

# FIBRANgeo BP-30

## Stonewool insulation board with knit fibres

Technical Data Sheet / April 2022



0751



### Description

**FIBRANgeo BP-30** 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).

**FIBRANgeo BP-30** (1200 x 600 mm) boards can be produced with the facing **AL** (Aluminum foil reinforced with fibreglass net) or **XA** (Kraft paper) on one surface.

### Applications



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

On **floors** such as:

- Floating floor of concrete screed and final surface, e.g. marble/ceramic tiles, industrial flooring (thickness 30-60 mm)
- Floating floor of dry construction and final surface, e.g. timber, ceramic tiles (thickness 30-60 mm)

On **flat roofs** such as:

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



### 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 - T7 - CS(10)30 - TR10 - PL(5)400 - WS - WL(P) - MU1 - SD33 - CP2 - AW0,95 - AFr50**

| Technical Characteristics   | Symbol<br>EN 13162 | Unit                 | Value   | EN Standard                      |
|---|--------------------|----------------------|---|----------------------------------|
| Declared thermal conductivity at 10°C   | $\lambda_D$        | W/(mK)               | 0,036   | EN 13162<br>EN 12667<br>EN 12939 |
| Nominal thickness   | $d_N$              | mm                   | 30 - 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                | T7<br>(0, +10%)                               | EN 12431                         |
| Compressive Stress at 10% thickness deformation                                 | CS(10)             | kPa                  | ≥ 30  | EN 826                           |
| Tensile strength perpendicular to faces   | TR                 | kPa                  | ≥ 10  | EN 1607                          |
| Point Load at 5mm thickness deformation   | PL(5)              | N                    | ≥ 400   | EN 12430                         |
| Thickness Compressibility (Cp = dL - dB)  | CP                 | mm                   | 2   | EN 12431<br>EN 13162             |
| Recommended design load of board's with thickness 30 - 60mm                     | -                  | kN/m <sup>2</sup>    | 8<br>(Floors A, B, C1, C2, C3, C4, D1, D2, F) | EN 13162<br>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 50mm                             | 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<br>NRC          | -                    | 0,95 Class A<br>0,90                          | EN ISO 11654<br>EN ISO 354       |

\*dL = thickness under load of 0,25 kPa, dB = 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                 | 30   | 40   | 50   | 60   | 70   | 80   | 100  | 120  | 140  | 150  | 160  | 180  | 200  | EN 823   |
|-----------------------------|-------|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|
| Declared thermal resistance | $R_D$ | m <sup>2</sup> K/W | 0,80 | 1,10 | 1,35 | 1,65 | 1,90 | 2,20 | 2,75 | 3,30 | 3,85 | 4,15 | 4,40 | 5,00 | 5,55 | EN 13162 |

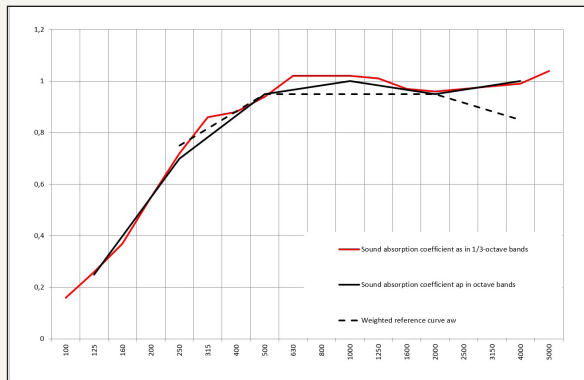
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### Acoustic properties

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            | 0,72       | 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

**FIBRANgeo BP-30** 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 **FIBRANgeo** stonewool insulation products meet the quality and safety requirements of the European Standards and comply with the European Regulations 305/2011 (CPR).

Furthermore, all **FIBRANgeo** 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

**FIBRANgeo** 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

| 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> ] |
|----------------|------------|-------------|--------------------------|--|---------------------------|---------------------------------------|
| 30             | 600        | 1200        | 8                        | 5,76                                   | 20                        | 115,20                                |
| 40             | 600        | 1200        | 6                        | 4,32                                   | 20                        | 86,40                                 |
| 50             | 600        | 1200        | 6                        | 4,32                                   | 16                        | 69,12                                 |
| 60             | 600        | 1200        | 5                        | 3,60                                   | 16                        | 57,60                                 |
| 70             | 600        | 1200        | 4                        | 2,88                                   | 18                        | 51,84                                 |
| 80             | 600        | 1200        | 3                        | 2,16                                   | 20                        | 43,20                                 |
| 100            | 600        | 1200        | 3                        | 2,16                                   | 16                        | 34,56                                 |
| 120            | 600        | 1200        | 2                        | 1,44                                   | 20                        | 28,80                                 |
| 140            | 600        | 1200        | 2                        | 1,44                                   | 18                        | 25,92                                 |
| 150            | 600        | 1200        | 2                        | 1,44                                   | 16                        | 23,04                                 |
| 160            | 600        | 1200        | 2                        | 1,44                                   | 16                        | 23,04                                 |
| 170            | 600        | 1200        | 2                        | 1,44                                   | 14                        | 20,16                                 |
| 180            | 600        | 1200        | 2                        | 1,44                                   | 14                        | 20,16                                 |
| 200            | 600        | 1200        | 1                        | 0,72                                   | 24                        | 17,28                                 |

Upon request, it can be produced up to 300mm thickness.



#### FIBRAN S.A

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