

Menzolit Menzolit[®] SMC 2400 Unsaturated Polyester UP

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

Material Notes:

SMC 2400 is a SMC with fire retardancy. The glass level has been selected to combine mouldability with strength and stiffness properties. The fire retardancy is especially high, and the material is virtually nonburnable. In case of fire smoke is released to a small extent. Smoke is, except for carbon monoxide non-toxic! This makes SMC 2400 very suitable for railway interior or exterior applications, like wall panels, window frames, luggage bins, seat shells and structures or similar rail way components. Fire safe furniture or sanitary furniture on ships, trains or prison cells are another typical use. Within the electrical industry it is used for arc quenching chambers or switch gear components that are exposed to high power switching operations and resulting electrical arcs (peak loads of temperature and fire). Information Provided by Menzolit

Order this product through the following link:

http://www.lookpolymers.com/polymer_Menzolit-Menzolit-SMC-2400-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	0.00080 cm/cm	0.00080 in/in	ISO 2577

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	58.0 MPa @Temperature 22.0 °C	8410 psi @Temperature 71.6 °F	25mm flat samples, compression moulded; ISO 527-4
Tensile Strength, Yield	58.0 MPa @Temperature 22.0 °C	8410 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	9.00 GPa	1310 ksi	25mm flat samples, compression moulded; ISO 527-4
Flexural Strength	140 MPa @Temperature 22.0 °C	20300 psi @Temperature 71.6 °F	25 mm wide 100 mm long, flat samples; ISO 14125
Flexural Modulus	9.00 GPa @Temperature 22.0 °C	1310 ksi @Temperature 71.6 °F	25 mm wide 100 mm long, flat samples; ISO 14125
Poissons Ratio	0.30	0.30	
Shear Modulus	3.50 GPa	508 ksi	in plane

Mechanical Properties	Metric	English	Comments
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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 $\text{Å}^2\cdot\text{Å}^\circ\text{F}$	
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	V-0 @Thickness 3.00 mm	V-0 @Thickness 0.118 in	
Oxygen Index	70 %	70 %	ISO 4589-2
Glow Wire Test	960 $\text{Å}^\circ\text{C}$	1760 $\text{Å}^\circ\text{F}$	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
Arc Resistance	$\geq 180 \text{ sec}$	$\geq 180 \text{ sec}$	ASTM D495
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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