

laminates

VETRONIT G11

► **High Pressure Laminate with excellent retention of mechanical strength even at elevated temperatures**

► **Good electrical properties**

► **High comparative tracking index**

General description

Vetronit G11 is an insulating laminate made of glass fabric bonded with epoxy resin. It has a temperature index of 180°C.

Specifications

IEC/DIN EN 60893 EP GC 203/308
DIN 7735 HGW 2372.4 (*)
BS 3953 EP 5
NFC 26-151 Vt-EM 2
NEMA LI-1 G-11

(*) no longer valid since March 2003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

Yellow brown

Application

Electrical insulation
High temperature resistant machine parts
Aeronautics and aerospace
Chemical engineering

Former denominations

Epoxy Vetronite 64.120
Vetronit G11 432.86

Form of delivery

Sheet formats 1170 x 1070 mm and 2070 x 1070 mm (up to 40 mm thickness).
Tolerance of formats 0 / - 30 mm
Thickness in range of 0,2 to 150 mm
Thickness tolerances acc. to DIN EN 60893-3-2

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 drill through-holes prior to machine.

		Value	Test norm
Mechanical properties			
Modulus of elasticity	MPa	24000	ISO 178
Edgewise notched impact strength Charpy	kJ/m ²	65	ISO 179
Flexural strength at 150°C / 1h	MPa	400	ISO 178
Tensile strength	MPa	375	ISO 527
Flexural strength	MPa	500	ISO 178
Compressive strength //, at 23°C	MPa	260	ISO 604
Flatwise compressive strength	MPa	550	ISO 604
Shear strength //	MPa	30	IEC 60893
Electrical properties			
Insulation resistance after the immersion in water	Ω	1.00E+12	IEC 60167
Relative permittivity at 1 MHz		4.9	IEC 60250
Dissipation factor at 1 MHz		0.019	IEC 60250
Flatwise electric strength, 90°C in oil	kV/mm	20	IEC 60243-1
Comparative tracking index CTI	V	500	IEC 60112
Breakdown voltage //, 90°C in oil	kV	80	IEC 60243-1
Thermal properties			
Thermal conductivity	W/m.K	0.25	DIN 52612
Temperature index (TI)	°C	180	IEC 60216
Coefficient of linear expansion //	1.0E-6 / K	15	VDE 0304
Physical properties			
Density	g/cm ³	1.90	ISO 1183
Water absorption 24h 23°C	mg / %	10 / 0.04	ISO 62

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