

Raschig Group SURAPLAST UPA 63 UP

Category : Polymer , Thermoset , Filled/Reinforced Thermoset

Material Notes:

Glass fiber reinforced polyester molding compound. Minimal mold shrinkage and post-shrinkage, very good arc resistance, very 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 molding Information provided by the Raschig Group

Order this product through the following link:

http://www.lookpolymers.com/polymer_Raschig-Group-SURAPLAST-UPA-63-UP.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	0.650 - 0.850 g/cc	0.0235 - 0.0307 lb/in ³	ISO 60
Water Absorption	<= 0.50 % @Temperature 23.0 °C, Time 86400 sec	<= 0.50 % @Temperature 73.4 °F, Time 24.0 hour	ISO 62
Linear Mold Shrinkage	0.0010 - 0.0040 cm/cm	0.0010 - 0.0040 in/in	Injection; ISO 2577

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	50.0 - 70.0 MPa	7250 - 10200 psi	Injection; ISO 527
Modulus of Elasticity	8.00 - 10.0 GPa	1160 - 1450 ksi	ISO 527
Flexural Strength	140 - 160 MPa	20300 - 23200 psi	Injection; ISO 178
Flexural Modulus	16.0 - 19.0 GPa	2320 - 2760 ksi	Injection; ISO 178
Compressive Strength	200 - 250 MPa	29000 - 36300 psi	ISO 604
Charpy Impact Unnotched	1.00 - 1.20 J/cm ² @Temperature 23.0 °C	4.76 - 5.71 ft-lb/in ² @Temperature 73.4 °F	Injection; ISO 179/ 1eU
Charpy Impact, Notched	0.500 - 0.700 J/cm ² @Temperature 23.0 °C	2.38 - 3.33 ft-lb/in ² @Temperature 73.4 °F	Injection; 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
		6.25 - 7.63 BTU-in/hr-	

Thermal Conductivity Thermal Properties	0.900 - 1.10 W/m-K Metric	ft ² ·°F English	ASTM E1461 Comments
Maximum Service Temperature, Air	170 °C	338 °F	20,000 h; IEC 216/T1
	210 °C	410 °F	< 50 h; IEC 216/T1
Deflection Temperature at 8.0 MPa	>= 200 °C	>= 392 °F	Injection; ISO 75-C
Flammability, UL94	V-0	V-0	
	@Thickness 0.750 mm	@Thickness 0.0295 in	
Shrinkage	<= 0.10 %	<= 0.10 %	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+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	4.0 - 5.0	4.0 - 5.0	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	5.0 - 6.0	5.0 - 6.0	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	0.010 - 0.030	0.010 - 0.030	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.010 - 0.030	0.010 - 0.030	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	600 V	600 V	CTI; 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
Arc Resistance	4 Stufe	ASTM D495

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

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