

ALUMEN

SUPERCEL® Alumen - is a high performance rigid thermoset designed for ductworks, especially those requiring non-fibrous material. It comprises a **phenolic resin foam insulation core** with, an external 25 micron aluminium vapor barrier foil facing reinforced by **5x5mm glass scrim** on the **upper side** and a saturated **glass tissue facing on the lower side**.



EN 13166



SECURITY

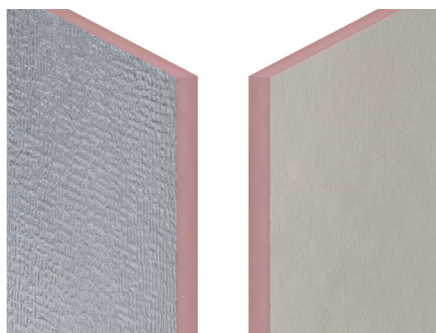
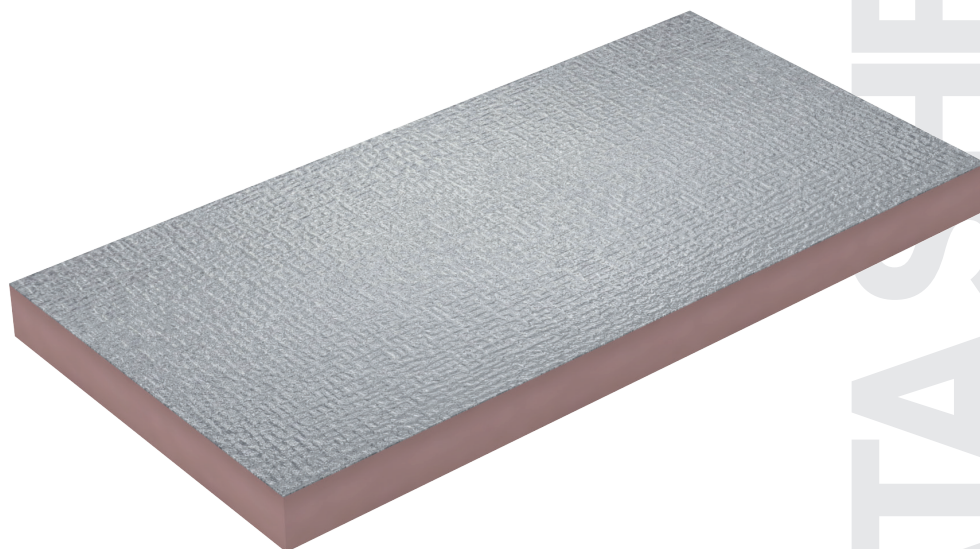


INSULATION

BIM
ready



CERTIFICATE
EPD



SUGGESTED APPLICATIONS

- » Insulation of cavity walls
- » Insulation of heated floors
- » Insulation of ceilings or roofs

PANEL SIZE:

- » 1200 x 600 mm (**STANDARD**)
- » 1200 x 1200 mm
- » 1200 x 2400 mm

THERMAL CONDUCTIVITY λ_D	0,019 W/mK / 0,021 W/mK
REACTION TO FIRE EUROCLASS	B - s ₁ , d ₀
PROFILES	Standard flat profile edges
FACINGS	25 micron aluminium vapor barrier foil reinforced by 5x5mm glass scrim / Saturated glass tissue

ITEM SPECIFICATION

Thermal insulation performed using **SUPERCEL® ALUMEN** - a closed cell phenolic foam boards, with dimensionsx..... mm, thickness mm, coated with a **25 micron aluminium vapor barrier foil facing** reinforced by **5x5mm glass scrim** on the **upper side** and a saturated glass tissue facing on the lower side, CE marked according to the EN13166 standard, EPD verified (Environmental Product Declaration), having a declared thermal conductivity $\lambda_D = \dots$ W/mK, a declared thermal resistance: $R_D = \dots$ m²K/W, a reaction to fire Euroclass B-s1,d0 according to EN13501-1; with compressive strength ≥ 120 kPa, for the Insulation of cavity walls, of heated floors and of ceilings or roofs (...)*.

*it is advisable to complete the specifications by indicating the most relevant characteristics and performances for the specific application

TECHNICAL CHARACTERISTICS (TYPICAL VALUES)

HARMONIZED PRODUCT STANDARD

EN 13166:2012+A2:2016 - THERMAL INSULATION FOR BUILDINGS - FACTORY MADE PHENOLIC FOAM PRODUCTS (PF)

Thickness (d_N)	mm	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	
Thermal conductivity λ_D	W/mK	0,021						0,019									
Thermal resistance R	m ² K/W	0,95	1,43	1,90	2,38	2,86	3,33	4,21	4,74	5,26	5,79	6,32	6,84	7,37	7,89	8,42	
Thermal resistance R_D	m ² K/W	0,95	1,40	1,90	2,35	2,85	3,30	4,20	4,70	5,25	5,75	6,30	6,80	7,35	7,85	8,40	
Thermal Transmittance U	W/m ² K	1,05	0,71	0,53	0,43	0,35	0,30	0,24	0,21	0,19	0,17	0,16	0,15	0,14	0,13	0,12	
Durability of Thermal Resistance against heat, weathering, aging / degradation							Determination of the aged values of thermal resistance and thermal conductivity										R_D & λ_D

PROPERTIES	NORMS	UNITS	VALUES														CODE/CLASS	
			20	30	40	50	60	70	80	90	100	110	120	130	140	150		160
Thickness (d_N)	-	mm	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	
Thickness tolerance	EN 823	mm	± 2			-2/+3				-2/+5							T1	
Length	EN 822	mm	600 to 2400														L ₁	
Width	EN 822	mm	1200														W ₁	
Compressive strength	EN 826	kPa	≥ 120														CS(Y)120	
Dimensional stability	EN 1604	%															DS(70,90); DS(-20,-)	
Variation thickness: 48h at 70±2°C & 90±5% R.H. 48h a -20°C			≤ 1,5 % in reduction															
Variation length and width: 48h at 70±2°C & 90±5% R.H. 48h a -20°C			≤ 1,5 % in absolute value															
Short term water absorption	EN 1609	kg/m ²	≤ 0,75														WS3	
Long term water absorption	EN12087	kg/m ²	≤ 1,00														WL(P)4	
Reaction to fire	EN 13501-1	Euroclass	B s ₁ d ₀														RtF	
Water vapor permeability and transmission	EN 12086	μ	> 10.000														MU	
Apparent mass	EN 1602	kg/m ³	37,5 ± 2,5														AD	
Operating temperature range	-	°C	-50 / +120														ST(-) / ST(+)	
Specific heat capacity	-	J/kgK	1750														c	

INDICATIONS FOR USE

When using boards from the **SUPERCEL® Building Insulation** product range, in phenolic foam, it is advisable to keep in mind the following good practices:

- » The boards must be stored, even when on site, indoors or protected by waterproof sheets, in their original packaging, dry and protected from bad weather;
- » The boards must not be bonded to degraded supports;
- » The boards must not be used if damaged or deteriorated;
- » The boards were not designed with the intention of providing a finished covering;
- » The boards must be cut using mechanical cutting.

Any small areas of non-adhesion between the facing and the foam may originate from the production cycle. These areas do not affect the physical-mechanical properties of the panels in any way. The same applies to the detachment areas caused by the installation phases relating to the bonding and leveling of the slabs when they are beaten with a trowel (or similar). Areas of non-adhesion between the facing and the foam must be removed with a cutter before proceeding to subsequent phases.

PACKING LIST

Thickness [mm]	Format [mm]	Bards / pack	m ² / pack	Pack / pal.	m ² / pal.
40	1200x600	6	4,32	20	86,40
50	1200x600	8	5,76	12	69,12
60	1200x600	5	3,60	16	57,60
70	1200x600	7	5,04	10	50,40
60	1200x600	5	3,60	12	43,20
70	1200x600	5	3,60	10	36,00
100	1200x600	4	2,88	12	34,56
120	1200x600	4	2,88	10	28,80
130	1200x600	3	2,16	12	25,92
140	1200x600	4	2,88	8	23,04
150	1200x600	4	2,88	8	23,04
160	1200x600	3	2,16	10	21,60

NOTES

The boards of the **SUPERCEL® Building Insulation** product range, in expanded phenolic foam, are considered articles with reference to the European regulations (Reg. 1906/2007/EC - REACH), therefore they do not require safety data sheets. When using the product, it is advisable to wear protective gloves and glasses and to comply with the workplace safety regulations.

The information and instructions reported above, although corresponding to our best knowledge, are to be considered, in any case, purely indicative; therefore, before using the product, anyone who intends to use it is required to establish whether or not it is suitable for the intended use, and in any case, assumes any responsibility that may arise from its use.

The most updated technical data sheet is available on the website at the following address: www.resineisolanti.com.