



TRO  
CEL  
LEN

INSULATION



TROCELLEN

TROSIL<sup>®</sup>, TROSIL TECH<sup>®</sup>

Superior Acoustic Insulation

Construction

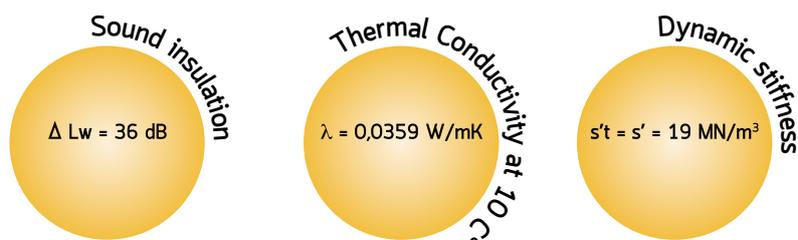


# Trosil® – Trosil Tech®

## 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



Measurements with concrete mortar 180 kg/m<sup>2</sup>

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



## ITEM SPECIFICATIONS

### TROSIL 4 mm

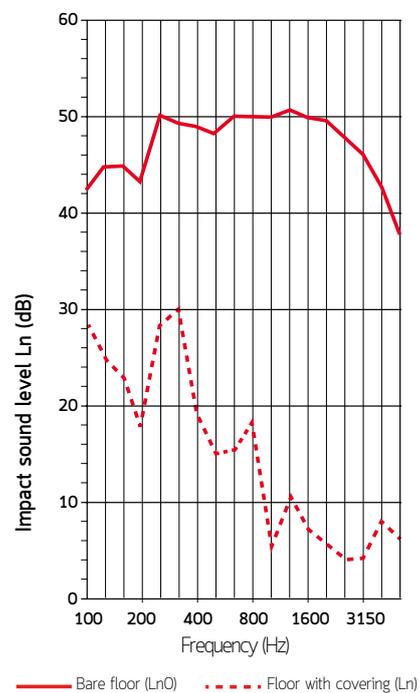
Chemically cross-linked closed cell polyolefin foam, CFC-free.  
TROSIL 4 mm thick, density 30 kg/m<sup>3</sup>  
Certified sound insulation  $\Delta L_w = 28 \text{ dB}$   
Apparent dynamic stiffness  $s't = s' = 73 \text{ MN/m}^3$ .

### TROSIL 5 mm

Chemically cross-linked closed cell polyolefin foam, CFC-free.  
TROSIL 5 mm thick, density 30 kg/m<sup>3</sup>  
Certified sound insulation  $\Delta L_w = 28 \text{ dB}$   
Apparent dynamic stiffness  $s't = s' = 52 \text{ MN/m}^3$ .

### TROSIL 10 mm

Chemically cross-linked closed cell polyolefin foam, CFC-free.  
TROSIL 10 mm thick (available also battened), density 30 kg/m<sup>3</sup>  
Certified sound insulation  $\Delta L_w = 36 \text{ dB}$   
Apparent dynamic stiffness  $s't = s' = 19 \text{ MN/m}^3$ .



IMPACT SOUND INSULATION

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



## DYNAMIC STIFFNESS

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

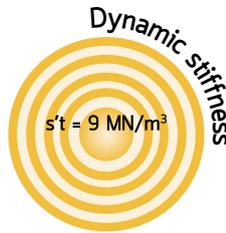
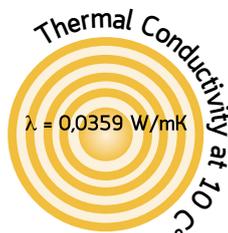
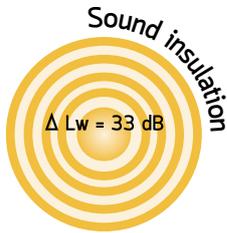


TROSIL TECH



# 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.



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



## ITEM SPECIFICATIONS

### TROSIL TECH 10 mm

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

**TROSIL TECH** density 30 kg/m<sup>3</sup>, laminated with non-woven polyester fiber, total thickness 10 mm, battened.

Certified sound insulation  $\Delta L_w = 33$  dB

Apparent dynamic stiffness  $s't = 9$  MN/m<sup>3</sup>

Dynamic Stiffness  $s' = 20$  MN/m<sup>3</sup>.

DYNAMIC STIFFNESS  
Test report n° 194278 dated 18/03/2005

(Rapporto di prova n. 194278 del 18/03/2005) segue - foglio n. 5 di 5

**Risultati della prova.**

Massa della piastra oscillante	8,162 kg
Massa dell'accelerometro	0,018 kg
Massa Totale	8,180 kg
Massa superficiale totale "m"	204,5 kg/m <sup>2</sup>
Modalità di eccitazione della piastra di carico	Segnale sinusoidale
Grandezza misurata	Accelerazione

Prova	Spessore sotto carico	Peso	Frequenza di risonanza "f"	Rigidità dinamica apparente "s't"	Rigidità dinamica apparente media "s'm"
[n.]	[mm]	[g]	[Hz]	[MN/m <sup>3</sup> ]	[MN/m <sup>3</sup> ]
1	10	16,6	34	9	9
2	10	16,3	34	9	
3	10	16,1	33	9	
4	10	16,8	33	9	
5	10	17,5	34	10	

Il Responsabile Tecnico di Base (Gugen. Omar)      
Il Presidente o l'Amministratore Delegato **Dot. Ing. Vincenzo Tommi** 

TECHNICAL DATA				
TECHNICAL CHARACTERISTICS	NORM	UNIT	TROSIL	TROSIL TECH
Description			Chemically cross-linked PE foam	Chemically cross-linked PE foam laminated with polyester fiber
Density	EN ISO 845	kg/m <sup>3</sup>	30	30*
Thickness	EN ISO 1923	mm	4 - 5 - 10	10
Colour	BASE Spec.	-	beige	PE beige - fiber white
Roll size		m	thickness: 4 mm: 1,50x50 - 5 mm: 1,50x50 10 mm: 1,50x40 - 10 mm (battened): 1,50x25	1,50x25
Compression stress strength	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 coefficient at 10 °C (λ-value)	EN 12667	W/mK kcal/mh°C	0,0359 0,0317	0,0359* 0,0317*
Impact sound insulation $\Delta L_w$ (mortar 180 kg/m <sup>2</sup> )	EN ISO 140/6-8 EN ISO 717/2	dB	thickness: 4 mm: 28 - 5 mm: 28 - 10 mm: 36	thickness 10 mm: 33
Dynamic stiffness $s't$	EN 29052-1	MN/m <sup>3</sup>	thickness: 4 mm: 73 ( $s't = s'$ ) 5 mm: 52 ( $s't = s'$ ) - 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. Trocellen Italia SpA reserves the right at any time to make changes to the packaging, size and colour, without notice, due to business needs.

## INSTALLATION INSTRUCTIONS

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

Clean thoroughly and position **TROSIL** or **TROSIL TECH** over the full surface. Take care to overlap the the rolls at least 5 cm and to splice tightly with the adhesive tape Join Band, in order to avoid creating “sound bridges”.

For non-battened **TROSIL** thicker than 5 mm, to prevent the penetration of sand or mortar, match perfectly the rolls and use the adhesive tape Join Band.

**TROSIL TECH** must be positioned with the polyester face down and the joints covered with the adhesive tape Join Band. Exceeding material can be cut after the floor has been laid, if in direct contact with the vertical walls.

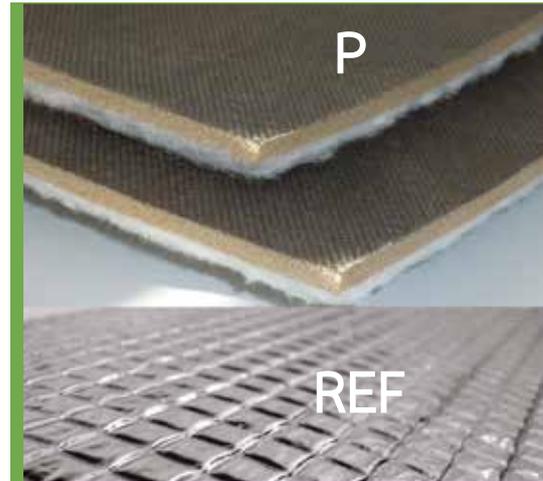
The reinforced concrete (at least 5 cm thick) is laid on top of **TROSIL** or **TROSIL TECH**. Cover the sides of the wall with N-Band to avoid sound-bridges, so that the reinforced concrete floor does not have direct contact with the structural floors or walls.

Alternatively, it is possible to use P-Band, pre-engraved at 50 mm, to facilitate the installation at “L” and reinforced with TNT to prevent breakage.

Exceeding 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 suggest users to consult the guidelines on the Anit-laying floating floors.



### VARIANT P

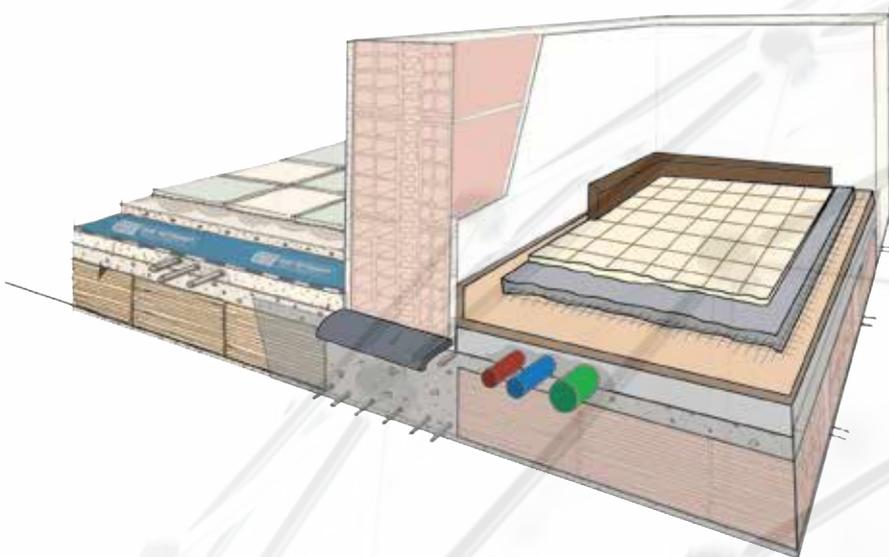
PP fabric coated for extra protection during the installation of the product

### VARIANT REF

Reflective film-coated PET, for improving the thermal insulation product, for example, underfloor heating systems



### N-Band adhesive strip



## INTERNATIONAL LOCATIONS

Lead Plant

### TROCELLEN Italia S.p.A.

Sales office  
Via Dante, 3  
20867 Caponago (MB), Italy  
Ph. +39 02 959 621  
Fax +39 02 959 62 235

### TROCELLEN GmbH

Mülheimer Straße 26  
53840 Troisdorf, Germany  
Ph. +49 2241 2549000  
Fax +49 2241 2549099

### TROCELLEN Ibérica S.A.

C/Avila, s/n  
28804 Alcalá de Henares, Spain  
Ph. +34 91 885 55 00  
Fax +34 91 885 55 01

### Polifoam Plastic Processing Co. Ltd

Táblás u. 32  
1097 Budapest, Hungary  
Ph. +36 1 347 98 00  
Fax +36 1 280 67 08

### TROCELLEN S.E.A. Sdn Bhd

Lot 2213, Kg. Batu 9 Kebun Baru,  
Jalan Kasawari  
42500 Telok Panglima Garang  
Selangor Darul Ehsan, Malaysia  
Ph. +60 3 3122 1213  
Fax +60 3 3122 1211

### TROCELLEN France

Bureau de vente  
2 rue de Comméres,  
Immeuble les Peupliers  
F-78310 Coignères, France  
Ph. +33 (0) 130 85 93 40

## TROCELLEN\*

Trocellen is the first choice European polyolefin foam-solution provider. Through continuous innovations and successful partnerships we dedicate ourselves to one goal: protecting and providing comfort for people.

After more than 40 years, with 600 employees at seven sites and many cooperating companies, various partner universities, institutes and designers we offer solutions for our business partners in various industries such as construction and insulation, automotive, leisure and professional sport, adhesive tapes, footwear and packaging.

\*Trocellen is the member of Furukawa Group.

[insulation@trocellen.com](mailto:insulation@trocellen.com)



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from the Official Website

50° 49' N	07° 09' O	Germany
40° 28' N	03° 21' O	Spain
41° 53' N	12° 28' O	Italy
47° 30' N	19° 02' O	Hungary
02° 54' N	101° 28' O	Malaysia
35° 40' N	139° 49' O	Japan FURUKAWA

