

Saint-Gobain Meldin® 2001 Bearing

Category : Polymer , Thermoset , Polyimide, TS

Material Notes:

General Notes on Meldin 2000 Series Bearing Products:For High-Temperature, Close-Tolerance Applications. Able to withstand temperatures of 600°F with excursions to 900°F, the Medlin® 2000 Series can be machined into various configurations, from rod or sheet stock shapes. Black in color. Meldin® 2000 Series offers very high compression strength, high creep resistance, and dimensional stability.**Specific Notes on Meldin® 2001 Bearing**Meldin® 2001 is best suited for thermal and electrical insulation and radiation resistance. Meldin® 2001 has the highest compressive strength properties of any material in the series.Applications include: Appliances, Automotive, Industrial, Semiconductor, Transportation.**Specification Notes:** Note that the specifications given for this product are typical specifications for the Meldin® 2000 Series, and individual products will vary as indicated in the material notes.Information provided by Saint Gobain Performance Products.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Saint-Gobain-Meldin-2001-Bearing.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.39 g/cc	1.39 g/cc	ASTM D792
Water Absorption	0.13 %	0.13 %	ASTM D570
Deformation	0.10 % @Pressure 13.8 MPa	0.10 % @Pressure 2000 psi	24 hrs. Mold Direction; ASTM D621
Outgassing - Total Mass Loss	0.010 %	0.010 %	% CVM; ASTM E55955
	1.04 %	1.04 %	% WVR; ASTM E595
	1.62 %	1.62 %	% TML; ASTM E5955

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	92	92	ASTM D2240
Tensile Strength, Ultimate	20.6 MPa @Temperature 316 °C	2990 psi @Temperature 601 °F	ASTM D 638
	48.2 MPa @Temperature 260 °C	6990 psi @Temperature 500 °F	ASTM D 638
	92.0 MPa @Temperature 23.0 °C	13300 psi @Temperature 73.4 °F	ASTM D 638
Elongation at Break	7.0 % @Temperature 260 °C	7.0 % @Temperature 500 °F	ASTM D 638

Mechanical Properties	8.0 % Metric	8.0 % English	Comments
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	25 %	25 %	ASTM D 638
	@Temperature 316 °C	@Temperature 601 °F	
Tensile Modulus	0.200 GPa	29.0 ksi	ASTM D 638
	@Temperature 316 °C	@Temperature 601 °F	
	0.800 GPa	116 ksi	ASTM D 638
	@Temperature 260 °C	@Temperature 500 °F	
	1.20 GPa	174 ksi	ASTM D 638
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Flexural Strength	145 MPa	21000 psi	ASTM D 790
Flexural Modulus	4.40 GPa	638 ksi	ASTM D 790
Compressive Yield Strength	48.2 MPa	6990 psi	ASTM D695 Modified
	@Strain 7.00 %, Temperature 316 °C	@Strain 7.00 %, Temperature 601 °F	
	75.8 MPa	11000 psi	ASTM D695 Modified
	@Strain 7.00 %, Temperature 260 °C	@Strain 7.00 %, Temperature 500 °F	
	234 MPa	33900 psi	ASTM D695 Modified
	@Strain 10.0 %, Temperature 23.0 °C	@Strain 10.0 %, Temperature 73.4 °F	
Ultimate Compressive Strength	172.3 MPa	24990 psi	ASTM D695 Modified
	@Temperature 316 °C	@Temperature 601 °F	
	203.3 MPa	29490 psi	ASTM D695 Modified
	@Temperature 260 °C	@Temperature 500 °F	
	275.7 MPa	39990 psi	ASTM D695 Modified
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Compressive Modulus	0.600 GPa	87.0 ksi	ASTM D695 Modified
	@Temperature 316 °C	@Temperature 601 °F	
	1.20 GPa	174 ksi	ASTM D695 Modified
	@Temperature 260 °C	@Temperature 500 °F	
	2.70 GPa	392 ksi	ASTM D695 Modified

Mechanical Properties	Metric	English	Comments
Mod Impact, Notched	@Temperature 23.0 °C 0.283 J/cm	@Temperature 73.4 °F 0.830 ft-lb/in	ASTM D 256

Thermal Properties	Metric	English	Comments
CTE, linear	53.0 µm/m-°C	29.4 µin/in-°F	ASTM E831-93
Thermal Conductivity	0.430 W/m-K	2.98 BTU-in/hr-ft²-°F	C518/C177
Maximum Service Temperature, Air	>= 316 °C	>= 600 °F	UL-746 B

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	ASTM D257
Surface Resistance	1.00e+16 ohm	1.00e+16 ohm	ASTM D257
Dielectric Constant	3.35	3.35	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.39	3.39	ASTM D150
	@Frequency 10000 Hz	@Frequency 10000 Hz	
Dielectric Strength	3.4	3.4	ASTM D150
	@Frequency 100 Hz	@Frequency 100 Hz	
Dissipation Factor	0.0016	0.0016	ASTM D150
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.0030	0.0030	ASTM D150
	@Frequency 10000 Hz	@Frequency 10000 Hz	
	0.0039	0.0039	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

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