

LG Chemical IF850 PMMA, General Purpose Grade for Injection Molding

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

Material Notes:

High flowability gradeParticularly recommended for complicated profiles or large and thin wall partsFeatures: 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

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	12.3 g/10 min @Load 3.80 kg, Temperature 230 Â°C	12.3 g/10 min @Load 8.38 lb, Temperature 446 Â°F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	90	90	ASTMD785
Tensile Strength at Break	70.0 MPa	10200 psi	ASTMD638
Elongation at Break	13 %	13 %	ASTMD638
Flexural Strength	128 MPa	18600 psi	ASTMD790
Flexural Modulus	3.304 GPa	479.2 ksi	ASTMD790
Izod Impact, Notched	0.147 J/cm	0.275 ft-lb/in	ASTMD256

Thermal Properties	Metric	English	Comments
CTE, linear	60.0 Âµm/m-Â°C @Temperature 20.0 Â°C	33.3 Âµin/in-Â°F @Temperature 68.0 Â°F	ASTM D696
Deflection Temperature at 1.8 MPa (264 psi)	90.0 Â°C	194 Â°F	ASTM D648
Vicat Softening Point	100 Â°C	212 Â°F	1 kg; ASTM D1525

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	$\geq 1.00 \times 10^{15}$ ohm-cm	$\geq 1.00 \times 10^{15}$ 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	200 - 240 °C	392 - 464 °F	Injection molding cylinder temperature
Mold Temperature	60.0 - 80.0 °C	140 - 176 °F	
Drying Temperature	60.0 - 70.0 °C	140 - 158 °F	
Dry Time	4 - 6 hour	4 - 6 hour	
Injection Pressure	58.84 - 137.3 MPa	8534 - 19910 psi	