

## Menzolit Menzolit<sup>®</sup> BMC 3100 Unsaturated Polyester UP

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

### Material Notes:

BMC 3100 is a special BMC suitable for the use in head lamp reflectors. Because of its high temperature resistance and dimensional stability as well as low coefficient of thermal expansion, complex shapes and good reflective properties can be made. Because of its temperature resistance the precise geometry of the reflector will keep its precise shape even at high temperature. It has found specific use in the field of reflectors for automotive head lamps but its use as lamp housings for household and office lighting equipment is possible as well. Information Provided by Menzolit

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Menzolit-Menzolit-BMC-3100-Unsaturated-Polyester-UP.php](http://www.lookpolymers.com/polymer_Menzolit-Menzolit-BMC-3100-Unsaturated-Polyester-UP.php)

| Physical Properties   | Metric          | English                   | Comments |
|-----------------------|-----------------|---------------------------|----------|
| Density               | 2.00 g/cc       | 0.0723 lb/in <sup>3</sup> | ISO 1183 |
| Water Absorption      | <= 0.50 %       | <= 0.50 %                 | ISO 62   |
| Linear Mold Shrinkage | -0.000300 cm/cm | -0.000300 in/in           | ISO 2577 |

| Mechanical Properties      | Metric                              | English                           | Comments  |
|----------------------------|-------------------------------------|-----------------------------------|---|
| Tensile Strength, Ultimate | 25.0 MPa<br>@Temperature 22.0<br>°C | 3630 psi<br>@Temperature 71.6 °F  | 25mm flat samples, compression moulded; ISO 527-4 |
| Tensile Strength, Yield    | 25.0 MPa<br>@Temperature 22.0<br>°C | 3630 psi<br>@Temperature 71.6 °F  | 25mm flat samples, compression moulded; ISO 527-4 |
| Elongation at Yield        | 1.0 %                               | 1.0 %                             | tensile rupture strain; ISO 527-4                 |
| Modulus of Elasticity      | 14.0 GPa                            | 2030 ksi                          | 25mm flat samples, compression moulded; ISO 527-4 |
| Flexural Strength          | 79.0 MPa<br>@Temperature 22.0<br>°C | 11500 psi<br>@Temperature 71.6 °F | 25 mm wide 100 mm long, flat samples; ISO 14125   |
| Flexural Modulus           | 11.0 GPa<br>@Temperature 22.0<br>°C | 1600 ksi<br>@Temperature 71.6 °F  | 25 mm wide 100 mm long, flat samples; ISO 14125   |
| Poissons Ratio             | 0.30                                | 0.30                              |   |
| Shear Modulus              | 5.40 GPa                            | 783 ksi                           | in plane  |
| Charpy Impact, Notched     | 1.50 J/cm <sup>2</sup>              | 7.14 ft-lb/in <sup>2</sup>        | 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 $\text{Å}^2$ - $\text{Å}^\circ\text{F}$ |                |
| Maximum Service Temperature, Air            | 190 $\text{Å}^\circ\text{C}$                           | 374 $\text{Å}^\circ\text{F}$                              |                |
| 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                   | 185 $\text{Å}^\circ\text{C}$                           | 365 $\text{Å}^\circ\text{F}$                              | ISO 11357-2    |
| Flammability, UL94                          | HB<br>@Thickness 2.00 mm                               | HB<br>@Thickness 0.0787 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 - 160 $\text{Å}^\circ\text{C}$ | 275 - 320 $\text{Å}^\circ\text{F}$ | Injection moulding, matched metal die |

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215, Fengxian District, Shanghai City, China