

PROSECUREfibretec 2.0

Reinforcement and decoupling mats with high compressive and flexural strength



Fields of application:

PROSECUREfibretec 2.0 is a reinforcement and decoupling mat with high compressive and flexural strength. It can be used to reliably protect the surface against deformation forces from the substrate.

The polymer-protected glass fleece on the underside forms a secure bond to the substrate in conjunction with an adhesive system selected according to the intended load. In combination with the glass fibre fabric on the upper layer, an evenly absorbent, extremely bond-friendly substrate is created for almost all surface coverings.

PROSECUREfibretec 2.0 is water-proof, alkaline-resistant and frost-proof and thus suitable for all areas with the exception of underwater areas like swimming pools.

With a thickness of just 1.5 mm, **PROSECUREfibretec 2.0** is extremely thin, an advantage which, particularly on critical substrates in old building renovations, provides an almost application-free solution to problems. Among other things, aesthetic demands on surfaces can be realised with a minimum of expansion joints if used in new builds.

- As a reinforcement, decoupling, carrier and protective mat
- As a laminating bond bridge with high tensile strength for all types of floor coverings
- In dry and wet interior and exterior areas
- For the highest loads in living spaces, commercial and industrial areas
- For all types of solid substrate in conjunction with suitable adhesive

- Over mixed substrate to create a secure layer on which to lay floor covering
- Over cracked, flexural resistant surfaces with no risk of height offset
- To compensate for thermal stress on underfloor heating or from intensive sunlight
- To dampen deformation from creeping and shrinkage on mineral substrates, such as relatively fresh concrete
- To absorb deformation forces from wooden beams or timber flooring with a warpage of max. L/300
- For laying tiles and paving over unheated cast asphalt screed in interior areas.

Product advantages:

PROSECUREfibretec 2.0 is very easy to use: The material is just 1.5 mm thick, free of tension and comes on rolls. It can be cut precisely to size with a professional craft knife or carpet scissors. The perpendicular mesh structure acts as a practical guide for this purpose.

The low weight simplifies handling and transport. Any tension arising retroactively is absorbed by the glass fibre material, which prevents cracks from widening at a later stage as effectively as possible. Floor coverings, such as tiles, natural stone, multi-layered or solid parquet or (after smoothing directly) carpets, PVC or designer covering are protected in this way against damaging tension.

PROSECUREfibretec 2.0 is resistant to many acids, base solutions, salt, organic solvents, alcohol and oil. The product is free of solvents, rot-proof, resistant to bacteria and fungus and is also drinking water neutral.

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- Easy to handle and simple to use
- Extremely low installation height
- Capable of absorbing a high level of tension
- Compensates for cracks
- Bond-friendly for common adhesives
- Ecologically safe
- Recyclable
- Secure layer for applying substances on critical substrate

Delivery form:

Sheet material wound onto a roll, 1.00 m wide

PROSECUREfibretec 2.0	roll with 10 m ²	Item no.: 93719
PROSECUREfibretec 2.0	roll with 25 m ²	Item no.: 93720

For packaging units (VPE), please refer to the price list, the current price list or product news sheets, or speak to your specialist dealer:

Specifications:

Material	Glass fibre material with glass fleece backing	
Colour/layer	Glass fibre material - green, glass fleece - white	
Width	100 cm (+/- 1 mm)	
Installation height when bonded	approx. 2 – 4 mm (depending on adhesive)	
Mesh structure	approx. 10.0 x 8.8 mm	
Highest tensile strength	> 4000 N/5cm	DIN 53857 T I
Highest tensile strength expansion	< 5 %	DIN 53857 T I
Load capability	up to 30 kN/m ²	
Weight	approx. 460 g/m ²	
Alkaline protection	Copolymer, solvent-free	
Temperature resistance	-40 °C - +80 °C	

Storage and transportation:

Rolls and mat sections should be stored and transported upright, if possible, in a cool and dry place protected against sunlight and contamination.

Environmental protection and disposal:

Containers and surplus materials must be disposed of in accordance with legislative regulations and regional by-laws.

Supplementary products:

PROFIX	Very low emission dispersion
Standard bonding to substrate	attachment, one-pack
Colour	Cream colours
Container	5 kg barrel
Coverage	approx. 300 g/m ² depending on the roughness of the substrate
Item no.	93780

PROBAND S	Special glass mesh fabric with
butt-joining tape	centrally attached adhesive strips
Colour	White
Width	75 mm, centrally attached self-adhesive strips with a width of approx. 30 mm
Rolls	25 m
Item no.:	93722

PROSTRIP S	fleece-backed PE edge insulating
edge insulating strip	with self-adhesive foot and clinging technique.
Colour	Green
Width	50 mm high, 8 mm thick
Rolls	25 m
Item no.	93520

PROSTRIP L	fleece-backed PE edge insulating
edge insulating strip	with self-adhesive foot and clinging technique.
Colour	Green
Width	100 mm high, 8 mm thick
Rolls	25 m
Item no.	93521

PROSTRIP Basic PE	Equipped on rear with approx. 25
mm	
edge insulating strip	wide self-adhesive strips
Colour	Grey
Width	100 mm high, 8 mm thick
Rolls	25 m
Item no.:	93527

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 before laying PROSECUREfibretec 2.0.

Before laying soft coverings, a thin layer of levelling compound can be applied using a low-shrinkage compound, ideally with fibre

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reinforcement.

Existing cracks greater than 0.5 mm must be sealed in advance by non-positive means and an adhesive strength of $> 0.3 \text{ N/mm}^2$ must be assured on the surface. Cracks narrower than 0.5 mm can be laid over directly, provided lasting assurance can be provided that neither height offset at the sides of the crack can form nor cracks can spread excessively.

Substrates must be assessed and pretreated according to basic engineering principles. Observe the details of the manufacturer in terms of structure-related and chemical products.

Laying/processing:

Preparatory measures / site planning

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

Prepare the substrate 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 $+18^\circ\text{C}$ to $+25^\circ\text{C}$ with no draft. 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 mats should be rolled out, cut ready to size and allowed to acclimatise. The green glass fibre material should face upwards when doing this.

The side with the flat glass fleece is bonded to the substrate. When applying the adhesive for the **PROSECUREfibretec 2.0**, ensure that no adhesive bridges are created to the walls and components (maintain a distance). Once the substrate has been prepared in this way, it can be primed if necessary.

To bond **PROSECUREfibretec 2.0** to smooth and flat substrates, **PROFIX** is generally used. To cater for greater force transfer requirements, thin-bed adhesives of C2 S1 quality or better or dispersion or reaction resin adhesive can be used.

The suitable adhesive must bond securely to the underside bearing the glass fleece. If unsure or in any doubt, even in terms of material compatibility, carry out a few tests in advance.

Processing

On smooth and even substrates that have been prepared as described above, apply **PROFIX** with a lamb's wool roller or neoprene roller in a film-forming manner and evenly so that the ready cut **PROSECUREfibretec 2.0** strips can be laid immediately

and pressed on thoroughly, preferably with a carpet roller. When doing this, it is essential that the glass fleece underside of the strip is spread with sufficient adhesive so that it can come into full contact.

If there are cracks in the substrate, **PROSECUREfibretec 2.0** is laid perpendicular to the cracks.

Structure or building parting joints should be formed in the top layer at the same height and position when doing this. In the area of connecting joints and expansion joints, cut the strips 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 by at least 25 cm to adjacent butt joints (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 already laid strip edge. Tape over butt joints centrally using **PROBAND S** butt-joining tape.

When it becomes necessary to walk carefully over the laid mats, ensure that no blisters or creases are created. Laying the floor covering can take place once the adhesive under **PROSECUREfibretec 2.0** has achieved 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 against any irregular negative influence or at least cover it without damage 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

Underfloor heating systems must be equipped with temperature controls for each individual room. The start-up temperature 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 **ENERGY** surface heating systems, **PROSECUREfibretec 2.0** is bonded with **PROFIX** directly onto the grease and dirt-free heat distribution plates.

PROSECUREfibretec 2.0 can be bonded directly to the grease-free and clean substrate.

Further details about direct bonding to a wide variety of energy efficient floor coverings can be found at: www.proline-energy.com

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Cement-based heated screed floor

PROSECUREfibretec 2.0 can also be laid without drying time, provided the screed floor exhibits no basin effect or signs of cupping. Screeds which are already cupped may not receive a covering until the deformation has fully dried out and disappeared.

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% at every point of the area or less, **PROSECUREfibretec 2.0** can be laid as a carrier, protective and laminating mat.

Electrical underfloor heating

Ideally, **PROSECUREfibretec 2.0** is installed with a quick hardening thin-bed adhesive of quality C2 S2 above pure heating cables that have been laid without material backing.

Once the full strength has been reached after 7 days, low-shrinkage smoothing cement can be applied evenly over the surface. After the rated strength of the smoothing cement has been reached, the suitable floor covering can be laid on it.

If cable heating systems with material backing are used, additional insulation can be laid under it in connection with **PROSECUREfibretec 2.0** for thermal and noise insulation.

Further information with certified system modules can be viewed at www.proline-energy.com.

Laying the floor covering

PROSECUREfibretec 2.0 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 on level substrates that conform to industrial standards.

The glass fibre material on the surface, which has a thickness of approx. 1 mm, requires a slightly greater amount when the contact layer is applied. The drying times apply for a film-forming, primed substrate with full coverage. Choose laying substances and floor coverings 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, **PROSECUREfibretec 2.0** is covered evenly with a low-shrinkage smoothing agent, preferably based on alpha-hemihydrate. The processing recommendations of the smoothing agent manufacturer must be adhered to without fail.

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

Building joints, connecting joints and expansion joints

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

At open ends of flooring edges (steps), **PRONIVO** transition and compensating profiles should be used to protect the elevated covering edges. The **PRONIVO** profiles are bonded across the whole area under the **PROSECUREfibretec 2.0** mat to the supporting substrate and filled with a sufficient quantity of mortar and, where necessary, also plugged.

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 plugged sufficiently.

Connecting and expansion joints at rising walls and installations should be carried over regularly at the same level as **PROSECUREfibretec 2.0**, as in the top layer, at the same point and same width as in the substrate.

At no point should non-positive connections be evident from adhesive or filling mortar, the covering or other substances.

Connecting joints and expansion joints can be closed with suitable elastic filling 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 physical resilience:

In contrast to conventional decoupling systems, **PROSECUREfibretec 2.0** increases the mechanical load capability of floor coverings due to its high tensile strength. It is possible to improve the flexural resistance of the overall system from the load distributing layer and top layer.

Furthermore:

- 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. Likewise, the mechanical load capability of the top layer that guards against destruction through impact (such as from falling objects) is also greater. Traffic loads from pedestrians to frequent traffic from rollers and floor conveyors with rubber tyres can be borne up to 10 kN/m² without damage.

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- The permissible mechanical load consists of loading groups I and II in accordance with ZDB bulletin 'Coverings capable of withstanding high loads' from October 2005.
- The use of lift trucks with metal rollers and polyamide wheels represents frequent high to extremely high mechanical loads. For this application, **PROSECUREfibretec 2.0** is only suitable within certain boundaries.

PROSECUREfibretec 2.0 can be used in a variety of different ways and combinations.

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

Important information:

- The smallest tile format 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 covered must be sufficiently rigid, resistant to compression forces and have low vibration levels to cater for the projected load levels.
- Mortar mixed with polymers, dispersion and reaction resin adhesive and elastic joint fillers must have reached their rated strength before they can be passed ready for their intended use.
- The installation sequence must take account of curing times in relation to the laying temperature and manufacturer's specifications so that already laid sections are not weakened or even damaged.
- **PROSECUREfibretec 2.0** 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 **PROSECUREfibretec 2.0** with suitable, water-free laying substances.
- Relatively fresh screed floors that are significantly and measurably deformed due to one-sided drying, pose the risk that larger retroactive reverse deformation can lead to cracks in installations and walls and could possibly tear the floor covering and place the mat in the stress zone.
- Wooden floorboards must be screwed down tight. The planks are not allowed to move towards or away from each other at all.
- Sheets of wood laid out over the area must be screwed down at least every 40 cm squared and the tongue and groove joints must be glued firmly. The supports of a joist floor must not exceed a dimension of 75 cm between the centre lines. The wood moisture must be the same as the moisture balance.
- The product contains glass fibre. Contact with the skin can cause itchiness. In the event of itchiness, clean with cold water. If **PROSECUREfibretec 2.0** is to be handled over a long period of time, we recommend the use of latex gloves.

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Standards and regulations:

It is recommended that the following standards and regulations are 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 Hot water underfloor heating
- DIN 18202 Tolerances in building construction
- DIN 18560 Screeds in building construction
- DIN 18195 Building seals
- DIN 18157 Application of ceramic tiling using the thin-bed method
- 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
- Schnittstellenkoordination beheizte Fußbodenkonstruktionen (Interface co-ordination for heating flooring constructions)
- Bulletins of German Association of Surface Heating
- ZDB Data Sheet 'Highly loaded floor coverings'
- ZDB tile and slab information 'Information on decoupling'
- BAKT InfoTechnik – Bathrooms in dry-wall construction
- Deutscher Natursteinverband (German Natural Stone Association) – Structural engineering information for natural stone

All information, references, instructions, basic engineering principles, regulations, standards and expertise are based on German 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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