

# Laminate



## VETRONITE EGS T23

- **High pressure laminate for high mechanical and electric requirements at high temperatures**
- **High temperature resistant resin matrix suitable for more than 200°C**
- **Very good chemical resistance**

### Description

VETRONITE EGS T23 is an insulating laminate made of fine weave glass fabric bonded with special epoxy resin. Especially suitable for short heat peaks.

### Specifications

IEC/DIN EN 60893	EP GC 203/308
DIN 7735	HGW 2372.4 (*)
BS 3953	EP-7 (*)
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(\*) no longer valid since March 2003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 2011/65/EU (RoHS-directive), annex II and amendment 2015/863/EU are not used as ingredients in this material.

### Colour

Olive grey

### Applications

High voltage insulation parts  
High temperature resistant machine parts  
Slides for compressors and vacuum pumps  
Cable channels

	Unit	Value	Test norm
<b>Mechanical properties</b>			
Flexural strength	MPa	450	ISO 178
E-modulus	MPa	24000	ISO 178
Flexural strength at 150°C / 1h	MPa	350	ISO 178
Notched impact strength (Charpy), //	kJ/m <sup>2</sup>	60	ISO 179
Compressive strength // at 23°C	MPa	280	ISO 604
Compressive strength ⊥ at 23°C,	MPa	500	ISO 604
Tensile strength	MPa	330	ISO 527
<b>Electrical properties</b>			
Insulation resistance after immersion in water	Ohm	5.00E+12	IEC 62631-3-3
Breakdown voltage // 90°C in oil	kV	80	IEC 60243-1
Electric strength ⊥ 90°C in oil	kV/mm	18	IEC 60243-1
Relative permittivity at 1 MHz		5.0	IEC 62631-2-1
Dissipation factor at 1 MHz		0.018	IEC 62631-2-1
Comparative tracking index CTI		200	IEC 60112
<b>Thermal properties</b>			
Temperature index (TI)	TI	180	IEC 60216
Thermal conductivity	W/m·K	0.25	ISO 8301
Linear expansion coefficient //	1.0E-6/K	15	ISO 11359-2
<b>Physical properties</b>			
Density	g/cm <sup>3</sup>	1.90	ISO 1183
Water absorption	mg/%	10/0.05	ISO 62

### Form of delivery

Sheet format 1170 x 1070 mm  
Size tolerance 0 / - 30 mm

Thickness range 0,2 to 150 mm  
Thickness tol. acc. to DIN EN 60893-3-2

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

### 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.