

## Raschig Group EPOXIDUR® 3581 S ZC EP Epoxy Molding Compound

Category : Polymer , Thermoset , Epoxy , Epoxy Molding Compound

### Material Notes:

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 surfaces, optimized isotropic properties. Sensor coatings 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-S-ZC-EP-Epoxy-Molding-Compound.php](http://www.lookpolymers.com/polymer_Raschig-Group-EPOXIDUR-3581-S-ZC-EP-Epoxy-Molding-Compound.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.85 - 1.95 g/cc	1.85 - 1.95 g/cc	ISO 1183
Apparent Bulk Density	0.700 - 1.00 g/cc	0.0253 - 0.0361 lb/in <sup>3</sup>	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	0.00500 - 0.00700 cm/cm	0.00500 - 0.00700 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	11.0 - 13.0 GPa	1600 - 1890 ksi	Injection and Compression; ISO 527
Flexural Strength	120 - 140 MPa	17400 - 20300 psi	Injection and Compression; ISO 178
Flexural Modulus	12.0 - 15.0 GPa	1740 - 2180 ksi	Injection and Compression; ISO 178
Compressive Strength	200 - 250 MPa	29000 - 36300 psi	ISO 604
Charpy Impact Unnotched	0.700 - 0.900 J/cm <sup>2</sup>	3.33 - 4.28 ft-lb/in <sup>2</sup>	Injection and Compression; ISO 179/1eU
Charpy Impact, Notched	0.200 - 0.400 J/cm <sup>2</sup>	0.952 - 1.90 ft-lb/in <sup>2</sup>	Injection and Compression; ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	20.0 - 25.0 µm/m-°C @Temperature 50.0 - 150 °C	11.1 - 13.9 µin/in-°F @Temperature 122 - 302 °F	ISO 11359-2
Thermal Conductivity		2.78 - 4.16 BTU-in/hr-	ASTM E1461

Thermal Properties	0.400 - 0.600 W/m-K Metric	°F English	Comments
Maximum Service Temperature, Air	180 °C @Time 7.20e+7 sec	356 °F @Time 20000 hour	IEC 60216/T1
	250 °C @Time <=180000 sec	482 °F @Time <=50.0 hour	IEC 60216/T1
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 @Thickness 1.60 mm	HB @Thickness 0.0630 in	
Shrinkage	<= 0.0500 % @Temperature 110 °C, Time 605000 sec	<= 0.0500 % @Temperature 230 °F, Time 168 hour	Post shrinkage; ISO 2577

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 @Frequency 1.00e+6 Hz	4.00 - 6.00 @Frequency 1.00e+6 Hz	IEC 60250
	5.00 - 7.00 @Frequency 100 Hz	5.00 - 7.00 @Frequency 100 Hz	IEC 60250
Dielectric Strength	25.0 - 35.0 kV/mm	635 - 889 kV/in	IEC 60243-1
Dissipation Factor	0.0100 - 0.0300 @Frequency 1.00e+6 Hz	0.0100 - 0.0300 @Frequency 1.00e+6 Hz	IEC 60250
	0.0300 - 0.0500 @Frequency 100 Hz	0.0300 - 0.0500 @Frequency 100 Hz	IEC 60250
Arc Resistance	180 - 240 sec	180 - 240 sec	ASTM D495
Comparative Tracking Index	>= 250 V	>= 250 V	IEC 60112

Processing Properties	Metric	English	Comments
	6.00 Month	6.00 Month	

Processing Properties	Metric	English	Comments
	@ 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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