

sheets

DELMAT EPOXY 68690 FLAME RETARDANT AND HALOGEN FREE

- ▶ Excellent thermal resistance, temperature index 180.
- ▶ Very low variation of shear resistance on slot wedges after ageing at elevated temperatures.
- ▶ Very good mechanical properties at elevated temperatures, suitable for class H applications.
- ▶ Good resistance to solvents normally used, to oil and chloric dielectric liquids.
- ▶ Good electrical properties.
- ▶ Low water absorption.
- ▶ Good dimensional stability.
- ▶ Fire classification according to NF F16-101 : I2 F1.
- ▶ Flammability according to UL : 94 V-0.
- ▶ Easy machining.

General description

Delmat Epoxy 68690 is a laminate made of glass mat with epoxy resin giving self extinguishing properties as well as good mechanical properties at elevated temperature.

Application

- Operating rods for HV/MV circuit breakers
- Blocking pieces for rotating machines
- Slot wedges, plates, supports...
- Threaded rods and nuts
- Spacers, Washers

Standards

IEC 60893 : EP GM 204
NF C 26-151 : Vm EM 2e

Form of delivery

- Delmat Epoxy 68690 is supplied in :
- sheets : 2950 x 1335 mm or 1335 x 975 mm for thicknesses 3 to 53mm.
 - machined parts according to drawings.
 - strips of any width.

Von Roll Isola has several well equipped workshops for the production of any machined or punched parts. For different sizes, please consult us.

Colour

red

The product properties set forth in this data sheet are based on the results of testing of typical material produced by the affiliated companies of Von Roll Holding Ltd. (underneath referred as Von Roll). Some variation in product properties is typical. Comments or suggestions relating to any subject other than product properties are

		Value	Test norm
Mechanical properties			
Tensile strength, //, at 23°C	MPa	250	ISO 527
Flexural strength at 23°C, flatwise	MPa	400	ISO 178
Flexural strength at 150°C, flatwise	MPa	200	ISO 178
Modulus of elasticity in flexure at 23°C, flatwise	MPa	18000	ISO 178
Modulus of elasticity in flexure at 150°C, flatwise	MPa	12000	ISO 178
Compressive strength at 23°C, flatwise	MPa	450	ISO 604
Compressive strength //, at 23°C	MPa	300	ISO 604
Shearing strength flatwise	MPa	130	IEC 60893
Shearing strength //	MPa	25	IEC 60893
// Notched impact strength IZOD method (10mm thick)	kJ/m ²	60	ISO 180
// Notched impact strength CHARPY method (10mm thick)	kJ/m ²	70	ISO 179
Bonding strength (10mm thick)	N	6000	ASTM D 229
Electrical properties			
Surface resistivity	Ohm	10 ¹²	IEC 60093
Surface resistivity after 24h immersion in 23°C water	Ohm	10 ¹⁰	IEC 60093
Volume resistivity	Ohms.cm	10 ¹³	IEC 60093
Volume resistivity after 24h immersion in 23°C water	Ohms.cm	10 ¹¹	IEC 60093
Insulation resistance	Ohm	10 ¹²	IEC 60167
Insulation resistance, after 24h immersion in water at 23°C	Ohm	10 ⁹	IEC 60167
Flatwise electric strength, step by step test, in oil at 90°C	kV/mm	13	IEC 60243-1
Edgewise breakdown voltage, step by step, in oil at 90° C, as received	kV	65	IEC 60243-1
Edgewise breakdown voltage, step by step, in oil at 23° C after immersion 48h/50°C/water	kV	50	IEC 60243-1
Relative permittivity at 1 MHz		<5	IEC 60250
Dissipation factor at 1 MHz		<0.04	IEC 60250
Physical properties			
Density	g/cm ³	1.9 ±0.1	ISO 1183
Water absorption 24h 23°C	%	0.20	ISO 62
Thermal properties			
Coefficient of linear expansion //	K ⁻¹	15.10 ⁻⁶	VSM 77110
Temperature index (TI)		180	IEC 60216
Other properties			
Flammability		94 V-0	UL 94

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