LG Chemical IH830 PMMA, General Purpose Grade for Injection Molding

Categories: Polymer; Thermoplastic; Acrylic; Acrylic, General Purpose, Molded

Material Notes:

- Highest of all grades in heat resistance
- Mechanical strength and surface hardness
- Particularly recommended for tail lamp, reflectors, and general lighting fixtures

Features:

- Excellent transparency and elegance
- Unsurpassed weather resistance and chemical resistance
- Unmatched surface hardness and coloring property
- Superior electrical resistance and mechanical properties
- No harm caused

Applications:

- Automotive Parts:
  - Rear lamp cover
  - Turn signal lamp cover
  - Indoor lamp cover
  - Rear quarter glass
  - Automotive badge
- Electric or Electronic Parts:
  - LCD light guide plate
  - Microwave oven door/front panel
  - Cassette door
  - VCR cover/front panel
  - Car stereo panel
  - Dial scale
  - Light pipe
- Sheet:
  - Signboard
  - Showcase
  - Light dome
  - Aquarium
  - Picture frame
- Lighting and Miscellaneous:
  - Solid surface
  - Lighting cover
  - Ornaments
  - Watch crystal
  - Optical lens
  - Piano keyboard

Information Provided by LG Chem

Vendors: No vendors are listed for this material. Please click here if you are a supplier and would like information on how to add your listing to this material.

Physical Properties	Metric	English	Comments
Specific Gravity	1.18 g/cc	1.18 g/cc	ASTM D792
Water Absorption	0.300 %	0.300 %	24 hours; ASTM D570
Linear Mold Shrinkage	0.00200 - 0.00600 cm/cm	0.00200 - 0.00600 in/in	ASTM D955
Melt Index of Compound	2.50 g/10 min @Load 3.80 kg, Temperature 230 °C	2.50 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	14.0 %	14.0 %	ASTM D638
Flexural Modulus	3.298 GPa	478.3 ksi	ASTM D790
Flexural Strength	137 MPa	19900 psi	ASTM D790
Izod Impact, Notched	0.147 J/cm	0.275 ft-lb/in	ASTM D256

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	ASTM D257
Dielectric Constant	4.00 @Frequency 60 Hz	4.00 @Frequency 60 Hz	ASTM D150
Dielectric Strength	20.0 kV/mm	508 kV/in	4kV/s; ASTM D149
Dissipation Factor	0.0500 @Frequency 60 Hz	0.0500 @Frequency 60 Hz	ASTM D150

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	113 °C	235 °F	1 kg; ASTM D1525
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	0.500 % @Thickness 3.20 mm	0.500 % @Thickness 0.126 in	ASTM D1003
Transmission, Visible	93.0 % @Thickness 3.20 mm	93.0 % @Thickness 0.126 in	ASTM D1003

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	