

Laminate



VETRONITE SGS

- **Very good thermal properties**
- **High tracking resistance**
- **Excellent electrical properties in dry and humid environment**
- **Defined burning rate acc. to UL94, class V-0**

Description

Vetronite SGS is an insulating laminate made of fine weave glass fabric bonded with silicone resin 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 (*)
NEMA LI-1 G-7
(*) no longer valid since March 2003

RoHS Directive

Hazardous products listed in the EU-directive 2011/65/EU (RoHS-directive), annex II and amendment 2015/863/EU are not used as ingredients in this material.

Color

White

Applications

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

Machining

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

	Unit	Value	Test norm
Mechanical properties			
Flexural strength	MPa	170	ISO 178
E-modulus	MPa	17000	ISO 178
Notched impact strength (Charpy), //	kJ/m ²	100	ISO 179
Compressive strength // at 23°C	MPa	100	ISO 604
Compressive strength ⊥ at 23°C	MPa	480	ISO 604
Tensile strength	MPa	180	ISO 527
Electrical properties			
Insulation resistance after immersion in water	Ohm	1.00E+12	IEC 62631-3-3
Breakdown voltage // 90°C in oil	kV	90	IEC 60243-1
Electric strength ⊥ 90°C in oil	kV/mm	15	IEC 60243-1
Relative permittivity at 1 MHz		4.4	IEC 60250
Dissipation factor at 1 MHz		0.003	IEC 60250
Arc resistance	s	180	ASTM D 495
Comparative tracking index CTI		600	IEC 60112
Thermal properties			
Temperature index (TI)	TI	220	IEC 60216
Thermal conductivity	W/m.K	0.3	ISO 8301
Linear expansion coefficient //	1.0E-6/K	12	ISO 11359-2
Physical properties			
Density	g/cm ³	1.85	ISO 1183
Flammability		V-0	UL 94
Water absorption	mg/%	26/0.1	ISO 62

Form of delivery

Sheet formats:
1170 x 1070 mm
2070 x 1070 mm
4300 x 1300 mm (untrimmed)
Size tolerance 0 / - 30 mm

Thickness range 0,2 to 30 mm
Thickness tol. acc. to DIN EN 60893-3-6

Also available as panels or machined parts.
Other dimensions and thicknesses on request.

The data supplied are typical values. They are not to be considered specification values. All of the information, suggestions, and recommendations about these properties and uses of the products herein are based on tests and data believed to be accurate; however, the final determination regarding the suitability of any material described herein for the contemplated application, the manner of such use, and whether the use infringes any patents is the sole responsibility of the user. There is no warranty - expressed or implied - including, without limitation, warranties of merchantability or fitness for a particular purpose. Under no circumstances shall we be liable for incidental or consequential loss or damage.

VRI Composites custom fabricates insulation materials to the exact specifications and drawings specified by our customers. We offer our customers the proper product for their specific application. A variety of dimensions and diameter sizes are available. Product colors vary according to material type.