



AMAGEL ULTRA

Amagel ULTRA represents the new insulation panel developed by AMA Advanced Materials to redefine standards in the constructions field.

Thanks to its innovative structure, which combines Aerogel and composite foam, Amagel Ultra offers unparalleled thermal performance – with a **conductivity of $\lambda_{10, dry} = 0,013 \text{ W/mK}$** – and extraordinary flexibility, making it suitable even for the most complex surfaces.

In the search for the maximum thermal protection, Amagel ULTRA is an essential insulator for its unique properties: extremely low thermal conductivity - $\lambda = 0,013 \text{ W/mK}$ -, higher flexibility, compression resistance, hydrophobicity, and ease of use. Amagel ULTRA can be used in a temperature range between -180°C and $+200^{\circ}\text{C}$.

Amagel ULTRA is available in thicknesses ranging from 10 to 60 mm, allowing optimization of internal spaces for applications in commercial and residential buildings, as well as guaranteeing the highest thermal resistance values with the same thickness as conventional insulation materials.

Its application permits achieving important results in complex situations, like the insulation of windows or parts of roofings, guaranteeing an actual improvement in the overall energy efficiency of the building, with excellent thermal and acoustic results.

Thanks to the highest R values per unit of surface compared to any insulation material, Amagel ULTRA is the ideal coating for the highest energy efficiency in the construction of dry walls, under floors, roofs, counter frames, and window frames.

Unlike rigid and preformed insulators, Amagel ULTRA adapts perfectly to any shape or design: it bends without losing efficiency, ideal for curves, angles or peculiar geometries.

Its specific composition guarantees performances up to 20% higher compared to the current Aerogel-based insulators. Moreover, its unique composition made of composite foam, and without the use of mineral fibers, makes it ideal for a clean and safe installation with a 90% reduction of the dustiness that characterized traditional Aerogel-based insulators.

Amagel ULTRA is a fully hydrophobic (>98%) insulation panels with Class B – UL94-V0 fire resistance.

TYPES AND FORMATS

Amagel ULTRA is available in panels in 10mm, 20mm, 30mm, 40mm, 50mm, and 60mm thicknesses.

THERMAL INSULATION TECHNICAL SPECIFICATION

Realization of panel-based thermal insulation, made from composite foam and siliceous Aerogel of Amagel ULTRA type, water repellent and breathable, supplied in panels with a nominal thickness of 10/20/30/40/50/60 mm, with a volumetric density of 100 kg/m^3 , a thermal conductivity of 0.013 W/mK , an operating temperature between -180°C / $+200^{\circ}\text{C}$, fire reaction Euroclass B, permeable to vapor diffusion, impermeable to surface water and/or immersion with water contact angle not below 150° . Suitable for use in dry applications, cavities, roofing, under screed applications and for the thermal insulation of complex surfaces.

TECHNICAL DATA	VALUES	UoM	TEST METHOD
Panel thickness	10/20/30/40/50/60	mm	
Thermal conductivity ($\lambda_{10, dry}$) at 10°C	0,013	W/mK	EN 12667
Temperature limit	-180 +200	$^{\circ}\text{C}$	
Specific heat	1.000	J/kgK	ASTM E 826
Nominal density	100	kg/m^3	
Compression	55	kPa	EN ISO 29469:2022
Water absorption	0,12	kg/m^2	EN ISO 29767
Tensile strength perpendicular σ_{mt}	0,10	N/mm ²	EN 1607:2013
Fire reaction class	B		EN 13501-1
Dimensional Stability	<1%		EN 1604
Color	white		
Water vapor permeability s_d	0,10	m	UNI EN 12086:2013