Hexion Bakelite™ PF 83 Phenolic Formaldehyde Resin, Special Preparation Cylindrical Pellets (discontinued **)

Category : Polymer , Thermoset , Filled/Reinforced Thermoset , Phenolic

Material Notes:

Phenolic molding compound, organically filled, reinforced with cotton fibers, increased notched impact strength, standardized molding compound.Application areas: Switch covers, rolls, handle casings, terminal parts and bobbins.Information provided by Bakelite AGBakelite AG became a part of Hexion in 2005.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Hexion-Bakelite-PF-83-Phenolic-Formaldehyde-Resin-Special-Preparation-Cylindrical-Pellets-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Density	1.42 g/cc	0.0513 lb/in³	ISO 1183
Apparent Bulk Density	0.600 g/cc	0.0217 lb/in³	ISO 60
Linear Mold Shrinkage, Flow	0.0035 cm/cm	0.0035 in/in	Compression molding; ISO 2577

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	250 MPa	36300 psi	H 961/30; ISO 2039/P1
Flexural Strength	90.0 MPa	13100 psi	2 mm/min; ISO 178
Flexural Modulus	7.50 GPa	1090 ksi	ISO 178
Charpy Impact Unnotched	0.750 J/cm² @Temperature 23.0 °C	3.57 ft-lb/in² @Temperature 73.4 °F	ISO 179-1/2 eU
Charpy Impact, Notched	0.350 J/cm² @Temperature 23.0 °C	1.67 ft-lb/in² @Temperature 73.4 °F	ISO 179-1/2 eA

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	130 °C	266 °F	<20000 hours; IEC 60216-P1
	160 °C	320 °F	< 50 hours; IEC 60216-P1
Deflection Temperature at 8.0 MPa	125 °C	257 °F	ISO 75-2
Shrinkage	0.500 % @Temperature 110 °C	0.500 % @Temperature 230 °F	Compression molding; ISO 2577

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+11 ohm-cm	1.00e+11 ohm-cm	IEC 60093

Electrical Properties	Metric	English	Comments
Surface Resistance	1.00e+10 ohm	1.00e+10 ohm	IEC 60093
Dielectric Constant	20 @Frequency 100 Hz	20 @Frequency 100 Hz	IEC 60250
Dissipation Factor	0.20 @Frequency 100 Hz	0.20 @Frequency 100 Hz	IEC 60250
Comparative Tracking Index	125 V	125 V	Test liquid A; IEC 60112

Processing Properties	Metric	English	Comments
Feed Temperature	60.0 - 75.0 °C	140 - 167 °F	Injection molding
Nozzle Temperature	80.0 - 100 °C	176 - 212 °F	Injection molding
Melt Temperature	80.0 - 100 °C	176 - 212 °F	Injection molding
Mold Temperature	160 - 190 °C	320 - 374 °F	Injection molding
	160 - 190 °C	320 - 374 °F	Compression molding
Injection Pressure	>= 15.0 MPa	>= 2180 psi	Compression and injection cavity mold pressure
Back Pressure	0.500 - 2.00 MPa	72.5 - 290 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
Chromatic Spectrum	Subdued Colors	
Creep Rupture Strength	Good	
Holding Pressure	Approximately 40-60% of injection pressure	
Media Resistance	Good	
Moisture Absorption	110 mg	ISO 62, 24 hours at 23°C
Reserves by Peak Temperature	High	
Thermal Expansion	Slight	

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