



FOR THE FLOATING INSTALLATION OF MULTI-LAYER PARQUET IN ACCORDANCE WITH EN 13489

Sublayers for installation

requirements and inspection procedure as per EN 16354: 2018 and the technical data sheet of the European Federation of the Parquet Industry (FEP). Any manufacturer specifications that deviate from these (with stricter requirements) must be taken into account.

Heat transfer resistance (R) — suitability for underfloor heating:

- › Option 1 for underfloor heating:
According to the Federal Association of Surface Heating and Surface Cooling and the EN 1264-3 European standard, total heat transfer resistance may not exceed 0.15 m² K/W (e.g. 0.10 for prefinished parquet + 0.04 for the sublayer mat + 0.005 for the vapour barrier = 0.145 m² K/W).
- › Option 2 for cooled floors:
To avoid condensation or a possible dew point, the system must have a dew-point sensor with a switch-off mechanism. Bauwerk recommends a heat transfer resistance of no more than 0.10 m² K/W.
- › Option 3 for unheated sublayers:
For unheated surfaces, a minimum heat insulation layer with > 0.075 m² K/W is recommended.

Point compensation capability (PC) — requirements for evenness

In general, the minimum evenness requirements specified in DIN/ÖNORM 18202 and SIA 251 must be met. Very small evenness deviations can be compensated using appropriate sublayer mats (e.g. uneven spots (grains) of less than 1 mm). The possibility of doing this is specified as a PC value in mm. The minimum requirement is > 0.5 mm. The higher the PC value, the better the ability to compensate local deviations in evenness.

Water vapour diffusion resistance (SD) — moisture protection

Mineral sublayers, such as cement, calcium sulphate, concrete etc. always contain a certain amount of moisture that can damage the parquet floor. A vapour barrier can prevent sublayer moisture from causing such damage. Vapour barriers have an SD value of over 1,500 metres. The minimum requirement for a vapour barrier is an SD value of > 75 metres. Bauwerk recommends a vapour barrier of at least 100 metres. (SD value > 100). Vapour barriers must be hermetically attached to the joints using an adhesive (e.g. adhesive aluminium tape), applied to the walls, up to the upper edge of the finished floor in the shape of a trough. In the case of multiple layers, these must be installed with an overlap of at least 20 cm, and additionally fixed with tape.

Wooden sublayers, such as particleboard, OBS plate or old wooden floor base, must never be covered with vapour barriers. There must be no film installed between a wooden base and parquet!

Dynamic load (DL) — mechanical protection

Floating parquet floor is constantly subjected to loads caused by walking, moving of furniture (e.g. chairs, castor chairs or other wheeled objects). The sublayer mat must be capable of withstanding these movements over a long period. The higher the DL value, the better the mat resists dynamic loads. For living areas, Bauwerk recommends at least 50,000 cycles of standardised load. In public areas (e.g. offices, businesses), the resistance must be at least 100,000 cycles.

Continuous compressive stress (CS and CC) — preservation of important characteristics

Option 1 — CS load in profile joints

To ensure a long service life of tongue-and-groove and click joints, the sublayer mat must not give too much under high loads. Severe mat deformations caused by static loads can result in irreversible damage to the joints. The higher the CS value, the better the sublayer mat is at protecting the joints connecting the elements, thus preventing cracks and creaking noises.

For living areas, Bauwerk recommends a CS value of 40 kPa and no more than 0.5 mm.

For severely stressed surfaces, the CS value should be at least 60 kPa.

Option 2 — CC load on the surface

Sublayer mats must be capable of withstanding loads, such as those created by heavy furniture, for a longer period (10 years). The higher the value, the better they are at withstanding static loads. For living areas, Bauwerk recommends a CC value of at least 5 kPa (0.5 mm). For severely stressed surfaces, the value should be at least 20 kPa.

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Impact sound reduction (IS) — reduction of impact sound in rooms nearby and below

Impact sound can be heard as a disturbing noise in rooms below the source of the sound or neighbouring rooms. The sublayer mat can reduce impact sound. The pertinent test methods are described in EN 16354. The impact sound reduction level is specified as an IS value in dB. The higher this value, the better impact sound can be reduced. Impact sound insulation should achieve a reduction of at least 14 dB.

Reduction of walking sound value (RWS) — reduction of noise emissions caused by walking in the room

Walking sound is perceived as disturbing noise within the room itself. A test procedure for assessing these noises was developed based on EN 16205. The lower the RWS value, the better walking sounds can be reduced in a room.

Other characteristics must be taken into account. Some of these are specified as binding in the respective national standards and regulations.

- › Environment and safety
- › Fire behaviour as per EN 13501
- › Declaration of constituent components
- › Prohibited components: Formaldehyde, halogens, plasticisers, solvents, asbestos, heavy metals
- › Emissions behaviour
- › Recyclability
- › Recyclable, neutral to bodies of water, not toxicologically hazardous