

TECHNICAL DATA SHEET

PRODUCT DETAILS

SUPERCCEL® ALUMEN is a high performance rigid thermoset with resin insulation core with aluminum vapor barrier foil facing covering the upper side and an internal saturated glass tissue facing covering the lower side.

The panel is available in the following standard dimensions:

1200 x 2400 mm

1200 x 600 mm

THERMAL CONDUCTIVITY λ_D

0,019 W/mK / 0,021 W/mK

SUGGESTED APPLICATION

Insulation for structural ceilings or flat roofs with non pasted synthetic membranes. Cavity walls, External ventilated facade systems. Civil or industrial floors. Heated floors.

PROFILES

Standard flat profile edges or tongue and groove fastening system.

FACINGS

Aluminum vapor barrier foil facing / Saturated glass tissue

CHARACTERISTICS AND PERFORMANCES - EN 13166:2016

| PROPERTIES | NORMS | UNITS | VALUES | | | | | | | | | | | | | | | |
|-------------------------------------------|------------|------------------------------------------------------------------------|-----------------------------------------------------------------------------|----|----|-------|----|----|----|----|-----|-------|-----|-----|-----|-----|--|--|
| | | | 25 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 120 | 130 | 140 | 150 | 160 | | |
| Thickness | | mm | 25 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 120 | 130 | 140 | 150 | 160 | | |
| Thickness tolerance | EN 823 | mm | -2/+2 | | | -2/+3 | | | | | | -2/+5 | | | | | | |
| Length | EN 822 | mm | 600 up to 4800 | | | | | | | | | | | | | | | |
| Width | EN 822 | mm | 1200 | | | | | | | | | | | | | | | |
| Compressive strength | EN 826 | kPa | ≥ 150 | | | | | | | | | | | | | | | |
| Dimensional stability | EN 1604 | % | | | | | | | | | | | | | | | | |
| | | Thickness: 48 hrs at (70 ± 2) °C & relative humidity of (90 ± 5)% | ≤ 1,5 % | | | | | | | | | | | | | | | |
| | | Length & Width: 48 hrs at (70 ± 2) °C & relative humidity of (90 ± 5)% | ≤ 1,5 % | | | | | | | | | | | | | | | |
| Water absorption by immersion | EN 1609 | Kg/m ² | ≤ 1 | | | | | | | | | | | | | | | |
| Water vapor permeability and transmission | EN 12086 | μ | > 10000 | | | | | | | | | | | | | | | |
| Reaction to fire | EN 13501-1 | Euroclass | C s ₁ d ₀ | | | | | | | | | | | | | | | |
| Fire propagation | BS 476-6 | | Index (I) not exceeding 12* Sub-index (i ₁) not exceeding 6* | | | | | | | | | | | | | | | |
| Flame spread | BS 476-7 | | Class 1* | | | | | | | | | | | | | | | |
| Operating temperature range | | °C | -50 / +120 | | | | | | | | | | | | | | | |
| Specific heat capacity | | J/Kg K | 1750 | | | | | | | | | | | | | | | |
| Apparent mass | EN 1602 | Kg/m ³ | 35 ± 1,5 | | | | | | | | | | | | | | | |

THERMAL CONDUCTIVITY AND THERMAL RESISTANCE EN 13166:2012+A2:2016

| Thickness (d _N) | mm | 25 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 120 | 130 | 140 | 150 | 160 | |
|--------------------------------------------------------------------------------|-------------------------|--------------|-------------|---------------------------------------------------------------------------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|---------------------------------|-------------|-------------|-------------|--|
| Thermal conductivity λ_D | W/mK | 0,021 | | | | | | | 0,019 | | | | | | | |
| Thermal resistance R | m ² K/W | 1,19 | 1,43 | 1,90 | 2,38 | 2,86 | 3,33 | 4,21 | 4,74 | 5,26 | 6,32 | 6,84 | 7,37 | 7,89 | 8,42 | |
| Thermal resistance R_D | m²K/W | 1,15 | 1,40 | 1,90 | 2,35 | 2,85 | 3,30 | 4,20 | 4,70 | 5,25 | 6,30 | 6,80 | 7,35 | 7,85 | 8,40 | |
| Trasmittanza termica U _D | W/m ² K | 0,87 | 0,71 | 0,53 | 0,43 | 0,35 | 0,30 | 0,24 | 0,21 | 0,19 | 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 | | | | |

TOLERANCES AND NOTES

| | | |
|-------|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Notes | Stability to the temperature | SUPERCCEL® performs well in both extremely hot and extremely cold environments. With a temperature range of - 50°C e + 120°C. |
| | Aspect | Any possible little areas of non-adhesion between coats and foam are originated by the production process and don't prejudice in any way the physical-mechanical properties of the panels. |

MORE INFORMATION

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| More information | <p>For more Information not present in this sheet, please contact the technical office of Resine Isolanti O. Diena S.r.l. Viale Zanotti, 86 - 27027 Gropello Cairoli (PV) - T. + 39 0382.81.59.79 info@resineisolanti.com</p> |
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*the results of the tests to BS 476-6:1989+A1: 2009 and BS 476-7: 1997, demonstrate that the product, as tested, **complies with the requirements for Class 0**, as defined in paragraph A13(b) of Approved Document B, 'Fire Safety', to the Building Regulations 2000