

Raschig Group DECAL® 1760 Phenolic

Category : Polymer , Thermoset , Phenolic

Material Notes:

Glass-fiber reinforced phenolic molding compound. Very good electrical properties, good chemical resistance and mechanical properties.

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 Information provided by Raschig Group

Order this product through the following link:

http://www.lookpolymers.com/polymer_Raschig-Group-DECAL-1760-Phenolic.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.60 - 1.75 g/cc	1.60 - 1.75 g/cc	ISO 1183
Apparent Bulk Density	0.600 - 0.800 g/cc	0.0217 - 0.0289 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	0.00600 - 0.00800 cm/cm	0.00600 - 0.00800 in/in	Injection; ISO 2577

Mechanical Properties	Metric	English	Comments
Tensile Strength	50.0 - 70.0 MPa	7250 - 10200 psi	Injection; ISO 527
Modulus of Elasticity	5.00 - 7.00 GPa	725 - 1020 ksi	Injection; ISO 527
Flexural Strength	100 - 120 MPa	14500 - 17400 psi	Injection; ISO 178
Flexural Modulus	7.00 - 9.00 GPa	1020 - 1310 ksi	Injection; ISO 178
Compressive Strength	150 - 200 MPa	21800 - 29000 psi	ISO 604
Charpy Impact Unnotched	0.600 - 0.900 J/cm²	2.86 - 4.28 ft-lb/in²	Injection; ISO 179/1eU
Charpy Impact, Notched	0.200 - 0.400 J/cm²	0.952 - 1.90 ft-lb/in²	Injection; ISO 179/1eA

Thermal Properties	Metric	English	Comments
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
Deflection Temperature at 8.0 MPa	160 - 180 °C	320 - 356 °F	ISO 75-C
Flammability, UL94	V-0	V-0	

Thermal Properties	@Thickness 1.50 mm Metric	@Thickness 0.0591 in English	Comments
Shrinkage	0.100 - 0.200 % @Temperature 110 °C, Time 605000 sec	0.100 - 0.200 % @Temperature 230 °F, Time 168 hour	Post shrinkage; ISO 2577

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	
	10.0 - 12.0	10.0 - 12.0	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	0.0400 - 0.0600	0.0400 - 0.0600	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.600 - 0.800	0.600 - 0.800	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Arc Resistance	120 - 180 sec	120 - 180 sec	ASTM D495
Comparative Tracking Index	>= 275 V	>= 275 V	IEC 60112

Processing Properties	Metric	English	Comments
Shelf Life	6.00 Month @Temperature 20.0 - 30.0 °C	6.00 Month @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	<40 mg	24 hr, 23°C; ISO 62

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