

Laminate



VETRONITE G11 CON

- High pressure laminate for special requirements in space and aerospace applications
- Excellent mechanical properties at elevated temperatures
- Suitable also for tensile forces in 45°
- Temperature class H

Description

Vetronite G11 CON is a special insulating laminate made of fine weave glass fabric bonded with special epoxy resin.

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.

Colour

Yellow brown, gets a greenish touch under influence of UV-light

Applications

Aerospace and space applications

Form of delivery

Sheet formats 2070 x 1070 mm, 4300 x 1305 mm (untrimmed)
Size tolerance 0 / - 30 mm

Thickness range 1 to 40 mm

Thickness tol. acc. to DIN EN 60893-3-2

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

	Unit	Value	Test norm
Mechanical Properties			
Flexural strength	MPa	580	ISO 178
E-Modulus	MPa	24000	ISO 178
Flexural strength 150°C / 1h	MPa	370	ISO 178
Notched impact strength (Charpy), //	kJ/m ²	80	ISO 179
Compressive strength // at 23°C	MPa	360	ISO 604
Compressive strength ⊥ at 23°C	MPa	660	ISO 604
Tensile strength	MPa	380	ISO 527
Tensile strength 45°	MPa	230	ISO 527
E-Modulus 45°	MPa	13000	ISO 527
Expansion 45°	%	18	ISO 527
Electrical properties			
Insulation resistance after immersion in water	Ohm	5.00E+11	IEC 62631-3-3
Breakdown voltage // 90°C in oil	kV	75	IEC 60243-1
Electric strength ⊥ 90°C in oil	kV/mm	16	IEC 60243-1
Relative permittivity at 1 MHz		5.5	IEC 60250
Dissipation factor at 1 MHz		0.15	IEC 60250
Comparative tracking index CTI		500	IEC 60112
Thermal properties			
Temperature index (TI)	TI	180	IEC 60216
Thermal conductivity	W/m.K	0.3	ISO 8301
Thermal expansion coefficient //	1.0E-6/K	15	ISO 11359-2
Physical properties			
Density	g/cm ³	1.90	ISO 1183
Water absorption	mg/%	10/0.04	ISO 62

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

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.