

## Sumitomo Bakelite Durez<sup>®</sup> 23570 Phenolic, Injection Grade

Category : Polymer , Thermoset , Phenolic

### Material Notes:

Durez 23570 Black Phenolic is a glass and mineral filled two-stage, special purpose molding material. It is designed for high strength, good dimensional stability, and electrical properties even after long term exposure to elevated temperatures. It is designed to meet the requirements of Mil-M-14G, Type MFH. Typical uses are connectors, automotive transmission components, computer parts and brush holders. Information provided by Sumitomo Bakelite North America, Inc.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Sumitomo-Bakelite-Durez-23570-Phenolic-Injection-Grade.php](http://www.lookpolymers.com/polymer_Sumitomo-Bakelite-Durez-23570-Phenolic-Injection-Grade.php)

Physical Properties	Metric	English	Comments
Density	1.77 g/cc	0.0639 lb/in <sup>3</sup>	ASTM D792
Apparent Bulk Density	0.800 g/cc	0.0289 lb/in <sup>3</sup>	ASTM D1895
Water Absorption	0.050 %	0.050 %	ASTM D570
Linear Mold Shrinkage	0.0030 cm/cm	0.0030 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	103 MPa	14900 psi	ASTM D638
Tensile Modulus	17.2 GPa	2490 ksi	ASTM D638
Flexural Yield Strength	172 MPa	24900 psi	ASTM D790
Compressive Yield Strength	262 MPa	38000 psi	ASTM D695
Poissons Ratio	0.32	0.32	
Shear Modulus	6.52 GPa	946 ksi	Calculated
Shear Strength	62.7 MPa	9100 psi	after 16hrs @ 300 <sup>°</sup> F
	84.8 MPa	12300 psi	as molded
Izod Impact, Notched	0.267 J/cm	0.500 ft-lb/in	ASTM D256

Thermal Properties	Metric	English	Comments
CTE, linear	20.5 $\mu$ m/m- <sup>°</sup> C	11.4 $\mu$ in/in- <sup>°</sup> F	
	@Temperature 23.0 - 60.0 <sup>°</sup> C	@Temperature 73.4 - 140 <sup>°</sup> F	
Specific Heat Capacity	1.17 J/g- <sup>°</sup> C	0.280 BTU/lb- <sup>°</sup> F	
		3.13 BTU-in/hr-ft <sup>2</sup> -	

Thermal Properties	0.452 W/m-K Metric	°F English	Comments
Maximum Service Temperature, Air	150 °C @Thickness 3.00 mm	302 °F @Thickness 0.118 in	UL Temp Index
Deflection Temperature at 1.8 MPa (264 psi)	204 °C	399 °F	ASTM D648
Flammability, UL94	V-0 @Thickness 3.00 mm	V-0 @Thickness 0.118 in	
	5VA @Thickness 1.50 mm	5VA @Thickness 0.0591 in	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+12 ohm-cm	1.00e+12 ohm-cm	ASTM D257
Dielectric Constant	5.5 @Frequency 1e+6 Hz	5.5 @Frequency 1e+6 Hz	ASTM D150
Dielectric Strength	14.7 kV/mm	373 kV/in	Step by step; ASTM D149
	17.7 kV/mm	450 kV/in	Short Time; ASTM D149
Dissipation Factor	0.010 @Frequency 1e+6 Hz	0.010 @Frequency 1e+6 Hz	ASTM D150

Descriptive Properties	Value	Comments
Color	Black	
Feeding & Preforming	Good	
Form	Granular	

## Contact Songhan Plastic Technology Co.,Ltd.

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