

Menzolit Menzolit[®] BMC 0300 Unsaturated Polyester UP

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

Material Notes:

BMC 0300 is a low shrink standard material for general-purpose applications, which require a higher level on surface quality and better dimensional stability. The glass content is on a level that combines good mould ability with good strength and stiffness properties. Typical applications are housings and covers in the electric industry, components for household appliances and office equipment. Due to reduced shrinkage warpage is reduced and a homogeneous colouration is possible. Information Provided by Menzolit

Order this product through the following link:

http://www.lookpolymers.com/polymer_Menzolit-Menzolit-BMC-0300-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 | 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 | 101 MPa @Temperature 22.0 °C | 14600 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 | 2.90 J/cm ² | 13.8 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 | 165 $\text{Å}^\circ\text{C}$ | 329 $\text{Å}^\circ\text{F}$ | |
| 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 | 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 | 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 | 30.0 kV/mm | 762 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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