

Kolon DIAMATÂ® IG

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® IG is an acrylic molding resin for injection molding, with well balance impact strength and heat resistance. Information provided by US distributor, API-Kolon.

Order this product through the following link:

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

Physical Properties	Metric	English	Comments
Specific Gravity	1.16 g/cc	1.16 g/cc	ASTM D792
Water Absorption	0.40 %	0.40 %	ASTM D570
Linear Mold Shrinkage	0.0030 - 0.0080 cm/cm	0.0030 - 0.0080 in/in	ASTM D955
Melt Flow	5.0 g/10 min	5.0 g/10 min	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	53	53	ASTM D785
Tensile Strength, Ultimate	44.1 MPa	6400 psi	ASTM D638
Flexural Strength	73.8 MPa	10700 psi	ASTM D790
Flexural Modulus	2.16 GPa	313 ksi	ASTM D790
Izod Impact, Notched	0.422 J/cm	0.790 ft-lb/in	ASTM D256
Falling Dart Impact	12.5 J	9.20 ft-lb	

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	90.0 Â°C	194 Â°F	Load not specified; ASTM D648
Vicat Softening Point	95.0 Â°C	203 Â°F	ASTM D1525
Glass Transition Temp, Tg	105 Â°C	221 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	91 % Metric	91 % 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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