Product Data Sheet

vakuVIP XPS-1 & XPS-2



Description:

- Ultra-high-performance insulation thanks to low density and very low thermal conductivity
- Evacuated product core made of pressed microporous silica, opacifiers and fibres
- vakuVIP B2 with a special flame-retardant high-barrier film for use in the construction industry
- 5 mm XPS facing on one side (XPS-1) or both sides (XPS-2) as a mechanical protective layer

Benefits:

- **Protected vacuum insulation panel** for enhanced mechanical protection
- **Excellent thermal insulation** thanks to very low thermal conductivity
- **Space-saving** thanks to its slim design
- **High compressive strength**
- **Environmentally friendly and safe for health:**
  - An ecological and sustainable product thanks to the 100% recyclability of the core material
  - Contains no glass fibres
- **Customisable:** available in various sizes and shapes to meet individual requirements
- **Durability:** resistant to ageing and moisture, with a service life of up to 50 years

Applications:

- Floor insulation, particularly in cold stores or in combination with underfloor heating
- Insulation of window and door reveals
- Insulation between masonry and roller shutter, blind or external venetian blind boxes

Dimensions and Tolerances:

Length* / Width* [mm]	***Tolerances***		***Thickness* [mm]*** ***(plus 5 mm XPS facing on one or both sides)***	***Thickness Tolerance* [mm]***
	Length* [mm]	***Width* [mm]***		
150 - 500	+1 / -4	+1 / -4	10 - 20 21 - 50	+1 / -1 +2 / -2
500-1000	+1 / -5	+1 / -5	10 - 20 21 - 50	+1 / -1 +2 / -2
>1000	+1 / -5	+1 / -5	10 - 20 21 - 50	+1 / -1 +2 / -2

**Other dimensions available on request*

For dimensions exceeding 1000 x 600 mm, the cores are assembled from several parts.

Performance Characteristics (applies to the vakuVIP B2 core product)**:**

Density	Thickness > 20 mm: 180 to max. 210 kg/m³ in accordance with DIN EN 1602 Thickness ≤ 20 mm: 180 to max. 250 k/m³ in accordance with DIN EN 1602
Weight	Approx. 4 kg/m² at a thickness of 20 mm
Compressive strength (Compressive stress at 10% deformation)	≥ 125 kPa in accordance with DIN EN 826
Thermal conductivity λ_{10} value	≤ 0.0040 W/(m*K) initial value before ageing for vakuVIP at an internal pressure of < 5 mbar (measured value when tested in accordance with DIN EN 12667) 0.0070 W/(m*k) design value including ageing and edge effects for vakuVIP
Temperature resistance	-50 to +90°C / -58 to +194°F Short-term (approx. 30 min) up to +130°C / 266°F
Service life	Up to 50 years, depending on the application, under dry conditions (relative humidity < 60%) and at temperatures of 5°C–30°C
Delivery format	Packed in cartons, on pallets
Safety information	According to the manufacturer, the core is not classified as a hazardous substance under Regulation (EC) No 1272/2008.

[1] Design value (calculation value) of thermal conductivity in accordance with Z-23.11-1851

U-value:

The vakuVIP B2 core product holds a national technical approval for Germany issued by the German Institute for Building Technology (DIBt Berlin) under approval number Z-23.11-1851 (dated 11 November 2013).

The calculation value for thermal conductivity for this product has been set at **0.007 W/(m*K)**.

U-Wert W/(m²K)	VAKUVIP WLG 0,007 * Dicke VIP in mm
0,70	10
0,35	20
0,23	30
0,17	40
0,14	50

Application Restrictions:

The metallised plastic composite film of the vakuVIP elements must not be damaged by drilling, cutting, milling, nailing, screwing, impact against sharp edges, etc. Damage to the film causes the internal pressure of the panels to rise, resulting in the loss of the vacuum and the excellent thermal insulation properties. Thermal conductivity in the non-evacuated state is approx. 0.020 W/(m*K).

Please follow our processing instructions, which are enclosed with the product upon delivery.

Contact Information

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