

Menzolit MenzolitÂ® BMC 1400 Unsaturated Polyester UP

Category : Polymer , Thermoset , Polyester, TS , Thermoset Polyester Glass Filled BMC

Material Notes:

BMC 1400 is a special BMC for the use on an engine. The glass content is set to a level that combines good mouldability with good strength and stiffness properties. The product has been developed for high resistance against gasoline, lubricants, cooling agents or cleaning agents that are used around an automotive engine. Because of its resin matrix it is especially resistant to cyclic loads under elevated temperature. Typical applications are valve covers, gear box covers, carburetor housings, or housings for auxiliary motors. Information Provided by Menzolit

Order this product through the following link:

http://www.lookpolymers.com/polymer_Menzolit-Menzolit-BMC-1400-Unsaturated-Polyester-UP.php

Physical Properties	Metric	English	Comments
Density	1.90 g/cc	0.0686 lb/in ³	ISO 1183
Water Absorption	<= 0.30 %	<= 0.30 %	ISO 62
Linear Mold Shrinkage	0.00030 cm/cm	0.00030 in/in	ISO 2577

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	37.0 MPa @Temperature 22.0 Â°C	5370 psi @Temperature 71.6 Â°F	25mm flat samples, compression moulded; ISO 527-4
Tensile Strength, Yield	37.0 MPa @Temperature 22.0 Â°C	5370 psi @Temperature 71.6 Â°F	25mm flat samples, compression moulded; ISO 527-4
Elongation at Yield	0.00 %	0.00 %	tensile rupture strain; ISO 527-4
Modulus of Elasticity	13.0 GPa	1890 ksi	25mm flat samples, compression moulded; ISO 527-4
Flexural Strength	125 MPa @Temperature 22.0 Â°C	18100 psi @Temperature 71.6 Â°F	25 mm wide 100 mm long, flat samples; ISO 14125
Flexural Modulus	10.0 GPa @Temperature 22.0 Â°C	1450 ksi @Temperature 71.6 Â°F	25 mm wide 100 mm long, flat samples; ISO 14125
Poissons Ratio	0.30	0.30	
Shear Modulus	5.00 GPa	725 ksi	in plane
Charpy Impact, Notched	3.50 J/cm ²	16.7 ft-lb/in ²	ISO 179

Thermal Properties	Metric	English	Comments
CTE, linear	10.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	5.56 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	ISO 11359-2
Specific Heat Capacity	1.10 J/g $\cdot^\circ\text{C}$	0.263 BTU/lb $\cdot^\circ\text{F}$	
Thermal Conductivity	0.700 W/m-K	4.86 BTU-in/hr-ft $^2\cdot^\circ\text{F}$	
Maximum Service Temperature, Air	170 $^\circ\text{C}$	338 $^\circ\text{F}$	
Deflection Temperature at 1.8 MPa (264 psi)	≥ 150 $^\circ\text{C}$	≥ 302 $^\circ\text{F}$	ISO 75-2
Minimum Service Temperature, Air	-40.0 $^\circ\text{C}$	-40.0 $^\circ\text{F}$	
Glass Transition Temp, Tg	162 $^\circ\text{C}$	324 $^\circ\text{F}$	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 $^\circ\text{C}$	1380 $^\circ\text{F}$	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	30.0 kV/mm	762 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 - 160 $^\circ\text{C}$	275 - 320 $^\circ\text{F}$	Injection moulding, matched metal die

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