

Hexion Bakelite™ PF 2400 Phenolic Formaldehyde Resin, High Surface Quality, Dishwasher Proof, UL Listed (disc

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

Material Notes:

Phenolic molding compound, inorganically/organically filled, average heat resistance, increased dimensional stability, dish washer proof, UL listed molding compound 1.5 mm/V-0 (ALL). Application areas: MCB-housings, cookware fittings, meter covers and bases, knobs/handles. Information provided by Bakelite AG. Bakelite AG became a part of Hexion in 2005.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Hexion-Bakelite-PF-2400-Phenolic-Formaldehyde-Resin-High-Surface-Quality-Dishwasher-Proof-UL-Listed-nbspdisc.php

Physical Properties	Metric	English	Comments
Density	1.47 g/cc	0.0531 lb/in ³	ISO 1183
Apparent Bulk Density	0.650 g/cc	0.0235 lb/in ³	ISO 60
Linear Mold Shrinkage, Flow	0.0035 cm/cm	0.0035 in/in	Compression molding; ISO 2577
	0.0075 cm/cm	0.0075 in/in	Injection molding; ISO 2577

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	350 MPa	50800 psi	H 961/30; ISO 2039/P1
Tensile Strength at Break	55.0 MPa	7980 psi	5 mm/min; ISO 527 - 1/2
Tensile Modulus	7.50 GPa	1090 ksi	1 mm/min; ISO 527 - 1/2
Flexural Strength	95.0 MPa	13800 psi	2 mm/min; ISO 178
Flexural Modulus	7.50 GPa	1090 ksi	ISO 178
Compressive Strength	250 MPa	36300 psi	Test specimen flat tested; ISO 604
Charpy Impact Unnotched	0.700 J/cm ² @Temperature 23.0 °C	3.33 ft-lb/in ² @Temperature 73.4 °F	ISO 179-1/2 eU
Charpy Impact, Notched	0.140 J/cm ² @Temperature 23.0 °C	0.666 ft-lb/in ² @Temperature 73.4 °F	ISO 179-1/2 eA

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	145 °C	293 °F	<20000 hours; IEC 60216-P1
	230 °C	446 °F	< 50 hours; IEC 60216-P1
Deflection Temperature at 8.0 MPa	125 °C	257 °F	ISO 75-2

Thermal Properties	Metric	English	Comments
UL RTI, Electrical	@Thickness 1.50 mm	@Thickness 0.0591 in	(ALL)
UL RTI, Mechanical with Impact	150 °C @Thickness 1.50 mm	302 °F @Thickness 0.0591 in	(ALL)
UL RTI, Mechanical without Impact	150 °C @Thickness 1.50 mm	302 °F @Thickness 0.0591 in	(ALL)
Flammability, UL94	V-0 @Thickness 1.50 mm	V-0 @Thickness 0.0591 in	(ALL)
Shrinkage	0.450 % @Temperature 110 °C	0.450 % @Temperature 230 °F	Compression molding; ISO 2577
	0.450 % @Temperature 110 °C, Time 605000 sec	0.450 % @Temperature 230 °F, Time 168 hour	Injection molding; ISO 2577

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+11 ohm-cm	1.00e+11 ohm-cm	IEC 60093
Surface Resistance	1.00e+10 ohm	1.00e+10 ohm	IEC 60093
Dielectric Constant	9.0 @Frequency 100 Hz	9.0 @Frequency 100 Hz	IEC 60250
Dielectric Strength	25.0 kV/mm @Thickness 1.00 mm	635 kV/in @Thickness 0.0394 in	IEC 60243-P1
Dissipation Factor	0.25 @Frequency 100 Hz	0.25 @Frequency 100 Hz	IEC 60250
Arc Resistance	125 - 130 sec	125 - 130 sec	ASTM D495
Comparative Tracking Index	125 V	125 V	Test liquid A; IEC 60112
Hot Wire Ignition, HWI	>= 120 sec @Thickness 1.50 mm	>= 120 sec @Thickness 0.0591 in	(ALL)
High Amp Arc Ignition, HAI	60 - 120 arcs @Thickness 1.50 mm	60 - 120 arcs @Thickness 0.0591 in	(ALL)
	>= 120 arcs @Thickness 3.00 mm	>= 120 arcs @Thickness 0.118 in	ALL

Electrical Properties	10.0 - 25.4 mm/min Metric	0.394 - 1.00 in/min English	Comments
	@Thickness 3.00 mm	@Thickness 0.118 in	

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	All Colors	
Creep Rupture Strength	Very Good	
Holding Pressure	Approximately 40-60% of injection pressure	
Media Resistance	Very Good	
Moisture Absorption	50 mg	ISO 62, 24 hours at 23°C
Reserves by Peak Temperature	Very High	
Thermal Expansion	Very Slight	

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