

CONSTRUCTION

TROSIL® - TROSIL TECH®
SUPERIOR SOUND PROOFING

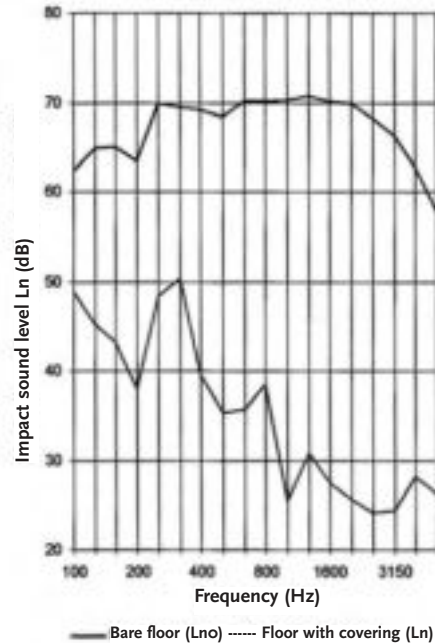
TROSIL®

Sound insulation of new generation, against impact sound, manufactured by **TROCELLEN** for **comfortable and quiet living**. Produced using soft cross-linked polyolefin foam offering excellent mechanical strength as well as **sound and thermal insulation**.



TROSIL 10 mm

TROSIL 10 mm



IMPACT SOUND INSULATION

Test report n. 0040-B/DC/ACU/05 dated 18/05/2005

Measurements with concrete mortar 180 kg/m³

SPECIFICATIONS

TROSIL 4 mm

Chemically cross-linked closed cell polyolefin foam, CFC-free.

TROSIL 4 mm thick, 30 kg/m³ density

Certified sound insulation $\Delta Lw = 28$ dB

Apparent dynamic stiffness $s't = s' = 73$ MN/m³.

TROSIL 5 mm

Chemically cross-linked closed cell polyolefin foam, CFC-free.

TROSIL 5 mm thick, 30 kg/m³ density

Certified sound insulation $\Delta Lw = 28$ dB

Apparent dynamic stiffness $s't = s' = 52$ MN/m³.

TROSIL 10 mm

Chemically cross-linked closed cell polyolefin foam, CFC-free.

TROSIL 10 mm thick, 30 kg/m³ density

Certified sound insulation $\Delta Lw = 36$ dB

Apparent dynamic stiffness $s't = s' = 19$ MN/m³.

Sound insulation

$\Delta Lw = 36$ dB

Thermal conductivity at 10 °C

$\lambda = 0,0359$ W/mK

Dynamic stiffness

$s't = s' = 19$ MN/m³

- Flexible and elastic
- Light and waterproof
- High mechanical strength
- Mould and insect resistant
- Non-rotting
- Easy to install
- CFC-free



TROSIL®



TROSIL TECH®



DYNAMIC STIFFNESS

Is the elastic strain capacity of a material when subjected to a dynamic stress, i.e. its capacity to function as “sound proofing against the impact sound”.

If used for floating floors, the dynamic stiffness per surface unit is expressed as MN/m^3 .

The lower a material's dynamic stiffness, the greater its sound proofing performance.

TROSIL TECH®

Sound insulation of new generation against impact sound, manufactured by **TROCELLEN** for comfortable and quiet living. Produced using soft cross-linked polyolefin polymer foam laminated to non-woven polyester fiber, with excellent **dynamic stiffness**.



VOCE DI CAPITOLATO

TROSIL TECH 10 mm

Chemically cross-linked closed cell polyolefin foam, CFC-free.

TROSIL 30 kg/m³ density, laminated with non-woven polyester fiber, total thickness **10 mm**.

Certified sound insulation $\Delta L_w = 33$ dB

Apparent dynamic stiffness $s't = 9$ MN/m³

Dynamic stiffness $s' = 20$ MN/m³.

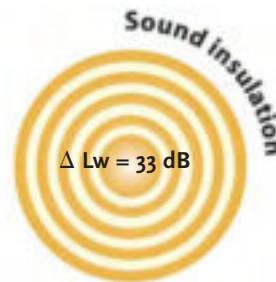
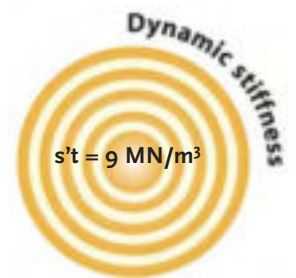
DYNAMIC STIFFNESS Test report n. 223089 dated 12/03/2007



Test results

Mass of the vibrating baseplate	8,162 kg
Mass of accelerometer	0,018 kg
Total mass	8,180 kg
Total mass per unit area "m" ²	204,5 kg/m ²
Load plate excitation method	Sinusoidal signal
Quantity measured	Acceleration

Specimen	Thickness under load	Weight	Resonant frequency "f ₀ "	Apparent dynamic stiffness "s' _d "	Average apparent dynamic stiffness "s' _d "
[No.]	[mm]	[g]	[Hz]	[MN/m ³]	[MN/m ³]
1	10	16,6	34	9	9
2	10	16,1	34	9	
3	10	16,1	33	9	
4	10	16,8	33	9	
5	10	17,5	34	10	



- Flexible and elastic
- Light and waterproof
- High mechanical strength
- Mould and insect resistant
- Non-rotting
- Easy to install
- CFC-free

INSTALLATION INSTRUCTIONS

TROSIL and **TROSIL TECH** must be installed using the “floating floor” technique: Prepare a foundation of light-weight concrete to cover all pipes.

Clean thoroughly and position **TROSIL** or **TROSIL TECH** over the full surface. Overlap the vertical walls around the edges to avoid creating a sound bridge, leaving approx. 5 cm of **TROSIL** or **TROSIL TECH** to extend above the final floor surface.

Pour the reinforced concrete on top of **TROSIL** or **TROSIL TECH**.

To prevent the penetration of sand or grout, seal the edges of **TROSIL** with a hot-air blower. **TROSIL TECH** or **TROSIL** must be positioned with the polyester face down and the joints covered with **TROCELLEN Adhesive Tape**.

The reinforced concrete (at least 5 cm thick) is laid on top of **TROSIL** or **TROSIL TECH**.

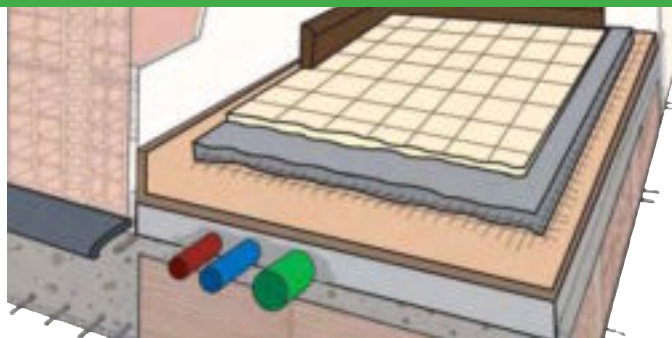
Cover the sides of the wall with **TROSIL** or **TROSIL TECH** to avoid sound-bridges, so that the reinforced concrete floor does not have direct contact with the structural floors or walls.

Alternatively, **TROCELLEN N-Band** or **TROSIL-Band** can be used instead separate the floor from the supporting walls.

Excess material can be cut after the floor has been laid and prior to fitting the skirting boards.

Before the installation of skirting boards it is advisable to apply **our specific tape with an uncoupling function**. Then trim the excess, sealing the gaps with a little silicon. We encourage users to consult the guidelines on the Anit-laying floating floors.

Properly installed **TROSIL** or **TROSIL TECH** will result in a dramatic reduction of impact sound in your and your neighbours' house.



Variant P

PP fabric coated for extra protection during the installation of the product.

Variant REF

Reflective film-coated PET, for improving the thermal insulation product, for example, **under floor heating systems**.

TECHNICAL DATA SHEET

	Norm	Unit	TROSIL	TROSIL TECH
Description			Chemically reticulated PE foam	Chemically cross-linked PE foam laminated with polyester fibers
Density	EN ISO 845	kg/m ³	30	30 *
Thickness	EN ISO 1923	mm	4 - 5 - 10	10
Colour	Base Spec.		beige	beige - white fiber PE
Roll size		m	thickness 4 mm 1,50 x 200 thickness 5 mm 1,50 x 200 thickness 10 mm 1,50 x 80	1,50 x 50
Compression stress strength at 10%	EN ISO 3386/1	KPa	10% 13,6 25% 31,6 50% 89,9	10% 2,27 25% 8,77 50% 34,18
Water absorption after 28 days	ISO 2896	Vol. %	< 3	< 3 *
Dimensional stability (< 5%)	ISO 2796	°C	75	85
Thermal conductivity at 10 °C (λ)	EN 12667	W/mK kcal/mh°C	0,0359 0,0317	0,0359 * 0,0317 *
Impact sound insulation ΔLw (mortar 180 kg/m ²)	EN ISO 140/6-8 EN ISO 717/2	dB	thickness 4 mm = 28 thickness 5 mm = 28 thickness 10 mm = 36	thickness 10 mm = 33
Dynamic stiffness s't	EN 29052-1	MN/m ³	thickness 4 mm = 73 (s't = s') thickness 5 mm = 52 (s't = s') thickness 10 mm = 19 (s't = s')	thickness 10 mm = 9 * Values for PE foam

The information contained herein is based on our experiences. They are not legally guaranteed and are indicative only. It is up to designers and users to decide whether or not the product is suitable for its intended use. Also assuming liability arising from the use of the products mentioned. Troc ellen Italia SpA reserves the right at any time to make changes to the packaging and the size, without notice, due to business needs.

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World-leading supplier of cross-linked polyolefin foams



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