

Raschig Group MELOPLAS® 183 MF

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

Material Notes:

Cellulose-reinforced and inorganically filled, phenol-modified MF molding compound (MPF) in white and colored shades. Improved dimensional stability and electrical properties as compared with MP 181, high surface hardness, good mechanical strength and heat resistance, good abrasion and UV stability. 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 183, ISO 800: MPF C10, ISO 14529-3: MP (LD20+MD30) - (LD30+MD20). Forms: Low dust granulate packed in moisture resistant bags. Standard bag size: 25 kg palletized in 1.000 kg loads or big-bags. Processing: Injection and compression, 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-183-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	<= 1.7 % @Temperature 23.0 °C, Time 86400 sec	<= 1.7 % @Temperature 73.4 °F, Time 24.0 hour	ISO 62
Linear Mold Shrinkage	0.0040 - 0.0070 cm/cm	0.0040 - 0.0070 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 - 65.0 MPa	5800 - 9430 psi	Compression; ISO 527
	50.0 - 80.0 MPa	7250 - 11600 psi	Injection; ISO 527
Modulus of Elasticity	5.00 - 8.00 GPa	725 - 1160 ksi	Injection and Compression; ISO 527
Flexural Strength	70.0 - 100 MPa	10200 - 14500 psi	Compression; ISO 178
	90.0 - 120 MPa	13100 - 17400 psi	Injection; ISO 178
Flexural Modulus	8.00 - 9.00 GPa	1160 - 1310 ksi	Injection and Compression; ISO 178
Compressive Strength	200 - 250 MPa	29000 - 36300 psi	ISO 604
Charpy Impact Unnotched	0.500 - 0.800 J/cm ² @Temperature 23.0 °C	2.38 - 3.81 ft-lb/in ² @Temperature 73.4 °F	Compression; ISO 179/ 1eU
	0.700 - 1.00 J/cm ²	3.33 - 4.76 ft-lb/in ²	Injection; ISO 179/ 1eU

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

Thermal Properties	Metric	English	Comments
CTE, linear	15.0 - 35.0 μm/m-°C	8.33 - 19.4 μin/in-°F	ISO 11359-2
	@Temperature 50.0 - 100 °C	@Temperature 122 - 212 °F	
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	V-0	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
Shrinkage	1.0 - 1.5 %	1.0 - 1.5 %	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+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	7.0 - 9.0	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	11 - 16	11 - 16	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	20.0 - 25.0 kV/mm	508 - 635 kV/in	IEC 60243-1
Dissipation Factor	0.030 - 0.050	0.030 - 0.050	IEC 60250

Electrical Properties	@Frequency 1.00e+6 Metric	@Frequency 1.00e+6 English	Comments
	0.30 - 0.50	0.30 - 0.50	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Comparative Tracking Index	600 V	600 V	CTI; IEC 60112

Processing Properties	Metric	English	Comments
	6.00 Month	6.00 Month	
Shelf Life	@Temperature 15.0 - 25.0 °C	@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	<100 mg	ISO 62; 24h / 23°C

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