

BONDING SOLID FLOORBOARDS (PK 8)

DEFINITION / STANDARDS

Solid floorboards are large-format, solid wood elements, usually with planed tongue and groove joints and pre-sanded surface, made of softwood or deciduous wood. Common thicknesses are 21-23 mm, but thicknesses of 14-19 mm are also available. Depending on the manufacturer/dimensions/type of wood, solid planks must either be fully glued, nailed/screwed or laid using a combination of both methods. A special case of bonding is strip bonding and floating installation with a manufacturer-specific composite system.

Solid planks have not yet been separately recorded in any parquet standard; the new standard DIN/EN 13629 "Wood flooring - Solid pre-assembled hardwood board" describes a plank element made of smaller individual elements with dovetail zinc coating and glueing. The new DIN/EN 13226 "Wood flooring - Solid parquet elements with grooves and/or tongues" must now also be applied to solid planks, as only minimum dimensions of the parquet strips are defined here, which deviates from the DIN 280 Part 1 which was applicable to strip parquet in the past. Depending on the manufacturer of the solid planks, however, application of the parquet measurements and standards for solid floorboards as well is controversial. Here, reference is often made to the standard for planed planks, which, among other things, permits significantly higher wood moisture content (...14-20%) than is permissible in interior use or parquet laying in our climatic conditions.

Since current parquet standards cover a very wide range of wood moisture, and the wood moisture specified in other standards applicable to planed floorboards does not correspond to the average indoor climate in heated buildings in Germany, we recommend specifying chamber-dried goods with an average wood moisture content of approximately 9% when ordering. Otherwise, especially during the heating period, increased occurrence of open joints is to be expected, and uneven joint fractures may also occur, depending on the surface treatment and type of installation.

INSTALLATION

Nailing/screwing: On false floors, also known as "dead floors", wooden foundation joists or also existing wooden floors. Woods suitable for the subfloor must be kiln-dried and should not exceed a moisture content of 12% at the time of installation. The use of a foil as a vapour retarder against any residual moisture from the substrate is recommended.

Bonding: Special attention must be paid to the professional assessment and preparation of the substrate. Due to their dimensions, solid floorboards place increased demands on the evenness of the screed surface. Even by weighing down to create adequate pressure, it is not possible to achieve sufficient adhesion at lower levels, as the solid wood elements do not adapt to the unevenness to the same extent as, for example, multi-layer parquet. In most cases it is therefore advisable to fill the entire surface with a self-levelling parquet compound or, on wooden substrates, a fibre-reinforced parquet levelling compound.

A special case of bonding is strip bonding. In this case, an adhesive bead of a normally elastic PU, SPU or SMP (often also called hybrid or silane) adhesive is applied from a cartridge and thus only a strip-like fixation of the solid wood floor is achieved.

ADHESIVE RECOMMENDATIONS

We recommend using only reactive, water-free adhesive systems for bonding full surfaces. 1- or 2-component reactive resin adhesives, such as PU-446 or PUK-455, SPU 460 or SPU 570 are ideal, which also significantly reduce the dimensional changes of the wood due to climate changes. The screed surface must be sufficiently resistant because the forces acting from solid floorboards are higher than with "usual" wood flooring or multilayer parquet.

To reduce strain on the substrate, hard elastic and/or elastic 1C-SPU-/SMP-adhesives, such as SMP 950, SPU 555 or SMP 930, are also recommended. It should be noted, in this case, that because of the somewhat higher flexibility of the adhesive joints, visible deformation can occur under unfavourable climatic conditions, particularly with very wide flooring elements.

Due to the swelling pressure generated by dispersion adhesives, these are only recommended to a limited extent and can only be used for short planks up to approximately 1 metre in length, if at all. For board widths over 120 mm, the use of water-containing adhesives should generally be avoided; instead, SPU, SMP and PU adhesives are more suitable.

TECHNICAL DATA SHEETS

FULL-SURFACE BONDING

The success of parquet installation largely depends on the appropriate substrate preparation. The appropriate testing and preparation of the substrate, in particular testing for dryness, evenness and strength, must therefore be carried out in accordance with the generally recognised rules of the trade (and DIN 18356). In addition, the current technical data sheets and the instructions on the labels on our product containers must be observed. In case of doubt, consultation with Stauf's technical department is recommended. We recommend the following procedure:

- ✓ Check and prepare the subfloor properly.
- ✓ In case of unevenness, if necessary, fill the entire surface with self-levelling compound XP 40, after priming with dispersion primer VDP 130 or D 54. Do not prime levelled surfaces before adhesion!
- ✓ Due to the good adhesion properties, it is generally not necessary to prime the subfloor or screed when Stauf reactive resin adhesives are used. Priming of absorbent substrates should only be carried out on sandy or extremely rough surfaces. Suitable primers for this purpose are 1-component PU primer VPU 155 S, WEP 180 2-component epoxy primer or VEP 195 2-component epoxy resin primer (preferably sprinkled with sand).
- ✓ Fix a continuous, straight floor marking line to the substrate (plug/screw). Alternatively, it is also possible to glue down a marking line consisting of several rows of "dry" assembled planks that are precisely aligned on the surface in the adhesive bed. Weigh down the floor marking line! After a few hours you can work against this marking line.

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- ✓ Apply the adhesive to the subfloor with STAUF trowel notch no. 14, alternatively no. 4. The application width should be limited to one to three rows of planks, depending on the width of the plank.

- ✓ When inserting the planks into the adhesive bed, make sure that no adhesive gets between the elements or into the tongue and groove connection. Since cured reactive resin adhesives are difficult to remove, appropriate measures must be taken to prevent contaminating any surfaces.
- ✓ If possible, work in front of the surface and weigh down the boards sufficiently immediately after installation.
- ✓ After a setting time of approx. 24 hours the floors are resilient, and surface treatment is possible after 24-48 hours if PU, SMP or SPU adhesives are used.

The information provided above corresponds to the current status of development. The information is purely indicative and non-binding, since we have no control over the installation process and because the actual installation conditions on site vary. Thus no claims can be made based on this information. The same is true for the commercial and technical advisory services that are provided without obligation and free of charge. We therefore recommend carrying out sufficient testing of your own in order to determine whether the result is suitable for the intended purpose.