

BASFIBER® ADVANCED TEXTILES NON-WOVEN

Basfiber® new non-combustible heat insulation material — Basfibermat®. This product allows to realize the main advantages of the basalt fiber over the traditional fibers —glass and mineral wool.

The continuous temperature application rates about 300°C higher than the comparative product made from E-Glass. The final application, its environment, the heat conditions, the heat directions, the density of the mat itself, as well as its thickness are only a few determining factors for the appropriate continuous application temperature. It seems that a good safe number will be 1000°C for the Basfibermat®. Higher values may apply, depending on the particular application. In order to enhance temperature reflective properties, an aluminium foil can be added to the product.

While the Basfibermat® is widely used in thermal applications, it also can be treated with resins and turned into a constructional board.

NOMENCLATURE

Our nomenclature is based on three letter followed by three numbers.

Example: NNW-06

The letters will be always NNW which stands for our Non-Woven products. The following number represents the thickness of the Non-Woven in millimetres:

MECHANICAL PROPRIETIES:

| TYPE | 6/130 | 8/130 | 10/130 | 12/130 |
|----------------------------|-------|-------|--------|--------|
| Volumetric Density [kg/m³] | 130 | 130 | 130 | 150 |
| Surface Density [g/m²] (1) | 780 | 1.040 | 1.300 | 1.800 |
| Tolerance [%] | ± 12 | ± 12 | ± 12 | ± 12 |
| Thickness [mm] (2) | 6 | 8 | 10 | 12 |
| Tolerance [mm] | ± 1 | ± 1 | ± 1 | ± 1 |
| Width [cm] | 100 | | | |
| Tolerance [cm] | ± 1 | ± 1 | ± 1 | ± 1 |
| Roll Length [m] | 50 | | | |
| Tolerance [%] | ± 1 | ± 1 | ± 1 | ± 1 |



| FILAMENT DIAMETER [µM] (ASTM D578) | 12 - 15 |
|------------------------------------|--|
| Sizing type | Silane |
| Sizing content [%] (ISO 1887) | 0.1 – 1.5 |
| Thermal stability [°C] | At continuous temperature of 550 °C and peak temperatures till 1200 °C |
| Fire behaviour (DIN 4102) | Incombustible |
| Safety measures | Gloves and long sleeve shirt. |

THERMAL CONDUCTIVITY (W/M²K) WITH 5% TOLERANCE OF BASFIBER®

| Average Temp. (°C) | 20° | 100° | 200° | 300° | 400° | 500° | 600° | 700° |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| 130 kg/m³ | 0.031 | 0.034 | 0.042 | 0.056 | 0.080 | 0.115 | 0.161 | 0.200 |
| 150 kg/m³ | 0.031 | 0.033 | 0.041 | 0.054 | 0.078 | 0.115 | 0.154 | 0.209 |
| 170 kg/m³ | 0.031 | 0.032 | 0.039 | 0.053 | 0.075 | 0.105 | 0.143 | 0.191 |

| COMPARISON WITH GLASS WOOL | 0.039 | 0.055 | 0.063 | 0.079 | 0.118 | Loses Characteristics |
|----------------------------|-------|-------|-------|-------|-------|-----------------------|
|----------------------------|-------|-------|-------|-------|-------|-----------------------|

| THERMAL PROPRIETIES COMPARISON: | BASFIBER® | GLASS WOOL |
|--|----------------|------------|
| Application Temperature (°C): | -260° to +700° | 350 |
| Short-term Max-Operation Temperature (°C): | +850° | +550° |
| Heat Conductivity (W/m²k): | 0.031 to 0.038 | 0.034-0.04 |

| MECHANICAL PROPRIETIES COMPARISON: | BASFIBER® | GLASS WOOL |
|--|-----------|------------|
| Tensile Strength of dry Fiber - mN/tex: (ASTM D3822) | 600-730 | 350-500 |
| Tensile Strength of single filaments – Mpa: (ASTM D2101) | 4500-4800 | 3450-3800 |
| Tensile Modulus of single filaments – Gpa: (ASTM D2101) | 84-87 | 72-76 |

APPLICATIONS

- ✦ Automotive industry,
- ✦ Road Paving,
- ✦ Engine Heat Shield,
- ✦ Clay Lining,
- ✦ Waterproof Lining,
- ✦ Turf Reinforcement,
- ✦ Railways,
- ✦ Asphalt Reinforcement,
- ✦ Erosion Control Matting,
- ✦ Embankments, Stockpiles & working Platforms,
- ✦ Subsoil Drainage System,
- ✦ Rock Fall Control,
- ✦ Secondary Container Tanks,
- ✦ Turbines,
- ✦ Retain Silt and Sediments,
- ✦ Industrial Insulation and general high temperature insulation,
- ✦ Walls,
- ✦ Floors,
- ✦ Water Pipe System,
- ✦ Shipbuilding,
- ✦ Roofs,
- ✦ Flexible Expansion Joints,
- ✦ Gasket,Batting,
- ✦ Asbestos replacement,
- ✦ Cryogenic,
- ✦ Ovens,
- ✦ Furnaces,
- ✦ Turbines,
- ✦ White ware,
- ✦ Exhaust Systems,
- ✦ etc.

OTHER PROPRIETIES:

- ✦ Non-respirable, 13 micron filament diameter.
- ✦ Meets chemical acceptability of NRC Guide 1.36, section C
- ✦ Very high alkali and acid resistance (surpassing most mineral and synthetic fibers)
- ✦ Negligible moisture absorption (less than 1% at 65% relative air humidity)
- ✦ Remarkable immunity to nuclear radiation, UV light and biologic contamination

PACKAGING

Rolls on cardboard tubes with 76 mm inside diameter, wrapped and sealed in plastic foil.

STORAGE

Dry, protected against moisture. Transportation In clean covered vehicles or closed containers

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