

Menzolit Menzolit[®] SMC 1650 Unsaturated Polyester UP

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

Material Notes:

SMC 1650 is a specially designed anti-microbial polyester moulding compound which incorporates a "germ killer" . It has been tested and found to be compliant for resistance to fungal defacement in accordance with the Standard test method BS EN ISO 846:1997. "Plastics Evaluation of the Action of Microorganisms", and for resistance to bacterial defacement in accordance with the Standard test method "JIS Z 2801:2000. "Antimicrobial products" Test for antimicrobial activity and efficacy". Specific applications are parts within health care or sanitary equipment or furnitures. The glass content is on a level that combines good mould ability with good strength and stiffness properties. The compound is available in a variety of sanitary colors. Information Provided by Menzolit

Order this product through the following link:

http://www.lookpolymers.com/polymer_Menzolit-Menzolit-SMC-1650-Unsaturated-Polyester-UP.php

Physical Properties	Metric	English	Comments
Density	1.70 g/cc	0.0614 lb/in ³	ISO 1183
Water Absorption	<= 0.50 %	<= 0.50 %	ISO 62
Linear Mold Shrinkage	0.00050 cm/cm	0.00050 in/in	ISO 2577

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	56.0 MPa @Temperature 22.0 °C	8120 psi @Temperature 71.6 °F	25mm flat samples, compression moulded; ISO 527-4
Tensile Strength, Yield	56.0 MPa @Temperature 22.0 °C	8120 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	11.0 GPa	1600 ksi	25mm flat samples, compression moulded; ISO 527-4
Flexural Strength	136 MPa @Temperature 22.0 °C	19700 psi @Temperature 71.6 °F	25 mm wide 100 mm long, flat samples; ISO 14125
Flexural Modulus	8.00 GPa @Temperature 22.0 °C	1160 ksi @Temperature 71.6 °F	25 mm wide 100 mm long, flat samples; ISO 14125
Poissons Ratio	0.30	0.30	
Shear Modulus	4.20 GPa	609 ksi	in plane
Charpy Impact, Notched	6.10 J/cm ²	29.0 ft-lb/in ²	ISO 179

Mechanical Properties	Metric	English	Comments
CTE, linear	12.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	6.67 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	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 $\text{Å}^2\cdot\text{Å}^\circ\text{F}$	
Maximum Service Temperature, Air	165 $\text{Å}^\circ\text{C}$	329 $\text{Å}^\circ\text{F}$	
Deflection Temperature at 1.8 MPa (264 psi)	$\geq 200 \text{ Å}^\circ\text{C}$	$\geq 392 \text{ Å}^\circ\text{F}$	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	170 $\text{Å}^\circ\text{C}$	338 $\text{Å}^\circ\text{F}$	ISO 11357-2
Flammability, UL94	HB @Thickness 3.00 mm	HB @Thickness 0.118 in	
Oxygen Index	30 %	30 %	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+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 $\text{Å}^\circ\text{C}$	275 - 302 $\text{Å}^\circ\text{F}$	Compression moulding, matched metal die

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