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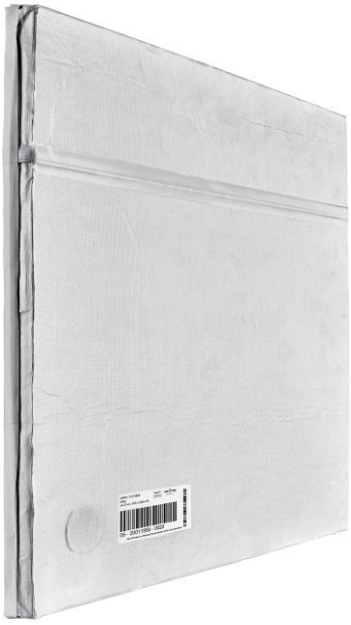
Technical Data Sheet

va-Q-shield VIP C



Product Description

va-Q-shield VIP C is a microporous insulation material based on fumed silica. In addition, it is provided with a special protective fabric, which results in higher fire resistance. va-Q-shield VIP C elements are unique because of their rectangular edges and corners (va-Q-seam) whereas 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.

Features

- Enhanced usable room area due to thinner insulation material
- Smooth edges and no foil overlaps due to patented va-Q-seam technology
- Various standard sizes on stock
- fire protection class B-s1, d0 according to EN 13501-1
- 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)

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Properties

Thermal conductivity - initial value @ 10 °C*	**≤ 0.0043 W/(m·K) (thickness ≥ 20 mm, at delivery) according to DIN EN 12667**
Thermal conductivity - design value incl. aging and edge effects	**0.007 W/(m·K) (thickness ≥ 20 mm)**
Thermal conductivity ventilated - design value incl. aging and edge effects	**0.020 W/(m·K)**
U-Value - initial value @ 10 °C*	**0,22 W/(m²·K) (Dicke = 20 mm)**
U-Value - design value incl. aging and edge effects	**0,35 W/(m²·K) (Dicke = 20 mm) 0,14 W/(m²·K) (Dicke = 50 mm)**
Internal gas pressure @ 20 °C	**≤ 5 mbar (at delivery)**
Density	**180 – 210 kg/m³ (thickness ≥ 20 mm) according to DIN EN 1602**
Area density	**3,5 – 5,0 kg/m² (thickness = 20 mm)**
Temperature resistance	**-75 – 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**
Servicetime	**Depending on usage, up to 60 years**
Fire class	**B-s1,d0 nach EN 13501-1**
Available thicknesses	**20 – 50 mm, in 5 mm steps**

***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.**

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Testing standards

Our va-Q-shield VIP C 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 / EN 11925-2
- Measurement of the length- and point-related heat transition coefficient (thermal bridge effect, Ψ-value)

Measures and tolerances (VIP)

length l / width b in [mm]	thickness d in [mm]	tolerance: l/b/d in [mm]		
≤ 500	≥ 20 - 50	+2/-4	+2/-4	+5 %/-5 %
> 500 - 1000	≥ 50 - 50	+2/-5	+2/-5	+5 %/-5 %

Remark: Please ask for preferred sizes and tolerances.

Legal Notes/Disclaimer

We expressly point out that the product va-Q-shield VIP C is a new development which is based on our existing construction products. For the product va-Q-shield VIP C, the German technical approval has been applied for at the DIBt, but has not yet been granted! If this product is to be used before the German technical approval is granted, a project-related approval must first be applied for from the responsible building inspection authority in the state, as the building inspection authority may otherwise take action under the building regulations and order to stop the construction work. In order to comply with the notification obligation, the contractor must report concerns to his client in writing and explain them to him. The receipt of the notification of concern must be confirmed in writing. A corresponding obligation to notify in writing also applies to sellers if the product is resold.

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.

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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.

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