PLASTIM
Subsidiary of Omnia Plastica

PRODUCT DATA SHEET

Epoxy Glass.

This is a thermo-laminated glass epoxymaterial, composed of woven fibreglass cloth and an epoxy resin binder that is flame resistant. With a good strength to weight ratio this product is used most commonly in electrical applications where high heat, mechanical stability and electrically isolative conditions are needed. Epoxy glass also has a very low water absorption rate. Even when machined into finished parts and components Epoxy glass retains its shape and size even operating at its material limits for prolonged periods of time.

Physical Properties (Indicative values)

GENERAL PROPERTIES	Test Method	Units	Value
Density	ISO 1183	g/cm^3	1.9
Water absorption, absolute	ISO 62	mg	23***
Thermal Endurance	IEC 60216	T.I.	130*
MECHANICAL PROPERTIES			
Flexural stress at rupture perpendicular to laminations.	ISO 178	MPa	340
Apparent modulus of elasticity to laminations.	ISO 178	MPa	22000*
Compressive strength perpendicular to laminations.	ISO 604	MPa	350*
Impact strength (Charpy) parallel to laminations.	ISO 179/3C	KJ/m^2	42
Shearing strength parallel to laminations.	VDE 0318/2	MPa	30*
Tensile Strength	ISO 527-4	MPa	300*
ELECTRICAL PRPERTIES			
Electric strength at 90^{0}C in oil perpendicular to laminations	IEC 60243-1	kV/mm	10.2**
Breakdown voltage at 90^{0}C in oil parallel to laminations.	IEC 60243-1	kV/mm	45
Insulation resistance after immersion in water.	IEC 60167	Mohm	50
Proof tracking index PTI	IEC 60112	PTI	-
Comparative traking index CTI	IEC 60112	CTI	200*
Tracking and erosion resistance.	IEC 60112	Klasse	-
Certifications Underwriter Laboratories			
Flammability E307596	IEC 60695-11-10	UL94	V-O
Hot-wire ignition E307596	UL746A	HWI	-
High Amp Arc Ignition E307596	UL746A	HAI	-
Relative Temperature Index E307596	UL746A	RTI	-
Fire behaviour and fire side effects of materials and parts DIN 5510 - 2			
Flamibility Group	DIN 5510 T.2	Class	-
Smoke Emissions Class	DIN 5510 T.3	Class	-
Drop Form Category	DIN 5510 T.4	Class	-

Base Material - Woven Glass Cloth
Matrix Resin - Epoxy (epoxide)

Legend

* Typical values as per IEC 60893-4. They shall not be considered as specification requirements.

** For thickness > = 3.0 mm

*** For test specimens 50 x 50 x 4 mm

Test values are derived from an average type test.

RoHS - Declaration.
This material does not contain any substances of very high concern as listed in the EU directive 2011/65/EU, article 4, paragraph 1.

The mechanical features decrease with a reduction in temperature and are also influenced by other factors (moisture, etc). The quoted values do not take into consideration impact conditions or heavy loads.

This table, is mainly to be used for comparison purposes. It's a valuable tool to help in the choice of material. The data listed here falls within the normal range of product properties. However, they aren't guaranteed and shouldn't be used to establish material specification limits nor used alone as the basis of design.

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