

Menzolit MenzolitÂ® SMC 0421 Unsaturated Polyester UP

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

Material Notes:

SMC 0421 is a low density premium Class-A SMC for on-line painted exterior body applications on cars. These compounds mould to light weight parts with excellent surface quality for on-line painted body panels at high paint bake temperatures (190- 200 Â°C). Moulded parts comply with all regulations of the automotive industry including low C-emissions. Surface defects like waviness, fibre patterns and orange peel are not existent with this product. To achieve the highest surface quality, we recommend that tool surfaces are mirror polished. Information Provided by Menzolit

Order this product through the following link:

http://www.lookpolymers.com/polymer_Menzolit-Menzolit-SMC-0421-Unsaturated-Polyester-UP.php

Physical Properties	Metric	English	Comments
Density	1.50 g/cc	0.0542 lb/inÂ³	ISO 1183
Water Absorption	<= 0.50 %	<= 0.50 %	ISO 62
Linear Mold Shrinkage	-0.000500 cm/cm	-0.000500 in/in	ISO 2577

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	75.0 MPa @Temperature 22.0 Â°C	10900 psi @Temperature 71.6 Â°F	25mm flat samples, compression moulded; ISO 527-4
Tensile Strength, Yield	75.0 MPa @Temperature 22.0 Â°C	10900 psi @Temperature 71.6 Â°F	25mm flat samples, compression moulded; ISO 527-4
Elongation at Yield	1.3 %	1.3 %	tensile rupture strain; ISO 527-4
Modulus of Elasticity	8.00 GPa	1160 ksi	25mm flat samples, compression moulded; ISO 527-4
Flexural Strength	150 MPa @Temperature 22.0 Â°C	21800 psi @Temperature 71.6 Â°F	25 mm wide 100 mm long, flat samples; ISO 14125
Flexural Modulus	8.00 GPa @Temperature 22.0 Â°C	1160 ksi @Temperature 71.6 Â°F	25 mm wide 100 mm long, flat samples; ISO 14125
Compressive Yield Strength	80.0 MPa	11600 psi	ISO 14126
Poissons Ratio	0.30	0.30	
Shear Modulus	3.10 GPa	450 ksi	in plane

Charpy Impact, Notched Mechanical Properties	7.00 J/cm ² Metric	33.3 ft-lb/in ² English	ISO 179 Comments
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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	200 Å°C	392 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	145 - 155 Å°C	293 - 311 Å°F	Compression moulding, matched metal die

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