



THERMO BULLES

bubble thermal reflector

Special fireproof thermo-reflective insulation for renovation

THERMAL PERFORMANCE

CERTIFIED

• By an approved laboratory, in accordance with European standard EN 16012

R intrinsic = 1,61 m².K/W

ε = 0,04 / 0,04

R between 2 air gaps = 2.67 m².K/W

FELT after implementation

- Limited overheating **in summer** due to the reflection of solar radiation
- Heating energy savings **in winter**
- Draughts were stopped and thermal bridges were avoided
- A pleasant sensation of comfort created by the warm wall effect



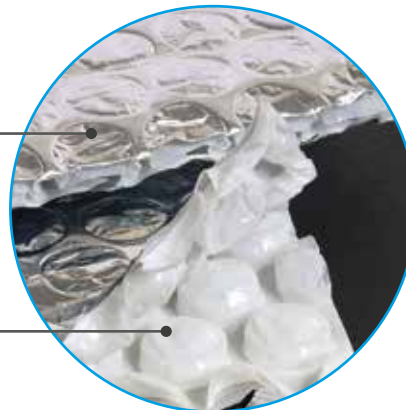
EFFECTIVENESS WITH THIN INSULATION

- Thermal comfort in summer and winter
- Totally watertight and airtight
- Semi-rigid insulation
- Easy to install

It is particularly suitable for room renovations and modular or agricultural buildings.

2 layers of powder-coated aluminium film

2 layers of fireproof polyethylene bubble film



18

EN 13984:2013





GENERAL RECOMMENDATIONS FOR IMPLEMENTATION

- For optimal insulation, leave an air gap (minimum of 20 mm) on each side of the insulation
- Use clips of at least 20 mm (galvanised or stainless steel) or wide-headed nails
- Do not install close to heat sources (near a chimney duct, lights, etc.)
- When installing from the outside, respect the ventilation of the area beneath the roof (DTU series 40) and adopt the necessary precautions if there is sunshine
- On the strip joints, use 75 mm aluminium adhesive

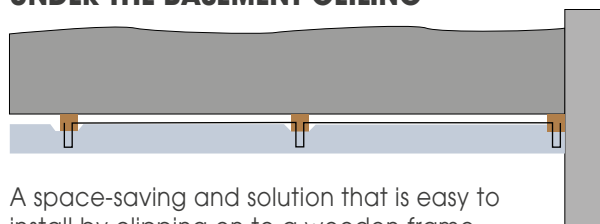
TECHNICAL CHARACTERISTICS

Thickness	7 mm*	<p>EMISSIONS INTO INDOOR AIR *</p> <p>A+</p> <p>A+ A B C</p> <p><small>*Information on the level of emissions of volatile substances relative to the prevailing rate of emission based on a class scale from A+ (very low emissions) to C (high emissions)</small></p>
Area density	186 gr/m ²	
Totally airtight, watertight, and vapour tight		
Reaction to fire	Euroclasse B-s1-d0**	
Resistance to nail tearing (nail shank)	LD : min. 70 N TD : min. 85 N	
Tensile properties:	LD : min. 65 N/50 mm TD : min. 55 N/50 mm	
Tensile strength and maximum longitudinal and transversal elongation	LD : min. 18 % TD : min. 8 %	
Packaging	25 m x 1,25 m = 31,25 m ² ± 3 % - 7,4 kg	

* Thickness can vary according to the compressions on the roll
** Behind a plasterboard

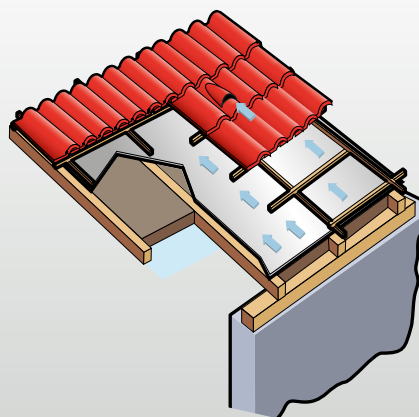


INSTALLATION UNDER THE FLOOR / UNDER THE BASEMENT CEILING



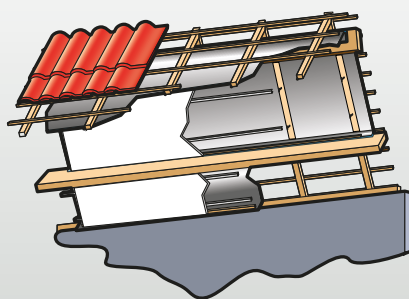
A space-saving and solution that is easy to install by clipping on to a wooden frame pegged under the concrete ceiling.

INSTALLATION ON RAFTERS with thick insulation between rafters



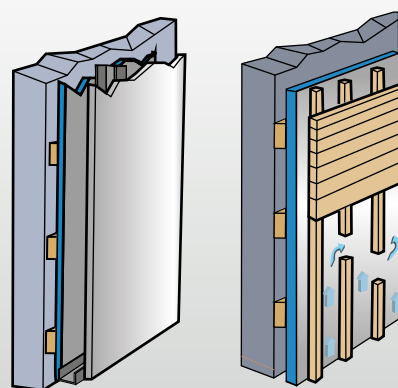
Continuous insulation of the roof, with no thermal bridge. Optimal comfort in summer.

INSTALLATION UNDER RAFTERS in convertible lofts



Space gain and purlins visible to preserve volume and living space.

INSTALLATION ON INTERNAL OR EXTERNAL WALLS



Thermal efficiency with a thin product.