

LG Chemical IH830 PMMA, General Purpose Grade for Injection Molding

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

Material Notes:

Highest of all grades in heat resistanceMechanical strength and surface hardnessParticularly recommended for tail lamp, reflectors, and general lighting fixturesFeatures: Excellent transparency and eleganceWeather resistance and chemical resistanceSurface hardness and coloring propertySuperior electrical resistance and mechanical propertiesNo harm causedApplications: Automotive Parts: Rear lamp coverTurn signal lamp coverIndoor lamp coverRear quarter glassAutomotive badgeElectric or Electronic Parts:LCD light guide plateMicrowave oven door/front panelCassette doorVCR cover/front panelCar stereo panelDial scaleLight pipeSheet:SignboardShowcaseLight domeAquariumPicture frameLighting and Miscellaneous:Solid surfaceLighting coverOrnamentsWatch crystalOptical lensPiano keyboardInformation Provided by LG Chem

Order this product through the following link:

http://www.lookpolymers.com/polymer_LG-Chemical-IH830-PMMA-General-Purpose-Grade-for-Injection-Molding.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.18 g/cc	1.18 g/cc	ASTM D792
Water Absorption	0.30 %	0.30 %	24 hours; ASTM D570
Linear Mold Shrinkage	0.0020 - 0.0060 cm/cm	0.0020 - 0.0060 in/in	ASTM D955
Melt Index of Compound	2.5 g/10 min @Load 3.80 kg, Temperature 230 °C	2.5 g/10 min @Load 8.38 lb, Temperature 446 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	99	99	ASTM D785
Tensile Strength at Break	75.0 MPa	10900 psi	ASTM D638
Elongation at Break	14 %	14 %	ASTM D638
Flexural Strength	137 MPa	19900 psi	ASTM D790
Flexural Modulus	3.298 GPa	478.3 ksi	ASTM D790
Izod Impact, Notched	0.147 J/cm	0.275 ft-lb/in	ASTM D256

Thermal Properties	Metric	English	Comments
CTE, linear	60.0 µm/m-°C @Temperature 20.0 °C	33.3 µin/in-°F @Temperature 68.0 °F	ASTM D696
Deflection Temperature at 1.8 MPa (264 psi)	103 °C	217 °F	ASTM D648

Vicat Softening Point Thermal Properties	113 °C Metric	235 °F English	1 kg- ASTM D1525 Comments
Annealing Point	80.0 - 90.0 °C	176 - 194 °F	3-5 hours

Optical Properties	Metric	English	Comments
Refractive Index	1.49	1.49	ASTM D542
Haze	0.50 % @Thickness 3.20 mm	0.50 % @Thickness 0.126 in	ASTM D1003
Transmission, Visible	93 % @Thickness 3.20 mm	93 % @Thickness 0.126 in	ASTM D1003

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	ASTM D257
Dielectric Constant	4.0 @Frequency 60 Hz	4.0 @Frequency 60 Hz	ASTM D150
Dielectric Strength	20.0 kV/mm	508 kV/in	4kV/s; ASTM D149
Dissipation Factor	0.050 @Frequency 60 Hz	0.050 @Frequency 60 Hz	ASTM D150

Processing Properties	Metric	English	Comments
Processing Temperature	220 - 260 °C	428 - 500 °F	Injection molding cylinder temperature
Mold Temperature	70.0 - 80.0 °C	158 - 176 °F	
Drying Temperature	80.0 - 90.0 °C	176 - 194 °F	
Dry Time	4 - 6 hour	4 - 6 hour	
Injection Pressure	78.45 - 147.1 MPa	11380 - 21340 psi	

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