

Raschig Group EPOXIDUR® 3581 T-1 EP Epoxy, Molded, Glass Fiber Filler

Category : Polymer , Thermoset , Epoxy , Epoxy, Molded, Glass Fiber Filler

Material Notes:

Glass-fiber reinforced and inorganically filled epoxy molding compound. Good mechanical strength, very good electrical isolation properties and dimensional stability even at high temperatures. Very good sealing connection on metal and EPOXIDUR EP 3581 T-1 part surfaces. Sensor encapsulation in the automobile industry. This product meets the allowed upper limits for heavy metals and PCAs and also conforms to the requirements of the EU directives 2002/95 (RoHS), 2002/96 (WEEE) and 2006/122 (PFOS). Processing: Injection and compression molding Information provided by Raschig Group

Order this product through the following link:

http://www.lookpolymers.com/polymer_Raschig-Group-EPOXIDUR-3581-T-1-EP-Epoxy-Molded-Glass-Fiber-Filler.php

| Physical Properties | Metric | English | Comments |
|-----------------------------|---|---|-------------------------------------|
| Specific Gravity | 1.93 - 1.98 g/cc | 1.93 - 1.98 g/cc | ISO 1183 |
| Apparent Bulk Density | 0.0800 - 0.0900 g/cc | 0.00289 - 0.00325 lb/in ³ | ISO 60 |
| Water Absorption | <= 0.100 % @Temperature 23.0 °C, Time 86400 sec | <= 0.100 % @Temperature 73.4 °F, Time 24.0 hour | ISO 62 |
| Linear Mold Shrinkage, Flow | 0.00400 - 0.00600 cm/cm | 0.00400 - 0.00600 in/in | Injection and Compression; ISO 2577 |

| Mechanical Properties | Metric | English | Comments |
|-------------------------|---------------------------------|------------------------------------|--|
| Tensile Strength | 70.0 - 90.0 MPa | 10200 - 13100 psi | Injection and Compression; ISO 527 |
| Modulus of Elasticity | 15.0 - 18.0 GPa | 2180 - 2610 ksi | Injection and Compression; ISO 527 |
| Flexural Strength | 140 - 160 MPa | 20300 - 23200 psi | Injection and Compression; ISO 178 |
| Flexural Modulus | 15.0 - 20.0 GPa | 2180 - 2900 ksi | Injection and Compression; ISO 178 |
| Compressive Strength | 200 - 250 MPa | 29000 - 36300 psi | ISO 604 |
| Charpy Impact Unnotched | 1.20 - 1.40 J/cm ² | 5.71 - 6.66 ft-lb/in ² | Injection and Compression; ISO 179/1eU |
| Charpy Impact, Notched | 0.200 - 0.400 J/cm ² | 0.952 - 1.90 ft-lb/in ² | Injection and Compression; ISO 179/1eA |

| Thermal Properties | Metric | English | Comments |
|-------------------------------|---|--|-------------|
| CTE, linear, Parallel to Flow | 15.0 - 20.0 µm/m-°C @Temperature 50.0 - 150 °C | 8.33 - 11.1 µin/in-°F @Temperature 122 - 302 °F | ISO 11359-2 |

| Thermal Properties | Metric | English | Comments |
|---|--------------------------------------|------------------------------------|--------------------------|
| Maximum Service Temperature, Air | 180 °C | 356 °F | IEC 60216/T1 |
| | @Time 7.20e+7 sec | @Time 20000 hour | |
| | 250 °C | 482 °F | IEC 60216/T1 |
| | @Time <=180000 sec | @Time <=50.0 hour | |
| Deflection Temperature at 1.8 MPa (264 psi) | >= 200 °C | >= 392 °F | ISO 75-A |
| Deflection Temperature at 8.0 MPa | 160 - 180 °C | 320 - 356 °F | ISO 75-C |
| Flammability, UL94 | HB | HB | |
| | @Thickness 1.60 mm | @Thickness 0.0630 in | |
| Shrinkage | <= 0.0500 % | <= 0.0500 % | Post shrinkage; ISO 2577 |
| | @Temperature 110 °C, Time 605000 sec | @Temperature 230 °F, Time 168 hour | |

| Electrical Properties | Metric | English | Comments |
|----------------------------|----------------------------|----------------------------|-------------|
| Volume Resistivity | 1.00e+14 - 1.00e+15 ohm-cm | 1.00e+14 - 1.00e+15 ohm-cm | IEC 60093 |
| Surface Resistance | 1.00e+13 - 1.00e+14 ohm | 1.00e+13 - 1.00e+14 ohm | IEC 60093 |
| Dielectric Constant | 4.00 - 6.00 | 4.00 - 6.00 | IEC 60250 |
| | @Frequency 1.00e+6 Hz | @Frequency 1.00e+6 Hz | |
| | 5.00 - 7.00 | 5.00 - 7.00 | IEC 60250 |
| | @Frequency 100 Hz | @Frequency 100 Hz | |
| Dielectric Strength | 25.0 - 35.0 kV/mm | 635 - 889 kV/in | IEC 60243-1 |
| Dissipation Factor | 0.0100 - 0.0300 | 0.0100 - 0.0300 | IEC 60250 |
| | @Frequency 1.00e+6 Hz | @Frequency 1.00e+6 Hz | |
| | 0.0300 - 0.0500 | 0.0300 - 0.0500 | IEC 60250 |
| | @Frequency 100 Hz | @Frequency 100 Hz | |
| Arc Resistance | 180 - 240 sec | 180 - 240 sec | ASTM D495 |
| Comparative Tracking Index | 250 V | 250 V | IEC 60112 |

| Processing Properties | Metric | English | Comments |
|-----------------------|--------|---------|----------|
|-----------------------|--------|---------|----------|

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

| Descriptive Properties | Value | Comments |
|-----------------------------|--------|---------------------|
| Glow wire flammability test | 900/1 | IEC 60695 2-12 |
| Glow wire ignitability test | 900/1 | IEC 60695 2-13 |
| Water Absorption | <10 mg | 24 hr, 23°C; ISO 62 |

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