



Bi+ 20

 **ΔL_w 29 dB**

 **0,65 m²K/W**

*quiet
and warm*

Acoustic floor insulation & thermal!

**against impact
and shock noises**



insulit Bi+20

Insulit Bi+20 is a thermo acoustic underlay intended to limit the transmission of impact and shock noises and to provide thermal insulation between different floors. Insulit Bi+20 is put under a floating screed of ± 8 cm thick.

*Which acoustic insulation ?

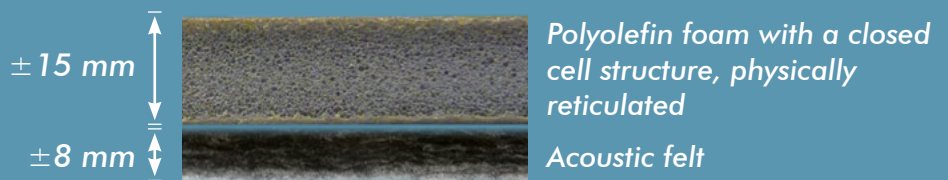
The insulit Bi+20 will meet the "normal or superior acoustic comfort" Belgian standard in function of the specifications of the structures and the building. To determine with precision the level of acoustic comfort, a detailed study of the specific parameters of the building will have to be made by specialized consultants. The new acoustic standard in Belgium demands these elements to be taken into account.

*Which thermal insulation ?

The insulit Bi+20 use, without any other thermal insulation will reduce thermal loss between floors.

Using a first screed (type of "Betopor", "Celmix" etc.) having a thermal purpose will increase the thermal insulation. That kind of screed is recommended with underfloor heating systems. On the other hand, polyurethane sprayed foam as first screed, beneath the underlay, is not recommended because of the decreasing of the acoustic insulation results.

Structure



Acoustic results

ΔL_w 29 dB (Eco-scan : A-2015_ZO_1633-G473/42226)

Dynamic rigidity $s'_t = 7 \text{ MN/m}^3$ (CSTC 2012-DE635xa037)

$L'_{nT,w}$ 46 dB^{1*}
43 dB^{2*}

Acoustic improvement (ΔL) :

$\pm 20,1$ dB at 250 Hz $\pm 31,2$ dB at 500 Hz
 $\pm 44,3$ dB at 1600 Hz $\pm 49,0$ dB at 4000 Hz

1* : Basic floor 350 kg/m²- Lateral walls 150 kg/m² - Receiver room 80 m³

2* : Basic floor 450 kg/m²- Lateral walls 150 kg/m² - Receiver room 80 m³
Simulations done with the CSTC calculation software.

Thermal results

$R = 0,655 \text{ m}^2\text{K/W}$ (CSTC 2015- DE 632xC370)

1
single
layer

- = savings on the materials
- = savings on the application time
- = reduce the overall thickness
- = reduce the working time
- = reduce the operation costs

ΔL_w 29 dB
 $R = 0,65 \text{ m}^2\text{K/W}$

all in one : thermal and acoustic insulation

Benefits

- ✓ All in one : thermal and acoustic insulation
- ✓ Light, soft, easy and quick laying
- ✓ Foam tape included for thermal and moisture insulation
- ✓ Physically reticulated polyolefin with closed cells
- ✓ Low dynamic rigidity
- ✓ CSTC & Eco-scan - reports 2015 = guarantee of results

Characteristics



Foam thickness	$\pm 15 \text{ mm}^*$
Felt thickness	$\pm 8 \text{ mm}^*$
Total thickness	$\geq 23 \text{ mm}^*$
Color	Grey (foam) / Anthracite (felt)
Material	Physically reticulated polyolefin Acoustic polyester felt
Compression	$\pm 10 \%$ under 2 kPa*
Roll size	20 m x 1 m (21.87 yd x 1.09 yd)
Thermal seal foam	foam 3 mm - 25 m x 7 cm 0.12'' - 27.34 yd x 2.75''

* tolerance 10%



Unroll the Insulit Bi+20 rolls edge-to-edge



Insure the tightness with the Stickelfoam 25/70



Place the strip L-foam sides against the wall



Make a $\pm 8 \text{ cm}$ thick reinforced screed on the Bi+20


insulit Bi+20

Underfloor heating system

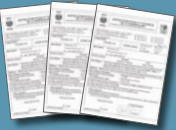
It is possible to use the insulit Bi+20 in combination with an underfloor heating system. In this case, we advise that the heating system should be placed above the insulit Bi+20. The pipes will be maintained in a soft structure designed to be put in floating installation. The pipes cannot be fixed under any circumstances through the insulit Bi+20.



Description for the specifications

 [http:// bi20en.insulit.be](http://bi20en.insulit.be)

CSTC & Eco-scan reports

 We want to draw your attention on the importance of the choice of the acoustic membrane. The use of underlays without acoustic reports established according to the criteria of the european norm EN ISO 717-2 could present the risk that the building does not meet the stringent acoustic requirements in force.

Insulit Bi+20 is CE marked and has the Declaration of Performances that is attached to it.



DOP/2017-01-30/INSULIT Bi+20 - EN16069

Installation

1 Preparation

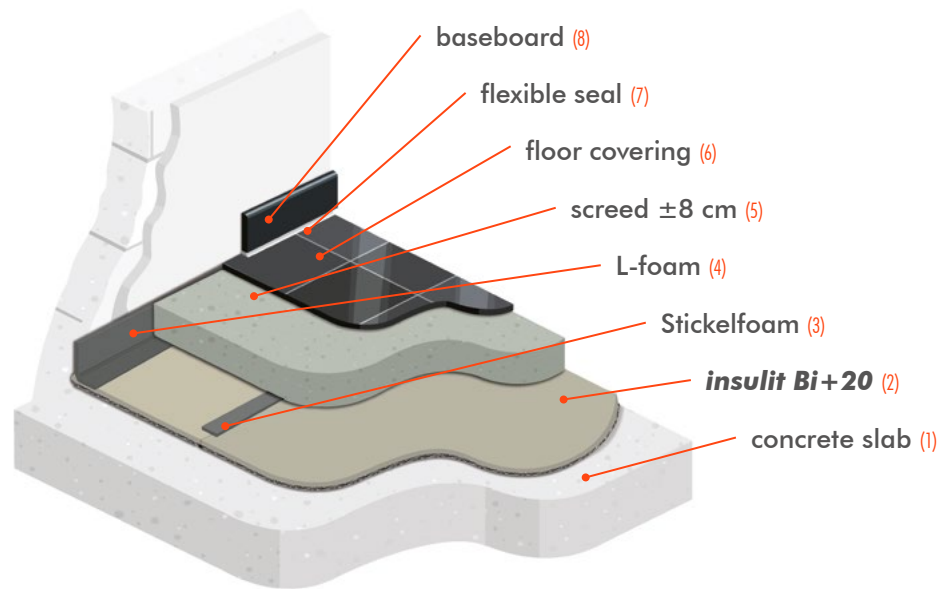
The concrete slab (1) will have to be flat and carefully brushed. At the crossing of the tubes, flashings and ogees will be needed. In all cases, the vertical tubes, heating and sanitary, will be carefully insulated from the flooring they cross, with the help of an insulation sleeve made on the spot from the Insulco Stickelfoam self-adhesive foam.

2 Installation of the underlay

The insulit Bi +20 (2) will have to be unrolled, with its felt side down. The strips need to be laid parallel, edge-to-edge and without overlaps. The foam strip Stickelfoam (3) covers the junctions in order to bring the underlays together and avoid any thermal bridge. The adhesive and peripheral L-foam (4) strips get stuck on the insulit Bi+20 and climbs against the wall.

3 Making of the screed

Cover the insulit Bi+20 with a screed (5) ± 8 cm thick. Once the screed is finished and the floor covering laid, the surplus of L-foam will have to be cut. The baseboard will be laid slightly higher than the floor covering (6) to avoid any lateral acoustic transmission. Then, a flexible seal (7) will be placed under the baseboard (8).



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Technical products

The specialist against impact noises

Z.I. Sud (1) • Rue Buisson aux Loups 1a • 1400 Nivelles • Belgium

Phone : +32 67 41 16 10 • Fax : +32 67 41 16 16

e-mail : insulco@insulco.be • Web : www.insulco.eu

enterprise number : BE 0405.642.815 - RPM Nivelles



Visit www.insulit.be, our website dedicated to the Insulco underlays

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