

Application purpose and characteristics

Electrical insulation, transport of goods, naval application.
Fire proof, arc resistant, high rigidity, flame resistance and low smoke emission.

Material name, short description	UP GM
Material name, based on technical standards	Polyester resin laminated glass mat
Density	1.85 g/cm ³
Color	white
Compound code	UP GM 203-1.043-00

Mechanical properties

Tensile strength	70 N/mm ² ISO 527 Parallel to layer
Flexural modulus of elasticity	≥ 9000 N/mm ² ISO 178
Bending strength 1	≥ 150 N/mm ² ISO 178
Bending strength 2	≥ 70 N/mm ² ISO 178 130 °C
Compressive strength 1	≥ 160 N/mm ² ISO 604 Parallel to layer
Compressive strength 2	220 N/mm ² ISO 604 Vertical to layer
Impact strength	≥ #ErrorkJ/m ² ISO 179 Charpy, parallel to layer

Other attributes

Water absorption	≤ 50 mg ISO 62-1 Thickness 4 mm
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Thermal attributes

Min. operating temperature	-40 °C
Max. operating temperature long term	155 °C
Heat deflection temperature 1	≥ 200 °C ISO 75-2
Thermal class	F IEC 60216

Electrical attributes

Comparative tracking index	500 CTI IEC 60112
Dielectric dissipation factor 1	0.01 DIN VDE 0303-4 1 MHz
Dielectric constant 1	5 DIN VDE 0303-4 1 MHz
Dielectric strength 1	≥ 20 kV/mm DIN IEC 60243-1 Vertical to layer, after 24 h / 23 °C, 50 % humidity
Surface resistivity	10 ¹³ Ω IEC 60893

In compliance with **RoHS** and **REACH** directives.

This information is based on our available data. These values are measured on standard test specimens and are within the normal tolerance range of material properties and do not represent guaranteed property values. Therefore they shall not be used for specification purposes. The customer is solely responsible for quality and suitability of material for his application. He has to test usage and processing prior to use. Angst+Pfister makes no guarantees for the suitability of the material for any given application and assumes no obligation or liability in connection with the information provided above.