

Saint-Gobain Meldin[®] 1003 Thermoplastic Bearing Material

Category : Polymer , Thermoplastic , Polyphenylene Sulfide (PPS)

Material Notes:

Meldin 1003 components offer the highest level of strength and rigidity for this product family. They maintain high chemical, tensile, and flexural properties even at elevated temperatures. Meldin[®] 1000 series components are used in appliance applications due to their superior wear life and ability to operate without the need for any oils or lubricants. For scroll tip seal applications, Meldin[®] 1000 series materials provide some parts with superior wear resistance properties, and superior deformation properties over those of standard PTFE scroll tip seals. In vehicle systems such as transmission bearings or thrust washers, as well as fuel pump bearings, Meldin[®] 1000 series materials provide performance superior to metallic components. The Meldin 1000 series materials' wear resistance, coupled with their excellent chemical resistance, make them ideal materials for vehicle system components.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Saint-Gobain-Meldin-1003-Thermoplastic-Bearing-Material.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.57 g/cc	1.57 g/cc	ASTM D792
Water Absorption	0.030 %	0.030 %	ASTM D570

Mechanical Properties	Metric	English	Comments
Tensile Strength	46.0 MPa	6670 psi	ASTM D 638
	@Temperature 204 Â°C	@Temperature 399 Â°F	
	69.0 MPa	10000 psi	ASTM D 638
	@Temperature 149 Â°C	@Temperature 300 Â°F	
	175 MPa	25400 psi	ASTM D 638
	@Temperature 25.0 Â°C	@Temperature 77.0 Â°F	
Elongation at Break	2.0 %	2.0 %	ASTM D 638
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
	2.5 %	2.5 %	ASTM D 638
	@Temperature 149 Â°C	@Temperature 300 Â°F	
	2.8 %	2.8 %	ASTM D 638
	@Temperature 204 Â°C	@Temperature 399 Â°F	
Flexural Strength	193 MPa	28000 psi	ASTM D 790
Flexural Modulus	13.8 GPa	2000 ksi	ASTM D 790

Mechanical Properties	23.4 MPa Metric	3390 psi English	Comments
	@Temperature 204 Â°C	@Temperature 399 Â°F	
	38.0 MPa	5510 psi	ASTM D 695
	@Temperature 149 Â°C	@Temperature 300 Â°F	
	155 MPa	22500 psi	ASTM D 695
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
Izod Impact, Notched	0.430 J/cm	0.806 ft-lb/in	ASTM D 256

Thermal Properties	Metric	English	Comments
CTE, linear	1.40 Âµm/m-Â°C	0.778 Âµin/in-Â°F	ASTM E831-93
Thermal Conductivity	0.750 W/m-K	5.20 BTU-in/hr-ftÂ²- Â°F	ASTM F433
Deflection Temperature at 1.8 MPa (264 psi)	260 Â°C	500 Â°F	ASTM D648

Electrical Properties	Metric	English	Comments
Surface Resistance	150 ohm	150 ohm	ASTM D257

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