

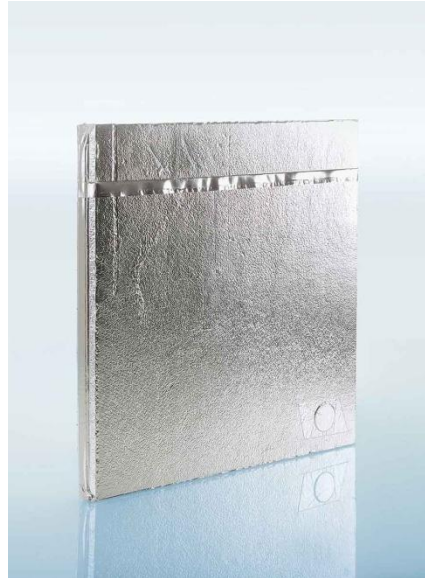


va-Q-vip

Details

va-Q-vip is an evacuated micro porous thermal insulating panel with excellent insulating properties. The core material of va-Q-vip is fumed Silica board and non-combustible. It is sealed into a high gas barrier film under vacuum.

Due to the special "edge fold technique va-Q-seam", va-Q-vip has smooth faces and sharp rectangular edges so that individual va-Q-vips can be tightly fitted together, making an almost seamless assembly possible. In general va-Q-vip is produced in rectangular shapes. It is also available on request in other shapes such as triangle, trapezium, corner cut and oval cut.



Applications

va-Q-vip is specially developed for insulation applications where not much space is available but a high thermal resistance is necessary. va-Q-vip is a successful insulation element in the following areas:

- Building application (roofs, floors, etc)
- Thermal packaging (Medical transport boxes, etc)
- Appliances (Water boiler, etc)
- Automotive (train, ships, aerospace, etc)

Benefits

- Drastically reduced heat fluxes
- Drastically reduced insulation thickness
- Increased usable volume
- All purpose VIP with a long service life

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Technical Data

Product Name:	va-Q-vip Evacuated micro porous thermal insulating panel sealed into a high gas barrier film under vacuum
Surface Colour:	Silver
Geometry:	Rectangular shape (without protruding flanges*)
Density: (bulk, DIN EN 1602)	180-210 kg/m ³
Thermal conductivity:	<0.005 W/(mK) @ 20mm thickness (measured value)
Temperature stability:	-70°C to +70°C (due to the film)
Thermal shock resistance:	Not sensitive to heat and cold shock in the given temperature range
Humidity stability:	0% to 60%
Internal gas pressure:	<5 mbar (at delivery)
Increase of gas pressure:	Approximately 1mbar/year (at 20mm thickness and normal room conditions)
Standard dimension: (LxW) I & II	I: 1000mm x 600mm II: 500mm x 600mm
Nonstandard dimension: III & IV	III: Area > 0,10m ² and <0,60m ² IV: Area <0,10m ²
Special form:	Triangle, trapezium, special shape, cornet cut, hole cut and recessed surface
Thickness:	10mm to 50mm



Size tolerance:	
0 to 500mm	+2 / -4mm
501 to 1000mm	+2 / -5mm
Thickness tolerance:	±1mm
Specific heat capacity:	0.8 kJ (kg K) (at normal room temperature)
Mass per area:	4 kg/m ² (at 20mm thickness)
Compressive strength:	Approximately 150kPa (at 10% compression)
Service Life:	Extrapolated, depending on application up to 60 years.
* For 10mm and 15mm thicknesses, if a flat edge is required, the flanges are refolded onto the main surface of panel.	
<i>All figures are intended as a guide and should not be used for preparing specifications.</i>	

Nominal Thickness to R-Value @ 10°C

Nominal Thickness mm	Lambda/K Value/Thermal Conductivity	R Value
10	0.008	1.3
15	0.008	1.9
20	0.007	2.9
25	0.007	3.6
30	0.007	4.3
40	0.007	5.7
50	0.007	7.1