

Raschig Group RALUPOL® 804 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. 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-804-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/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 - 0.00500 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/cm²	2.38 - 4.76 ft-lb/in²	Compression; ISO 179/1eU
	0.800 - 1.10 J/cm²	3.81 - 5.23 ft-lb/in²	Injection; ISO 179/1eU
Charpy Impact, Notched	0.250 - 0.350 J/cm²	1.19 - 1.67 ft-lb/in²	Compression; ISO 179/1eA
	0.300 - 0.400 J/cm²	1.43 - 1.90 ft-lb/in²	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	180 $^\circ\text{C}$	356 $^\circ\text{F}$	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	V-0	V-0	
	@Thickness 3.00 mm	@Thickness 0.118 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	6.00 Month	
	@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	930/1	IEC 60695 2-13
Water Absorption	<35 mg	24 hr, 23°C; ISO 62

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