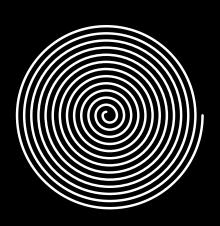


# Energenetically perfect thermoreflective insulation









General Catalogue





### About us

Over 20 years of innovation, for a sustainable, zero-kilometer future

With over 26 years of experience in the market, Over-all is an Italian company that looks to the future with a commitment to developing cutting-edge solutions for energy efficiency and environmental protection.

Located in Arese, we have recently **started producing reflective insulation** with a high recycled content, the result of a production process that combines innovation and respect for our planet. Our products are designed to meet the needs of customers and building designers, who can count on insulation solutions that combine high quality, sustainability and the guarantee of a **Made in Italy** product.

Our goal is to provide materials that help reduce the energy consumption of buildings, improving thermal performance and reducing environmental impact. All our reflective insulation is designed to guarantee energy savings while promoting more sustainable and responsible architecture.

For several years, Over-all has been the only reflective insulation company **associated with ANIT** (National Association for Thermal and Acoustic Insulation) and **CTI** (Italian Thermotechnical Committee) and collaborates as an expert for Italy in **CEN** (European Committee for Standardisation) working groups.

Over-all is not only synonymous with quality and innovation, but also with attentive and **dedicated customer service**. Our philosophy is to support industry professionals at every stage of the project, offering customised solutions and qualified technical support.

At Over-all, we believe that true value is measured not only in the products we offer, but also in the service and support we provide every day to customers and building designers, such as:

- support for thermal engineers in assessing the stratigraphy to be implemented.
- thermo-hygrometric verification of the structures to be insulated.
- acoustic calculation for the insulation of impact noise.
- on-site assistance during the installation of materials
- training through technical seminars organised in partnership with professional associations or at distributors.

#### Just in time warehouse

At its operational headquarters in Arese, Over-all has a warehouse with a large stock of its main insulating materials.

With approximately 20,000 square meters of products always available, and using leading couriers, Over-all is able to deliver very quickly throughout Italy and internationally.

That's why we are committed to being a reliable and innovative partner in every project, working together to build solutions that stand the test of time.

By choosing Over-all, you are choosing the future of sustainable construction.





# When can a material be defined as eco-sustainable?

A material is eco-sustainable when its impact on the environment is very low.



All stages of its life cycle must be analysed: raw materials, production, storage, transport, use, disposal and recycling.

#### **RAW MATERIALS**

The raw materials used in OVER-ALL insulation are almost entirely locally sourced, as they are all supplied by companies in northern Italy.

#### **PRODUCTION**

The production of multi-layer reflective insulation has a very low environmental impact and the **new production plant** has been installed at the **new head-quarters in Arese**. Production waste is minimal.

#### **STORAGE**

Over-foil insulation is supplied in lightweight rolls, with very low volume and weight. One pallet contains more than 100 m² and occupies a volume of ONLY 2 m³; the volume required to store the same quantity of rigid panel insulation with the same performance is more than 6 times greater.

#### **TRANSPORT**

Thanks to the reduced volume of Over-foil insulation, **transport is also reduced by more than six times** compared to rigid panel insulation with the same performance. Heavy commercial vehicles alone are responsible for 23% of the greenhouse gas emissions of the transport sector.

#### **USE**

Over-foil insulation is **easy to work** with and does not require special tools or heavy machinery for installation. It is a **clean** product that **does not fray** or **release substances that are harmful** to the environment or people, and **does not cause irritation** during installation, so **no protective equipment is required**. The special composition of the materials and the **ease of installation** allow them to be installed even in the most difficult places, **drastically reducing waste** and therefore the waste of material as well as **thermal bridges**.

**OVER-ALL** insulation allows you to save up to 90% of the energy used for heating and cooling the building in which it is installed. They have a very long average life span, at the end of which the energy savings and CO2 emissions are vastly superior to those used for its production, transport and installation.

#### **END OF LIFE: DISPOSAL AND RECYCLING**

OVER-ALL products are **made with a high percentage of recycled material** and are **entirely recyclable**.



# Main advantages...

There are several advantages obtained from insulating structures with Over-all insulation

### Over-all reflective insulations guarantee:

- inner walls warmer in winter and cooler in summer
- 2 less convective motions within the environment
- improved living comfort with same internal temperature
- improves the efficiency of heating systems



# **5** Air barrier

During the winter season, by pressure difference, air within the environment is "pushed" towards the outside.

Over-all thermoreflective insulations are a perfect barrier to air which prevents rise of mold and condensation.

# 6 NO thermal bridges Insulation continuity

The flexibility of thermoreflecting materials and the type of application insures isolated structures with maximum continuity, avoiding thermal and acoustic bridges.

# Saving as much as 7 cm!

Use of Over-foli Multistrato 19 in a 100 m<sup>2</sup> apartment allows to gain about 3 m<sup>2</sup> of floor space!





## 7 Low thickness

Thickness reduction means more walkable surface.

On the left an insulated wall with Over-foil Multistrato 19 and on the right a wall insulated with a standard insulation material used to achieve the same thermal performance.



# Insulating solutions for efficient buildings



10 rolls of Over-foil insulation for a 150 m<sup>2</sup> house



Continuous insulation without thermal and acoustic bridges





Over-all insulating does not contain harmful and irritating substances



**Transport savings** 

 $1500 \text{ m}^2 = 20 \text{ m}^3$ Over-foil insulation

two trucks of other insulating



Over-all insulations do not absorb water in case of borken tiles

### Thermoreflective insulation: How does it work

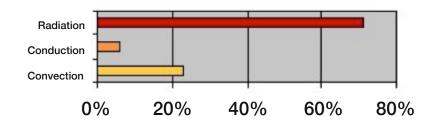
# Operational principle

Radiation is the principal cause of heat loss. In particular, during winter, heat loss through external walls and roofing amounts to 65-80%.

During summer the heat due to radiation transmitted from the roofing to the dwelling is even equal to 93%.

Thermoreflective insulation **do not absorb heat** thanks to the glossy surfaces (low emissivity).

### Heat quantity lost through walls

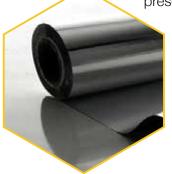


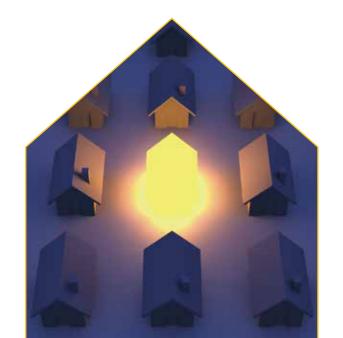
The applications of this kind of insulation in other sectors highlights its functioning and effectiveness, as for example, thermal blankets which are used to keep body temperature, thermos for hot (or cold) liquids that



preserve the liquid temperature

thanks to low-emission surfaces of the cavity, or aluminum films used in cooking, which maintains temperature of food slowing down heat transmission by radiation.









# **Building applications**

The outstanding performance of Over-all reflective insulations are not comparable with other materials which directly depend on thickness to ensure insulation.

Reflective insulations have a low thickness, with the advantages of occupying less space within the masonry structures. They are coated with one or more pure aluminum foil and have an emissivity value of 0.02 - 0.05, therefore able to reflect radiant energy in a very high percentage.

To increase performance, reflective insulations are laid in an "insulating system" which involves creating one or more air cavity.

Thermal reflecting surfaces, in contact with air, limits the heat transfer increasing the insulating power of the air by more than four times.

They are in fact low-emissivity surfaces, allowing to reflect radiated energy up to 98%.

An Over-all reflective material, placed in the middle of an air chamber of a wall or a roof, produces an increase of thermal resistance of about 8 times.

### **REGULATION**

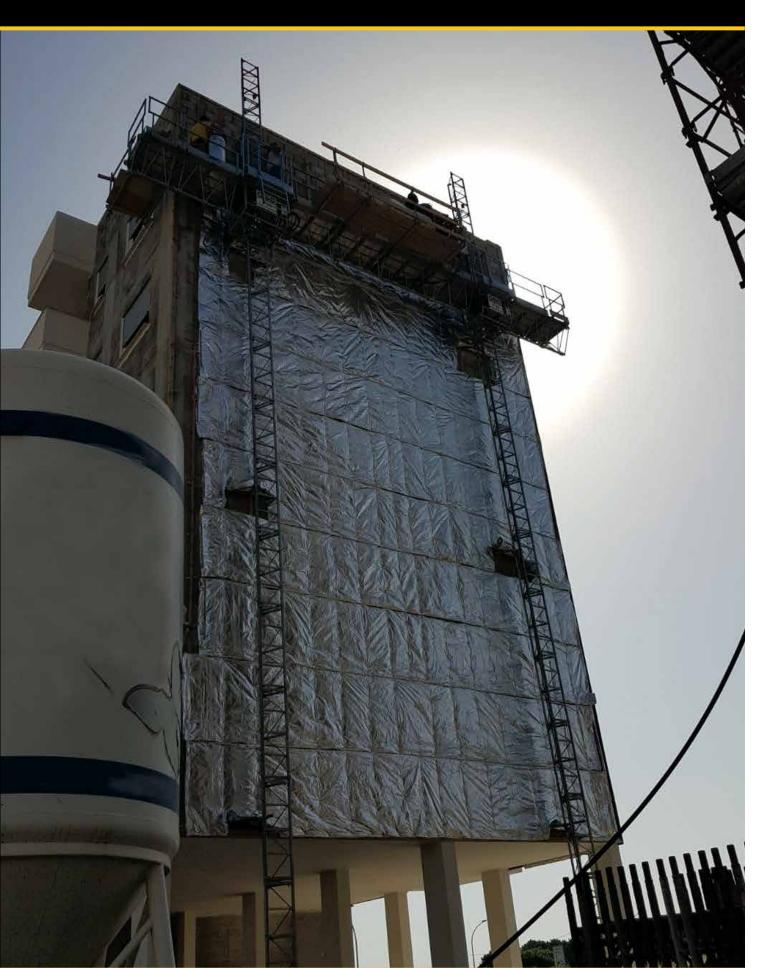
The standard specification to define the thermal insulation performance of reflecting insulating materials is the UNI EN 22097.

The specification describes a set of procedures for using test or calculation methods, defined in existing CEN or ISO standards, to determine the thermal performance of reflective insulation products.

The regulation applies to all insulating products that owe part of their thermal properties to the presence of one or more reflective or low-emissive surfaces and to any associated air spaces.

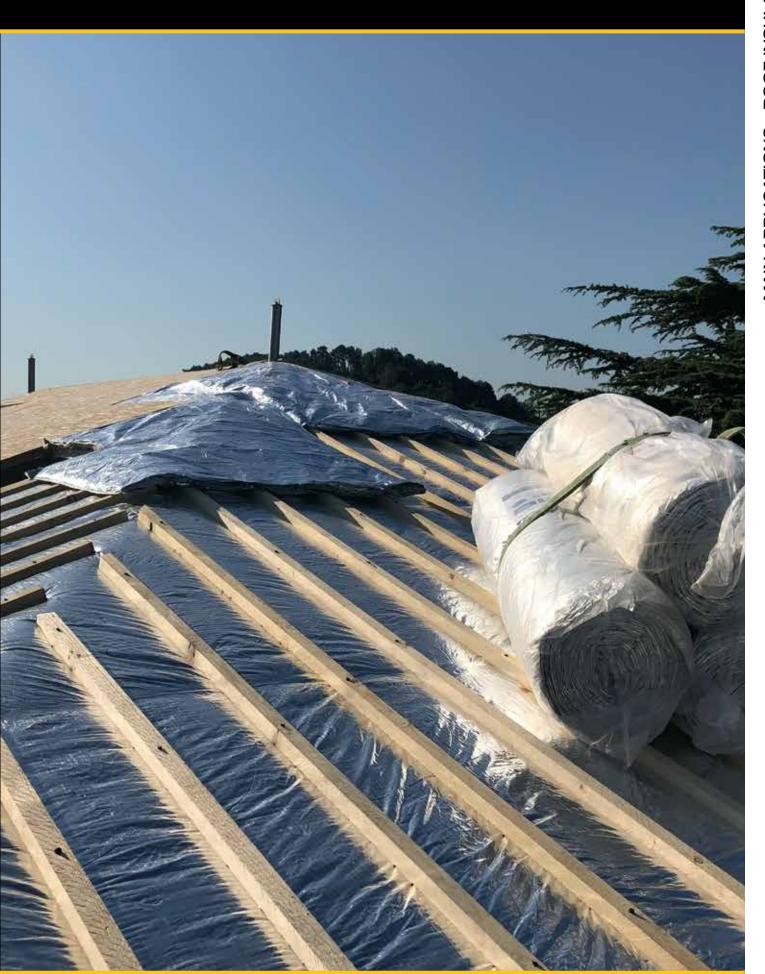
# Wall insulation



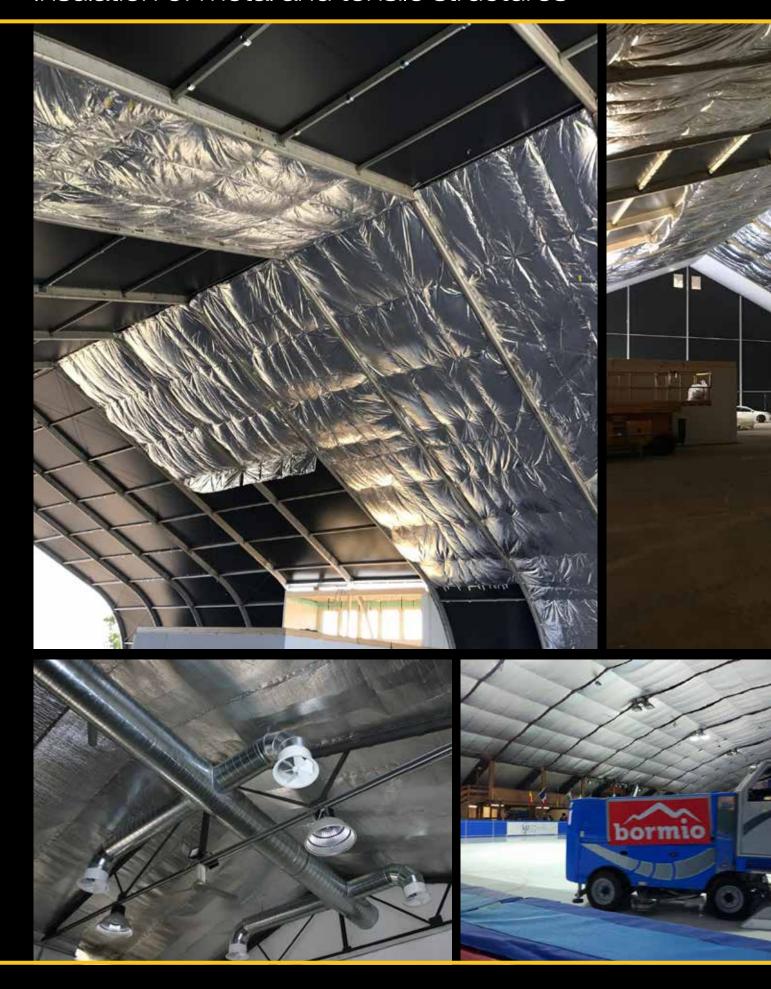


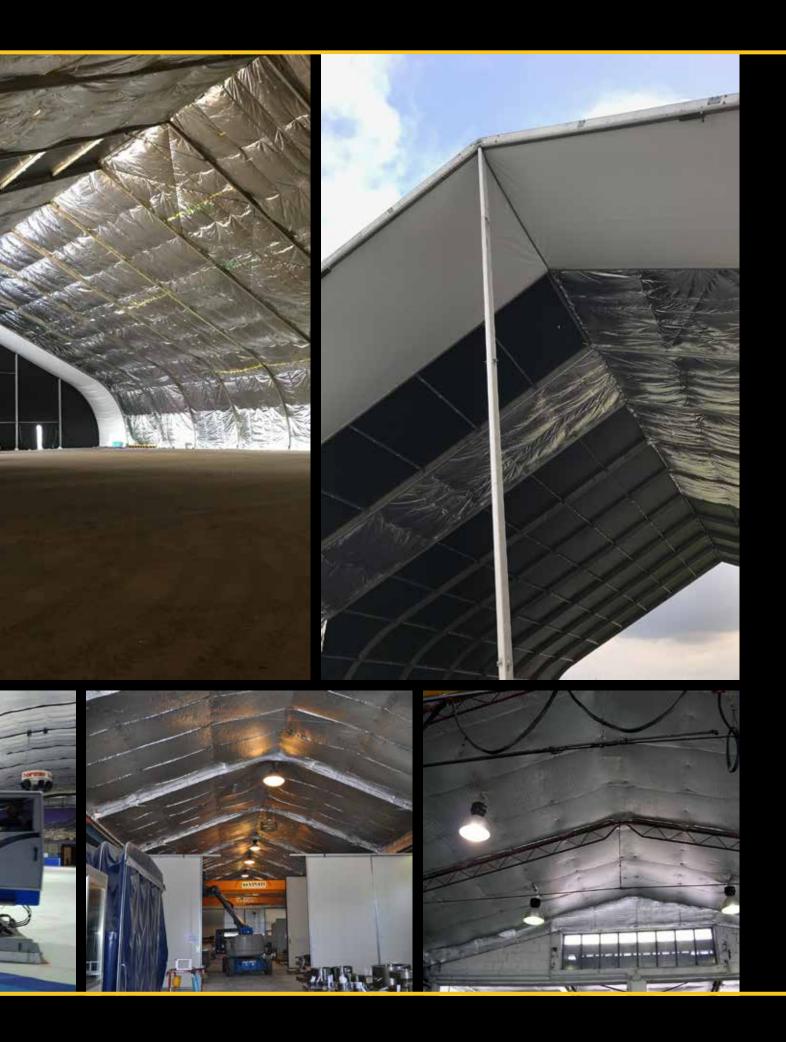
# Roof insulation





# Insulation of metal and tensile structures





# Insulation of radiant walls

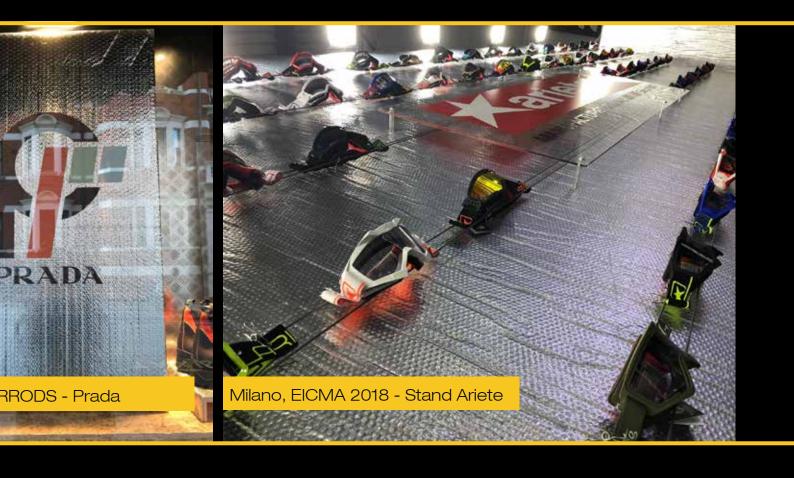


# Fashion and design



# Transport and storage



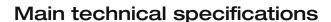


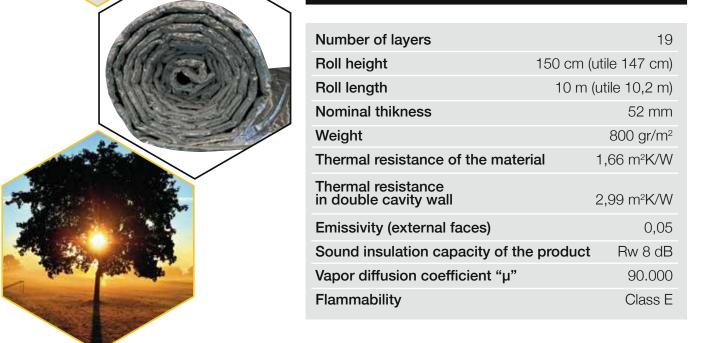




## Over-foil Multistrato 19

Over-foil Multistrato 19 is the best performing pure aluminium reflective insulation on the market, environmentally sustainable and certified. Thanks to its high thermal insulation performance, tested in accordance with the new UNI EN 22097 reference standard, it is the ideal insulation for limiting thicknesses in renovations and new constructions in combination with drywall systems. Used in walls and roofs, it makes it possible to exploit the air spaces created, thus obtaining high-performance structures with low thickness. Over-foil Multistrato 19 consists of 19 layers with the 2 outer faces of pure aluminium protected and reinforced with net.









# Over-foil Multistrato 11





Over-foil Multistrato 11 is the environmentally sustainable and certified pure aluminium reflective insulation. Tested in accordance with the new reference standard UNI EN 22097, it is the ideal insulation for reducing thicknesses in renovations and new buildings in combination with drywall systems. Overfoil Multistrato 11 consists of 11 layers with the 2 outer faces of pure aluminium protected and reinforced with net.

Number of layers	11
Roll height	150 cm (utile 147 cm)
Roll length	10 m (utile 10,2 m)
Nominal thikness	34 mm
Weight	660 gr/m <sup>2</sup>
Thermal resistance of the mater	ial 1,06 m <sup>2</sup> K/W
Thermal resistance in double cavity wall	2,39 m <sup>2</sup> K/W
Emissivity (external faces)	0,05
Vapor diffusion coefficient "µ"	90.000
* inhouse calculation	

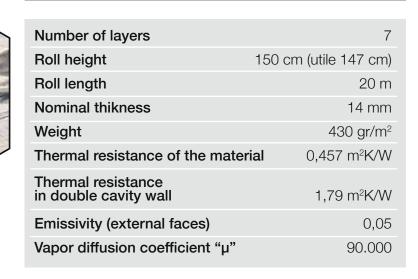






# Over-foil 311+

Over-foil 311+ is the eco-friendly, certified pure aluminium reflective insulation. Consisting of **7 layers** in total, it has the 2 outer faces of pure aluminium protected and reinforced with net; the 5 inner layers are additional reflective films, wadding layers and PE foam film. Tested according to the new **UNI EN 22097** standard, it has a reduced thickness but offers good performance in terms of insulation.



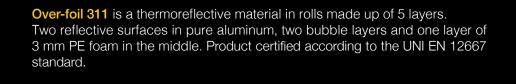




# Over-foil 311







Number of layers	5
Roll height	150 cm
Roll length	20 m
Nominal thikness	9 mm
Weight	520 gr/m <sup>2</sup>
Thermal resistance of the material	0,73 m <sup>2</sup> K/W
Thermal resistance in double cavity wall	1,90 m <sup>2</sup> K/W
Emissivity (external faces)	0,05
Vapor diffusion coefficient "µ"	30.789
Flammability	Class F
Soundproofing power (wall)  * inhouse calculation	Rw 55 dB*





# Over-foil 2L-2

Over-foil 2L-2 is a heat-reflective material in rolls composed of: 2 outer faces of pure aluminum protected and 2 air bubbles with high grammage. Product certified according to the UNI EN 12667 standard.

Thikness	6,5 mm
Roll height	120 cm
Roll length	25 m
Weight	340 gr/m <sup>2</sup>
Thermal resistance of the material	0,32 m <sup>2</sup> K/W
Thermal resistance in cavity wall	1,49 m²K/W
Emissivity (external faces)	0,05
Vapor diffusion coefficient "µ"	30.789
Soundproofing power (wall)	Rw 54,8 dB*
* inhouse calculation	



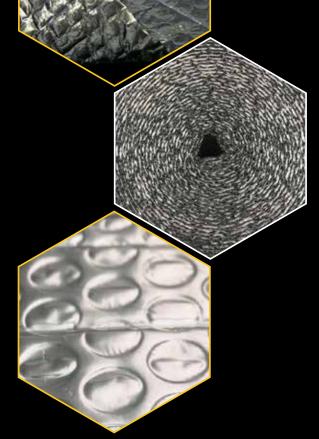


# Over-foil Rad





Over-foil Rad is a heat-reflective material in rolls composed of: 2 outer faces of protected pure aluminum and 1 air bubble with high grammage. Product certified according to the UNI EN 12667 standard.



Thikness	3 mm
Roll height	120 cm
Roll length	25 m
Weight	300 gr/m <sup>2</sup>
Thermal resistance of the material	0,125 m <sup>2</sup> K/W
Thermal resistance in double cavity wall	1,27 m <sup>2</sup> K/W
Emissivity (external faces)	0,03
Vapor diffusion coefficient "µ"	30.700



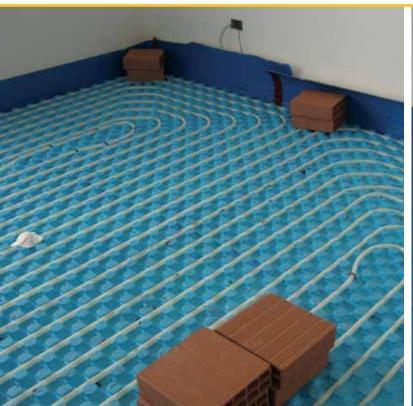




# Over-foil BM

Over-foil BM is a thermoreflective material developed and manufactured to insulate floors. Noise is a very common type of pollution in urban realities. Flexibility, high compressive and tensile strength, ease and quick laying of the product are the features that make it possible to realise "floating" floors with excellent acoustic insulation compliant with the acoustic requirements set by standards. Over-foil BM is also a greate thermal insulation and a perfect vapor barrier.

Roll height	120 cm
Roll length	25 m
Nominal thikness	6 mm
Weight	420 gr/m <sup>2</sup>
Thermal resistance of the material*	0,35 m <sup>2</sup> K/W
Acoustic insoulation value (floor)	<b>ΔL</b> w 31 dB*
* inhouse calculation	

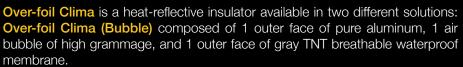




# Over-foil Clima







Over-foil Clima (Wavy) composed of 1 outer face of pure aluminum, 1 3-mm polypropylene wavy film, and 1 outer face of black TNT breathable waterproof membrane.

Thikness	4 mm
Roll height	120 cm
Roll length	40 m
Weight	290 gr/m <sup>2</sup>
Thermal resistance of the material	0,125 m <sup>2</sup> K/W
Thermal resistance in single cavity wall	0,614 m²K/W
Permeability	75,4 g/m <sup>2</sup> 24h
Vapor permeability value "µ" (open flaps)	

