

Kolon DIAMATÂ® IM

Category : Polymer , Thermoplastic , Acrylic (PMMA) , Acrylic, General Purpose, Molded

Material Notes:

Description: DIAMATÂ® is a specially formulated high impact grade PMMA resin from KOLON. The acrylic composition results in an excellent balance of impact resistance and high modulus at reasonable pricing. DIAMATÂ® utilizes acrylic toughener technology resulting in consistent appearance, even after years of UV exposure. DIAMATÂ® IM is a resin for injection molding with excellent moldability and impact strength. Information provided by US distributor, API-Kolon.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Kolon-DIAMAT-IM.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.17 g/cc	1.17 g/cc	ASTM D792
Water Absorption	0.30 %	0.30 %	ASTM D570
Linear Mold Shrinkage	0.0030 - 0.0070 cm/cm	0.0030 - 0.0070 in/in	ASTM D955
Melt Flow	7.5 g/10 min	7.5 g/10 min	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	68	68	ASTM D785
Tensile Strength, Ultimate	47.1 MPa	6830 psi	ASTM D638
Flexural Strength	85.5 MPa	12400 psi	ASTM D790
Flexural Modulus	2.35 GPa	341 ksi	ASTM D790
Izod Impact, Notched	0.324 J/cm	0.606 ft-lb/in	ASTM D256
Falling Dart Impact	9.63 J	7.10 ft-lb	

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	94.0 Â°C	201 Â°F	Load not specified; ASTM D648
Vicat Softening Point	100 Â°C	212 Â°F	ASTM D1525
Glass Transition Temp, Tg	108 Â°C	226 Â°F	ASTM D3418

Optical Properties	Metric	English	Comments
Refractive Index	1.49	1.49	ASTM D542
Haze	<= 2.0 %	<= 2.0 %	ASTM D1003

Transmission Visible Optical Properties	92 % Metric	92 % English	ASTM D1003 Comments
Processing Properties	Metric	English	Comments
Rear Barrel Temperature	150 - 180 Â°C	302 - 356 Â°F	Injection
Middle Barrel Temperature	180 - 230 Â°C	356 - 446 Â°F	Injection
Front Barrel Temperature	210 - 240 Â°C	410 - 464 Â°F	Injection
Nozzle Temperature	220 - 245 Â°C	428 - 473 Â°F	Injection
Zone 1	200 - 220 Â°C	392 - 428 Â°F	Extrusion
Zone 2	210 - 230 Â°C	410 - 446 Â°F	Extrusion
Zone 3	220 - 240 Â°C	428 - 464 Â°F	Extrusion
Zone 4	210 - 235 Â°C	410 - 455 Â°F	Vent; Extrusion
Zone 5	225 - 240 Â°C	437 - 464 Â°F	Extrusion
Adapter Temperature	230 - 240 Â°C	446 - 464 Â°F	Extrusion
Die Temperature	220 - 240 Â°C	428 - 464 Â°F	Extrusion
Melt Temperature	220 - 235 Â°C	428 - 455 Â°F	Recommended for Injection
Mold Temperature	40.0 - 80.0 Â°C	104 - 176 Â°F	
Roll Temperature	80.0 - 100 Â°C	176 - 212 Â°F	Extrusion
Drying Temperature	70.0 - 80.0 Â°C	158 - 176 Â°F	
Dry Time	3 - 5 hour	3 - 5 hour	
Injection Pressure	78.45 - 137.3 MPa	11380 - 19910 psi	
Screw Speed	40 - 80 rpm	40 - 80 rpm	Extrusion

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