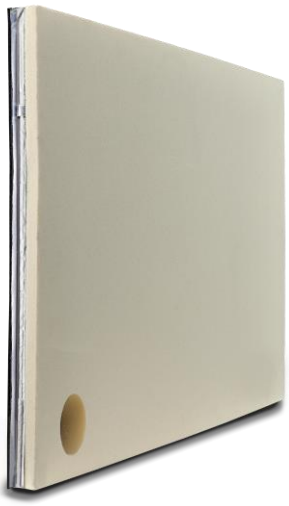
va-Q-tec AG
Alfred-Nobel-Straße 33
97080 Würzburg, Germany
Tel.: +49 (0) 931 35 942 0
www.va-Q-tec.com

WE SOLVE THERMAL CHALLENGES

Technical Data Sheet
va-Q-vip Floor



Product Description

va-Q-vip Floor is a microporous insulation material based on fumed silica. Additionally it is laminated by a 17 mm thick PIR layer on top and a 3 mm rubber granulate layer at the bottom. This composition enables an optimized protection of the vacuum core for construction applications. Our va-Q-vip Floor elements are unique because of their smooth edges and corners (va-Q-seam) wherefore individual elements can be joined together almost seamlessly. In general rectangular panels are produced but various shapes (trapeze, triangle, corner section) are possible on request. The va-Q-vip Floor was specially developed for the use in floors, flat roofs, balconies and terraces.

Features

- **Barrier-free traffic areas**
- **Smooth edges and no foil overlaps because of patented va-Q-seam technology**
- **Additional protection through mechanical damage**
- Long lifetime due to optimized panel design
- 100 % quality control with the patented gas pressure measurement system (va-Q-check)
- Sustainable product (recyclable core material)

13th October 2022

va-Q-tec AG
Alfred-Nobel-Straße 33
97080 Würzburg, Germany
Tel.: +49 (0) 931 35 942 0
www.va-Q-tec.com

WE SOLVE THERMAL CHALLENGES

Properties

Thermal conductivity (VIP) - initial value @ 10 °C*	**≤ 0.0043 W/(m·K) (thickness ≥ 20 mm, at delivery) according to DIN EN 12667**
Thermal conductivity (VIP) - design value incl. aging and edge effects	**0.007 W/(m·K) (thickness ≥ 20 mm)**
Thermal conductivity (VIP) ventilated - design value incl. aging and edge effects	**0.020 W/(m·K)**
U-Value (VIP) - initial value @ 10 °C*	**0.22 W/(m²·K) (thickness = 20 mm)**
U-Value (VIP) - design value incl. aging and edge effects	**0.18 W/(m²·K) (thickness = 40 mm)** **0.35 W/(m²·K) (thickness = 20 mm)**
Internal gas pressure @ 20 °C	**≤ 5 mbar (at delivery)**
Density	**180 – 210 kg/m³ according to DIN EN 1602**
Area density	**3.5 – 5 kg/m² (thickness = 20 mm)**
Temperature resistance (VIP)	**-70 – 80 °C (temporary up to 120 °C)**
Moisture resistance	**0 – 70 % rel. humidity (until 50 °C)**
Specific heat capacity	**0.8 – 1.0 kJ/(kg·K) (at room temperature)**
Compressive strength at 10 % compression	**≥ 150 kPa according to DIN EN 826**
Tensile strength perpendicular to faces	**≥ 30 kPa according to DIN EN 1607**
Lifetime	**Depending on usage, up to 60 years**
Fire class (VIP)	**B2 according to DIN 4102**
Standard sizes (l x w)	**1000 mm x 600 mm** **1000 mm x 300 mm** **600 mm x 500 mm** **600 mm x 250 mm** **300 mm x 250 mm**
Available thickness (overall construction)	**40 mm, 50 mm, 60 mm**

***Please note terms of service § 6 “Deviation range of the insulation value” in “Special Terms and Conditions of Sale and Delivery, Product: Vacuum Insulation Panels (VIPs)” corresponding to the valid version respectively.**

va-Q-tec AG
Alfred-Nobel-Straße 33
97080 Würzburg, Germany
Tel.: +49 (0) 931 35 942 0
www.va-Q-tec.com

WE SOLVE THERMAL CHALLENGES

Testing Standards

Our va-Q-vip Floor panels are subjected to the according to internal test methods to confirm their exceptional properties:

- Accelerated aging tests at 50 °C, 70 % relative humidity and 80 °C (dry)
- Thermal conductivity measurements λ(T), λ(p) according to DIN EN 12667
- Long-time monitoring at room conditions (p(t), λ(t))
- Fire protection test according to DIN 4102-1
- Measurement of the length- and point-related heat transition coefficient (thermal bridge effect, Ψ-value)

Measures and tolerances (VIP)

<table>
<tr><th>length l / width w
in [mm]</th><th>thickness t in [mm]</th><th colspan="3">tolerances: l/w/t in [mm]</th></tr>
<tr><td>≤ 500</td><td>10 - 20</td><td rowspan="2">+2/-4</td><td rowspan="2">+2/-4</td><td>+1mm/-1mm</td></tr>
<tr><td>≤ 500</td><td>25 - 60</td><td>+5 %/-5 %</td></tr>
<tr><td>> 500 - 1000</td><td>10 - 20</td><td rowspan="2">+2/-5</td><td rowspan="2">+2/-5</td><td>+1mm/-1mm</td></tr>
<tr><td>> 500 - 1000</td><td>25 - 60</td><td>+5 %/-5 %</td></tr>
</table>

Remark: Please ask for preferred sizes and tolerances.

13th October 2022

va-Q-tec AG
Alfred-Nobel-Straße 33
97080 Würzburg, Germany
Tel.: +49 (0) 931 35 942 0
www.va-Q-tec.com

WE SOLVE THERMAL CHALLENGES

Legal Notes/Disclaimer

The data presented in this technical data sheet are in accordance with the present state of our knowledge.

All numbers and features proposed in this data sheet (e.g. lifetime) were determined under test conditions in the laboratory and therefore represent a nonbinding and purely scientific value. There are no guarantees associated with. Only the respectively agreed warranty period and warranty rights apply.

To the extent permitted by law, all other warranties of any kind, whether express or implied, including, but not limited to the implied warranties of MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, and non-infringement are EXCLUDED.

Proposals for usage and applications do not constitute a guarantee, warranty or representation of suitability for the specific purpose. However the user bears the responsibility if the product is suitable and compatible for his own purposes. The user shall perform his own tests and experiments for his individual purposes and applications regarding the suitability and processing of the product described herein.

We reserve the right to change the product values and features. The respective current valid version of this technical data sheet applies and is published on our homepage.

It is prohibited to copy or use information from this technical data sheet in whole or in parts, especially towards third parties.