

## Hexion Bakelite™ PF 2736 Phenolic Formaldehyde Resin, Improved Electrical Properties, Low Shrinkage, UL Listed & nbs

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

### Material Notes:

Phenolic molding compound, inorganically/organically filled, increased tracking resistance, UL listed molding compound 0.46 mm/V-0 (BK, Suffix "H"), 0.81 mm/V-0 (NC, GN, BK), 1.5 mm/V-0 (ALL). Application areas: Bobbins, relays, circuit prot. switches, MCB housings, pump parts, sealing flanges, insulating caps, electrical switch gears and lamp holders. 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-2736-Phenolic-Formaldehyde-Resin-Improved-Electrical-Properties-Low-Shrinkage-UL-Listed-nbs.php](http://www.lookpolymers.com/polymer_Hexion-Bakelite-PF-2736-Phenolic-Formaldehyde-Resin-Improved-Electrical-Properties-Low-Shrinkage-UL-Listed-nbs.php)

Physical Properties	Metric	English	Comments
Density	1.56 g/cc	0.0564 lb/in <sup>3</sup>	ISO 1183
Apparent Bulk Density	0.730 g/cc	0.0264 lb/in <sup>3</sup>	ISO 60
Linear Mold Shrinkage, Flow	0.0030 cm/cm	0.0030 in/in	Compression molding; ISO 2577
	0.0060 cm/cm	0.0060 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	50.0 MPa	7250 psi	5 mm/min; ISO 527 - 1/2
Tensile Modulus	10.0 GPa	1450 ksi	1 mm/min; ISO 527 - 1/2
Flexural Strength	95.0 MPa	13800 psi	2 mm/min; ISO 178
Flexural Modulus	9.50 GPa	1380 ksi	ISO 178
Compressive Strength	225 MPa	32600 psi	Test specimen flat tested; ISO 604
Charpy Impact Unnotched	0.700 J/cm <sup>2</sup>	3.33 ft-lb/in <sup>2</sup>	ISO 179-1/2 eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	0.140 J/cm <sup>2</sup>	0.666 ft-lb/in <sup>2</sup>	ISO 179-1/2 eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	150 °C	302 °F	<20000 hours; IEC 60216-P1
	200 °C	392 °F	< 50 hours; IEC 60216-P1

Thermal Properties	130 °C Metric	266 °F English	ISO 75-2 Comments
UL RTI, Electrical	150 °C	302 °F	(ALL)
	@Thickness 0.810 mm	@Thickness 0.0319 in	
	150 °C	302 °F	(BK suffix H)
	@Thickness 0.460 mm	@Thickness 0.0181 in	
UL RTI, Mechanical with Impact	150 °C	302 °F	(ALL)
	@Thickness 0.810 mm	@Thickness 0.0319 in	
	150 °C	302 °F	(BK suffix H)
	@Thickness 0.460 mm	@Thickness 0.0181 in	
UL RTI, Mechanical without Impact	150 °C	302 °F	(ALL)
	@Thickness 0.810 mm	@Thickness 0.0319 in	
	150 °C	302 °F	(BK suffix H)
	@Thickness 0.460 mm	@Thickness 0.0181 in	
Flammability, UL94	V-1	V-1	ALL
	@Thickness 0.810 mm	@Thickness 0.0319 in	
	V-0	V-0	(NC, GN, BK)
	@Thickness 0.810 mm	@Thickness 0.0319 in	
	V-0	V-0	(ALL)
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	V-0	V-0	BK, Suffix H
	@Thickness 0.460 mm	@Thickness 0.0181 in	
Shrinkage	0.400 %	0.400 %	Compression molding; ISO 2577
	@Temperature 110 °C	@Temperature 230 °F	
	0.500 %	0.500 %	Injection molding; ISO 2577
	@Temperature 110 °C, Time 605000 sec	@Temperature 230 °F, Time 168 hour	

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	13	13	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	

Electrical Properties	Metric	English	Comments
Dielectric Strength	@Thickness 1.00 mm	@Thickness 0.0394 in	IEC 60243-P1
Dissipation Factor	0.30 @Frequency 100 Hz	0.30 @Frequency 100 Hz	IEC 60250
Arc Resistance	130 - 135 sec	130 - 135 sec	ASTM D495
Comparative Tracking Index	175 V	175 V	Test liquid A; IEC 60112
Hot Wire Ignition, HWI	>= 120 sec @Thickness 0.810 mm	>= 120 sec @Thickness 0.0319 in	ALL
High Amp Arc Ignition, HAI	30 - 60 arcs @Thickness 0.810 mm	30 - 60 arcs @Thickness 0.0319 in	ALL
High Voltage Arc-Tracking Rate, HVTR	0.000 - 10.0 mm/min @Thickness 3.00 mm	0.000 - 0.394 in/min @Thickness 0.118 in	ALL

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	

Descriptive Properties	Value	Comments
Reserves by Peak Temperature	Very High	hours at 23°C
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