction period, a glue type suitable for the installation conditions must be used. All board edges must be completely protected against moisture penetration and the boards must be glued to joists and beams. Read more in *Factsheet #59 Stricter rules for wet installation*.

PRODUCT DATA

Spaandex K-Floor and Unipan K-Floor 22 mm have a double profile on 4 sides. This ensures strong and durable joints. The floor boards fulfil strength and stiffness requirements according to EN 312 P6 and EN 312 P6/P5 respectively. The classification can be seen on the labelling on the top of the chipboard.

Room type/ application class	Construction type	Product type	Board thickness mm	Cover dimensions mm	Classification	
					EN	FIRE
Heated rooms Application class 1	Load-bearing on joists or beams	Spaandex K-floor	22	2400/1800 × 600	312 P6	D _{fl} -s1
Unheated rooms Application class 2	Load-bearing on joists or beams	Spaandex Unipan K-floor	22	1800 × 600	312 P6/P5	D _{fl} -s1

Application class 1

EN 312 P6 is the classification for particleboard for use in permanently heated rooms with an annual relative humidity exceeding 65% for only a few weeks - e.g. general residential use.

Application class 2

EN 312 P6/P5 is the classification of particleboards for use in unheated rooms with a relative humidity exceeding 85% for only a few weeks per year, e.g. unutilised attics and holiday homes. P6 indicates strength and stiffness requirements while P5 indicates the level of moisture resistance requirements. The board has a green-coloured core and is resistant to moderate amounts of water.

ADVICE ON 22 MM SPAANDEX K-FLOORS

DURING THE CONSTRUCTION PERIOD

- Before mounting subfloors, all masonry and plastering work must be completed and the building must be dried out of construction moisture, heated and ventilated.
- Particleboard must always be acclimatised, unpackaged, for approximately 1 week before installation in the room where it will be mounted.
- Avoid traffic on the floor during installation.

INSULATION AND MOISTURE BARRIER

- Check that the construction is protected against rising damp. If there is a risk of moisture and when renovating moisture-laden decks, solutions should be carried out in consultation with a moisture specialist.
- If there is a risk of moisture affecting joists, blocking and floors from construction moisture, an effective moisture barrier must be installed, e.g. 0.20 mm PE membrane, CE labelled according to EN 13984, with at least 50 mm overlay and taped joints.
- To ensure the correct placement of insulation and moisture barrier, e.g. for pipework, see supplier instructions.

BEFORE MOUNTING FLOOR COVERINGS

- The floor construction must be in moisture balance with the indoor climate - i.e. the moisture in the chipboard must not exceed approx. 8% - when the floor covering is fully bonded to it.
- Moisture content in joists: $10 \pm 2\%$.
- Moisture content in solid beams: $13 \pm 2\%$.
- Never place a moisture barrier on top of organic materials, e.g. particle board flooring.

BONDING TO WET JOISTS/JOISTS

- Where the moisture content of joists and beams exceeds 13-15%, it is always recommended to glue the Climate Floor to joists/beams.

DISCLAIMER OF LIABILITY

Spaandex K-floor boards and Spaandex Unipan K-floor boards are manufactured under careful quality control. Kronospan products are under continuous development and technical specifications are subject to change. Please refer to the applicable terms and conditions of sale and delivery. The latest version is always available at kronospan-dk.dk.

2024 © Kronospan [Nexttool, v.2, 08/2024]

FASTENING AND MOUNTING OF TOP FLOORING

- Wood floors should be installed on e.g. 500 g/m² cardboard to avoid rattling noises.
- Solid wood floors, engineered wood flooring and parquet boards should be fixed to the subfloor with screws.
- When installing thin floor coverings, such as vinyl, there is a risk of marking joints and screw holes in the covering. Therefore, all board joints should be sanded. Screw holes should never be filled.

MOISTURE PROTECTION

The finished subfloor must be protected from drying out and moistening with e.g. PE membrane until the floor covering is mounted.

HANDLING, TRANSPORT AND STORAGE

K-floor boards should be handled so that edges and surfaces are not damaged. The boards should be stored dry on a flat surface. Particleboards must always be protected from moisture.

Manual transport and panel lifting must be carried out by 2 people in accordance with current lifting guidelines.

- For transport and panel lifting: Wear work gloves for handling, category 2 according to EN 388.
- When working with floor boards: Wear protective goggles and respiratory protection.

K-floors 620 × 1820/2420 × 22 mm weighs 18/24 kg.

QUALITY ASSURANCE

All particleboards from KRONOSPAN are manufactured under the supervision of Dancert and CE labelled, see www.kronospan-dk.dk

kronospan
NOVOPAN TRÆINDUSTRI

KRONOSPAN ApS Pindstrup
8550 Ryomgaard · T +45 8974 7400
sales@kronospan-dk.dk · www.kronospan-dk.dk