

Hexion UP 802 Unsaturated Polyester Resin, High Surface Quality, Low Shrinkage, High Arc Resistance

Category : Polymer , Thermoset , Filled/Reinforced Thermoset , Polyester, TS , Thermoset Polyester Glass Filled BMC

Material Notes:

Polyester molding compound, inorganically filled, glass fiber reinforced, styrene free, high dimensional stability, very slight post shrinkage, good mechanical properties, increased electrical values, standardized molding compound. Application areas: Ignition distributor caps, distributor fingers, spark plug connectors. This product was originally produced by Bakelite AG, now a part of Hexion.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Hexion-UP-802-Unsaturated-Polyester-Resin-High-Surface-Quality-Low-Shrinkage-High-Arc-Resistance.php

Physical Properties	Metric	English	Comments
Density	2.00 g/cc	0.0723 lb/in ³	ISO 1183
Apparent Bulk Density	0.880 g/cc	0.0318 lb/in ³	ISO 60
Linear Mold Shrinkage, Flow	0.0010 cm/cm	0.0010 in/in	Compression molding; ISO 2577

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	375 MPa	54400 psi	H 961/30; ISO 2039/P1
Flexural Strength	100 MPa	14500 psi	2 mm/min; ISO 178
Flexural Modulus	13.5 GPa	1960 ksi	ISO 178
Compressive Strength	200 MPa	29000 psi	Test specimen flat tested; ISO 604
Charpy Impact Unnotched	0.700 J/cm ² @Temperature 23.0 Â°C	3.33 ft-lb/in ² @Temperature 73.4 Â°F	ISO 179-1/2 eU
Charpy Impact, Notched	0.350 J/cm ² @Temperature 23.0 Â°C	1.67 ft-lb/in ² @Temperature 73.4 Â°F	ISO 179-1/2 eA

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	170 Â°C	338 Â°F	<20000 hours; IEC 60216-P1
	210 Â°C	410 Â°F	< 50 hours; IEC 60216-P1
Deflection Temperature at 8.0 MPa	200 Â°C	392 Â°F	ISO 75-2
Shrinkage	0.0300 % @Temperature 110 Â°C	0.0300 % @Temperature 230 Â°F	Compression molding; ISO 2577

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+13 ohm-cm	1.00e+13 ohm-cm	IEC 60093
Surface Resistance	1.00e+12 ohm	1.00e+12 ohm	IEC 60093
Dielectric Constant	5.0	5.0	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	23.0 kV/mm	584 kV/in	IEC 60243-P1
	@Thickness 1.00 mm	@Thickness 0.0394 in	
Dissipation Factor	0.020	0.020	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Comparative Tracking Index	600 V	600 V	Test liquid A; IEC 60112

Processing Properties	Metric	English	Comments
Feed Temperature	60.0 - 70.0 Â°C	140 - 158 Â°F	Injection molding
Nozzle Temperature	70.0 - 100 Â°C	158 - 212 Â°F	Injection molding
Melt Temperature	70.0 - 100 Â°C	158 - 212 Â°F	Injection molding
Mold Temperature	160 - 180 Â°C	320 - 356 Â°F	Injection molding
	160 - 180 Â°C	320 - 356 Â°F	Compression molding
Injection Pressure	>= 10.0 MPa	>= 1450 psi	Compression and injection cavity mold pressure
Back Pressure	0.500 - 1.00 MPa	72.5 - 145 psi	Injection molding
Cure Time	0.167 - 0.333 min	0.00278 - 0.00556 hour	Per 1 mm of wall thickness, injection molding
	0.333 - 0.667 min	0.00556 - 0.0111 hour	Per 1 mm of wall thickness, compression molding

Descriptive Properties	Value	Comments
Creep Rupture Strength	Good	
Holding Pressure	Approximately 40-60% of injection pressure	
Media Resistance	Medium	
Moisture Absorption	20 mg	ISO 62, 24 hours at 23Â°C
Reserves by Peak Temperature	Very High	
Thermal Expansion	Very Slight	

Descriptive Properties	Value	Comments
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