

Raschig Group DECAL® 937 Phenolic

Category : Polymer , Thermoset , Phenolic

Material Notes:

Mica reinforced phenolic molding compound. 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: Compression molding

Applications: Commutators Information provided by Raschig Group

Order this product through the following link:

http://www.lookpolymers.com/polymer_Raschig-Group-DECAL-937-Phenolic.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.65 - 1.75 g/cc	1.65 - 1.75 g/cc	ISO 1183
Apparent Bulk Density	0.700 - 0.900 g/cc	0.0253 - 0.0325 lb/in³	ISO 60
Water Absorption	<= 0.100 % @Temperature 23.0 °C, Time 86400 sec	<= 0.100 % @Temperature 73.4 °F, Time 24.0 hour	ISO 62
Linear Mold Shrinkage, Flow	0.00300 - 0.00500 cm/cm	0.00300 - 0.00500 in/in	Compression; ISO 2577

Mechanical Properties	Metric	English	Comments
Tensile Strength	20.0 - 40.0 MPa	2900 - 5800 psi	Compression; ISO 527
Modulus of Elasticity	5.00 - 7.00 GPa	725 - 1020 ksi	Compression; ISO 527
Flexural Strength	50.0 - 70.0 MPa	7250 - 10200 psi	Compression; ISO 178
Flexural Modulus	10.0 - 13.0 GPa	1450 - 1890 ksi	Compression; ISO 178
Compressive Strength	100 - 150 MPa	14500 - 21800 psi	ISO 604
Charpy Impact Unnotched	0.200 - 0.400 J/cm²	0.952 - 1.90 ft-lb/in²	Compression; ISO 179/1eU
Charpy Impact, Notched	0.150 - 0.350 J/cm²	0.714 - 1.67 ft-lb/in²	Compression; ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	10.0 - 15.0 µm/m-°C @Temperature 50.0 - 150 °C	5.56 - 8.33 µin/in-°F @Temperature 122 - 302 °F	ISO 11359-2
Thermal Conductivity	0.400 - 0.600 W/m-K	2.78 - 4.16 BTU-in/hr- ft²-°F	ASTM E1461
Deflection Temperature at 1.8 MPa (264 psi)	>= 200 °C	>= 392 °F	ISO 75-A

Thermal Properties	Metric	English	Comments
Flammability, UL94	V-0	V-0	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
Shrinkage	0.100 - 0.200 %	0.100 - 0.200 %	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+10 - 1.00e+11 ohm	1.00e+10 - 1.00e+11 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	
	6.00 - 8.00	6.00 - 8.00	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	0.0100 - 0.0200	0.0100 - 0.0200	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.100 - 0.200	0.100 - 0.200	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Arc Resistance	180 - 240 sec	180 - 240 sec	ASTM D495
Comparative Tracking Index	>= 225 V	>= 225 V	IEC 60112

Processing Properties	Metric	English	Comments
Shelf Life	6.00 Month	6.00 Month	
	@Temperature 20.0 - 30.0 °C	@Temperature 68.0 - 86.0 °F	

Descriptive Properties	Value	Comments
Glow wire flammability test	960/1	IEC 60695 2-12
Glow wire ignitability test	960/1	IEC 60695 2-13
Water Absorption	<10 mg	24 hr, 23°C; ISO 62

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Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com
Email : sales@lookpolymers.com
Tel : +86 021-51131842
Mobile : +86 13061808058
Skype : lookpolymers
Address : United North Road 215,Fengxian District, Shanghai City,China