

Raschig Group RALUPOL® 2100 UP Polyester

Category : Polymer , Thermoset , Polyester, TS

Material Notes:

Organically and inorganically filled polyester molding compound. Low post-shrinkage, very good electrical values, 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: Injection and compression molding Primary application: Safety cut outs, Contactors, Switches Information provided by Raschig Group

Order this product through the following link:

http://www.lookpolymers.com/polymer_Raschig-Group-RALUPOL-2100-UP-Polyester.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.65 - 1.85 g/cc	1.65 - 1.85 g/cc	ISO 1183
Apparent Bulk Density	0.750 - 1.00 g/cc	0.0271 - 0.0361 lb/in³	ISO 60
Water Absorption	<= 1.20 % @Temperature 23.0 °C, Time 86400 sec	<= 1.20 % @Temperature 73.4 °F, Time 24.0 hour	ISO 62
Linear Mold Shrinkage, Flow	0.00700 - 0.0100 cm/cm	0.00700 - 0.0100 in/in	Injection; ISO 2577
	0.00800 - 0.0110 cm/cm	0.00800 - 0.0110 in/in	Compression; ISO 2577

Mechanical Properties	Metric	English	Comments
Tensile Strength	25.0 - 40.0 MPa	3630 - 5800 psi	Compression; ISO 527
	40.0 - 50.0 MPa	5800 - 7250 psi	Injection; ISO 527
Modulus of Elasticity	4.00 - 6.00 GPa	580 - 870 ksi	Compression; ISO 527
	5.00 - 8.00 GPa	725 - 1160 ksi	Injection; ISO 527
Flexural Strength	50.0 - 80.0 MPa	7250 - 11600 psi	Compression; ISO 178
	80.0 - 120 MPa	11600 - 17400 psi	Injection; ISO 178
Flexural Modulus	6.00 - 9.00 GPa	870 - 1310 ksi	Compression; ISO 178
	7.00 - 10.0 GPa	1020 - 1450 ksi	Injection; ISO 178
Compressive Strength	150 - 200 MPa	21800 - 29000 psi	ISO 604
Charpy Impact Unnotched	0.500 - 0.800 J/cm²	2.38 - 3.81 ft-lb/in²	Compression; ISO 179/1eU
	0.600 - 1.00 J/cm²	2.86 - 4.76 ft-lb/in²	Injection; ISO 179/1eU

Charpy Impact, Notched Mechanical Properties	0.100 - 0.200 J/cm² Metric	0.475 - 0.952 ft-lb/in² English	Compression; ISO 179/1eA Comments
	0.150 - 0.250 J/cm²	0.714 - 1.19 ft-lb/in²	Injection; ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	24.0 - 45.0 µm/m-°C	13.3 - 25.0 µin/in-°F	ISO 11359-2
	@Temperature 50.0 - 100 °C	@Temperature 122 - 212 °F	
Thermal Conductivity	0.900 - 1.00 W/m-K	6.25 - 6.94 BTU-in/hr-ft²-°F	ASTM E1461
Maximum Service Temperature, Air	13.0 °C	55.4 °F	IEC 60216/T1
	@Time 7.20e+7 sec	@Time 20000 hour	
	190 °C	374 °F	IEC 60216/T1
	@Time <=180000 sec	@Time <=50.0 hour	
Deflection Temperature at 1.8 MPa (264 psi)	>= 180 °C	>= 356 °F	ISO 75-A
Deflection Temperature at 8.0 MPa	80.0 - 120 °C	176 - 248 °F	ISO 75-C
Flammability, UL94	V-0	V-0	
	@Thickness 3.00 mm	@Thickness 0.118 in	
Shrinkage	0.200 - 0.400 %	0.200 - 0.400 %	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+12 - 1.00e+13 ohm-cm	1.00e+12 - 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 - 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	20.0 - 30.0 kV/mm	508 - 762 kV/in	IEC 60243-1
Dissipation Factor	0.0300 - 0.0500	0.0300 - 0.0500	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

Electrical Properties	Metric	English	Comments
	0.600 - 0.800	0.600 - 0.800	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Arc Resistance	180 - 240 sec	180 - 240 sec	ASTM D495
Comparative Tracking Index	600 V	600 V	IEC 60112

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

Descriptive Properties	Value	Comments
Glow wire flammability test	960/1	IEC 60695 2-12
Glow wire ignitability test	850/1	IEC 60695 2-13
Water Absorption	<75 mg	24 hr, 23°C; ISO 62

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