

Raschig Group 4554 Silicone

Category : Polymer , Thermoset , Silicone , Silicone, Molded, Glass Fiber Filled

Material Notes:

Glass fiber reinforced silicone molding compound. Excellent thermal stability - up to 300°C, exceptional electrical properties, good mechanical strength, very good dimensional stability. Processing: Injection and transfer. Applications: Very high heat resistant connectors
Information provided by Raschig Group

Order this product through the following link:

http://www.lookpolymers.com/polymer_Raschig-Group-4554-Silicone.php

Physical Properties	Metric	English	Comments
Specific Gravity	2.10 - 2.20 g/cc	2.10 - 2.20 g/cc	ISO 1183
Apparent Bulk Density	0.950 - 1.05 g/cc	0.0343 - 0.0379 lb/in ³	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	0.00200 - 0.00600 cm/cm	0.00200 - 0.00600 in/in	Injection; ISO 2577
	0.00400 - 0.00800 cm/cm	0.00400 - 0.00800 in/in	Compression; ISO 2577

Mechanical Properties	Metric	English	Comments
Tensile Strength	20.0 - 30.0 MPa	2900 - 4350 psi	Injection; ISO 527
Modulus of Elasticity	5.00 - 6.00 GPa	725 - 870 ksi	Injection; ISO 527
Flexural Strength	60.0 - 80.0 MPa	8700 - 11600 psi	Injection; ISO 178
Flexural Modulus	12.0 - 16.0 GPa	1740 - 2320 ksi	Injection; ISO 178
Compressive Strength	70.0 - 90.0 MPa	10200 - 13100 psi	ISO 604
Charpy Impact Unnotched	0.400 - 0.600 J/cm ²	1.90 - 2.86 ft-lb/in ²	Injection; ISO 179/1eU
Charpy Impact, Notched	0.200 - 0.350 J/cm ²	0.952 - 1.67 ft-lb/in ²	Injection; ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	20.0 - 40.0 µm/m-°C @Temperature 50.0 - 150 °C	11.1 - 22.2 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- ft ² -°F	ASTM E1461

Thermal Properties	Metric	English	Comments
Deflection Temperature at 8.0 MPa (264 psi)	>= 200 °C	>= 392 °F	ISO 75-C
Flammability, UL94	V-0 @Thickness 0.600 mm	V-0 @Thickness 0.0236 in	
Shrinkage	<= 0.0500 % @Temperature 110 °C, Time 605000 sec	<= 0.0500 % @Temperature 230 °F, Time 168 hour	Post shrinkage; ISO 2577

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	4.00 - 6.00 @Frequency 100 Hz	4.00 - 6.00 @Frequency 100 Hz	IEC 60250
	4.00 - 6.00 @Frequency 1.00e+6 Hz	4.00 - 6.00 @Frequency 1.00e+6 Hz	IEC 60250
Dielectric Strength	20.0 - 30.0 kV/mm	508 - 762 kV/in	IEC 60243-1
Dissipation Factor	0.00500 - 0.0100 @Frequency 1.00e+6 Hz	0.00500 - 0.0100 @Frequency 1.00e+6 Hz	IEC 60250
	0.0100 - 0.0200 @Frequency 100 Hz	0.0100 - 0.0200 @Frequency 100 Hz	IEC 60250
Arc Resistance	180 - 240 sec	180 - 240 sec	ASTM D495
Comparative Tracking Index	>= 350 V	>= 350 V	IEC 60112

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

Descriptive Properties	Value	Comments
Water Absorption	<10 mg	24 hr, 23°C; ISO 62

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