

Raschig Group RALUPOL® 802 UP Polyester

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

Material Notes:

Glass-fiber reinforced polyester molding compound. Low molding shrinkage and post-shrinkage, good electrical values, good mechanical strength, good heat resistance. 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
Primary application: Molded parts in electrical engineering Information provided by Raschig Group

Order this product through the following link:

http://www.lookpolymers.com/polymer_Raschig-Group-RALUPOL-802-UP-Polyester.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.90 - 2.10 g/cc	1.90 - 2.10 g/cc	ISO 1183
Apparent Bulk Density	0.750 - 1.00 g/cc	0.0271 - 0.0361 lb/in ³	ISO 60
Water Absorption	<= 0.500 % @Temperature 23.0 °C, Time 86400 sec	<= 0.500 % @Temperature 73.4 °F, Time 24.0 hour	ISO 62
Linear Mold Shrinkage, Flow	0.00200 - 0.00500 cm/cm	0.00200 - 0.00500 in/in	Injection; ISO 2577
	0.00400 - 0.00700 cm/cm	0.00400 - 0.00700 in/in	Compression; ISO 2577

Mechanical Properties	Metric	English	Comments
Tensile Strength	35.0 - 60.0 MPa	5080 - 8700 psi	Compression; ISO 527
	40.0 - 70.0 MPa	5800 - 10200 psi	Injection; ISO 527
Modulus of Elasticity	6.00 - 9.00 GPa	870 - 1310 ksi	Injection and Compression; ISO 527
Flexural Strength	80.0 - 100 MPa	11600 - 14500 psi	Compression; ISO 178
	100 - 120 MPa	14500 - 17400 psi	Injection; ISO 178
Flexural Modulus	8.00 - 12.0 GPa	1160 - 1740 ksi	Injection and Compression; ISO 178
Compressive Strength	150 - 200 MPa	21800 - 29000 psi	ISO 604
Charpy Impact Unnotched	0.500 - 1.00 J/cm ²	2.38 - 4.76 ft-lb/in ²	Compression; ISO 179/1eU
	0.800 - 1.10 J/cm ²	3.81 - 5.23 ft-lb/in ²	Injection; ISO 179/1eU
Charpy Impact, Notched	0.250 - 0.350 J/cm ²	1.19 - 1.67 ft-lb/in ²	Compression; ISO 179/1eA
	0.300 - 0.400 J/cm ²	1.43 - 1.90 ft-lb/in ²	Injection; ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	10.0 - 20.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	5.56 - 11.1 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ISO 11359-2
	@Temperature 50.0 - 100 $^{\circ}\text{C}$	@Temperature 122 - 212 $^{\circ}\text{F}$	
Thermal Conductivity	0.900 - 1.10 W/m-K	6.25 - 7.63 BTU-in/hr-ft ² - $^{\circ}\text{F}$	ASTM E1461
Maximum Service Temperature, Air	170 $^{\circ}\text{C}$	338 $^{\circ}\text{F}$	IEC 60216/T1
	@Time 7.20e+7 sec	@Time 20000 hour	
	210 $^{\circ}\text{C}$	410 $^{\circ}\text{F}$	IEC 60216/T1
	@Time <= 180000 sec	@Time <= 50.0 hour	
Deflection Temperature at 1.8 MPa (264 psi)	>= 175 $^{\circ}\text{C}$	>= 347 $^{\circ}\text{F}$	ISO 75-A
Deflection Temperature at 8.0 MPa	125 - 150 $^{\circ}\text{C}$	257 - 302 $^{\circ}\text{F}$	ISO 75-C
Flammability, UL94	HB	HB	
	@Thickness 1.60 mm	@Thickness 0.0630 in	
Shrinkage	<= 0.100 %	<= 0.100 %	Post shrinkage; ISO 2577
	@Temperature 110 $^{\circ}\text{C}$, Time 605000 sec	@Temperature 230 $^{\circ}\text{F}$, Time 168 hour	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+13 - 1.00e+14 ohm-cm	1.00e+13 - 1.00e+14 ohm-cm	IEC 60093
Surface Resistance	1.00e+12 - 1.00e+13 ohm	1.00e+12 - 1.00e+13 ohm	IEC 60093
Dielectric Constant	4.00 - 5.00	4.00 - 5.00	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	5.00 - 6.00	5.00 - 6.00	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 100 Hz	@Frequency 100 Hz	
	0.0100 - 0.0300	0.0100 - 0.0300	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

Arc Resistance Electrical Properties	180 - 240 sec Metric	180 - 240 sec English	ASTM D495 Comments
Comparative Tracking Index	600 V	600 V	IEC 60112

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

Descriptive Properties	Value	Comments
Glow wire flammability test	960/1	IEC 60695 2-12
Glow wire ignitability test	930/1	IEC 60695 2-13
Water Absorption	<35 mg	24 hr, 23°C; ISO 62

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