

# FIBRAN<sub>geo</sub> BP-50-L

## Stonewool insulation board with knit fibres

Technical Data Sheet / April 2022



0751



### Description

**FIBRAN<sub>geo</sub> BP-50-L** rigid stonewool board is a natural inorganic fibrous product that is industrially produced from molten rock spun into fibres, in accordance with European Standard EN 13162 (Thermal insulation products for buildings - Factory made mineral wool (MW) products).

All four edges of the boards have L-cuts (shiplap) profiles. The cut is positioned in the middle of the edges and it is 15mm deep.

### Applications



Boards designed for thermal insulation, fire resistance and sound insulation applications where increased mechanical properties and resistance to compressive stress is required.

On **flat roofs** such as:

- External thermal and sound insulation of flat roofs, with stonewool that is covered by screed and water-insulation layer.
- External thermal and sound insulation of concrete or metal flat roofs, with stonewool that is covered by water-insulation membrane layer.



### Advantages

- Excellent thermal insulation
- High mechanical properties
- L-cut profiles eliminate thermal bridges and ensure excellent joint implementation
- Non-combustible material with excellent fire resistance
- Excellent sound absorption and sound reduction
- Open hive structure material with very low water vapour diffusion resistance that enhances the building element's breathability
- Excellent dimensional stability and durability
- Water repellent and non-hygroscopic
- Easy to handle, cut and install
- Natural, inorganic, odourless, chemically inert (practically neutral PH)
- Recyclable, friendly to the environment and to the end user

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### Technical characteristics

Designation Code:

**MW (Mineral Wool) - EN 13162 - T7 - CS(10)50 - TR15 - PL(5)600 - WS - WL(P) - MU1 - SD33 - CP2 - AW0,95 - AFr50**

Technical Characteristics	Symbol EN 13162	Unit	Value	EN Standard
Declared thermal conductivity at 10°C	$\lambda_D$	W/(mK)	0,037	EN 13162 EN 12667 EN 12939
Nominal thickness	$d_N$	mm	100 – 280	EN 823
Fire classification	-	Class	A1 (Non-combustible)	EN 13501-1
Melting temperature	-	°C	>1000	DIN 4102-17
Specific heat capacity	c	kJ/kgK	1,03	ISO 10456
Thickness tolerance	T	Class	T7 (0, +10%)	EN 12431
Compressive Stress at 10% thickness deformation	CS(10)	kPa	≥ 50	EN 826
Tensile strength perpendicular to faces	TR	kPa	≥ 15	EN 1607
Point Load at 5mm thickness deformation	PL(5)	N	≥ 600	EN 12430
Thickness Compressibility ( $C_p = d_L - d_B$ )*	CP	mm	2	EN 12431 EN 13162
Recommended design load of board's with thickness 30 - 100mm	-	kN/m <sup>2</sup>	13	EN 13162 EN 1991-1
Short term water absorption for 24 hours	WS	kg/m <sup>2</sup>	<1	EN 1609
Long term water absorption for 28 days	WL(P)	kg/m <sup>2</sup>	<3	EN 12087
Water vapor diffusion resistance factor, $\mu$	MU	-	1	EN 12086
Dynamic Stiffness, $s'$ , on boards' thickness 40mm	SD	MN/m <sup>3</sup>	33	EN 29052-1
Air flow resistivity, r	AFr	kPa s/m <sup>2</sup>	≥ 50	EN 29053
Weighted sound absorption coefficient on boards with thickness 50mm, $\alpha_w$	AW NRC	-	0,95 Class A 0,90	EN ISO 11654 EN ISO 354

\* $d_L$  = thickness under load of 0,25 kPa,  $d_B$  = thickness under load of 2 kPa and preload +/- 48 kPa  
Technical characteristics and DoP refer to the product without facings.

### Thermal resistance R

Nominal thickness	$d_N$	mm	100	120	140	150	160	180	200	220	240	260	280	EN 823
Declared thermal resistance	$R_D$	m <sup>2</sup> K/W	2,70	3,20	3,75	4,05	4,30	4,85	5,40	5,90	6,45	7,00	7,55	EN 13162

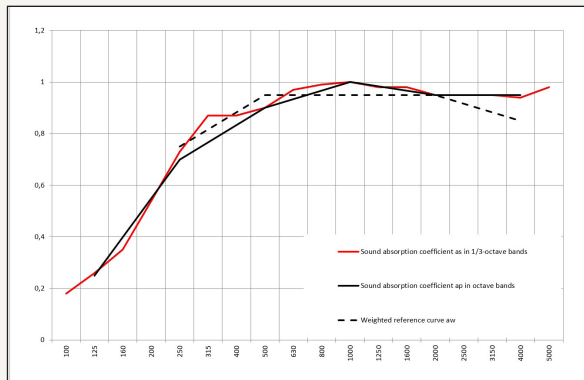
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### Acoustic properties

Sound absorption coefficient  $\alpha$  (EN ISO 354) on boards with thickness 50mm



Frequency (Hz)	$\alpha_s$	$\alpha_p$	$\alpha_w$
125	0,26	0,25	-
250	0,73	0,70	0,75
500	0,90	0,90	0,95
1000	1,00	1,00	0,95
2000	0,95	0,95	0,95
4000	0,94	0,95	0,85

Weighted sound absorption coefficient

$\alpha_w = 0,95$  - Class A (EN ISO 11654)

Noise reduction coefficient

**NRC = 0,90** (ASTM 423)

### Certification

**FIBRAN<sub>geo</sub> BP-50-L** stonewool insulation products have been certified according to European Norms EN 13162 και EN 13172 and hold the CE marking that derives from the Declaration of Performance **DoP**.

All **FIBRAN<sub>geo</sub>** stonewool insulation products meet the quality and safety requirements of the European Standards and comply with the European Regulations 305/2011 (CPR).

Furthermore, all **FIBRAN<sub>geo</sub>** stonewool products, carry the certification mark EUCEB (European Certification Board for Mineral Wool Products), whose procedures ensure compliance of mineral wool insulation products with the "Note Q" of Directive 97/69/EC, regarding their fibres biosolubility and their non-classification as dangerous materials.

Moreover, according to EC Regulation 790/2009 they are not classified as products that cause skin irritation (R38).

FIBRAN S.A. implements a system of quality management according to ISO 9001:2015 and environmental management according to ISO 14001:2015.

### Application

**FIBRAN<sub>geo</sub>** products must be protected from getting wet before and on their application. If part of the product gets wet, it must be dried before installation. Stonewool dries quickly and its insulating properties remain unchanged after drying. Packaging should be removed carefully just before the installation.

Working areas should be kept clean. Unnecessary or extensive contact of the skin and eyes with product's off-cuts, fibres and dust should be avoided, and protective wear should be used (gloves, goggles, hats).

Products with facing AL, AX, YM ή YA are not suggested for application with service temperature on the surface more than 90°C while those with surface XA are not suggested for more than 66°C.

Sufficient ventilation of the working areas should be ensured, whilst power cutting tools should always be equipped or supplemented with a mechanical system of dust intake.

Stonewool products are not dangerous materials for disposal. They are covered by code 17.06.04 of the waste list, of Decision 2000/532 / EC and are disposed of in accordance with applicable environmental regulations.

More informations on the **Safety Data Sheet** of product.



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### Storage

FIBRAN<sup>geo</sup> products should be stored indoors. If stored outdoors, they must be protected from impregnation. Handling, loading and unloading of the products should be carried out with care to avoid damage to both the packaging and the board's edges.

### Packaging

Dimensions 2000 mm x 1200 mm (High Pallet / Short Pallet)

Thickness [mm]	Width [mm]	Length [mm]	Pieces per pallet [pc., High / Short]	Quantity per pallet [m <sup>2</sup> , High / Short]
100	2000	1200	25 / 12	60,00 / 28,80
120	2000	1200	21 / 10	50,40 / 24,00
140	2000	1200	18 / 8	43,20 / 19,20
150	2000	1200	17 / 8	40,80 / 19,20
160	2000	1200	15 / 7	36,00 / 16,80
180	2000	1200	14 / 6	33,60 / 14,40
200	2000	1200	12 / 6	28,80 / 14,40

Upon request, it can be produced up to 280mm thickness.

Dimensions 1000 mm x 1200 mm (High Pallet / Short Pallet)

Thickness [mm]	Width [mm]	Length [mm]	Pieces per pallet [pc., High / Short]	Quantity per pallet [m <sup>2</sup> , High / Short]
100	1000	1200	50 / 12	60,00 / 14,40
120	1000	1200	42 / 10	50,40 / 12,00
140	1000	1200	36 / 8	43,20 / 9,60
150	1000	1200	34 / 8	40,80 / 9,60
160	1000	1200	30 / 7	36,00 / 8,40
180	1000	1200	28 / 6	33,60 / 7,20
200	1000	1200	24 / 6	28,80 / 7,20

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#### FIBRAN S.A

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