

# FIBRANgeo BP-ETICSplus

## Stonewool insulation board with knit fibres

Technical Data Sheet / April 2022



0751



## Description

**FIBRANgeo BP-ETICSplus** (1000 x 600 mm) 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).

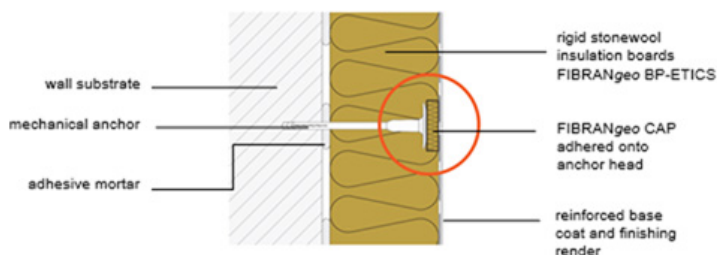
## Applications



Boards designed for thermal insulation, fire resistance and sound insulation applications on External Thermal Insulations Composite Systems (E.T.I.C.S.):

- External walls

Complementary to the E.T.I.C.S. application, **FIBRANgeo CAPs** (rigid stonewool insulation discs) are installed over the mechanical anchors' heads, where **FIBRANgeo BP-ETICS** or **FIBRANgeo BP-ETICSplus** stonewool is used as part of a composite external thermal insulation system (ETICS), in order to eliminate thermal bridges and optimize application of final render.



## Advantages

- Excellent thermal insulation
- 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 – T5 – DS(90,70) – CS(10)20 – TR7,5 – WS – WL(P) – MU1 – AW0,95 – AFr50**

| Technical Characteristics   | Symbol<br>EN 13162 | Unit                 | Value  | EN Standard                      |
|---|--------------------|----------------------|--|----------------------------------|
| Declared thermal conductivity at 10°C   | $\lambda_D$        | W/(mK)               | 0,034  | EN 13162<br>EN 12667<br>EN 12939 |
| Nominal thickness   | $d_N$              | mm                   | 50 – 300   | EN 823                           |
| Fire classification   | -                  | Class                | A1<br>(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                | T5<br>(<100mm: -1 , +3 mm)<br>(≥ 100mm: +1% , +3 mm) | EN 12431                         |
| Dimensional stability   | DS(70,90)          | %                    | <1   | EN 1604                          |
| Compressive Stressa at 10% thickness deformation                                | CS(10)             | kPa                  | ≥ 20   | EN 826                           |
| Tensile strength perpendicular to faces   | TR                 | kPa                  | ≥ 7,5  | EN 1607                          |
| 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                         |
| 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<br>NRC          | -                    | 0,95 Class A<br>0,90                                 | EN ISO 11654<br>EN ISO 354       |

### Thermal resistance R

| Nominal thickness           | $d_N$ | mm                 | 50   | 60   | 70   | 80   | 100  | 120  | 140  | 150  | 160  | 180  | 200  | EN 823   |
|-----------------------------|-------|--------------------|------|------|------|------|------|------|------|------|------|------|------|----------|
| Declared thermal resistance | $R_D$ | m <sup>2</sup> K/W | 1,45 | 1,75 | 2,05 | 2,35 | 2,90 | 3,50 | 4,10 | 4,40 | 4,70 | 5,25 | 5,85 | EN 13162 |

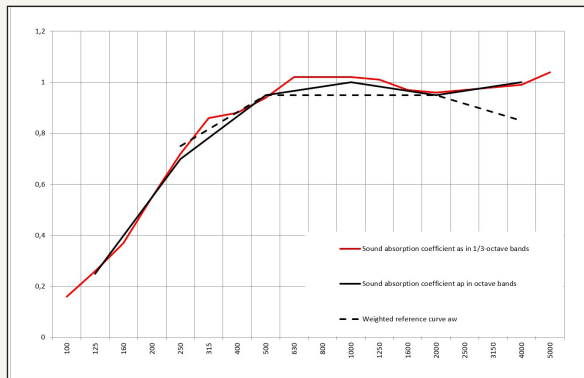
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### Acoustic properties

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            | 0,72       | 0,70       | 0,75       |
| 500            | 0,94       | 0,95       | 0,95       |
| 1000           | 1,02       | 1,00       | 0,95       |
| 2000           | 0,96       | 0,95       | 0,95       |
| 4000           | 0,99       | 1,00       | 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-ETICSplus** 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 complies 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 products 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

| Thickness [mm] | Width [mm] | Length [mm] | Boards per package [pc.] | Quantity per package [m <sup>2</sup> ] | Packages per pallet [pc.] | Quantity per pallet [m <sup>2</sup> ] |
|----------------|------------|-------------|--------------------------|--|---------------------------|---------------------------------------|
| 50             | 600        | 1000        | 6                        | 3,60                                   | 16                        | 57,60                                 |
| 60             | 600        | 1000        | 5                        | 3,00                                   | 16                        | 48,00                                 |
| 70             | 600        | 1000        | 4                        | 2,40                                   | 18                        | 43,20                                 |
| 80             | 600        | 1000        | 5                        | 3,00                                   | 12                        | 36,00                                 |
| 100            | 600        | 1000        | 3                        | 1,80                                   | 16                        | 28,80                                 |
| 120            | 600        | 1000        | 4                        | 2,40                                   | 10                        | 24,00                                 |
| 140            | 600        | 1000        | 2                        | 1,20                                   | 18                        | 21,60                                 |
| 150            | 600        | 1000        | 3                        | 1,80                                   | 10                        | 18,00                                 |
| 160            | 600        | 1000        | 3                        | 1,80                                   | 10                        | 18,00                                 |
| 180            | 600        | 1000        | 2                        | 1,20                                   | 14                        | 16,80                                 |
| 200            | 600        | 1000        | 2                        | 1,20                                   | 12                        | 14,40                                 |
| 220            | 600        | 1000        | 1                        | 0,60                                   | 22                        | 13,20                                 |
| 240            | 600        | 1000        | 1                        | 0,60                                   | 20                        | 12,00                                 |
| 260            | 600        | 1000        | 1                        | 0,60                                   | 18                        | 10,80                                 |
| 280            | 600        | 1000        | 1                        | 0,60                                   | 18                        | 10,80                                 |
| 300            | 600        | 1000        | 1                        | 0,60                                   | 16                        | 9,60                                  |



#### FIBRAN S.A

6<sup>th</sup> km Thessaloniki - Oreokastro Rd.  
 P.O. Box 40306, A.C. 564 10  
 Thessaloniki, Greece  
 Tel. +30 2310 682 425. 692 700  
 Fax. +30 2310 683 131

info@fibran.gr  
 www.fibran.gr

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