

Menzolit Menzolit[®] BMC 2500 Unsaturated Polyester UP

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

Material Notes:

BMC 2500 is a special BMC for high voltage isolating applications. The glass content is set to a level that combines good mouldability with good strength and stiffness properties. The fire retardancy level HB according to the UL 94 is achieved. The electrical properties are improved to have exceptional high isolation properties. When moulding this material, a high moulding pressure is important to achieve a well densified material matrix to guarantee high voltage applications. Typical applications are isolating components in high voltage applications. Information Provided by Menzolit

Order this product through the following link:

http://www.lookpolymers.com/polymer_Menzolit-Menzolit-BMC-2500-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	0.00050 cm/cm	0.00050 in/in	ISO 2577

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	31.0 MPa @Temperature 22.0 °C	4500 psi @Temperature 71.6 °F	25mm flat samples, compression moulded; ISO 527-4
Tensile Strength, Yield	31.0 MPa @Temperature 22.0 °C	4500 psi @Temperature 71.6 °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	100 MPa @Temperature 22.0 °C	14500 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
Poissons Ratio	0.30	0.30	
Shear Modulus	5.00 GPa	725 ksi	in plane
Charpy Impact, Notched	2.30 J/cm ²	10.9 ft-lb/in ²	ISO 179

Thermal Properties	Metric	English	Comments
CTE, linear	10.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	5.56 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ISO 11359-2
Specific Heat Capacity	1.10 J/g- $\text{Å}^\circ\text{C}$	0.263 BTU/lb- $\text{Å}^\circ\text{F}$	
Thermal Conductivity	0.700 W/m-K	4.86 BTU-in/hr-ft Å^2 - $\text{Å}^\circ\text{F}$	
Maximum Service Temperature, Air	180 $\text{Å}^\circ\text{C}$	356 $\text{Å}^\circ\text{F}$	
Deflection Temperature at 1.8 MPa (264 psi)	$\geq 150 \text{ Å}^\circ\text{C}$	$\geq 302 \text{ Å}^\circ\text{F}$	ISO 75-2
Minimum Service Temperature, Air	-40.0 $\text{Å}^\circ\text{C}$	-40.0 $\text{Å}^\circ\text{F}$	
Glass Transition Temp, Tg	185 $\text{Å}^\circ\text{C}$	365 $\text{Å}^\circ\text{F}$	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 $\text{Å}^\circ\text{C}$	1380 $\text{Å}^\circ\text{F}$	IEC 60695-2-12

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+16 ohm-cm	1.00e+16 ohm-cm	IEC 60093
Surface Resistance	1.00e+13 ohm	1.00e+13 ohm	IEC 60093
Dielectric Constant	4.0	4.0	IEC 60250
Dielectric Strength	40.0 kV/mm	1020 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 $\text{Å}^\circ\text{C}$	275 - 302 $\text{Å}^\circ\text{F}$	Injection moulding, matched metal die

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