

Raschig Group MELOPLAS® 182 MF

Category : Polymer , Thermoset , Melamine , Melamine-Phenolic Copolymer , Phenolic

Material Notes:

Wood flour-reinforced and inorganically filled, phenol-modified MF molding compound (MPF) in dark colors. Improved dimensional stability and electrical properties as compared with MP 180, high surface hardness, good mechanical strength and heat resistance. Self-extinguishing (V-0/1,6 according to UL 94), UL-listed in all colors. Free of halogens and toxic heavy metals. Supervised according ISO 14529-3, DIN 7708: MP 182 ISO 800: MPF C20, ISO 14529-3: MP (WD35+MD15) -(WD45+MD05). Forms: Low dust granulate packed in moisture resistant bags. Standard bag size: 25 kg palletized in 1.000 kg loads or big-bags. Applications: Molded parts in electrical engineering. Information provided by the Raschig Group

Order this product through the following link:

http://www.lookpolymers.com/polymer_Raschig-Group-MELOPLAS-182-MF.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.60 - 1.70 g/cc	1.60 - 1.70 g/cc	ISO 1183
Apparent Bulk Density	0.550 - 0.750 g/cc	0.0199 - 0.0271 lb/in ³	ISO 60
Water Absorption	<= 2.0 % @Temperature 23.0 °C, Time 86400 sec	<= 2.0 % @Temperature 73.4 °F, Time 24.0 hour	ISO 62
Linear Mold Shrinkage	0.0040 - 0.0080 cm/cm	0.0040 - 0.0080 in/in	(longitudinal) Compression; ISO 2577
	0.0070 - 0.011 cm/cm	0.0070 - 0.011 in/in	(longitudinal) Injection; ISO 2257

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	40.0 - 60.0 MPa	5800 - 8700 psi	Compression; ISO 527
	55.0 - 85.0 MPa	7980 - 12300 psi	Injection; ISO 527
Modulus of Elasticity	5.00 - 8.00 GPa	725 - 1160 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	7.00 - 9.00 GPa	1020 - 1310 ksi	Compression; ISO 178
	8.00 - 10.0 GPa	1160 - 1450 ksi	Injection; ISO 178
Compressive Strength	200 - 250 MPa	29000 - 36300 psi	ISO 604
Charpy Impact Unnotched	0.400 - 0.700 J/cm ² @Temperature -40.0 °C	1.90 - 3.33 ft-lb/in ² @Temperature -40.0 °F	Compression; ISO 179/ 1eU
	0.500 - 0.800 J/cm ²	2.38 - 3.81 ft-lb/in ²	

Mechanical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	Comments Compression; ISO 179/ 1eU
	0.650 - 1.00 J/cm ² @Temperature 23.0 °C	3.09 - 4.76 ft-lb/in ² @Temperature 73.4 °F	Injection; ISO 179/ 1eU
Charpy Impact, Notched	0.120 - 0.180 J/cm ² @Temperature 23.0 °C	0.571 - 0.857 ft-lb/in ² @Temperature 73.4 °F	Compression; ISO 179/ 1eA
	0.130 - 0.200 J/cm ² @Temperature 23.0 °C	0.619 - 0.952 ft-lb/in ² @Temperature 73.4 °F	Injection; ISO 179/ 1eA

Thermal Properties	Metric	English	Comments
CTE, linear	15.0 - 35.0 µm/m-°C @Temperature 50.0 - 100 °C	8.33 - 19.4 µin/in-°F @Temperature 122 - 212 °F	ISO 11359-2
Thermal Conductivity	0.400 - 0.500 W/m-K	2.78 - 3.47 BTU-in/hr-ft ² -°F	ASTM E1461
Maximum Service Temperature, Air	135 °C	275 °F	20,000 h; IEC 60216/T1
	160 °C	320 °F	< 50 h; IEC 60216/T1
Deflection Temperature at 1.8 MPa (264 psi)	155 - 180 °C	311 - 356 °F	Injection and Compression; ISO 75-A
Deflection Temperature at 8.0 MPa	110 - 130 °C	230 - 266 °F	Injection and Compression; ISO 75-C
Flammability, UL94	V-0 @Thickness 1.50 mm	V-0 @Thickness 0.0591 in	
Shrinkage	1.0 - 1.5 % @Temperature 110 °C, Time 605000 sec	1.0 - 1.5 % @Temperature 230 °F, Time 168 hour	Post-shrinkage; ISO 2577

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+11 - 1.00e+12 ohm-cm	1.00e+11 - 1.00e+12 ohm-cm	IEC 60093
Surface Resistance	1.00e+10 - 1.00e+11 ohm	1.00e+10 - 1.00e+11 ohm	IEC 60093
Dielectric Constant	7.0 - 9.0 @Frequency 1.00e+6 Hz	7.0 - 9.0 @Frequency 1.00e+6 Hz	IEC 60250
	11 - 16 @Frequency 100 Hz	11 - 16 @Frequency 100 Hz	IEC 60250

Electrical Properties	Metric 25.0 kV/mm	English 35 kV/in	Comments
Dissipation Factor	0.030 - 0.0500 @Frequency 1.00e+6 Hz	0.030 - 0.0500 @Frequency 1.00e+6 Hz	IEC 60250
	0.30 - 0.50 @Frequency 100 Hz	0.30 - 0.50 @Frequency 100 Hz	IEC 60250
Comparative Tracking Index	600 V	600 V	CTI; 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
Arc Resistance	5 Stufe	ASTM D495
Glow wire ignitability test	900/1	IEC 60695 2-13
Glow-wire flammability test	960/1	IEC 60695 2-12
Water Absorption	<115 mg	ISO 62; 24h / 23°C

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