

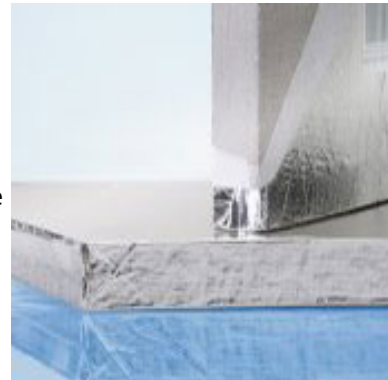
# va-Q-vip

## Product Data Sheet

### Characteristics

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 noncombustible. 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 a smooth and rectangular edge. Therefore individual va-Q-vips can be tightly fitted together, making an almost gapless assembly possible. In general va-Q-vip is produced rectangular shape and other shapes such as triangle, trapezium, cornet cut and oval cut etc. are available on request.

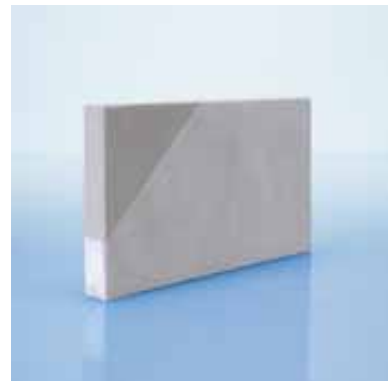


### Application

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 (Medicine transport boxes, etc.)
- Appliance (Water boiler, etc.)
- Automotive (train, ship, air plains, etc.)

For the building application va-Q-vip B (official approval in Germany) can also be used.



### Advantage

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

### Product data

Surface color	Silver
Geometry	Rectangular shape (without protruding flanges*)
Density	180 to 210 kg/m <sup>3</sup>
Thermal conductivity	< 0.0043 W/mK (at 20 mm thickness)
Temperature stability	-70 °C to +70 °C (due to the film)

Thermal shock resistance

Not sensitive to heat & cold shock in the given temperature range

Humidity stability

0 % to 60 %

Internal gas pressure

< 5 mbar (at delivery)

Increase of gas pressure

approx. 1 mbar/year (at 20 mm thickness & normal room conditions)

Standard dimension (L x W) I & II

I: 1000 mm x 600 mm, II: 500 mm x 600 mm

Nonstandard dimension III & IV

III: Area > 0,10 m<sup>2</sup> and < 0,60 m<sup>2</sup>, IV: area < 0,10 m<sup>2</sup>

Special form

Triangle, trapezium, special shape, corner cut, hole cut and recessed surface

Thickness

10 mm to 50 mm

Size tolerance

• 0 to 500 mm

+2 / -4 mm

• 501 to 1000 mm

+2 / -5 mm

Thickness tolerance

± 1 mm

Specific heat capacity

0.8 kJ/(kg·K) (at normal room temperature)

U-value

0.22 W/(m<sup>2</sup>K) (at 20 mm thickness)

Mass per area

4 kg/m<sup>2</sup> (at 20 mm thickness)

Compressive strength

approx. 150 kPa (at 10% compression)

Service life

extrapolated, depending on application up to 60 years

\* For 10 mm and 15 mm thickness, if a flat edge is required, the flanges are refolded onto the main surface of panel.

All figures are intended as a guide and should not be used for preparing specifications.

