2026

ama®

ADVANCED MATERIALS

AEROPAN VP

ALTA TECNOLOGIA PER ALTE PRESTAZIONI

AEROPAN VP

The AEROPAN® VP vacuum-sealed insulation panel represents the evolution of siliceous Aerogel products. Developed with the aim of guaranteeing the highest level of thermal insulation, this product has a high technological content and is the result of advanced productive procedures.

The extremely high insulating properties ensure unmatched performances, allowing to achieve the highest levels of insulation in various applications in construction and industrial domains and, more in general, wherever traditional insulation products may have application limits.

It is the best performing solution in the field of insulation panels for installations which require the best thermal performance in extremely reduced spaces.

The AEROPAN® VP panels have been used to obtain the best thermal insulation performances, thanks to the extraordinary insulant qualities of the Aerogel core, and are able to guarantee unparalleled performances in various application domains. They can be used for applications in a temperature range between -70°C and +80°C.

AEROPAN® VP contains a nanotechnological Aerogel core; the nanopores drastically reduce the transmission of energy and, consequently, the thermal conductivity by contact is reduced to the minimum. The addition of specific and selected mattifying products helps minimizing the emission of infrared radiations.

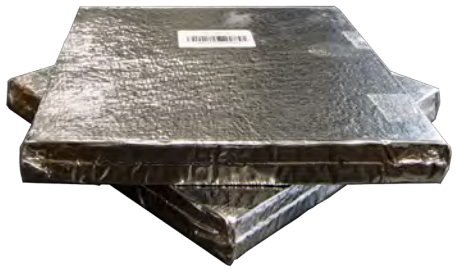
AEROPAN® VP is then transformed into a vacuum-sealed panel, hence avoiding any thermal transmission by convection.

The core of AEROPAN® VP is heat-sealed in a vacuum-sealed metallized, multilayer film. The incredibly low internal pressure and the core of the microporous panel allow to reach extremely low values of thermal diffusion.

AEROPAN® VP enables a thickness reduction up to 10 times compared to traditional insulation products while still maintaining the same insulating properties in terms of thermal transmittance.

THE ADVANTAGES OF AEROPAN® VP

- Aerogel core for high performances
- Minimum thermal conductivity of 0.0045 W/mK
- Higher energetic saving and, consequently, economic saving
- Thickness reduction: from 5 up to 10 times thinner than a traditional product
- Higher dimensional stability
- Minimal loss of the living spaces
- Waste reduction and higher level of living comfort
- Maximum fire resistance for a safer use
- Aerogel core made of recycled raw materials and completely recyclable



AEROPAN® VP

AEROPAN® VP-R

The AEROPAN® VP panel is available in 2 different versions:

- **AEROPAN® VP** naked panel, suitable for applications in wall cavities and where a dry finishing is needed.
- **AEROPAN® VP-R** double coated panel with a 3 mm cement slab for applications in which a direct finishing is needed or when a higher resistance to impact and superficial abrasion is required.

AEROPAN® VP FIELDS OF APPLICATIONS

1. **Facades – new buildings**: compliance with the European directive on the energy performance of buildings is essential in new buildings. The AEROPAN® VP insulation panels offer a space-saving alternative to conventional insulation for facades, improving the indoor climate comfort.
2. **Facades – energy requalification**: in energy renovations, the AEROPAN® VP panels play a crucial role while also meeting current standards. The reduced thickness of AEROPAN® VP allows to maintain the existing appearance of the facades without removing the overhang of the roof or of the existing architectural elements (window frames, windowsills, etc.). This solution, particularly valuable for historical buildings, allows energy renovations without compromising the aesthetics of the building.
3. **Terraces and Balconies**: terraces have become essential living spaces, but professionally insulating these areas can be complex. The AEROPAN® VP panels offer a thin yet efficient insulation, eliminating height differences and ensuring a barrier-free flow.
4. **Floor Applications**: the AEROPAN® VP panels revolutionize the field of floor insulation. With a reduced thickness compared to traditional materials, they offer versatility in private buildings and commercial applications, such as cold rooms. Ideal for renovations, they allow the installation in areas of limited height, ensuring greater thermal efficiency and reducing heating costs.

Thermal conductivity

PANEL	INSULATION THICKNESS	λ 90/90
AEROPAN VP	10 mm	0.0047/0.0051
AEROPAN VP	20 mm	0.0046/0.0050
AEROPAN VP	25 mm	0.0045/0.0049
AEROPAN VP	30 mm	0.0045/0.0051
AEROPAN VP	35 mm	0.0045/0.0047

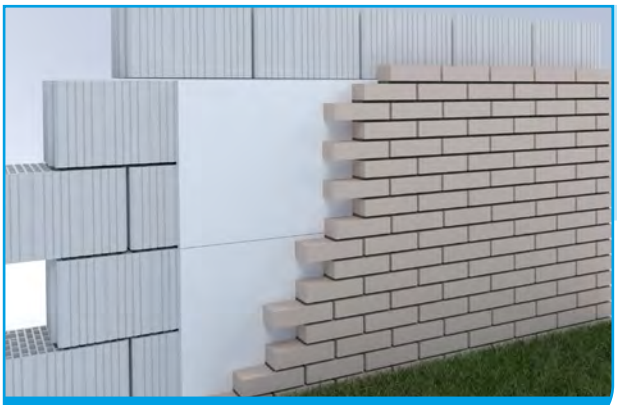
Valori comprensivi delle lastre cementizie di 3 mm

PANEL	INSULATION THICKNESS	λ 90/90
AEROPAN VP-R	10 mm	0.0080/0.0089
AEROPAN VP-R	20 mm	0.0062/0.0066
AEROPAN VP-R	25 mm	0.0060/0.0068
AEROPAN VP-R	30 mm	0.0068/0.0070
AEROPAN VP-R	35 mm	0.0070/0.0077

TECHNICAL DATA	VALUES	UNITÀ
Standard panel format	1200x600	mm
Special pieces panel format	600x600	mm
	150x600	mm
	100x600	mm
	50x600	mm
Thicknesses	10/15/20/25/30	mm
Thicknesses upon request	35/40	mm
Water vapor permeability (μ)	3,600	μ
Temperature limit	- 70 / + 80	°C
Compression resistance (10% deformation)	σ 10 15 / 61	kPa
Dimensional stability	0.60 / 1.50	mm
Tensile strength	σ 10 / 100	kPa
Specific heat	1,000	J/Kg K
Nominal density	180±10	kg/m^3
Fire reaction class	A2	
Long-term water absorption by partial immersion	< 100	g/m^2
Color	Grey/White	

PRECAUTIONS FOR USE

The AEROPAN® VP metallic plastic, multilayered film must not be damaged by holes, cuts, milling or riveting; in these cases, the internal pressure of the panel will rise, and its special properties will be compromised.



APPLICATIONS

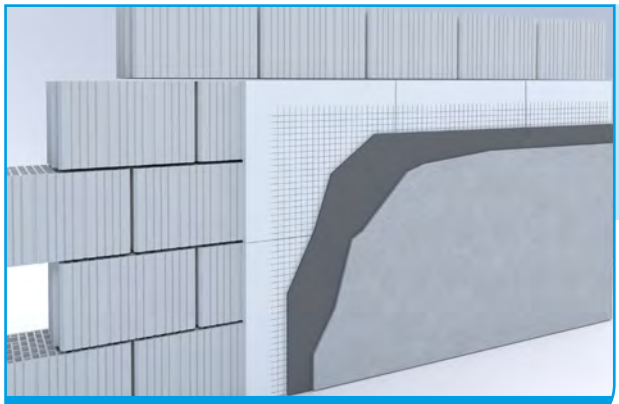
INTERCAPEDINE

APPLICATIONS

CAVITY WALLS

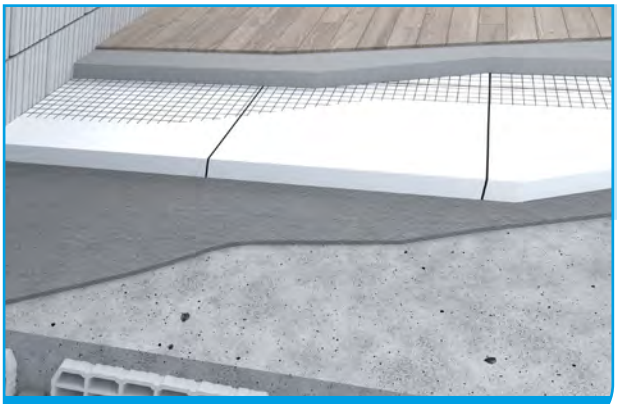
APPLICATIONS

THERMAL BRIDGES



APPLICATIONS

EXTERNAL WALLS



APPLICATIONS

INTER-FLOOR SLABS

APPLICATIONS

TERRACES AND FLAT ROOFS

APPLICATIONS

ROOFING

AEROPAN® FIX *MECHANICAL FIXING SYSTEM*

The revolutionary AEROPAN® FIX fixing system, currently patent pending, offers an advanced solution to securely and permanently attach our AEROPAN® VP panels to any type of support.

The inability to use traditional fixing systems, in order to avoid dangerous holes in the vacuum-sealed panels and, thus, guarantee the outstanding certified performance, has pushed the AMA ADVANCED MATERIALS department to design a plastic fixing system.

This system, easy to install and extremely versatile, guarantees an excellent mechanical sealing to preserve the long-term adhesion to the support. The system is made of a double nylon disk with sealing ties running through it.

The first disk has to be fixed to the existing support through the adequate dowels, with 5 holes arranged radially. The second disk guarantees the tear resistance, by tightly anchoring itself to the sealing ties inserted in the support disk. The ties, 1mm thick, minimize the joints between the panels, guaranteeing an outstanding mechanical tear resistance when combined with the external fixing disk.

After placing the fixing disk, the exceeding parts of the ties can be cut flush with the disk.

With the possibility of installing 4 ties, the AEROPAN® FIX System offers maximum flexibility in terms of use, adapting perfectly to the specific requirements of installation area. An innovative solution to guarantee the safe and reliable installation of the AEROPAN® VP panels.

PREPARING THE SURFACE

Before the installation, it is necessary to treat the wall surface with an adequate primer to guarantee a good adhesion; in any case the surface must be intact and free of uneven or sharp parts. In the case of irregular surfaces, proceed with an adequate shaving of the surface to guarantee a correct planarity.

PLACING THE STARTER PROFILE

Tightly secure the starter profile to the wall using dowels.

INSTALLING THE AEROPAN® VP-R PANEL

Apply a layer of adhesive on the panel through a 10mm notched trowel. Install the panel on the wall horizontally, starting from the starter profile.

INSTALLING THE AEROPAN® FIX FIXING SYSTEM

Proceed with the installation of AEROPAN® FIX starting from the vertical joint between the horizontally placed panels, inserting the right number of ties in the support disk and mechanically fastening the disk on the support using the adequate fixing dowels.

Successively, it is fundamental to proceed with the installation of the AEROPAN® FIX fasteners at least in every T joint between one panel and the other.

INSTALLING THE NEXT PANELS

Proceed with the installation of the AEROPAN® VP-R panels, staggering the joints and using all the available sizes of the panel.

Where it is necessary, close possible small areas by using Aerogel AEROPAN ®panels to avoid thermal bridges.

LEVELING THE SURFACE

Using a straight edge, level the covered surface to guarantee the correct installation of the system and ease the following shaving procedure.

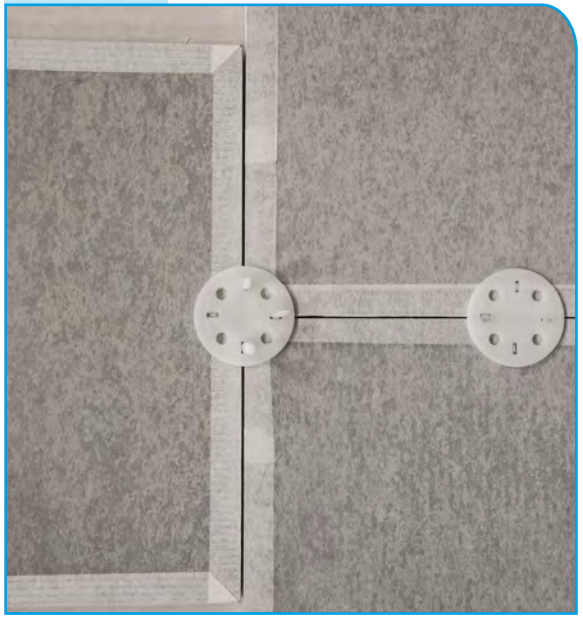
CLOSING THE AEROPAN® FIX FASTENERS

Insert the fastening disks of the AEROPAN® FIX dowels, by carefully getting in adherence to the surface of the panel and cutting the exceeding part of the sealing ties with an adequate tool (cutter or angle grinder with a small disk).

STEP - 2

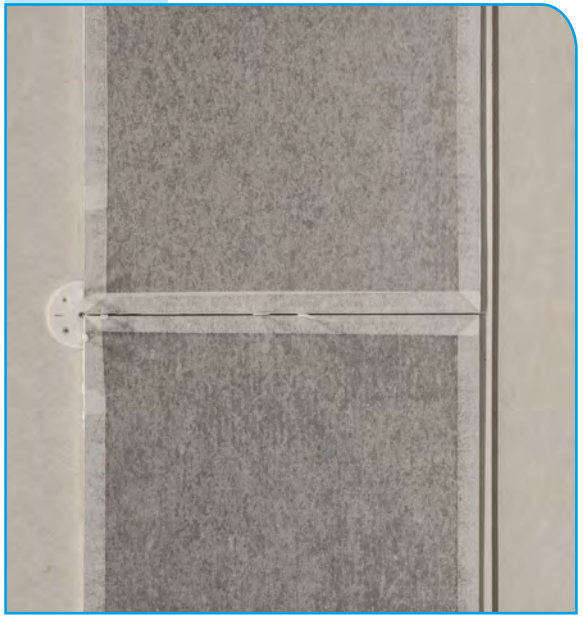
STEP - 4

STEP - 6

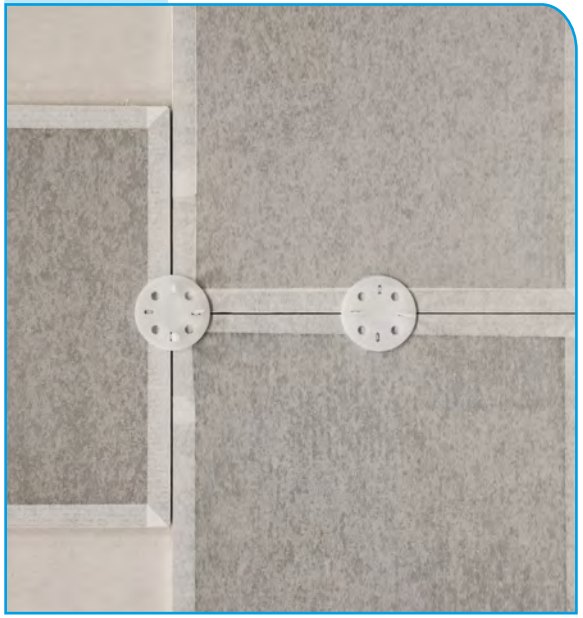


STEP - 1

STEP - 3



STEP - 5



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