

Raschig Group MELOPLAS® 180 MF

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

Material Notes:

Wood flour-reinforced, phenol-modified MF molding compound (MPF) in dark colors. High surface hardness, good mechanical strength and electrical properties, good heat resistance. Self-extinguishing (V-O/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 180 ISO 800: MPF A20 ISO 14529-3: MP (WD30+MD15) - (WD40+MD05). 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 or Compression. Applications: Molded parts in electrical engineering, Fittings for household appliances, Car ash-trays. Information provided by the Raschig Group

Order this product through the following link:

http://www.lookpolymers.com/polymer_Raschig-Group-MELOPLAS-180-MF.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.50 - 1.60 g/cc	1.50 - 1.60 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	0.0050 - 0.0090 cm/cm	0.0050 - 0.0090 in/in	(longitudinal) Compression; ISO 2577
	0.0080 - 0.012 cm/cm	0.0080 - 0.012 in/in	(longitudinal) Injection; ISO 2257

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	45.0 - 60.0 MPa	6530 - 8700 psi	Compression; ISO 527
	50.0 - 70.0 MPa	7250 - 10200 psi	Injection; ISO 527
Modulus of Elasticity	5.00 - 8.00 GPa	725 - 1160 ksi	Injection and Compression; ISO 527
Flexural Strength	90.0 - 120 MPa	13100 - 17400 psi	Compression; ISO 178
	100 - 130 MPa	14500 - 18900 psi	Injection; ISO 178
Flexural Modulus	7.00 - 9.00 GPa	1020 - 1310 ksi	Injection and Compression; ISO 178
Compressive Strength	200 - 250 MPa	29000 - 36300 psi	ISO 604
Charpy Impact Unnotched	0.450 - 0.700 J/cm ² @Temperature 23.0 °C	2.14 - 3.33 ft-lb/in ² @Temperature 73.4 °F	Compression; ISO 179/ 1eU
	0.600 - 0.900 J/cm ² @Temperature 23.0 °C	2.86 - 4.28 ft-lb/in ² @Temperature 73.4 °F	Injection; ISO 179/ 1eU

Mechanical Properties	Metric	English	Comments
Charpy Impact, Notched	0.180 J/cm ²	0.857 ft-lb/in ²	Compression; ISO 179/ 1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	0.140 - 0.200 J/cm ²	0.666 - 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	0.500 - 0.600 W/m-K	3.47 - 4.16 BTU-in/hr-ft ² -°F	ASTM E1461
Maximum Service Temperature, Air	135 °C	275 °F	20,000 h; IEC 216/T1
	160 °C	320 °F	< 50 h; IEC 216/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	0.80 - 1.3 %	0.80 - 1.3 %	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	
Dissipation Factor	11 - 16	11 - 16	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dissipation Factor	0.030 - 0.050	0.030 - 0.050	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.30 - 0.50	0.30 - 0.50	

Electrical Properties	Metric @Frequency 100 Hz	English @Frequency 100 Hz	IEC 60250 Comments
Arc Resistance	115 - 125 sec	115 - 125 sec	ASTM D495
Comparative Tracking Index	>= 175 V	>= 175 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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