



Technical Data Sheet

STEPBOARD

Art.-No. 2 05833

Polyester fibre impact sound deadening and uncoupling board
 in thicknesses of 4 mm, 9 mm and 15 mm

- very high dimensional stability of the board
- very high compressive strength
- rotproof
- high level of impact sound reduction



STEPBOARD is an easy to use uncoupling and renovation board with high resistance to compression and exceptional impact sound deadening properties. The uncoupling action is due to the reduction of shear forces through plastic deformation within the board.

Areas of application:

STEPBOARD is installed for permanent uncoupling and impact sound reduction beneath ceramic tiles and slabs, natural and agglomerated stone in internal areas.

STEPBOARD 9 mm and 15 mm are also suitable for installation on load-bearing and correctly installed timber floors such as floorboards, parquet and chipboard. For uncoupling ceramic finishes from damaged, cracked but load-bearing substrates, for covering disruptive intermediate movement joints, which are to be relocated in the final finish and for levelling differing construction heights and recesses (e.g. the transition between old tiled finishes to plastered areas when renovating). The use of STEPBOARD 4 mm is possible on heated substrates without appreciable heat loss. STEPBOARD 9 mm and 15 mm possess heat insulating properties. Beneath thin-section warm water or electric surface heating systems, when using 4 mm board the efficiency is increased by approx. 30%, approx. 50% with the 9 mm board and in combination with the 15 mm board by approx. 60%.

	Unit Measure	STEPBOARD 4 mm	STEPBOARD 9 mm	STEPBOARD 15 mm
Weight	kg/m ²	3,2 ± 5 %	6,3 ± 5 %	10,5 ± 5 %
Thickness	mm	4 ± 0,5	9 ± 0,5	15 ± 0,5
Format	cm × cm	100 × 60 ± 0,1	100 × 60 ± 0,1	100 × 60 ± 0,1
Pressured strength, DIN 53456	N/mm ²	15	10	10
Bending strength, DIN 53453	N/mm ²	4	2	2
Bending E-module, DIN 53452	MN/m ²	ca. 240	ca. 100	ca. 100
Breaking strength, DIN 53457	N/mm ²	6	6	6
Permissible traffic load in accordance with DIN 1055	kN/m ²	5	5	5
Thermal conductivity λ, DIN 52612	W/mK	0,11	0,10	0,8
Thermal resistance R, without covering to DIN 52 612	m ² K/W	0,04	0,09	0,19
Coefficiency of linear expansion α ₀	K ⁻¹	2,75 × 10 ⁻⁵	2,51 × 10 ⁻⁵	2,10 × 10 ⁻⁵
Impact sound reduction level ΔL _w with a ceramic floor finish**				
with tiles bonded	dB	13	13	14
with tiles loose laid	dB	-	-	20
Reaction to fire in accordance with DIN EN 13501-1		E _{fl}	E _{fl}	E _{fl}

** baseline test value in accordance with DIN ISO 140-8 and DIN ISO 717-2

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Technical Data:

Basis:	Polyester fibre
Colour:	green
Packaging:	15mm (60 cm × 1m): 60 boards/E.-Pal. = 36.0m ² 15mm (60cm × 1m): 6 boards/box = 3.6m ² 10 boxes/E.-Pal.= 36.0m ² 9mm (60cm × 1m): 100 boards/E.-Pal.= 60.0m ² 9mm (60cm × 1m): 10 boards/box = 6.0m ² 10 boxes/E.-Pal.= 60.0m ² 4mm (60cm × 1m): 200 boards/E.-Pal.= 120.0m ² 4mm (60cm × 1m): 15 boards/box = 9.0m ² 10 boxes/E.-Pal.= 90.0m ²
Storage:	dry, lying flat, min. 2 years (for additional technical data see the table on page 1)

Substrate preparation:

The substrate must be dry, load-bearing and free from separating substances. Suitable substrates on floors are e.g. concrete, cement-based screeds, calcium sulphate based screeds, magnesite screeds as well as old, well bonded ceramic tiled finishes and natural stone. Calcium sulphate based substrates must be abraded, dry (< 0.5% in accordance with the CM method on unheated substrates; < 0.3% in accordance with the CM method on heated substrates) and primed with ASO-Unigrund-S. Refer to the additional technical information No. 14 in the annex.

Product application:

STEPBOARD can be cut with a hand-held circular saw (e.g. Ø 150 mm, 48 teeth hard metal or 60 teeth chrome plated), a jigsaw (large swing, wood blade) or a carpet knife. To prevent sound bridges and restraint, lay the boards with a min. 5 mm gap against adjoining structures, supports or interruptions etc. Here we recommend the edge isolating strip RD-SK50. It is possible to lay the 15 mm STEPBOARD floating on flat, load-bearing mineral-based substrates. Here the impact sound deadening is further increased. With this method, the butt joints in the boards are covered with standard adhesive tape (approx. width 50 mm). Installing STEPBOARD

as a bonded construction on the following named substrates is carried out with the flexible thin-bed adhesives MONOFLEX-XL, LIGHTFLEX or SOLOFLEX. The floor finishes can be installed after approx. 24 hrs. *. For speedy building progress, it is possible to use the rapid setting thin-bed adhesives SOLOFLEX-FAST, CRISTALLIT-flex or the rapid setting flow bed adhesive MONOFLEX-FB. Here the floor finishes can be laid after approx. 3–4 hrs. *.

* The values relate to +23 °C and 50% relative humidity. Higher temperatures reduce and lower temperatures extend these timings.

Laying the STEPBOARD:

- Bonded to concrete, poured asphalt, cement-based, calcium sulphate based and magnesite screeds and old floor finishes e.g. agglomerated stone, natural stone and ceramic tiles as an impact sound deadening and uncoupling board (STEPBOARD 4mm, 9mm and 15mm)
Prime highly absorbent and calcium sulphate based substrates with ASO-Unigrund. Clean old well bonded flooring and roll on ASO-Unigrund-S. Uneven areas can be levelled with SOLOPLAN-30-PLUS, SOLOPLAN-FA or ASO-NM15 (calcium sulphate based, for use on calcium sulphate based screeds). Once the primer or the levelling compound has dried, trowel apply the appropriate thin-bed adhesive with a 6–10 mm notched trowel. The boards are laid into the wet adhesive within the open time and pushed tight up against one another avoiding cruciform joints. Directly after laying the boards, beat them into position so that a void-free and fully wetted bedding is achieved. In so doing, ensure that no adhesive appears between the board joints. Once the adhesive has dried, tape over the board joints with a standard adhesive tape approx. 20–50 mm wide.
- Bonded to timber substrates such as floorboards, chipboard, OSB boards and parquet as an impact sound deadening and uncoupling board (only STEPBOARD 9 mm and 15 mm)
Timber substrates must be clean, dry and load-bearing.

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Replace damaged areas and screw fix as necessary. If needed, seal any joints in the timber substrate, between floorboards with a conventional acrylic sealant.

Chipboard or OSB must be linked together, screwed and glued. Where necessary, abrade floorboards and parquet and prime with ASO-Unigrund-S. Uneven areas can be pre-levelled with the fibre-reinforced floor levelling compound SOLOPLAN-FA up to 20 mm in one layer. Once the primer or levelling compound is dry, trowel out the appropriate thin-bed adhesive with a 6–10 mm notched trowel. The boards are laid into the wet adhesive within the open time and pushed tight up against one another avoiding cruciform joints. Directly after laying the boards, beat them into position so that a void-free and fully wetted bedding is achieved. In so doing, ensure that no adhesive appears between the board joints. Once the adhesive has dried, tape over the board joints with a standard adhesive tape approx. 20–50 mm wide.

- **Bonded to plaster/render, concrete and masonry work as a renovation board for walls**

When using STEPBOARD on walls e.g. for levelling out recesses beneath tiles, the substrate must be sound, load-bearing, free from old paints and suitable as a substrate for tiling. Prime absorbent and lightly sanded substrates with ASO-Unigrund. Once the primer is dry, trowel out the appropriate thin-bed adhesive with a 6–10 mm notched trowel. The boards are laid into the wet adhesive within the open time and pushed tight up against one another avoiding cruciform joints. Directly after laying the boards, beat them into position so that a void-free and fully wetted bedding is achieved. In so doing, ensure that no adhesive appears between the board joints. At the transition between the old surface finish/STEPBOARD, cover the joint created by incorporating a conventional alkali resistant glass fibre mesh into the thin-bed adhesive used.

Subsequent floor/wall finishes on STEPBOARD:

Once the adhesive has hardened, the final finish can be fixed to the STEPBOARD. In wet duty areas (moisture exposure classes A0 and A in accordance with the current ZDB data sheet*) install a bonded waterproof membrane such as AQUAFIN-2K, AQUAFIN-2K/M or AQUAFIN-RS300 before fixing the surface finish.

- **Tiles and slabs**

For the installation of ceramic tiles and slabs e.g. white bodied and red bodied earthenware, vitrified, those with low water absorption <0.5% (porcelain), mosaic, clinker and non-moisture sensitive natural stone to STEPBOARD, the following thin-bed adhesives can be used: LIGHTFLEX, MONOFLEX-XL, MONOFLEX-FB and SOLOFLEX.

- **Natural stone**

For the installation of sensitive natural and agglomerated stone tiles we recommend: CRISTALLIT-flex, CRISTALLIT-MULTI-flex.

Important Advice:

- The installation of STEPBOARD is a special construction method. We therefore recommend that this special construction method is contractually agreed.
- Perimeter and structural movement joints are to be brought through or inserted at the designed location and stopped with suitable material e.g. edging strips. Always incorporate movement joints in doorways/thresholds.
- STEPBOARD 9 mm and 15 mm possess thermal insulating properties and are therefore only conditionally for use on heated constructions or are unsuitable. The total thermal resistance of the construction should not exceed 0.15 m²K/W. Refer also to: Guideline No.: 9 "Use of floor coverings over surface heating/cooling – positioning and advice" from the Bundesverband Flächenheizungen und Flächenkühlung e.V.!

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- Refer to the technical data sheets of the applied waterproofing materials, smoothing compounds, adhesives as well as the installation instructions of the manufacturer of the surface finish.
- When installing natural or agglomerated stone tiles, refer to the specific properties of the product (discolouration, risk of curling etc.) and the installation recommendations of the manufacturer. We recommend carrying out a trial adhesion.
- Refer to current relevant regulations! Therefore e.g.:
DIN 18157
Guideline No.: 9 "Use of floor coverings over surface heating/cooling - positioning and advice" from the Bundesverband Flächenheizungen und Flächenkühlung e.V!
The BEB data sheets, circulated by the Bundesverband Estrich und Belag e.V.
The ZDB data sheets, circulated by the Fachverband des deutschen Fliesengewerbes:
[*1] "Bonded waterproof membranes"
[*3] "Movement joints in wall and floor tiled finishes"
[*5] "Ceramic tiles and slabs, natural stone tiles and concrete tiles on cement-based floor constructions with insulation"
[*6] "Ceramic tiles and slabs, natural stone tiles and concrete tiles on heated cement-based floor constructions"
[*7] "Planning and implementation of uncoupled finishes in internal areas"