



THE GUND COMPANY

Manufacturers & fabricators of engineered material solutions

Item:	Cycloaliphatic Epoxy
Description:	<p>Cycloaliphatic Epoxy is a low viscosity, low molecular weight, epoxy resin designed for high voltage outdoor electrical applications. The epoxy resin system achieves crack free components with excellent mechanical and electrical properties with high uniformity. It also provides good thermal shock resistance and is suitable for use in outdoor applications.</p> <p>When the hardener, accelerator, and filler are mixed with epoxy resin and casted under vacuum, crack free components with excellent mechanical and electrical properties can be achieved with high uniformity. This system is capable to provide good thermal shock resistance and suitable to use for outdoor applications.</p>
Processing	Automatic pressure gelation, pressure gelation and conventional vacuum casting.
Applications	Electrical insulation for medium voltage outdoor applications such as switchgear components, instrument transformers, bushings, line, post and pin insulators.

Typical Properties: Cycloaliphatic Epoxy

Property	Test Method	Unit	Typical Values
Appearance	Visual	-	Clear liquid
Viscosity* @25°C	JIS K 7233	cPs	300 - 600
Specific Gravity @25°C	TEC-AS-P-004	-	1.14 - 1.20
Epoxy equivalent weight (EEW)	DIN 16945/4. 15B (89) TEC-AS-C-002	g/eq	182 - 194
Tensile strength	ISO 527	MPa	70 - 90
Tensile elongation at break	ISO 527	%	1 - 1.5
Tensile modulus	ISO 527	MPa	10,500 - 12,000
Flexural strength	ISO 178	MPa	150 - 170
Flexural elongation	ISO 178	MPa	1.7 - 2.0
Flexural modulus	ISO 178	MPa	10,500 - 12,000
Deflection temperature (HDT)	ISO / R 75	°C	72 - 80
Glass transition temperature (Tg)	DSC	°C	75 - 85
Density	DIN 55990	g / cm ³	1.8 - 1.85
Water absorption (50 x 50 x 4 mm) 23°C / 10 days 60 min / 100°C	ISO / R 62	% %	0.1 - 0.2 0.006 - 0.15
Arc resistance	ASTM D 495	Seconds	>185
Comparative tracking index	IEC 60112	Volts	>600
Electrical strength perpendicular (2 mm thick sheet)	IEC 60243-1	Kv / mm	18 - 22