

Menzolit Menzolit® SMC 0390 Unsaturated Polyester UP

Category : Polymer , Thermoset , Polyester, TS , Thermoset Polyester Glass SMC

Material Notes:

SMC 0390 is a standard low profile SMC. Because of its low shrinkage, the material shows good surface quality as well as very low warpage. The product is suitable for applications if a better surface quality is necessary that can not be achieved with low shrink material. Because of the low shrinkage, tool design is more difficult and the user should take care for proper part demoulding. Typical applications are furniture, telephone booths, business machines and housings or covers that call for improved surface quality and dimensional stability. Because of this painting may be desired. Paint adhesion of appropriate paint systems is very good. Chrome-plating of punch and cavity surfaces is recommended. Information Provided by Menzolit

Order this product through the following link:

http://www.lookpolymers.com/polymer_Menzolit-Menzolit-SMC-0390-Unsaturated-Polyester-UP.php

Physical Properties	Metric	English	Comments
Density	1.90 g/cc	0.0686 lb/in ³	ISO 1183
Water Absorption	<= 0.50 %	<= 0.50 %	ISO 62
Linear Mold Shrinkage	0.00020 cm/cm	0.00020 in/in	ISO 2577

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	86.0 MPa @Temperature 22.0 °C	12500 psi @Temperature 71.6 °F	25mm flat samples, compression moulded; ISO 527-4
Tensile Strength, Yield	86.0 MPa @Temperature 22.0 °C	12500 psi @Temperature 71.6 °F	25mm flat samples, compression moulded; ISO 527-4
Elongation at Yield	1.5 %	1.5 %	tensile rupture strain; ISO 527-4
Modulus of Elasticity	12.0 GPa	1740 ksi	25mm flat samples, compression moulded; ISO 527-4
Flexural Strength	182 MPa @Temperature 22.0 °C	26400 psi @Temperature 71.6 °F	25 mm wide 100 mm long, flat samples; ISO 14125
Flexural Modulus	10.0 GPa @Temperature 22.0 °C	1450 ksi @Temperature 71.6 °F	25 mm wide 100 mm long, flat samples; ISO 14125
Compressive Yield Strength	90.0 MPa	13100 psi	ISO 14126
Poissons Ratio	0.30	0.30	
Shear Modulus	4.60 GPa	667 ksi	in plane

Mechanical Properties	Metric	English	Comments
Charpy Impact, Notched	0.20 J/cm ²	50.0 ft-lb/in ²	ISO 179

Thermal Properties	Metric	English	Comments
CTE, linear	10.0 Åµm/m-Å°C	5.56 Åµin/in-Å°F	ISO 11359-2
Specific Heat Capacity	1.10 J/g-Å°C	0.263 BTU/lb-Å°F	
Thermal Conductivity	0.700 W/m-K	4.86 BTU-in/hr-ftÅ²-Å°F	
Maximum Service Temperature, Air	165 Å°C	329 Å°F	
Deflection Temperature at 1.8 MPa (264 psi)	>= 200 Å°C	>= 392 Å°F	ISO 75-2
Minimum Service Temperature, Air	-40.0 Å°C	-40.0 Å°F	
Glass Transition Temp, Tg	170 Å°C	338 Å°F	ISO 11357-2
Flammability, UL94	HB @Thickness 3.00 mm	HB @Thickness 0.118 in	
Oxygen Index	22 %	22 %	ISO 4589-2
Glow Wire Test	750 Å°C	1380 Å°F	IEC 60695-2-12

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	IEC 60093
Surface Resistance	1.00e+12 ohm	1.00e+12 ohm	IEC 60093
Dielectric Constant	4.0	4.0	IEC 60250
Dielectric Strength	24.0 kV/mm	610 kV/in	IEC 60243-1
Dissipation Factor	0.010	0.010	IEC 60250
Comparative Tracking Index	600 V	600 V	IEC 60112

Processing Properties	Metric	English	Comments
Processing Temperature	135 - 150 Å°C	275 - 302 Å°F	Compression moulding, matched metal die

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