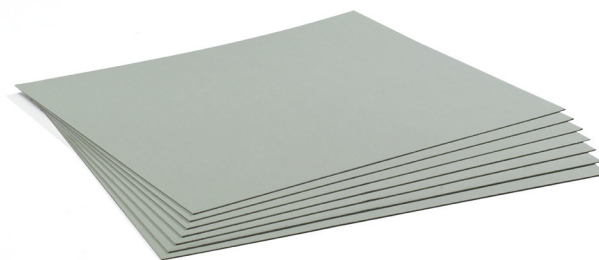


PROSILENCE

Item number 93401

Decoupling step and walking noise insulation board under tile, natural stone, laminate and parquet



Fields of application:

PROSILENCE is a decoupling board with high compressive and flexural strength. Deformation forces from substrates can therefore be reliably kept away from the surface layer.

The plastic matting on the underside, along with the adhesive system suitable for the given application, creates a secure bond with the substrate. In combination with the plastic matting on the top, this creates an evenly absorbent, extremely bond-friendly substrate for almost all bonding compounds.

PROSILENCE is waterproof and alkali-resistant, making it ideal for use in all living areas.

With a thickness of only 3 mm, **PROSILENCE** is very thin, an advantage that makes this the ideal solution for critical substrates in old building renovations. In new building constructions, aesthetic and other considerations for surfaces can be implemented using a minimum of expansion joints.

- As a decoupling and insulation board
- In dry and wet areas in building interiors
- For the common loads in living spaces and commercial areas, such as offices
- For all types of solid substrates in conjunction with suitable adhesive
- Over cracked, but flexural resistant surfaces with no risk of height offset
- For laying tiles and boards over unheated poured asphalt screed in interior areas.

Product advantages:

PROSILENCE is very easy to work:

The boards, which are only 3 mm thick, can be cut precisely to size with a professional craft knife. The favourable board size simplifies handling and transport. Stress applied after installation is absorbed by the board, which provides an effective means of preventing cracks from widening at a later stage. This protects surface layers such as tile, natural stone, multi-layer parquet or loosely placed laminates from harmful stress. **PROSILENCE** is resistant to many acids, bases, salts, organic solvents, alcohols and oils. The product is free of solvents, rot-proof, resistant to bacteria and fungus and does not affect drinking water.

- Easy to handle and simple to use
- Low installation height
- Capable of absorbing a high level of stress
- Compensates for cracks
- Bond-friendly for common adhesives
- Ecologically safe
- Recyclable
- Provides a reliable base for laying work on critical substrates

Delivery form:

Boards (size 0.80 m x 0.50 m) packaged in a box,

PROSILENCE	Box with 12 boards = 4.8 m ²	Item no.: 93401
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For packaging units, please refer to the price list, the relevant price sheets or product news sheets, or speak to your specialist dealer.

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Technical data:

Material:	Plastic quartz sand board with plastic fleece lining on front and back
Colour/layer	Light-green
Size	0.8 m × 0.5 m
Installation height bonded	Approx. 5 – 6 mm (depending on adhesive)
Tile sizes	min. 5 × 5 cm
Water vapour permeability	Sd = 0.9 m
Heat transfer resistance	0.11 m²K/W
Step sound improvement figure	approx. 17 dB
Weight	3 ± 0.2 kg/m²

Storage and transportation:

Boards should be transported and stored in a box, laying horizontally if possible, in a cool and dry place protected from sunlight and dirt.

Environmental protection and disposal:

Dispose of containers and leftover product as stipulated by law and in accordance with regional regulations.

Additional products required:

PROBAND S Butt-joining tape	Special glass mesh fabric with adhesive strips attached to the centre
Colour	White
Width	75 mm, centred self-adhesive strips with a width of approx. 30 mm
Rolls	25 m
Art. No.	93722
PROSTRIP Basic PE Edge-insulating strip	Equipped on rear with approx. 25 mm wide self-adhesive strips
Colour	Grey
Width	100 mm high, 8 mm thick
Rolls	25 m
Art. No.	93527

Instructions on hazardous goods and substances:

No special measures required.

Preparation/assessment of substrate:

The substrate must be clean, dry and free of any substances that diminish the bonding effect. The compressive and flexural strength and evenness of the substrate must be of a standard suitable for the intended use.

Levelling work must be carried out, if possible, before laying **PROSILENCE**. Existing cracks greater than 0.5 mm must be sealed in advance by non-positive means and an adhesive strength of > 0.3 N/mm² must be assured on the surface. Material can be laid directly over cracks narrower than 0.5 mm as long as lasting assurance can be provided that there will not be differences in height at the edges of the crack and the crack will not spread excessively.

Substrates must be assessed and pretreated according to basic engineering principles.

The manufacturer's specifications regarding the construction equipment and chemical products in use must be observed.

Laying/working:

Preparatory measures/site planning

Attach **PROSTRIP Basic PE** edge-insulating strips to all rising components and installation parts to prevent non-positive connections and sound bridges.

Prepare the substrates according to the intended evenness, the required slope and the necessary strength.

Filling and levelling compound must have reached its rated strength. Ideally, the temperature of the space should be +18 °C to + 25 °C and free of any draught. This temperature range also applies to the dewpoint-free substrate to be laid on.

As a general recommendation, the climatic conditions during laying should match those expected during use and the boards should be cut to size and left to acclimatise.

The board is bonded to the substrate. When applying the adhesive for the **PROSILENCE**, ensure that no adhesive bridges are created to the walls and components (maintain spacing). Once the substrate has been prepared in this way, it can be primed if necessary.

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To bond **PROSILENCE** to smooth and flat substrates, a class 2 thin-bed adhesive is generally used. Where the requirements of strength exceed this standard, reaction resin adhesives are used. The suitable adhesive must bond securely to the underside. If unsure or in any doubt, even in terms of material compatibility, carry out separate tests in advance. Cut **PROSILENCE** precisely to the size of the area to be covered before laying.

Working

On smooth and level substrates that have been prepared as described above, apply a class C2 thin-bed adhesive or, even better, using a 4-mm toothed trowel in the floating process and immediately line with **PROSILENCE** boards in a running bond pattern. While performing this work, it is essential that sufficient adhesive be applied to the board so that the bottom makes full contact. Structure or building parting joints should be formed in the surface layer at the same height and position when doing this. In the area of connecting joints and expansion joints, cut the boards to the planned width of the joints. Butt joints at the end of strips or areas that have been cut to fit must be offset from adjacent butt joints by at least 25 cm (no cross joints). Ensure in the area of butt joints that no adhesive is pressed up into the joint area. Preferably, use a spatula to scrape off the combed adhesive along the previously laid strip edge. Tape over the middle of butt joints using butt-joining tape.

If it becomes necessary to walk carefully over the laid mats, ensure that no bubbles or creases are created. The surface layer can be laid once the adhesive under **PROSILENCE** has reached its rated strength. The curing time may be longer with slowly hardening adhesives and/or at lower temperatures.

Once the area has been covered, cordon it off to protect it from any irregular negative influence or, while avoiding any damage, at least cover it using load distributing elements such as formwork boards or similar. It may also be necessary to shade the area to protect it from sunlight, e.g. in the event of a large glass frontage.

Underfloor heating

A binding determination regarding actual suitability for use with underfloor heating is possible only using the data of all system components (heating system, underlay, floor covering, or the like).

According to recommendation of the BVF, the overall floor structure is not to exceed 0.15 m² K/W.

Underfloor heating systems must be equipped with temperature controllers for each individual room. The supply flow tempera-

ture must not exceed 40 °C.

With heated screed flooring, a preheating process should be carried out as a means of checking the "insulation, heating, screed floor" installations. After preheating, it is possible to determine whether there are defects.

On dry systems such as "Baseline surface heating and cooling systems", **PROSECUREfibretec 2.0** is first bonded with **PROFIX** directly onto the grease and dirt-free heat distribution boards (see **PROSECUREfibretec 2.0** data sheet). **PROSILENCE** can then be laid as described above to reduce walking and impact sounds. Further details about bonding to a wide variety of energy efficient surface layers can be found at:

www.proline-energy.com.

Cement-based heated screed floor

PROSILENCE can also be laid after preheating, provided the screed floor does not exhibit any signs of cupping or other defects. If there is already evidence of cupping in the screed floor, the covering may not be laid until it has dried completely and the deformation is reversed.

Alpha-hemihydrate screed floor

Provided the screed floor is free of defects after the preheating process and has a residual moisture level not exceeding 0.5 CM% or less at any point of the area, **PROSILENCE** can be laid as an insulation and decoupling board.

Electrical underfloor heating

Under pure cable heating systems that are laid with or without material backing, **PROSILENCE** is bonded directly to the substrate. The cables can be fixed directly to **PROSILENCE**. Once the full strength of the adhesive on the underside has been reached after 7 days, low-shrinkage filler can be applied evenly over the surface. After the rated strength of the filler has been reached, a suitable surface layer can be laid on it.

Laying the surface layer

PROSILENCE is structured on the surface in such a way that tiles, paving/slabs, natural stone, artificial stone, multi-layered and solid parquet can be laid in accordance with general basic engineering principles the same way as any level substrate that conforms to industrial standards.

The drying times apply for a film-forming, primed substrate with full coverage. Choose bonding compounds and surface layers

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that have been adapted for the intended use and the resulting mechanical and chemical loads in accordance with recognised standards.

To lay carpets and artificial coverings, evenly cover **PROSILENCE** with a low-shrinkage filler, preferably based on alpha-hemihydrate. Always observe the processing recommendations of the fillers manufacturer.

Once the laying surface has been created in this way, it is possible to apply the surface layer, e.g. carpet or designer covering, in conjunction with suitably selected adhesives.

Movement, structure and connection joints

Building joints must be formed using suitable profiles that have been packed underneath and anchored to the supporting floor at a height of the ready floor covering.

At open ends of flooring edges (steps), **PRONIVO** transition and compensating profiles should be used to protect the elevated edges of the floor covering. The **PRONIVO** profiles are bonded across the whole area under the **PROSILENCE** board to the supporting substrate and filled with a sufficient quantity of mortar and, where necessary, also anchored.

If high moving and rolling loads are expected, it is recommended that suitably sturdy expansion profiles be fitted directly to the supporting substrate at the height of the ready floor surface and anchored sufficiently.

Connecting joints and expansion joints at rising walls and installations should be carried over regularly at the same point and same width as present in the substrate at the level of the **PROSILENCE** as well as on the surface layer.

At no point should non-positive connections be evident from adhesive or grout, the covering or other substances. Connecting joints and expansion joints can be closed with suitable elastic sealing compounds or by inserting **PROCONNEX thin-bed profiles**. The higher the expected mechanical load on the surface, the stronger the expansion joint profiles should be made (e.g. **PROCONNEX thin-bed profiles** made from metal).

To protect the covering edges and elastic filling that is applied later, double guided **PROFLOOR angle profiles** made from metal can be fitted.

Chemical and mechanical resilience:

Due to its decoupling effect, **PROSILENCE** increases reliability, especially for large-sized tiles. It is possible to improve the stress dissipation of the overall system from the load distributing layer and surface layer.

Therefore, the following applies:

- The greater the flexural strength and compressive resistance of the substrate and the higher the breaking strength of the tile and slab material, the larger they can be. This also increases the mechanical resilience of the surface layer in preventing breakage from impacts (such as from falling objects). Traffic loads from pedestrians to frequent traffic from rollers and floor conveyors with rubber tyres can be transferred without damage up to 3.5 kN/m².
- The use of lift trucks with metal rollers and polyamide wheels normally represents high to extremely high mechanical loads. **PROSILENCE** is not suitable for this application.

PROSILENCE can be used in a variety of different ways and combinations.

The surface layer can have different qualities. Our specifications can only provide general information for this reason. Should specific areas of application be covered, each individual case should be clarified.

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Important information:

- The smallest tile size must not be below 5 x 5 cm.
- Multi-layered parquet should be no thinner than 14 mm.
- On underfloor heating, solid parquet boards should be no longer than 120 cm and no thinner than 21 mm.
- The substrates to be covered must have a sufficient level of flexural strength, compressive resistance and low vibration for the intended load.
- Mortar mixed with polymers, dispersion and reaction resin adhesives and elastic joint fillers must have reached their rated strength before they can be approved for their intended use.
- The installation sequence must take into account the curing times in relation to the laying temperature and manufacturer's specifications so that previously laid sections are not weakened or even damaged.
- PROSILENCE does not eliminate the need to install building joints, connecting joints and expansion joints.
- Natural and artificial stone coverings that are known to have a tendency to deform if they take on water should be laid on **PROSILENCE** with suitable, water-free bonding compounds.
- Relatively fresh screed floors that are significantly and measurably deformed due to one-sided drying, pose the risk that larger subsequent reverse deformation can lead to cracks in installations and walls and could possibly tear the floor covering in the stress zone.
- Wooden floorboards must be screwed down tight. Individual floorboards must never move towards or away from one another.
- Sheets of wood must be screwed down tight every 40 cm square and the tongue and groove joints must be permanently glued. The supports of a beam ceiling must not exceed a dimension of 75 cm between the centre lines. The wood moisture must be the same as the moisture balance.

Standards and regulations:

It is recommended that the following standards and regulations be observed and taken into consideration:

- DIN 18352 Tile laying work
- DIN 18332 Natural stone work
- DIN 18333 Cast stone work
- DIN 18353 Screed work
- DIN 18356 Working with parquet
- DIN 4725 Floor heating, systems and components
- DIN 18202 Tolerances in building construction
- DIN 18560 Floor screeds in building construction
- DIN 18195 Building seals
- DIN 18157 Execution of ceramic linings by thin mortar bed technique
- Bulletins from German Association of Screed and Flooring
- Bulletins from Association of Tiles and Natural Stone in the Central Association of the German Construction Industry
- Interface co-ordination of heated underfloor structures
- Bulletins of German Association of Surface Heating
- ZDB bulletin "Highly loaded floor coverings"
- ZDB tile and slab information "Information on decoupling"
- BAKT InfoTechnik – Bathrooms in dry-wall construction
- German Natural Stone Association – Structural engineering information for natural stone

All information, references, instructions, basic engineering principles, regulations, standards and expertise are based on the German regulations and largely equivalent European regulations and training standards, irrespective of additional country-specific supplements and amendments.

All our specifications are based on our experience and careful analysis. We are unable to examine or influence the diversity of associated materials used and the various construction site and processing conditions in detail.

Fulfilment of an imposed work order and verifiable functionality of the object therefore depends on the observation of current VOB rules and the recognised rules of technology.

Our details do not absolve the accountable planner's and fitter's obligation to assess - on their own authority - the building conditions and practicability of the products. In case of doubt, carry out your own tests or seek technical application advice. Please refer to the laying and processing guidelines of the floor covering manufacturers or the manufacturers of associated products.

All product data sheets previously published are superseded by this product data sheet once published.

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