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FIBRAN*geo* CORE BL-50

A Multipurpose Slab for laminated core of sandwich panels

Technical Data Sheet / June 2022

Description

FIBRAN*geo* CORE BL-50 is produced from molten mineral rock, initially fused in an electric furnace at more than 1500°C and then spun into fibres. The loose stonewool fibres, with the addition of adhesive resin, oil and special compounds that provide water repellency, become cohesive, elastic, non-hygroscopic and water-repellent. Fibres are formed in boards and cut to size as required by application. Products are finally shrink-wrapped in PE film and packed on pallets.

Stonewool is a natural inorganic fibrous material, widely recognized for its thermal and sound insulating properties, as well as its excellent performance in terms of fire protection. Products are certified according to the European Standard EN 13162 (MW - Mineral Wool insulation products).

Delivery Programme

FIBRAN*geo* CORE BL-50 slab dimensions are regularly produced upon the specification of the customer. However the format and the dimension tolerances can be respected only within the technical capability of the **FIBRAN*geo*** production line, that are specified below:

- **Thickness range**: 20 - 300 mm
- **Length**: 1000 – 2400 mm
- **Width**: 500 – 1250 mm

Packaging and palletizing upon customer specifications.

Application

FIBRAN*geo* CORE BL-50 is a semi-rigid board dedicated for the core of sandwich panels. During the application boards are being cut to lamella, that is reverted for 90 degrees and after inserted into the core of sandwich panel. The panel core is glued to metall coils with polyurethane glue.

FIBRAN*geo* CORE BL-50 is designed with a purpose to provide high mechanical characteristic of the laminated core installed inside the sandwich panel. The rotation of lamella before application changes the fibre orientation to vertical and therefore maximizes mechanical performance of the sandwich panel core.

FIBRAN*geo* CORE BL-50 basic mechanical and thermal properties in this document are being declared for lamella application.

Advantages

- Excellent themal insulation
- Non-combustible material with excellent fire resistance
- Excellent sound absorption and sound reduction
- Optimized for high Mechanical and Thermal stress
- Excellent dimensional stability and durability
- Water repellent and non-hygroscopic
- Easy to handle, cut and install
- Natural, inorganic, odourless, chemically inert (practically neautral pH)
- Recyclable, friendly to the enviroment and to the end user

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Technical characteristics

Designation Code:

MW (Mineral Wool) - **EN 13162 – T5 – WS – WL(P) – MU1**

Technical Characteristics	Symbol EN 13162	Unit	Value	EN Standard
Declared thermal conductivity at 10°C	λ_D	W/(mK)	0,035	EN 13162 EN 12667 EN 12939
Nominal thickness	d_N	mm	20-300	EN 823
Fire classification	-	Class	A1 (Non-combustible)	EN 13501-1
Calorific value	-	MJ/kg	≤ 2	EN 13501
Thickness tolerance	T	Class	T5 (<100mm: -1mm , +3 mm) (≥100mm: -1% , +3 mm)	EN 12431
Short term water absorption for 24 hours	WS	kg/m²	<1	EN 1609
Long term water absorption for 28 days	WL(P)	kg/m²	<3	EN 12087
Water vapor diffusion resistance factor, μ	MU	-	1	EN 12086

Modulus values availiable upon request

Thermal resistance R

Nominal thickness	d_N	mm	20	30	40	50	60	80	100	120	140	160	180	200	250	300	EN 823
Declared thermal resistance	R_D	m²K/W	0,55	0,85	1,10	1,40	1,70	2,25	2,85	3,40	4,00	4,55	5,10	5,70	7,10	8,55	EN 13162

Characteristics of lamella	Symbol	Unit	Value	EN Standard
Thermal conductivity	λ	W/(mK)	0,040	EN 13162
Compressive strength	CS	kPa	> 50	EN 826
Tensile strength	TR	kPa	> 80	EN 1607
Shear strength	SS	kPa	> 40	EN 12090

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