

## Hexion Bakelite™ PF 6507 Phenolic Formaldehyde Resin, Elasticized, Low Shrinkage, Resistant to High Temperatures, High Mechanical Strength

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

### Material Notes:

Phenolic molding compound, inorganically filled, glass fiber reinforced, elastomer modified, galvanizable, heat resistant, good media resistance, high dimensional stability at raised temperature, high mechanical strength. Application areas: Cooling pumps, solenoid switch covers, magnetic switches, mechanically and thermally highly stressed parts in automotive construction, electrical motor end shields, housing parts, pulleys, tension return pulleys, cog wheels, impellers, bearing parts. 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-6507-Phenolic-Formaldehyde-Resin-Elasticized-Low-Shrinkage-Resistant-to-High-Temperatures-High-Mechanical-Strength.php](http://www.lookpolymers.com/polymer_Hexion-Bakelite-PF-6507-Phenolic-Formaldehyde-Resin-Elasticized-Low-Shrinkage-Resistant-to-High-Temperatures-High-Mechanical-Strength.php)

Physical Properties	Metric	English	Comments
Density	1.58 g/cc	0.0571 lb/in <sup>3</sup>	ISO 1183
Apparent Bulk Density	0.710 g/cc	0.0257 lb/in <sup>3</sup>	ISO 60
Linear Mold Shrinkage, Flow	0.0015 cm/cm	0.0015 in/in	Injection molding; ISO 2577

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	250 MPa	36300 psi	H 961/30; ISO 2039/P1
Tensile Strength at Break	85.0 MPa	12300 psi	5 mm/min; ISO 527 - 1/2
Tensile Modulus	10.5 GPa	1520 ksi	1 mm/min; ISO 527 - 1/2
Flexural Strength	140 MPa	20300 psi	2 mm/min; ISO 178
Flexural Modulus	10.5 GPa	1520 ksi	ISO 178
Compressive Strength	180 MPa	26100 psi	Test specimen flat tested; ISO 604
Charpy Impact Unnotched	1.50 J/cm <sup>2</sup> @Temperature 23.0 °C	7.14 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	ISO 179-1/2 eU
Charpy Impact, Notched	0.350 J/cm <sup>2</sup> @Temperature 23.0 °C	1.67 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	ISO 179-1/2 eA

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	165 °C	329 °F	<20000 hours; IEC 60216-P1
	220 °C	428 °F	< 50 hours; IEC 60216-P1

Deflection Temperature at 8.0 MPa Thermal Properties	170 °C Metric	338 °F English	ISO 75-2 Comments
Shrinkage	0.150 %  @Temperature 110 °C, Time 605000 sec	0.150 %  @Temperature 230 °F, Time 168 hour	Injection molding; ISO 2577

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+12 ohm-cm	1.00e+12 ohm-cm	IEC 60093
Surface Resistance	1.00e+11 ohm	1.00e+11 ohm	IEC 60093
Dielectric Constant	7.0 @Frequency 100 Hz	7.0 @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	0.11 @Frequency 100 Hz	0.11 @Frequency 100 Hz	IEC 60250
Comparative Tracking Index	150 V	150 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	All Colors	
Creep Rupture Strength	Very Good	

<b>Holding Pressure Descriptive Properties</b>	<b>Approximately 40- 60% of injection pressure Value</b>	<b>Comments</b>
Media Resistance	Very Good	
Moisture Absorption	13 mg	ISO 62, 24 hours at 23°C
Reserves by Peak Temperature	Very High	
Thermal Expansion	Very Slight	

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China