

## Raschig Group MELOPLAS® 2500 MF

Category : Polymer , Thermoset , Melamine , Melamine-Phenolic Copolymer , Phenolic

### Material Notes:

Cellulose-reinforced MF molding compound in white and colored shades. Very good electrical properties, high surface hardness, good abrasion- and UV-stability, very good resistance to chemicals - also to foodstuff ingredients. Self-extinguishing (V-0/0,8 according to UL 94), UL listed. Free of halogens and toxic heavy metals. Forms: Low dust granulate packed in moisture resistant bags. Standard bag size: 25 kg palletized in 1.000 kg loads or big-bags. Processing: Injection or Compression. Applications: Molded parts in electrical engineering, Fittings for household appliances. Information provided by the Raschig Group

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Raschig-Group-MELOPLAS-2500-MF.php](http://www.lookpolymers.com/polymer_Raschig-Group-MELOPLAS-2500-MF.php)

| Physical Properties   | Metric                                              | English                                             | Comments                             |
|-----------------------|-----------------------------------------------------|-----------------------------------------------------|--------------------------------------|
| Specific Gravity      | 1.60 - 1.75 g/cc                                    | 1.60 - 1.75 g/cc                                    | ISO 1183                             |
| Apparent Bulk Density | 0.550 - 0.750 g/cc                                  | 0.0199 - 0.0271 lb/in³                              | ISO 60                               |
| Water Absorption      | <= 2.5 %<br>@Temperature 23.0 °C,<br>Time 86400 sec | <= 2.5 %<br>@Temperature 73.4 °F,<br>Time 24.0 hour | ISO 62                               |
| Linear Mold Shrinkage | 0.0050 - 0.010 cm/cm                                | 0.0050 - 0.010 in/in                                | (longitudinal) Compression; ISO 2577 |
|                       | 0.0080 - 0.013 cm/cm                                | 0.0080 - 0.013 in/in                                | (longitudinal) Injection; ISO 2257   |

| Mechanical Properties   | Metric                                     | English                                       | Comments                            |
|-------------------------|--------------------------------------------|-----------------------------------------------|-------------------------------------|
| Tensile Strength, Yield | 45.0 - 60.0 MPa                            | 6530 - 8700 psi                               | Compression; ISO 527                |
|                         | 70.0 - 90.0 MPa                            | 10200 - 13100 psi                             | Injection; ISO 527                  |
| Modulus of Elasticity   | 5.00 - 8.00 GPa                            | 725 - 1160 ksi                                | Injection and Compression; ISO 527  |
| Flexural Strength       | 100 - 130 MPa                              | 14500 - 18900 psi                             | Compression; ISO 178                |
|                         | 110 - 140 MPa                              | 16000 - 20300 psi                             | Injection; ISO 178                  |
| Flexural Modulus        | 5.00 - 8.00 GPa                            | 725 - 1160 ksi                                | Injection and Compression; ISO 178  |
| Compressive Strength    | 200 - 250 MPa                              | 29000 - 36300 psi                             | Injection and Compression; ISO 604  |
| Charpy Impact Unnotched | 0.700 - 1.00 J/cm²<br>@Temperature 23.0 °C | 3.33 - 4.76 ft-lb/in²<br>@Temperature 73.4 °F | Compression; ISO 179/ 1eU           |
|                         | 0.800 - 1.30 J/cm²<br>@Temperature 23.0 °C | 3.81 - 6.19 ft-lb/in²<br>@Temperature 73.4 °F | Injection; ISO 179/ 1eU             |
| Charpy Impact, Notched  |                                            |                                               | Injection and Compression; ISO 179/ |

| Mechanical Properties                       | 0.130 - 0.150 J/cm²<br>Metric                       | 0.619 - 0.714 ft-lb/in²<br>English                 | 1eA<br>Comments                     |
|---------------------------------------------|-----------------------------------------------------|----------------------------------------------------|-------------------------------------|
| Thermal Properties                          | Metric                                              | English                                            | Comments                            |
| CTE, linear                                 | 15.0 - 35.0 µm/m-°C<br>@Temperature 50.0 - 100 °C   | 8.33 - 19.4 µin/in-°F<br>@Temperature 122 - 212 °F | ISO 11359-2                         |
| Thermal Conductivity                        | 0.400 - 0.500 W/m-K                                 | 2.78 - 3.47 BTU-in/hr-ft²-°F                       | DIN 52 612                          |
| Maximum Service Temperature, Air            | 135 °C                                              | 275 °F                                             | 20,000 h; IEC 60216/T1              |
|                                             | 160 °C                                              | 320 °F                                             | < 50 h; IEC 60216/T1                |
| Deflection Temperature at 1.8 MPa (264 psi) | 170 - 190 °C                                        | 338 - 374 °F                                       | Injection and Compression; ISO 75-A |
| Deflection Temperature at 8.0 MPa           | 120 - 140 °C                                        | 248 - 284 °F                                       | Injection and Compression; ISO 75-C |
| Flammability, UL94                          | V-0<br>@Thickness 0.800 mm                          | V-0<br>@Thickness 0.0315 in                        |                                     |
| Shrinkage                                   | 1.2 - 2.0 %<br>@Temperature 110 °C, Time 605000 sec | 1.2 - 2.0 %<br>@Temperature 230 °F, Time 168 hour  | ISO 2577                            |
| Electrical Properties                       | Metric                                              | English                                            | Comments                            |
| Volume Resistivity                          | 1.00e+11 - 1.00e+12 ohm-cm                          | 1.00e+11 - 1.00e+12 ohm-cm                         | IEC 60093                           |
| Surface Resistance                          | 1.00e+10 - 1.00e+11 ohm                             | 1.00e+10 - 1.00e+11 ohm                            | IEC 60093                           |
| Dielectric Constant                         | 7.0 - 9.0<br>@Frequency 1.00e+6 Hz                  | 7.0 - 9.0<br>@Frequency 1.00e+6 Hz                 | IEC 60250                           |
|                                             | 11 - 16<br>@Frequency 100 Hz                        | 11 - 16<br>@Frequency 100 Hz                       | IEC 60250                           |
| Dielectric Strength                         | 20.0 - 30.0 kV/mm<br>@Thickness 1.00 mm             | 508 - 762 kV/in<br>@Thickness 0.0394 in            | IEC 60243-1                         |
| Dissipation Factor                          | 0.030 - 0.050<br>@Frequency 1.00e+6 Hz              | 0.030 - 0.050<br>@Frequency 1.00e+6 Hz             | IEC 60250                           |
|                                             | 0.30 - 0.50<br>@Frequency 100 Hz                    | 0.30 - 0.50<br>@Frequency 100 Hz                   | IEC 60250                           |

| Electrical Properties | Metric | English | Comments |
|-----------------------|--------|---------|----------|
|-----------------------|--------|---------|----------|

| Processing Properties | Metric                      | English                     | Comments |
|-----------------------|-----------------------------|-----------------------------|----------|
| Shelf Life            | 6.00 Month                  | 6.00 Month                  |          |
|                       | @Temperature 15.0 - 25.0 °C | @Temperature 59.0 - 77.0 °F |          |

| Descriptive Properties      | Value   | Comments           |
|-----------------------------|---------|--------------------|
| Arc Resistance              | 5 Stufe | ASTM D495          |
| Glow wire ignitability test | 900/1   | IEC 60695 2-13     |
| Glow-wire flammability test | 960/1   | IEC 60695 2-12     |
| Water Absorption            | <150 mg | ISO 62; 24h / 23°C |

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