

TECHNICAL DATA SHEET

GLASS FIBRE FABRIC

Glass fibre for insulation purposes is produced from a mixture of quartz sand, aluminium oxide with the addition of alkaline oxides. Appropriately selected chemical composition and controlled production process guarantee that the fibre is resistant to the effects of hot gases, aggressive chemicals and temperature. Physical parameters of glass fibres:



Quartz content SiO ₂	64-70 %
Mechanical strength	1800 MPa
Stress/softening point	550/750 °C
Fibre diameter	8 - 13 µm
Density	2,50 g/cm

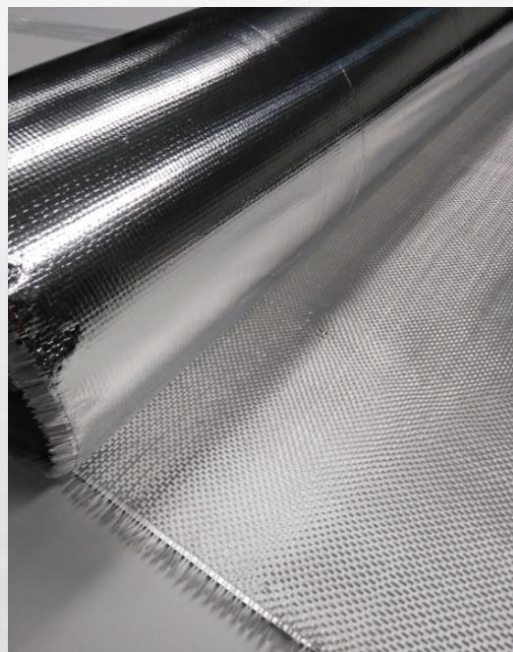
In order to improve the insulating properties, the fibre in the roving form is twisted and texturised to produce a soft insulating yarn with a size range of 480 to 5000 tex. A special fibre with low conductivity and low heat accumulation is used for this purpose. Texturised yarns have 2 times lower bulk density and 3 times better insulating properties than glass roving, making them the basis for many types of glass insulation.

FEATURES AND MAIN BENEFITS

Glass yarn and products made of this material have both high strength and resistance as well as excellent insulating properties. Among the most important advantages of glass fibre insulation, the following should be mentioned:

- Stability at medium temperatures and high resistance to thermal shock.
- Low thermal conductivity and low heat storage coefficient.
- Excellent mechanical strength and abrasion resistance.
- High chemical resistance, influence of oxidants and biological processes.
- As a molten sand product, fibreglass is environmentally friendly and can be easily recycled.

Insulations made of glass fibre have been used for several decades and are still being intensively modernised. This material provides high durability, is economical and easy to apply, and can also be used as electro-insulation and protective shielding.



FABRICS WITH COVERINGS

Glass fabrics are also manufactured with a **METAL COATING, SILICONE RUBBER OR POLYMER COATING**, such as PU, PE, PTFE etc. These coatings provide new properties and significantly broaden the field of application. It is a plain weave fabric covered with 18 µm aluminium foil, which preserves its flexibility. The material features a high IR reflectance of over 85%, making it an excellent barrier to radiant heat. Operating temperature up to 400 °C.

GLASS FABRIC, COATED WITH SILICONE ELASTOMER in red. This material, apart from insulation, is gas-tight, can protect against dust and even against liquid metal splashes. The maximum continuous operating temperature is up to 250 °C, but the silicone coating easily sublimates and thus can protect against sparks and metal drops over 1000 °C.

AREAS OF APPLICATION

Fabrics are used as insulation and shielding in the power industry, metallurgy and foundry industry. They are used in the manufacture of fabric expansion joints. But above all, glass fabrics are the equivalent of asbestos materials with a similar form and range of applications.



Properties / Type		0.8/1x50m	1.0/1x50m	1.5/1x50m	2.0/1x30m	3.0/1x30m
Thickness	mm	0,8	1	1,5	2	3
Weight	g/m ²	650 ±50	800 ± 60	1000 ± 70	1300 ± 85	1800 ± 110
Warp yarn	tex	480	480	100	1700	3000
Yarn on weft	tex	480	860	1000	1000	3000
Thermal conductivity λ for 23°C	W/mK	0,23	0,23	0,23	0,23	0,23
Mechanical strength	kN/m	30	40	60	80	110

DIMENSIONS AND PACKAGING

Glass fabrics are produced in the range from 0.8 mm to 3.0 mm in rolls with a standard width of 1 metre and lengths of 30 or 50 metres.

The maximum width of the fabric is up to 2 metres and the maximum length up to 100 metres. The fabric is packed in cardboard boxes and delivered on standard EPAL pallets.

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