



→ **ISOLTILE**

IsolTile is a low thickness uncoupling membrane and an undertile resilient layer, designed to the acoustic retrofitting of new or existing floor. This product can be directly laid under ceramic or wooden flooring in a double bonding or semi-floating (AD version) application. IsolTile is resilient underlay designed for reflected walking sound and impact sound reduction on existing flooring or in case of new buildings. IsolTile is made of HD expanded polypropylene, calendared-coated by FIBTEC XP1 (non-woven, embossed, black polypropylene anchoring fleece) on the upper side and the lower side to FIBTEC XP1 (IsolTile standard) or to removable adhesive (IsolTile AD)."



THICKNESS	Approx. 2 mm
IMPACT SOUND INSULATION	$\Delta L_w = 16$ dB Certified value
THERMAL CONDUCTIVITY	$\lambda = 0.037$ W/mK
THERMAL RESISTANCE	$R_t = 0.054$ m ² K/W
EQUIVALENT AIR LAYER THICKNESS	$S_d = 30$ m
COMPRESSIVE STRENGTH	10% compressive deformation at 151 kPa 25% compressive deformation at 180 kPa 40% compressive deformation at 222 kPa 50% compressive deformation at 274 kPa
SIZE	Rolls of: 1 m x 20 m = 20 m ²
PACKAGING	Single rolls with accessories (sealing tape and flanking strip)
ACCESSORIES	Sealing strip: h 7,5 cm x L 20 m Flanking strip: h 3 cm x L 20 m

→ **Conditions of use**

IsolTile can be installed directly on the existing flooring where acoustic bridges and flanking paths are critical in terms of compliance with the standards in force. It ensures a significant improvement of impact sound insulation with ceramic tiles and wooden flooring as well. It could be also installed on floating screed to enhance acoustic performances. IsolTile uncouples the floor covering from the substrate and neutralizes tensions between the substrate and the tile covering. Furthermore directly transfers the load impact on the tile covering to the substrate avoiding point load concentration and tile cracking.

These product installation does not modify the standard procedure to lay the flooring. IsolTile does not need any special adhesive that could be selected referring to the installation surface and finishing type. For instance, IsolTile could be laid by means of C2 class tiles adhesive or bi-component epoxyurethane glues for wooden flooring. This product is also suitable for hot water underfloor heating. Check: R_t (finishing + IsolTile layer) $\leq 0,15$ m²K/W in case of wooden flooring.

→ **Item specifications**

IsolTile is a low thickness uncoupling membrane and an undertile resilient layer, designed to the acoustic retrofitting of new or existing floor. It is made of closed-cell physically cross-linked polypropylene foam that is calendared-coated with non-woven, embossed, screenprinted polypropylene (IsolTile type). A removable adhesive layer is provided on the bottom side of IsolTile AD. Thickness approx. 2 mm, density approx. 77 kg/m³, thermal conductivity 0.037 W/mK, $S_d = 30$ m. It ensures 16 dB reduction of impact sound noise as per EN-ISO 140-8.

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→ Isolmant IsolTitle: how to lay the floor

1) preparing subfloor: the surface where IsolTile is installed should be load-bearing, flat, adequately even, clean and free from debris and oil. However, the product allows installation in a number of limit situations where it would be necessary to carry out other stabilising interventions such as levelling or applying primer. Nevertheless, the tiler will assess the suitability of the surface when laying glue and sheets.

2) Flanking strip installation: to prevent acoustic bridges, it is recommended to use Isolmant Fascia Perimetrale (flanking strip) which already comes in the package. It should be applied before spreading the glue all around the room perimeter. It is necessary to apply Isolmant Fascia Perimetrale on the vertical walls to disjoint surrounding walls from floor finishing.



DOUBLE BONDING INSTALLATION

3a) laying the first layer of glue: IsolTile does not require the use of any special adhesive. It is recommended to use glues suited to the installation surface. Apply the first layer of glue in proper quantity, using a fine tile trowel (3/4 mm) following the instructions set out by the technical reference standards. This layer of glue can absorb slight surface unevenness. Close to the flanking strips, be sure to remove exceeding glue.

laying the sheets: roll out IsolTile on the previous layer of glue, taking into consideration the open time of the adhesive. Remove any air bubbles under IsolTile sheets so that they adhere perfectly to the surface. Place the underlayment into the adhesive minimizing trapping of bubbles.

To this end, it is recommended to press the sheets using a roller for flexible flooring. During installation, IsolTile sheets should be laid close without overlapping in order to ensure a continuous insulation layer and avoid acoustic bridges. In case of ceramic or stone flooring, it is recommended to tape the junction points of the sheets by means of Isolmant Fascia per Giunte (sealing strip) which already comes in the package. In the case of glued parquet flooring, it is not necessary to seal the joints of sheets.

Wait at least 24 hours before installing the flooring to in order to allow the adhesives to cure: it is up to the tiler to decide on the most appropriate timing for tiling.



SEMI-FLOATING INSTALLATION

3b) semi-floating installation: roll out IsolTile AD along the wall against where you plan to start installing the flooring. Use an utility knife to trim the underlayment to fit the subfloor leaving no gaps. Remove the silicone film from the lower side holding the mat in place and keeping the right alignment. Exert suitable pressure on the sheet portion where the silicon film was removed to ensure perfect adhesion to the substrate removing any air bubble. Install the next row of underlayment in the same manner making sure the sheets are closed together but not overlapping.

Sealing strip (Fascia per Giunte) is required to seal joints properly in case of ceramic tile or stone floor installation. In the case of glued parquet flooring, it is not necessary to seal the joints. Immediately after installing IsolTile AD version it is possible to lay the floor finishing. The semi-floating installation can be also used for ceramic tile flooring by unrolling standard version of IsolTile on the substrate without using glue. The sheets are then laid close and fixed by means of the sealing tape. The tiles can then be glued onto the sheets. For further information or details, please contact the Isolmant Technical Department.

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TILE INSTALLATION

4a) installing ceramic tile floor: tiles can be glued straight onto Isolmant IsolTitle or IsolTitle AD by means of the proper tile glue in compliance with installation standards. The tiles must be fully embedded in the thin-bed adhesive. The glue must be spread using the proper trowel which should be chosen according to the type and shape of the tile in compliance with the instructions provided by the glue manufacturer and the relevant installation standards. The R&D laboratory of Tecnasfalti achieved the best results by using class C2 cementitious tile adhesive (improved adhesives, such as Kerakoll H40, Litokol Litoflex K80 or equivalent) or higher class. However,

the tiler will assess the adhesive suitability for the substrate and the finish according to his experience and UNI 11493 standard.

IsolTitle is a waterproof membrane and vapor barrier: depending on the climate and site conditions, sufficient time for drying of the glue must be considered. It is recommended to dry the glue from 36 to 48 hours before grouting joints. In case of flexible floor slab it is recommended to apply elastic tile grout



PARQUET INSTALLATION

4b) installing glued wooden flooring: this flooring can be glued directly onto IsolTitle by means of the proper glue layer that should be spread following the manufacturer's instructions and in compliance with the sector guidelines. Installation should be carried out under proper temperature and moisture conditions and in compliance with the wooden flooring installation standard. Bicomponent epoxy polyurethane glues, like Kerakoll L34, Chimiver Hercules or equivalent, yield positive results.



4c) installing not glued wooden flooring: IsolTitle can be used as underlay for the floating installation of laminates or engineered wood flooring.

This floating and dry laying method do not require any type of adhesive and it allow to remove and substitute the flooring without impacting the existing flooring.

This installation method is also suitable when using IsolTitle AD previously stuck to the subfloor using the removable self-adhesive side. The removable self-adhesive layer on the bottom side of IsolTitle

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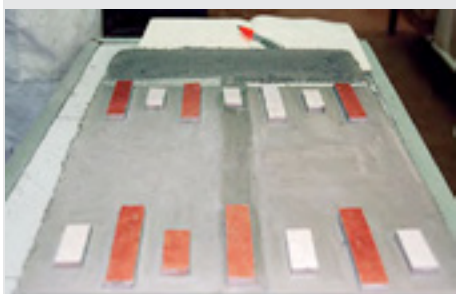
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FOCUS ON GLUES

The R&D laboratory of Tecnasfalti carried out a number of tests to assess shearing or ripping loads on both wooden and tile floorings by means of standard glues which are present in the market. It must be pointed out that currently there are not special standards or instructions concerning the minimum shearing strength for application on the underlays. Based on experience, it is known that professional flooring can bear a shearing strength higher than 1.5 N/mm². Heavy flooring, like industrial ones, should bear a shearing strength higher than 2 N/mm² as shown in the table.

The tests carried out with IsoDrum Parquet clearly highlighted an elastic behaviour of the system up to stress higher than 1 N/mm². A loss of cohesion of the non-woven fabric coating substrate was observed at about 2.5-3.0 N/mm² compared to the core polypropylene. The glues, in particular the lower layer, did not show any shearing modification inside these ranges of applied stress.

Shearing stress per surface unit N/mm ²	Flooring use
< 0,8	very reduced loads
0,8 - 1,5	reduced loads
1,5 - 2,0	medium load
2,0 - 3,5	heavy loads
> 3,5	very heavy loads (industrial)



A) Sample for shear test on glued tiles



B) Samples for shear test on glued wooden flooring and samples for pull-up test ("test dolly")



C) Shear test by means of proper instrumentation (Pressure meter - shearing hydraulic meter)

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