

Sumitomo Bakelite North America E 3812M-1 Mineral and Glass Filled Electrical Encapsulation Grade Epoxy

Category : Polymer , Thermoset , Epoxy , Epoxy, Encapsulating, Glass or Mineral Filled , Filled/Reinforced Thermoset

Material Notes:

E 3812M-1 is a mineral and short fiberglass filled epoxy molding compound for low pressure encapsulation molding, featuring excellent dimensional stability, good thermal shock resistance, and good electrical insulation properties. Information provided by Sumitomo Bakelite North America, Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Sumitomo-Bakelite-North-America-E-3812M-1-Mineral-and-Glass-Filled-Electrical-Encapsulation-Grade-Epoxy.php

Physical Properties	Metric	English	Comments
Bulk Density	0.950 g/cc	0.0343 lb/in ³	ASTM D1895
Density	1.86 g/cc	0.0672 lb/in ³	ASTM D792
Water Absorption	0.30 % @Temperature 50.0 Â°C, Time 173000 sec	0.30 % @Temperature 122 Â°F, Time 48.0 hour	ASTM D570
Linear Mold Shrinkage	0.0035 - 0.0050 cm/cm	0.0035 - 0.0050 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	58.0 MPa	8410 psi	ASTM D638
Flexural Strength	94.0 MPa	13600 psi	at rupture; ASTM D790
Flexural Modulus	13.0 GPa	1890 ksi	ASTM D790
Compressive Strength	213 MPa	30900 psi	ASTM D695
Izod Impact, Notched	0.160 J/cm	0.300 ft-lb/in	ASTM D256

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	>= 280 Â°C	>= 536 Â°F	Post Baked; ASTM D648A

Electrical Properties	Metric	English	Comments
Dielectric Constant	3.8 @Frequency 1.00e+6 Hz	3.8 @Frequency 1.00e+6 Hz	wet; ASTM D150
	13.8 kV/mm	351 kV/in	

Dielectric Strength Electrical Properties	Metric @Frequency 60.0 Hz	English @Frequency 60.0 Hz	step-by-step, wet; ASTM D149 Comments
	16.0 kV/mm	406 kV/in	short time, wet; ASTM D149
	@Frequency 60.0 Hz	@Frequency 60.0 Hz	
Dissipation Factor	0.020	0.020	wet; ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Arc Resistance	178 sec	178 sec	ASTM D495

Descriptive Properties	Value	Comments
Color	Black	
Form	Granular	
Molding Method	Compression	
	Transfer	

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