

## PBE LX PREMIUM

July 2021

Insulation boards with vertically-oriented fibres for direct introduction into sandwich panels



### DESCRIPTION

**KNAUF INSULATION PBE LX PREMIUM (PBE LX P)** is a rock mineral wool board with vertically-oriented fibers and excellent mechanical properties. This product eliminates the need for a lamella cutting machine in the customer's manufacturing process, making the production of sandwich panels simpler and more flexible.

The dimensions of each board can be customized according to specific customer requirements.

Optionally, a board can have profiled edges designed in accordance with customer specifications, to ensure optimal fit and superior fire resistance.

### PERFORMANCE

#### Excellent mechanical performance (on lamella)

Compression strength  $\geq 50$  kPa  
Tensile strength  $\geq 60$  kPa

#### Fire performance

Classified as non-combustible Euroclass A1

#### Thermal performance (on lamella)

Optimal thermal conductivity  $\lambda_g = 0,039$  W/mK

### BENEFITS

- ✓ Ready-to-use product (no cutting and no waste in sandwich panel production)
- ✓ Easy handling
- ✓ Excellent mechanical properties (compression and tensile strength)
- ✓ Non-combustibility (Euroclass A1)
- ✓ Fire-resistance, with melting point above 1000 °C
- ✓ Excellent acoustic properties
- ✓ Good thermal insulation properties
- ✓ Non-combustibility
- ✓ Dimensional stability

### APPLICATION

Ready-to-use insulation board, with excellent mechanical properties (high tensile and compression strength), which make it most convenient **for direct introduction into sandwich panels.**

### STANDARDS

**Technical properties of Knauf Insulation PBE LX PREMIUM are declared in accordance with EN 13162.**

Knauf Insulation PBE LX PREMIUM is manufactured in accordance with ISO 9001 Quality Management Systems, ISO 14001 Environmental Management Systems, ISO 50001 Energy Management Systems and ISO 45001 Occupational Health and Safety Management Systems as certified by TÜV Nord.

### CERTIFICATES



**DOP code: 04309HPCPR**

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### TECHNICAL PROPERTIES <sup>1)</sup>

Characteristics	Symbol	Value	Unit	Standard
Reaction to fire	-	Euroclass A1	-	EN 13501-1
Melting point	-	> 1000	°C	DIN 4102/T17
Thermal conductivity - declared (lamella)	$\lambda_D$	0.039	W/mK	EN 12667
Water vapour diffusion resistance factor	$\mu$	1	-	EN ISO 10456
Compression strength	$\sigma_{10}$	$\geq 50$	kPa	EN 826
Tensile strength (lamella)	$\sigma_{mf}$	$\geq 60$	kPa	EN 1607
Short-term water absorption	$W_p$	< 1	kg/m <sup>2</sup>	ISO 29767
Long-term water absorption	$W_{lp}$	< 3	kg/m <sup>2</sup>	ISO 16535
Specific heat capacity	$c_p$	1030	J/kgK	-

<sup>1)</sup> Compression, tensile and shear strength are tested on lamellas with 100 mm thickness, in accordance with EN standards.

### HANDLING & STORAGE

Knauf Insulation PBE LX PREMIUM is packed on a wooden pallet. Slabs are covered with a PE hood or wrapped twice with stretch foil, which is designed for short-term protection only. For longer-term protection on site we recommend storing the product either indoors or under a cover and off the ground, for a maximum of up to 12 months. If covered storage is not available, products can be stored outside (open-air-storage), for a maximum of up to one month. Outdoor storage is not recommended during particularly humid months with large fluctuations in temperature. If the material becomes damp on location, ensure the moisture evaporates before placing the lamellas into a manufacturing process, as water content can affect the performance of the final product.

The performance of PBE LX PREMIUM depends on the customer's manufacturing process. Individual customers must optimize and control their manufacturing process to ensure the material meets the requirements of their manufacturing process and their final product. Compression of the rock mineral wool core must not exceed a maximum of roughly 1% of the core thickness during the production of sandwich panels.



#### Knauf Insulation, d.o.o.

Trata 32, 4220 Škofja Loka, Slovenia

Tel: +386 (0)4 5114 100

Fax: +386 (0)4 5114 319

E-mail: oem@knaufinsulation.com

For more info visit:

[www.oem.knaufinsulation.com](http://www.oem.knaufinsulation.com)

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