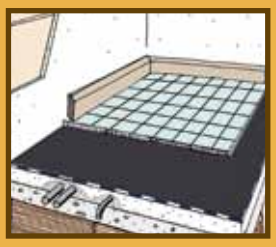
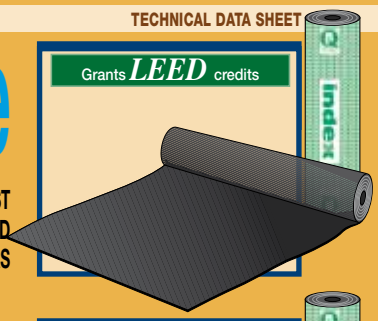


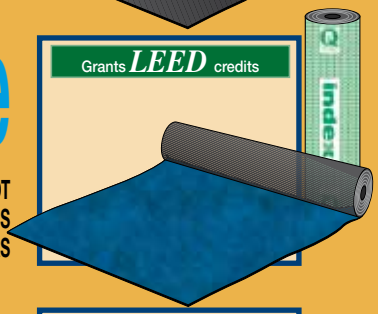
FONOSTOPTile Biadhesive

MULTIFUNCTIONAL, UNDERFLOOR, DOUBLE-SIDED SELF-ADHESIVE FOR ACOUSTIC INSULATION AGAINST FOOT TRAFFIC NOISE FOR DIRECT APPLICATION OF CERAMIC, WOOD AND NATURAL STONES WITH NO NEED OF CEMENTITIOUS ADHESIVE, HAVING WATERPROOFING AND ANTICRACKING PROPERTIES FOR INDOORS



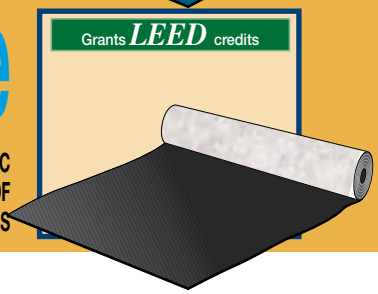
FONOSTOPTile Monoadhesive

MULTIFUNCTIONAL, UNDERFLOOR, ADHESIVE SELF-ADHESIVE ACOUSTIC INSULATION AGAINST FOOT TRAFFIC NOISE FOR DIRECT APPLICATION OF CERAMIC, WOOD AND NATURAL STONES WITH CEMENTITIOUS ADHESIVE, HAVING WATERPROOFING AND ANTICRACKING PROPERTIES FOR INDOORS



FONOSTOPTile Floatingadhesive

MULTIFUNCTIONAL, UNDERFLOOR ACOUSTIC INSULATION FOR FLOATING FLOORS AGAINST FOOT TRAFFIC NOISE FOR SELF-ADHESIVE APPLICATION OF CERAMIC, WOOD AND NATURAL STONES WITH NO NEED OF CEMENTITIOUS ADHESIVE, HAVING WATERPROOFING AND ANTICRACKING PROPERTIES FOR INDOORS



CHARACTERISTICS	ENVIRONMENTAL		
ACOUSTIC INSULATION	ECO GREEN	RECYCLABLE	NON DANGEROUS WASTE

PROBLEM

In civil building a requirement arose to guarantee acoustic insulation against foot traffic noise and the waterproofing of internal slabs as well as protecting the flooring from the cracks and damp that could be transmitted from the laying surface to the floor itself.
A further requirement, which regards both new buildings and to an even greater extent the refurbishment of old floors, is that of using insulation materials and systems that make it possible to reduce the thicknesses of the under-floor layers.
Particularly in the case of rigid marble, ceramic and stone floors, the problem is even more accentuated because a higher degree of insulation against foot traffic noise is normally obtained by laying a floating screed between the layer of acoustic insulation and flooring, making laying times longer and the process more complicated and reducing the living volumes due to the high thickness (at least 4 cm).
The requirement of reducing the setting times of the adhesives used for laying the floors themselves is also increasingly important.

SOLUTION

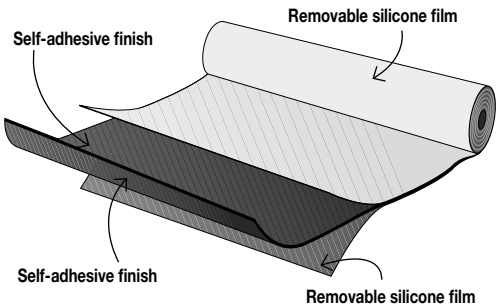
Materials are available on the market that satisfy one or more of the above requirements, which are normally products that fulfil one or more functions but rarely all of them together.
The Index **FONOSTOPTile** range can fulfil all the laying requirements reducing the on-site operations and thickness of the insulation and waterproofing to a minimum; three types of under-floor membrane have been developed:

- FONOSTOPTile Biadhesive
- FONOSTOPTile Monoadhesive
- FONOSTOPTile Floatingadhesive

FONOSTOPTile Biadhesive

Patent Pending

Multifunctional three-layer double-sided adhesive under-floor membrane, made up of a high resistance, sound resilient polyester fibre non-woven fabric covered on both faces with a self-adhesive waterproof layer. The membrane is suitable for acoustic insulation against foot traffic noise and the waterproofing of internal floor slabs, for spreading out the movements of the laying surface, for protection from humidity that allows bonding, on uniform surfaces, of floors with perfectly level ceramic, wood, marble and stone elements, without having to use adhesives.



FONOSTOPTile Biadhesive is a double-sided adhesive membrane of just 2 mm, which is laid without adhesives and does not only offer waterproofing but also high insulation against foot traffic noise. It is an effective vapour barrier and has high mechanical resistance preventing the transmission of the cracks in the slab to the flooring, but is also adhesive at room temperature to the extent that wooden and ceramic, marble or stone floors can be laid without adhesives, with the sole requirement of sealing the joints in the latter types.
The essential condition for the use of "FONOSTOPTile Biadhesive" type is that the laying

surface and the flooring elements are both perfectly level.

FONOSTOPTile Biadhesive is the result of joint research between the different INDEX divisions, which has led to the definition both of the insulating membrane and an exclusive and innovative laying system which produces an "insulating membrane – floor" layered arrangement that occupies very little space but can provide high water and vapour tightness, mechanical resistance and acoustic insulation properties.

FONOSTOPTile Biadhesive is a single thin sheet in which three layers can be distinguished: two self-adhesive waterproof layers separated by a polyester fibre non-woven fabric onto which they have been calendered.

The functionality of the product is based on the high water and vapour proof characteristics of the two self-adhesive layers of mainly elastomeric nature formulated to extend the adhesiveness also at low temperatures and to allow the cold self-adhesion characteristics to be maintained over time. This is combined with the special foot traffic insulation properties determined by the thickness of the non-woven fibres that are free to be deformed elastically under the action of the foot traffic generated on the flooring under which it is applied. The high basic weight non-woven fabric also has very high tensile strength and perforation resistant properties that prevent the transmission of the cracks in the laying surface to the flooring above.

The very high adhesiveness of the faces of the membrane means it can be bonded to the laying surface and that it can act as an adhesive to fix ceramic, wood, marble and stone flooring, which can be laid above without having to use traditional adhesives.

Laying ceramic, marble and stone floors without adhesives makes the floor immediately passable during all the laying operations without any limitations connected with the setting times of traditional adhesives (from 3 to 24 h according to the type) and, until the final filling stage of the joints, the operators can freely walk across the tiles bonded by simple self-adhesion.

Laying wood floors is even simpler where the elimination of the glue and absence of the joint filling steps makes the flooring immediately passable.

In both cases, circulation on the floor over time gradually strengthens its adhesion.

The space taken up by the system is only the thickness of the sheet to which the thickness of the pre-chosen flooring must be added.

The reduction in thickness of the layered arrangement leads to the great advantage of allowing the refurbishment of an old ceramic, marble or stone floor, without having to demolish the existing one but simply by bonding the membrane onto it and then the new floor, also eliminating the thickness of traditional glue.

For new buildings to be floored with ceramics, marble or stone, the elimination of the floating screed and the traditional resilient layer due to the use of the membrane and the laying system, subject to a patent application, allows the great advantage of a reduction in thickness of at least 4 cm per floor and the elimination of the screed setting times (at least 72 h).

FONOSTOPTile Biadhesive is supplied in rolls with both sides covered in adhesive protected by a non-stick silicone coated film, for the lower face, split into two overlapping halves in order to make it easier to remove when laying.

ADVANTAGES

- **Water and vapour tight, anti-cracking barrier, acoustic insulation in a single product of just 2 mm**
- **There is no need to use adhesives to fix the sheet or to lay the flooring**
- **Laying times are reduced**
- **System takes up very little space**
- **Can be walked on immediately**

APPLICATION FIELDS

FONOSTOPTile Biadhesive is used to insulate and protect the internal slabs of buildings both in new jobs and for refurbishments of old rigid floors as long as they are uniform enough and the elements of the new flooring are level.

METHOD OF USE

• SURFACE PREPARATION

Concrete surfaces must be perfectly level, clean and dry. If they are not perfectly level, correct them with self-levelling cement mortar. After the self-levelling mortar has dried (2 days) apply an acrylic resin-based primer PRIMER FIX in an aqueous dispersion.

Old ceramic, marble or wood floors must be perfectly level and clean. Marble or ceramic surfaces must be free from treatments, such as wax or similar. The aforementioned treatments must be removed with caustic soda. After removal apply PRIMER FIX.

• LAYING THE INSULATING SHEET

Unroll **FONOSTOPTile Biadhesive** onto the laying surface lining it up with one of the walls and cut to measure.

Remove the half silicone coated film from the lower face opposite the wall taking care not to move the insulation so that the alignment remains in place.

Exert suitable pressure on the half of the roll where the silicone coated film has been removed so that it sticks to the surface.

Remove the other half of the silicone coated film on the lower face

Exert suitable pressure on the whole roll so that it sticks fully to the surface

Proceed with the application repeating the laying, cutting, alignment, silicone coated film removal and pressure operations, keeping the sheets perfectly lined up alongside each other.

• LAYING THE NEW FLOORING

Remove the upper silicone coated film in the necessary area to start laying the new flooring (ceramic, marble or wood)

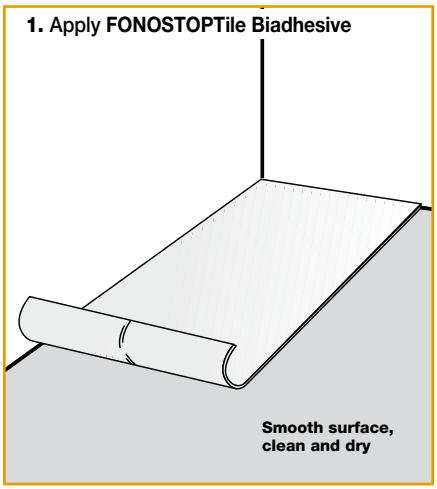
Before laying the ceramic, the approach lines of the sheets and the perimeter will be sealed with the bituminous mastic HEADCOLL.

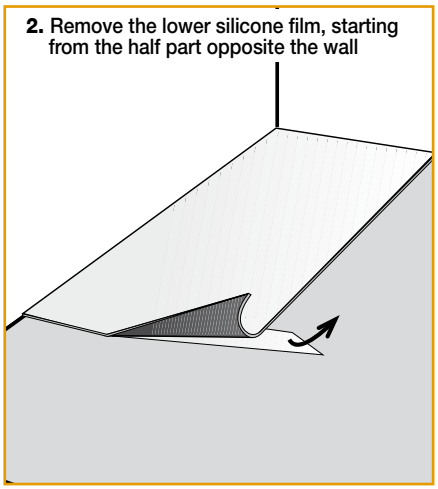
Start laying, taking care to align the new floor using the pre-formed plastic crosses.

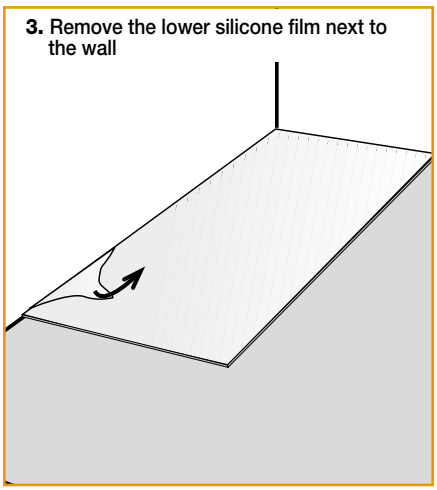
Proceed to lay by removing the silicone coated film, exerting suitable pressure on the laid tiles.

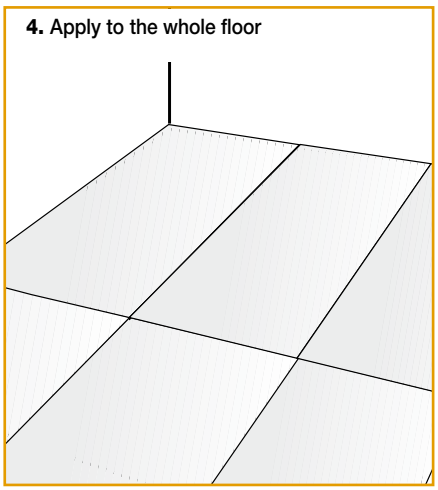
To increase the adhesion of the new floor, exert pressure on the tiles also by walking on them.

Any small dips can be compensated using small amounts of the aforementioned bituminous mastic under the tiles.

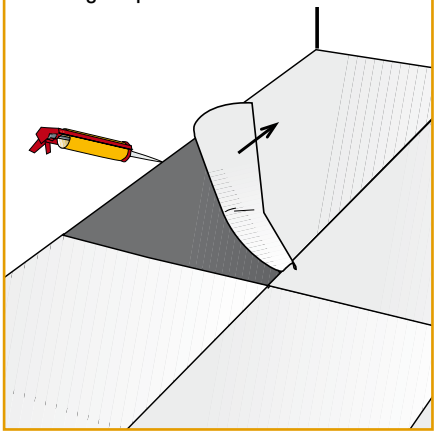




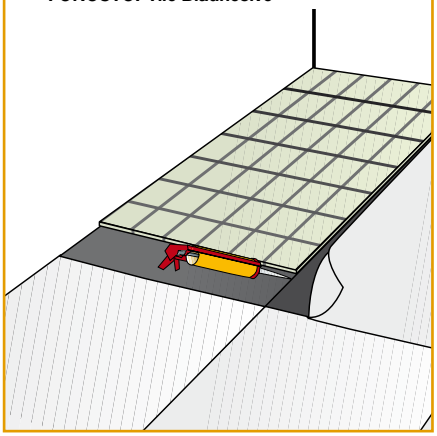




5. Remove the upper silicone film and seal along the perimeter with HEADCOLL



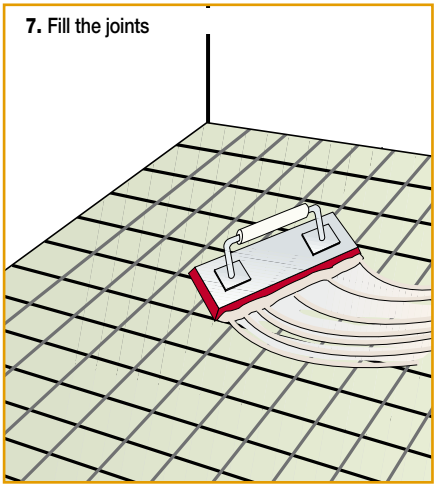
6. Apply the tiles self-adhesively on **FONOSTOPTile Biadhesive**



• FILLING JOINTS

Straight after laying, the joints can be filled using quartz-based cement filler with added powder resins to make it more flexible.
Mix the filler with clean water and apply it using a special rubber trowel.
When the filler starts to set clean any excess filler off the ceramic surface using a damp sponge. If necessary repeat the cleaning operation with the damp sponge.
Do not walk on the filler for at least 24 hours after laying.

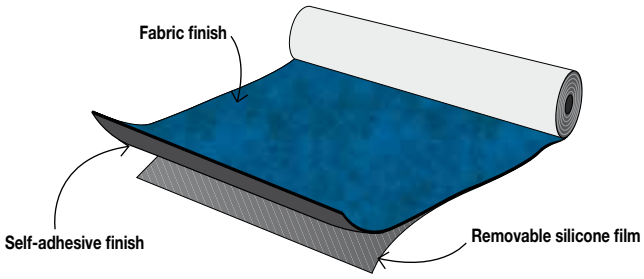
7. Fill the joints



FONOSTOPTile Monoadhesive

Patent Pending

Multifunctional three-layer one-sided adhesive under-floor membrane, made up of a high resistance, sound resilient polyester fibre non-woven fabric covered on both faces with a waterproof layer, self-adhesive on the lower face, covered on the upper face with a polypropylene fibre textile finish. The membrane is suitable for acoustic insulation against foot traffic noise and the waterproofing of internal floor slabs, for spreading out the movements of the laying surface, for protection from humidity that allows bonding with adhesives of ceramic, marble and stone floors, also with not perfectly level elements on non-uniform surfaces.



FONOSTOPTile Monoadhesive is an under-floor membrane of just 2 mm whose lower face is made up of a self-adhesive waterproof layer hence it is laid without adhesives, is waterproof, guarantees good insulation against foot traffic noise, is an effective vapour barrier and has high mechanical resistance, which prevents the transmission of the cracks in the slab to the flooring.
FONOSTOPTile Monoadhesive type was created to allow intervention on non-uniform surfaces and also when large format, non-perfectly level, flooring elements are used, hence it is necessary to use the adhesive as a uniforming layer to obtain a smooth floor.
To allow adhesion of the floor adhesive to the sheet, the waterproof layer covering the upper face of the membrane is covered with a polypropylene fibre non-woven fabric and the thickness of the insulation is reduced to a minimum as a floating screed does not need to be laid.
FONOSTOPTile Monoadhesive is a single thin sheet in which three layers can be distinguished: two waterproof layers separated by a polyester fibre non-woven fabric onto which they have been calendered.
The functionality of the product is based on the high water and vapour proof characteristics of the two layers of mainly elastomeric nature; the one covering the lower face is formulated to extend the adhesiveness also at low temperatures and to allow the cold self-adhesion characteristics to be maintained over time.
The thickness of the non-woven fabric fibres that are free to be deformed elastically under the action of the foot traffic generated on the flooring under which it is applied guarantees the foot traffic noise insulation performance.
The high basic weight non-woven fabric also has very high tensile strength and perforation resistant properties that prevent the transmission of the cracks in the laying surface to the overlying flooring.
The textile finish of the upper waterproof layer guarantees the hold of the traditional adhesives used to bond the different ceramic, marble and stone floors.
The space taken up by the system is only the thickness of the sheet to which the thickness of the glue and the pre-chosen flooring must be added.
The reduction in thickness of the layered arrangement leads to the great advantage of allowing the refurbishment of an old ceramic, marble or stone floor, without having to demolish the existing one but simply by bonding the membrane onto it and then the new floor.
FONOSTOPTile Monoadhesive is supplied in rolls with the lower face covered in adhesive protected by a non-stick silicone coated film split into two overlapping halves in order to make it easier to remove when laying.

ADVANTAGES

- **Water and vapour tight, anti-cracking barrier, acoustic insulation in a single product of just 2 mm.**
- **There is no need to use adhesives to fix the sheet.**
- **Laying times are reduced.**
- **System takes up very little space.**

APPLICATION FIELDS

FONOSTOPTile Monoadhesive is used to insulate and protect the internal slabs of buildings both in new jobs and for refurbishments of old rigid floors even if they are not perfectly uniform and even using elements of the new flooring that are not perfectly level.

METHOD OF USE

• SURFACE PREPARATION

Concrete surfaces must be sufficiently level, clean and dry. If the floor is very unlevel, it must be corrected with self-levelling cement mortar PLANORAPID. After the self-levelling mortar has dried (2 days) apply an acrylic resin-based primer PRIMER FIX in an aqueous dispersion.
Old ceramic, marble or wood floors must be clean and dry. Marble or ceramic surfaces must be free from treatments, such as wax or similar. The aforementioned treatments must be removed with caustic soda. After removal apply PRIMER FIX.

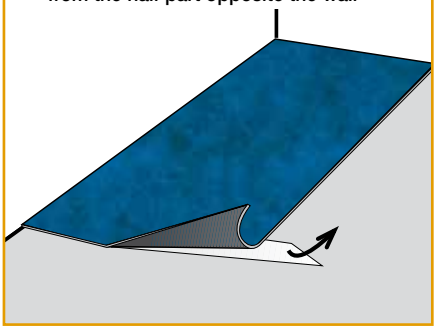
• LAYING THE INSULATING SHEET

Unroll **FONOSTOPTile Monoadhesive** onto the laying surface lining it up with one of

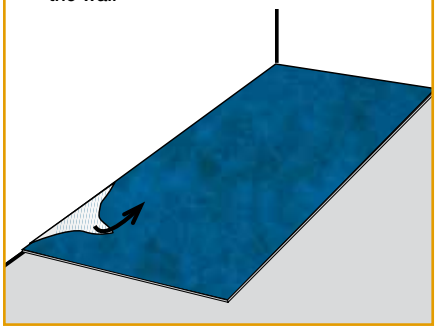
the walls and cut to measure. Remove the half silicone coated film from the lower face opposite the wall taking care not to move the insulation so that the alignment remains in place.
Exert suitable pressure on the half of the roll where the silicone coated film has been removed so that it sticks to the surface.
Remove the other half of the silicone coated film on the lower face
Exert suitable pressure on the whole roll so that it sticks fully to the surface
Proceed with the application repeating the laying, cutting, alignment, silicone coated film removal and pressure operations, keeping the sheets perfectly lined up alongside each other.

1. Apply **FONOSTOPTile Monoadhesive**

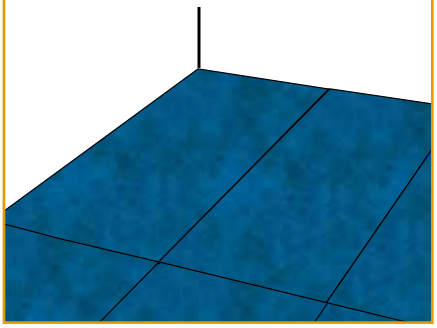
2. Remove the lower silicone film, starting from the half part opposite the wall



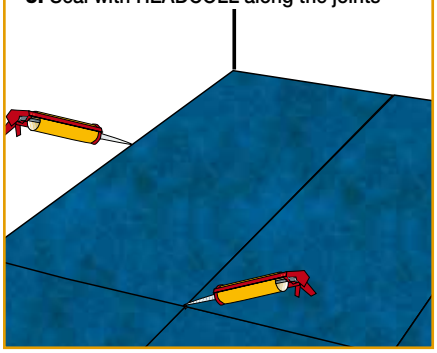
3. Remove the lower silicone film next to the wall



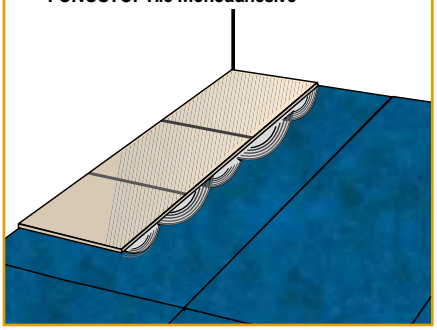
4. Apply to the whole floor



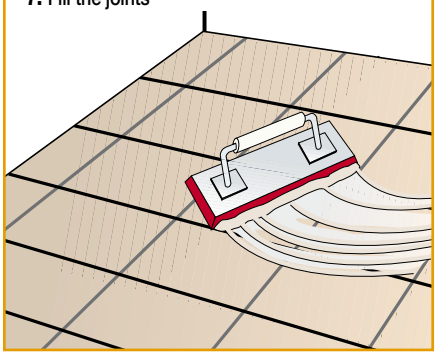
5. Seal with HEADCOLL along the joints



6. Apply the tiles withcementitious adhesive on **FONOSTOPTile Monoadhesive**



7. Fill the joints



• LAYING THE NEW FLOORING
Before laying the ceramic, the approach lines of the sheets and the perimeter will be sealed with the bituminous mastic HEADCOLL.
Position the FONOCELL SLIM edging strip.
Start to lay the flooring using suitable adhesive for the type of ceramic or natural stone to be laid, always keeping all the elements detached from the walls.
Spread the adhesive using a toothed trowel of the correct proportions for the size of the tile.
Lay the tile on the adhesive before it forms a "skin" and correct its position before the adjustment time of the adhesive expires.
Do not walk across the laid surface until the chosen adhesive has set (24-48 hours for normal setting adhesives).

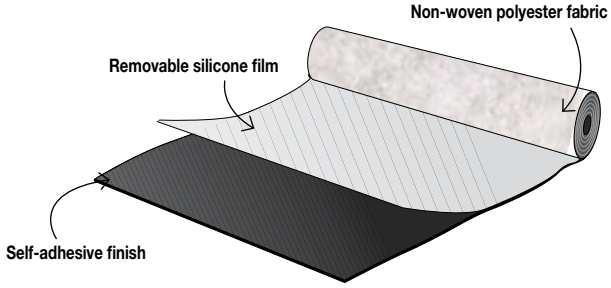
• FILLING JOINTS
After the adhesive has hardened, the joints can be filled using quartz-based cement filler with added powder resins to make it more flexible, such as FUGOFLEX 2-12.
Mix the filler with clean water and apply it using a special rubber trowel.
When the filler starts to set clean any excess filler off the ceramic surface using a damp sponge.
If necessary repeat the cleaning operation with the damp sponge.
Do not walk on the filler for at least 24-48 hours after laying.

FONOSTOPTile Floatingadhesive

Patent Pending

Multifunctional two-layer one-sided adhesive floating under-floor membrane, made up of a high resistance, sound resilient polyester fibre non-woven fabric with the upper face covered with a self-adhesive waterproof layer. The membrane is suitable for acoustic insulation against foot traffic noise and the waterproofing of internal floor slabs, for spreading out the movements of the laying surface, for protection from humidity that allows bonding, on uniform surfaces, of floors with perfectly level ceramic and wood elements, without having to use adhesives, also applicable on flexible wooden and covered gypsum laying surfaces.

FONOSTOPTile Floatingadhesive is a one-sided adhesive under-floor membrane of just 2 mm, which is laid dry and does not only offer waterproofing but also high insulation against foot traffic noise. It is an effective vapour barrier and has high mechanical resistance preventing the transmission of the cracks in the slab to the flooring, but, furthermore, its upper face is adhesive so that wooden and ceramic, marble or stone floors can be laid without adhesives, with the sole requirement of sealing the joints in the latter types.
The essential condition for the use of FONOSTOPTile Floatingadhesive is that the laying surface and the flooring elements are both perfectly level.
FONOSTOPTile Floatingadhesive type is used for floating wood floors, or ceramic floors especially designed for this particular laying procedure, and it is used in general on flexible wooden and covered gypsum surfaces.
FONOSTOPTile Floatingadhesive is a single thin sheet in which two layers can be distinguished: a polyester fibre non-woven fabric onto whose upper face a self-adhesive waterproof layer has been calendered, that is devised to extend the adhesiveness also at low temperatures and to allow the cold self-adhesion properties to be maintained over time. The functionality of the product is based on the high water and water vapour proof characteristics of the layer of mainly elastomeric nature.
The thickness of the non-woven fabric fibres that are free to be deformed elastically under the action of the foot traffic generated on the flooring under which it is applied guarantees the foot traffic noise insulation performance. The high basic weight non-woven fabric also has very high tensile strength and perforation resistant properties that prevent the transmission of the cracks in the laying surface to the flooring above.
The extremely high adhesiveness of the upper face of the membrane allows it to act as an adhesive for fixing ceramic and wood floors that are laid above without having to use traditional adhesives.
Laying ceramic floors without adhesives makes the floor immediately passable during all the laying operations without any limitations connected with the setting times of traditional adhesives (from 3 to 24 h according to the type) and, until the final



filling stage of the joints, the operators can freely walk across the tiles bonded by simple self-adhesion.
Laying wood floors is even simpler where the elimination of the glue and absence of the joint filling steps makes the flooring immediately passable.
In both cases, circulation on the floor over time gradually strengthens its adhesion.
The space taken up by the system is only the thickness of the sheet to which the thickness of the pre-chosen flooring must be added.
The reduction in thickness of the layered arrangement leads to the great advantage of allowing the refurbishment of an old floor, without having to demolish the existing one but simply by placing the membrane onto it and then the new floor, also eliminating the thickness of traditional glue.
For new buildings to be floored with ceramics, the elimination of the floating screed and the traditional resilient layer due to the use of the membrane and the laying system, allows the great advantage of a reduction in thickness of at least 4 cm per floor and the elimination of the screed setting times (at least 72 h).
FONOSTOPTile Floatingadhesive is supplied in rolls with the upper face covered in adhesive protected by a non-stick silicone coated film.

VANTAGGI

- **Water and vapour tight, anti-cracking barrier, acoustic insulation in a single product of just 2 mm.**
- **There is no need to use adhesives to fix the sheet or to lay the flooring**
- **Laying times are reduced**
- **System takes up very little space**
- **Can be walked on immediately**

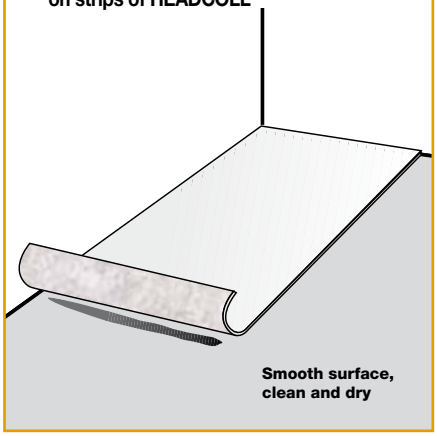
APPLICATION FIELDS

FONOSTOPTile Floatingadhesive is used to insulate and protect the internal slabs of buildings, also made of wood, both in new jobs and for refurbishments of old rigid floors as long as they are uniform enough and the elements of the new flooring are level.

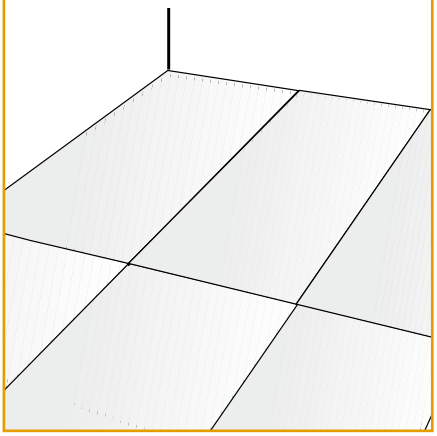
METHOD OF USE

• SURFACE PREPARATION
Concrete surfaces must be perfectly level, clean and dry. If they are not perfectly level, correct them with self-levelling cement mortar.
Old ceramic, marble or wood floors must be perfectly level and clean.
• LAYING THE INSULATING SHEET DRY
Unroll **FONOSTOPTile Floating** onto the laying surface lining it up with one of the walls and cut to measure
For easier laying it is possible to fix the sheets onto a coat of FONOCOLL laid in strips.
Proceed with the application repeating the laying, cutting and alignment operations, keeping the sheets perfectly lined up alongside each other.
• LAYING THE NEW FLOORING
Remove the upper silicone coated film in the necessary area to start laying the new flooring (ceramic, marble or wood).
Before laying the ceramic, the approach lines of the sheets and the perimeter will be sealed with the bituminous mastic HEADCOLL.
Start laying, taking care to align the new floor using the pre-formed plastic crosses.
Proceed to lay by removing the silicone coated film, exerting suitable pressure on the laid tiles.
To increase the adhesion of the new floor, exert pressure on the tiles also by walking on them.
Any small dips can be compensated using small amounts of the aforementioned bituminous mastic under the tiles.
• FILLING JOINTS
Straight after laying, the joints can be filled using quartz-based cement filler with added powder resins to make it more flexible.
Mix the filler with clean water and apply it using a special rubber trowel.
When the filler starts to set clean any excess filler off the ceramic surface using a damp sponge.
If necessary repeat the cleaning operation with the damp sponge.
Do not walk on the filler for at least 24 hours after laying.

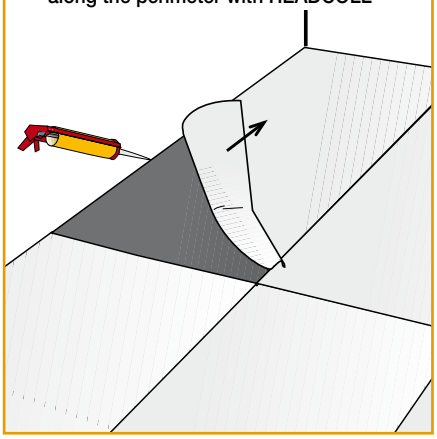
1. Apply **FONOSTOPTile Floatingadhesive** on strips of HEADCOLL



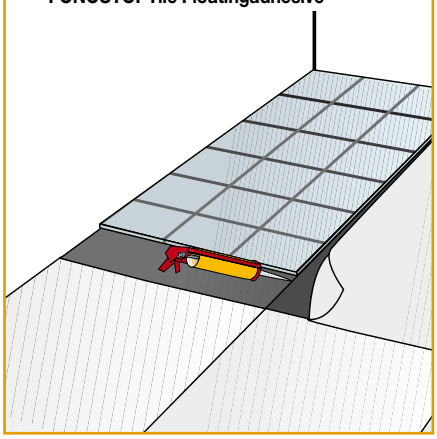
2. Apply to the whole floor



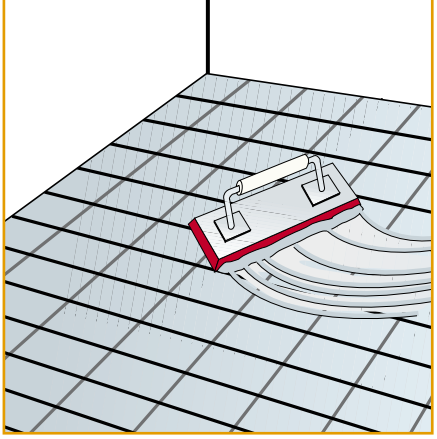
3. Remove the upper silicone film and seal along the perimeter with HEADCOLL



4. Apply the tiles self-adhesively on **FONOSTOPTile Floatingadhesive**



5. Fill the joints



FONOSTOPTile

TYPE	FONOSTOPTile Biadhesive	FONOSTOPTile Monoadhesive	FONOSTOPTile Floatingadhesive
Roll size	1,00×15,00 m	1,00×15,00 m	1,00×15,00 m
Mass per unit area	1,35 kg/m²	1,35 kg/m²	1,00 kg/m²
Thickness	2 mm	2 mm	2 mm
Watertightness	60 kPa	60 kPa	60 kPa
Transmission of water vapour	μ= 50.000	μ= 50.000	μ= 50.000
Tensile strength L/T	800/650 N/5cm	800/650 N/5cm	800/650 N/5cm
Ultimate elongation L/T	30/35%	30/35%	30/35%
Cold flexibility	–25°C	–25°C	–25°C
Peel test on steel • new • after thermal ageing of 30 days at 70°C	117 N/5cm 92 N/5cm	117 N/5cm 92 N/5cm	117 N/5cm 92 N/5cm

ON-SITE DETERMINATION OF FOOT TRAFFIC NOISE LEVEL

On an existing cement and brick slab 20+4 cm covered in ceramic tiles, the foot traffic noise level was measured before and after laying **FONOSTOPTile Biadhesive** and the new ceramic floor.
The on-site assessment was carried out using a room on the 1st floor as a local source and the measurement was taken in the room directly below it (on the ground floor) on a volume of 314 m³.

FONOSTOPTile Biadhesive

Existing floor $L_{n,w}$ = 69 dB

Pavimento rinnovato e isolato con
FONOSTOPTile Biadhesive $L_{n,w}$ = 56 dB

Benefit obtained $\Delta L'_{n,w}$ = 13 dB

On an existing cement and brick slab 20+4 cm covered in ceramic tiles, the foot traffic noise level was measured before and after laying **FONOSTOPTile Monoadhesive** and the new ceramic floor.
The on-site assessment was carried out using a room on the 1st floor as a local source and the measurement was taken in the room directly below it (on the ground floor) on a volume of 314 m³.

FONOSTOPTile Monoadhesive

Pavimento esistente $L_{n,w}$ = 69 dB

Pavimento rinnovato e isolato con
FONOSTOPTile Biadhesive $L_{n,w}$ = 57 dB

Benefit obtained $\Delta L'_{n,w}$ = 12 dB

On an existing cement and brick slab 20+4 cm covered in ceramic tiles, the foot traffic noise level was measured before and after laying **FONOSTOPTile Floatingadhesive** and the new ceramic floor.
The on-site assessment was carried out using a room on the 1st floor as a local source and the measurement was taken in the room directly below it (on the ground floor) on a volume of 314 m³.

FONOSTOPTile Floatingadhesive

Pavimento esistente $L_{n,w}$ = 69 dB

Pavimento rinnovato e isolato con
FONOSTOPTile Biadhesive $L_{n,w}$ = 55 dB

Benefit obtained $\Delta L'_{n,w}$ = 14 dB

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Internet: **www.indexspa.it**
e-mail Inform. Tecniche Commerciali: **tecom@indexspa.it**
e-mail Amministrazione e Segreteria: **index@indexspa.it**
e-mail Index Export Dept.: **index.export@indexspa.it**

Via G. Rossini, 22 - 37060 Castel D'Azzano (VR) - Italy - C.P.67 - Tel. 045.8546201 - Fax 045.518390