

## Menzolit Menzolit<sup>®</sup> SMC 1100 Unsaturated Polyester UP

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

### Material Notes:

SMC 1100 is a special vinylester SMC for high strength applications. The reinforcement has been put to a level that combines mouldability with high strength and stiffness properties. The specific resin and a higher amount of glass fibers results in high mechanical strength. Durability is improved as well. Even without a specific fire retardant, the fire retardancy level HB according UL 94 is achieved. Typical applications are structural components within the automotive industry or mechanical engineering. It is suitable for load carrying applications or fast moving and accelerated components. Information Provided by Menzolit

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Menzolit-Menzolit-SMC-1100-Unsaturated-Polyester-UP.php](http://www.lookpolymers.com/polymer_Menzolit-Menzolit-SMC-1100-Unsaturated-Polyester-UP.php)

Physical Properties	Metric	English	Comments
Density	1.80 g/cc	0.0650 lb/in <sup>3</sup>	ISO 1183
Water Absorption	<= 0.30 %	<= 0.30 %	ISO 62
Linear Mold Shrinkage	0.00040 cm/cm	0.00040 in/in	ISO 2577

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	150 MPa @Temperature 22.0 Â°C	21800 psi @Temperature 71.6 Â°F	25mm flat samples, compression moulded; ISO 527-4
Tensile Strength, Yield	150 MPa @Temperature 22.0 Â°C	21800 psi @Temperature 71.6 Â°F	25mm flat samples, compression moulded; ISO 527-4
Elongation at Yield	1.6 %	1.6 %	tensile rupture strain; ISO 527-4
Modulus of Elasticity	13.0 GPa	1890 ksi	25mm flat samples, compression moulded; ISO 527-4
Flexural Strength	280 MPa @Temperature 22.0 Â°C	40600 psi @Temperature 71.6 Â°F	25 mm wide 100 mm long, flat samples; ISO 14125
Flexural Modulus	13.0 GPa @Temperature 22.0 Â°C	1890 ksi @Temperature 71.6 Â°F	25 mm wide 100 mm long, flat samples; ISO 14125
Compressive Yield Strength	120 MPa	17400 psi	ISO 14126
Poissons Ratio	0.30	0.30	
Shear Modulus	5.00 GPa	725 ksi	in plane

Charpy Impact, Notched Mechanical Properties	12.8 J/cm <sup>2</sup> Metric	60.9 ft-lb/in <sup>2</sup> English	ISO 179 Comments
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Thermal 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 $\cdot\text{Å}^\circ\text{C}$	0.263 BTU/lb $\cdot\text{Å}^\circ\text{F}$	
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	170 $\text{Å}^\circ\text{C}$	338 $\text{Å}^\circ\text{F}$	
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	162 $\text{Å}^\circ\text{C}$	324 $\text{Å}^\circ\text{F}$	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+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 - 160 $\text{Å}^\circ\text{C}$	275 - 320 $\text{Å}^\circ\text{F}$	Compression moulding, matched metal die

## Contact Songhan Plastic Technology Co.,Ltd.

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