EN

PREMIUM LINE

INSULIT Bi+8

Acoustic underlay for screed

against impact and airborne noises

ΔLw 28 dB

insulco insulation products

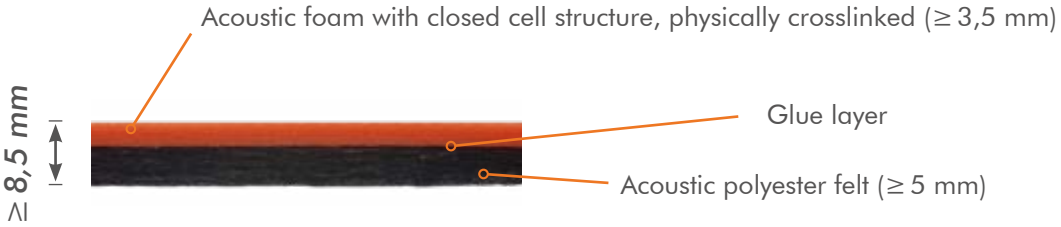
insulit Bi+8

insulit Bi+8 is an acoustical underlay intended to limit the transmission of impact and shock noises between different floors. It is put under a floating screed approximately 6 cm thick. Recent tests, performed in accordance with standard EN ISO 717-2 certify its performance. insulit Bi+8 is one of the premium range products made by insulco, the Belgian specialist in acoustic underlays for the last 30 years.

Superior acoustic performance from a new product

Structure

insulit Bi+8 is made up of an embossed layer of approximately 3,5 mm of closed-cells physically crosslinked polyolefin foam combined with a low dynamic stiffness acoustic felt of more or less 5 mm thick. The benefit of combining a felt with a foam is to be able to cover a much larger frequency range. The felt corrects the low frequencies and the foam corrects the medium and high frequencies.

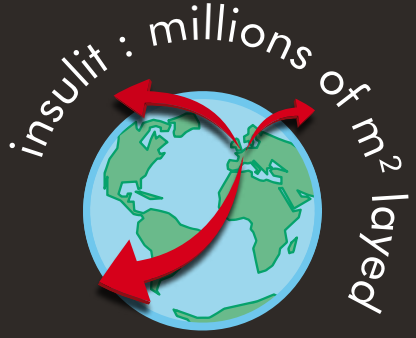


Characteristics

PREMIUM ★★★ LINE ★★★

Material	Physically crosslinked polyolefin and acoustic polyester felt
Thickness	≥ 8,5 mm under 1,5 kPa
Color	Orange (foam) / Anthracite (felt)
Impact noises insulation	ΔL_W = **28** $dB^{(A)}$ on a bare slab with no pre-screed *(ISO 717-2:2013 ; EN ISO 10140-3:2010)*
Dynamic stiffness	s'_t = 7 MN/m^3 *(EN 29052-1)*
Tear resistance	50 - 50 N *(EN 12310-1)*
Compression	≤10 % under 2 kPa (tolerance 10%)
Thermal resistance	R = 0,26 $m^2 \cdot K/W$ *(EN 12667:2002)*
Conductivité thermique	λ = 0,0356 W/m·K at 10°C (foam) *(EN 12667:2002)* λ = 0,0353 W/m·K at 10°C (felt) *(EN 12667:2002)*
Length	30 m
Width	1,50 m
Weight	±320 g/m^2
Weight/roll	±15 kg
Overlaps	Junction is made with an included kraft tape
Packaging	Plastic bag

insulit is being exported
world wide



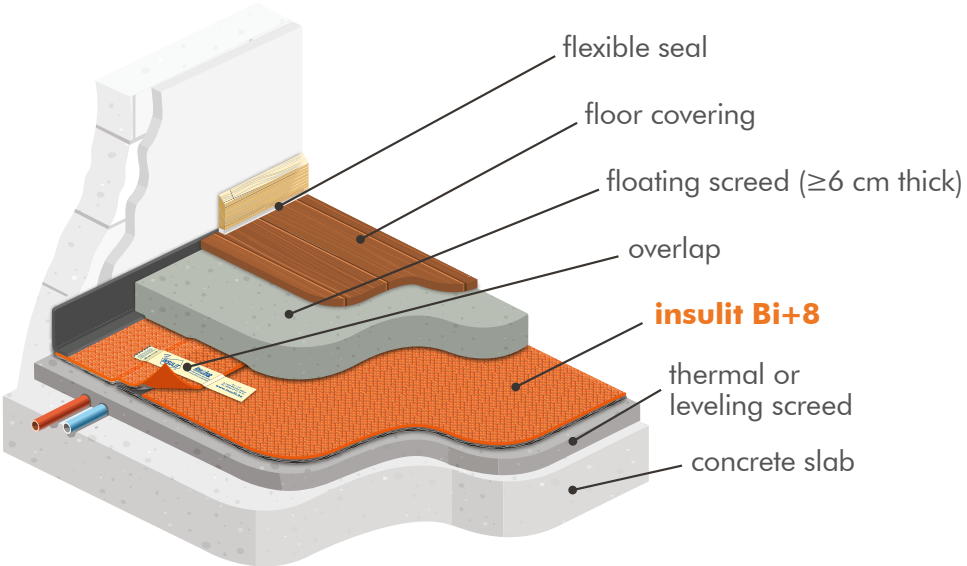
Benefits

New in 2018

- Reduce impact & airborne noises
- Roll packaging for quick and easy use
- High efficiency
- Tape provided for the overlaps
- Physically crosslinked polyolefin : lifespan guaranteed
- Closed-cells
- Very thin, light and soft
- Low dynamic stiffness : acoustical performance
- Low creeping
- Recent BBRI reports = guarantee of results

Floating screed

The acoustic sublayer insulit Bi+8 is laid under ≥ 60 mm of floating screed. It disconnects the slab from the building and avoids the transmission of noises between dwellings.



Reports

insulit Bi+8 has recent test report. The test was run following the EN ISO 717-2:2013 norm and prove the underlays quality. It is available on request.

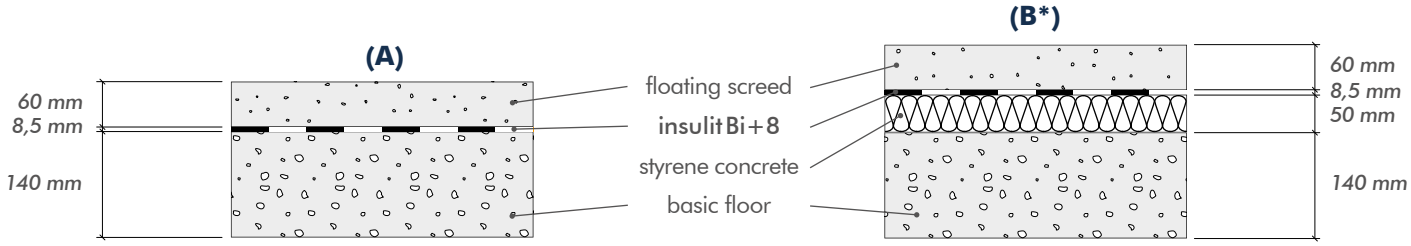
Acoustic performances

1 - Impact noises

insulit Bi+8 has been tested according to the norms EN ISO 10140-3 and EN ISO 717-2, on a concrete bare slab, under of floating screed of 60 mm thick (A).

Improvement of ΔL_w – according to the norm EN ISO 717-2:2013 ; EN 10140:2010

Single value of reduction of impact sound pressure level.



ΔL_w = 28 dB

$L_{,n,r,w}$ = 50 dB

BBRI report 2017 : AC 7718

$\Delta L_w \approx$ 35 dB*

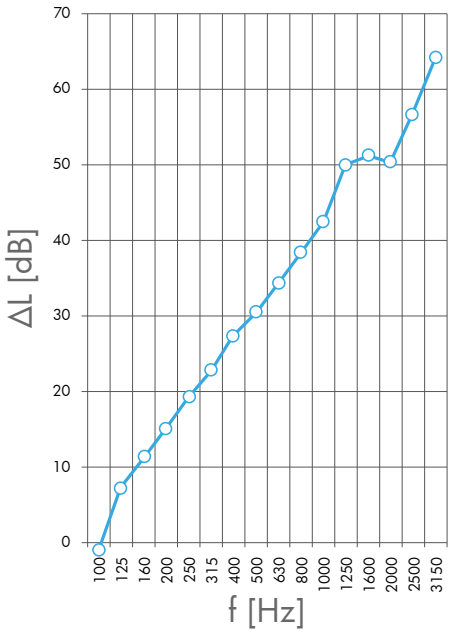
* A polystyrene bead-based pre-screed significantly improves the performance of the acoustic underlay. Refer to the test conducted by the BBRI of insulit 4+2.

Measurements of acoustic improvements (ΔL) :

Reduction of impact sound pressure levels by adding the sublayer insulit Bi+ 8.

Frequencies	insulit Bi+8
250 Hz	19,3 dB
500 Hz	30,4 dB
800 Hz	38,3 dB
1250 Hz	49,9 dB
2000 Hz	50,4 dB
4000 Hz	63,4 dB

Reduction of impact sound pressure level



2 - Airborne noises

Improvement of R_W – according to the norm EN 12354-1

The underlay insulit Bi+8 efficiently separates the screed from the compression slab (principle of mass – spring – mass).

insulit Bi+8 has a low resonance frequency (f_0) ≤ 25 Hz, that determines the low dynamic stiffness.

The effect of this attractive property is that, for a slab with a weighted sound reduction index (R_W) of between 20 dB and 60 dB, it is possible to achieve an improvement in the acoustic insulation of airborne noise of ≤ 7 dB – $R_W/2$ compared with underlays whose resonant frequency is greater than 160 Hz.

Note : *The dynamic stiffness (s') is given by the resonance frequency of the underlay (f_r), the basis weight of the supporting floor (m'1) and the basis weight of the screed (m'2).*
Most of the underlays available in the market have a dynamic stiffness higher than 160 Hz.

VOC FREE

According to the CEN/TS 16516 method (ISO 16000-3), the insulit underlays have a very low Volatile Organic Compound emissions level (VOC), in compliance with the following current requirements :

	French regulations	Belgian decree	M1 label	Italian regulations	Blue Angel	Emicode	AgBB
S1	A+	✓	M1	✓	✓	✓	✓

Laboratory

Research and development

Internal test procedures :

– Dynamic stiffness (EN 29052/1)
– Thermal resistance (EN 12667)
– Creeping (loaded)
– Compression /traction/ tear - resistance
– Weight
– Thickness (EN 823)

Creeping with time :

The underlay insulit Bi+8 is made to last. We choose components that are not flatted with time under floating floor.

- Tested with load ≥ 2 kPa

insulit Bi+8

Made in Belgium

Installation

1 Preparation

Place a first screed in order to cover the tubes and other sheaths if needed. If the placement of this pre-screed is impossible, unroll the insulit Bi+8 directly on the technical tubes. The concrete slab will have to be flat and carefully brushed. At the crossing of the tubes, equalize with sand or cement so that there is no hollow space under the insulit membrane.

2 Installation of the underlay

Unroll the insulit Bi+8 with the felt side down. An overlap of ±10 cm is made thanks to the surplus of foam provided for that purpose (1). Maintain the overlaps with the adhesive tape provided (30 cm of tape)perpendicularly stuck on the overlaps, every 1 m is enough) (2). The insulit Bi+8 should be cut as close as possible to the wall.

Insulate carefully the vertical tubes from the flooring they cross with the help of insulation sleeves made on the spot from the insulit Bi+8 or with the adhesive Stickelfoam from insulco.

The junction between the underlay and the wall will be covered by the peripheral strip – Insulco Lfoam 18 This self-adhesive foam is designed in a L-shape, in order to be fixed to the underlay and alongside the wall (3).

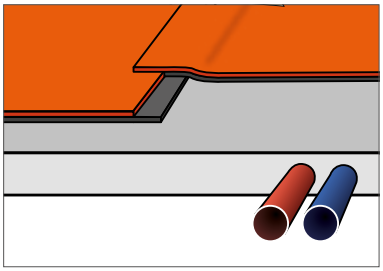
3 Application of the screed

Immediately after the laying, pour a reinforced screed of minimum 6 cm thick on the insulit Bi+8 (4). In case of a flowing screed, make sure that the underlay is totally waterproofed. Once the screed is poured and the floor covering laid, cut the surplus of Lfoam 18. Lay the baseboard slightly higher than the final floor covering, in order to avoid any lateral acoustic transmission. Finally, make a flexible joint under the baseboard.

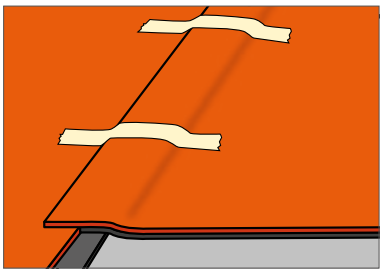
The screed is made according to the official regulations (in Belgium please follow the NIT 189-193).

Underfloor heating system ?

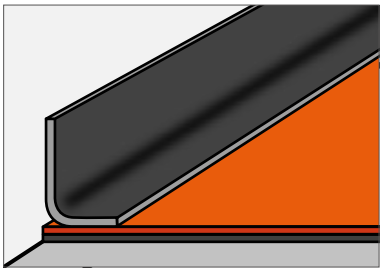
It is possible to use the insulit Bi+8 in combination with an underfloor heating system. In this case, we advise that the heating system should be placed above the insulit Bi+8. The piping system will be maintained in a soft structured membrane designed to be put in floating installation. The pipes cannot be fixed under any circumstances through the insulit Bi+8.



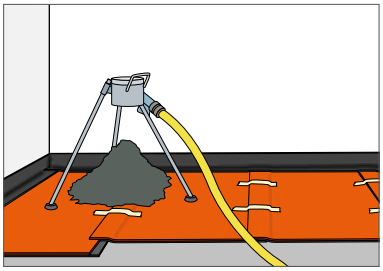
(1) Unroll the insulit Bi+8 with a covering of 10 cm



(2) Keep the overlap maintained with the adhesive provided



(3) Cover the junction between the underlay and the wall with the peripheral strip Lfoam



(4) Make a ≥6 cm thick screed up the insulit Bi+8

insulco insulation products — The specialist against impact noises

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