

laminates

VETRONIT SGS

- Very good thermal properties
- High tracking resistance
- Excellent dielectric properties in dry and humid environment
- Flammability class V0 acc. to UL 94

General description

Vetronit SGS is a glass fabric bonded with silicone resin for mechanical and electrical applications with a temperature index of 220°C. Suitable for applications in high frequency technology.

Specifications

IEC/DIN EN 60893 SI GC 201/202
DIN 7735 HGW 2572 (*)
BS 3953 SI 5
NFC 26-154 VS 2
NEMA LI-1 G-7
(*) no longer valid since March 2003

RoHS Directive

Hazardous products listed in the EU-directive 2002/95/CE (RoHS directive), §4 section 1, are not used as ingredients in this material.

Colour

White

Application

Electrical insulation, high frequency technology
Electrical insulation, track resistant
High voltage insulation parts
High temperature resistant machine parts

Former denominations

SGS
Vetronite Silicone 64.020
Vetronit G 7 432.61

Form of delivery

Sheet sizes of 1170 x 1070 and 2070 x 1070 mm (up to 40 mm thickness)
Sheet size tolerances : 0 / - 30 mm
Thickness in range of 0,2 to 50 mm
Thickness tolerances acc. DIN EN 60893-3-6
Material also available as cut to size panels and machined parts.
Other dimensions and thicknesses on request.

Processing

Machining with carbide or diamond tools.
For water jet cutting we recommend to add silica sand to the water and to drill through-holes prior

		Value	Test norm
Mechanical properties			
Flexural strength	MPa	150	ISO 178
Modulus of elasticity	MPa	15000	ISO 178
Edgewise notched impact strength Charpy	kJ/m ²	50	ISO 179
Compressive strength at 23°C, flatwise	MPa	450	ISO 604
Compressive strength //, at 23°C	MPa	100	ISO 178
Tensile strength	MPa	130	ISO 527
Shear strength //	MPa	20	IEC 60893
Electrical properties			
Insulation resistance after the immersion in water	Ω	1.00E+12	IEC 60167
Breakdown voltage //, 90°C in oil	kV	75	IEC 60243-1
Flatwise electrical strength	kV/mm	8	IEC 60243-1
Arc resistance	s	180	ASTM D 495
Relative permittivity at 1 MHz		4.4	IEC 60250
Dissipation factor at 1 MHz		0.003	IEC 60250
Comparative tracking index CTI	V	600	IEC 60112
Thermal properties			
Thermal conductivity	W/m.K	0.30	DIN 52612
Coefficient of linear expansion //	1.0E-6 / K	12	VDE 0304
Temperature index (TI)	°C	220	IEC 60216
Physical properties			
Density	g/cm ³	1.85	ISO 1183
Water absorption 24h 23°C	mg / %	26 / 0.1	ISO 62
Flammability		V0	UL 94

to machine.

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