

Raschig Group RALUPOL® 5000 UP Polyester

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

Material Notes:

Glass-fiber reinforced polyester molding compound. Low mold shrinkage and post-shrinkage, very good electrical values, excellent heat resistance, good mechanical strength. 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: Transfer and compression molding

Primary application: Commutators Information provided by Raschig Group

Order this product through the following link:

http://www.lookpolymers.com/polymer_Raschig-Group-RALUPOL-5000-UP-Polyester.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.95 - 2.15 g/cc	1.95 - 2.15 g/cc	ISO 1183
Apparent Bulk Density	0.800 - 1.00 g/cc	0.0289 - 0.0361 lb/in³	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 - 0.00300 cm/cm	0.00200 - 0.00300 in/in	Compression; ISO 2577

Mechanical Properties	Metric	English	Comments
Tensile Strength	35.0 - 60.0 MPa	5080 - 8700 psi	Compression; ISO 527
Modulus of Elasticity	9.00 - 11.0 GPa	1310 - 1600 ksi	Compression; ISO 527
Flexural Strength	85.0 - 130 MPa	12300 - 18900 psi	Compression; ISO 178
Flexural Modulus	4.00 - 6.00 GPa	580 - 870 ksi	Compression; ISO 178
Compressive Strength	150 - 200 MPa	21800 - 29000 psi	ISO 604
Charpy Impact Unnotched	0.400 - 0.600 J/cm²	1.90 - 2.86 ft-lb/in²	Compression; ISO 179/1eU
Charpy Impact, Notched	0.250 - 0.350 J/cm²	1.19 - 1.67 ft-lb/in²	Compression; ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	10.0 - 20.0 µm/m-°C @Temperature 50.0 - 100 °C	5.56 - 11.1 µin/in-°F @Temperature 122 - 212 °F	ISO 11359-2
Thermal Conductivity	0.600 - 0.700 W/m-K	4.16 - 4.86 BTU-in/hr- ft²-°F	ASTM E1461
Deflection Temperature at 8.0 MPa	180 - 200 °C	356 - 392 °F	ISO 75-C

Thermal Properties	Metric	English	Comments
Flammability, UL94	@Thickness 1.60 mm	@Thickness 0.0630 in	
Shrinkage	<= 0.100 % @Temperature 110 °C, Time 605000 sec	<= 0.100 % @Temperature 230 °F, Time 168 hour	Post shrinkage; ISO 2577

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+13 ohm-cm	>= 1.00e+13 ohm-cm	IEC 60093
Surface Resistance	1.00e+11 - 1.00e+12 ohm	1.00e+11 - 1.00e+12 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	
Dielectric Strength	5.00 - 6.00	5.00 - 6.00	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dissipation Factor	0.0100 - 0.0300 @Frequency 100 Hz	0.0100 - 0.0300 @Frequency 100 Hz	IEC 60250
Arc Resistance	0.0100 - 0.0300 @Frequency 1.00e+6 Hz	0.0100 - 0.0300 @Frequency 1.00e+6 Hz	IEC 60250
	180 - 240 sec	180 - 240 sec	
Comparative Tracking Index	>= 600 V	>= 600 V	ASTM D495

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
Water Absorption	<35 mg	24 hr, 23°C; ISO 62

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