

Chi Mei Acryrex® CM-205 PMMA

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

Material Notes:

High heat injection grade. It can resist high temperature. High mechanical strength. Applications: The indicator cover of scooter and automobile/sun glasses/digital watch cover. Features: Good Weather Resistance High Heat Resistance High Strength Uses: Automotive Applications Protective Coverings RoHS Compliant Appearance: Clear/Transparent Forms: Pellets Processing Method: Injection Molding Availability: Africa & Middle East Asia Pacific Europe Latin America North America South America

Physical Properties	Metric	English	Comments
Density	0.700 g/cc	0.0253 lb/in ³	Apparent; ASTM D1182
	1.19 g/cc	0.0430 lb/in ³	ISO 1183
Water Absorption	0.30 %	0.30 %	Equilibrium; ASTM D570
Linear Mold Shrinkage, Flow	0.0020 - 0.0060 cm/cm	0.0020 - 0.0060	ASTM D955
Melt Flow	1.8 g/10 min @Load 3.80 kg, Temperature 230 °C	in/in 1.8 g/10 min @Load 8.38 lb, Temperature 446 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Shore M	95 @Thickness 6.35 mm	95 @Thickness 0.250 in	ASTM D785
Tensile Strength, Yield	70.3 MPa @Thickness 3.18 mm	10200 psi @Thickness 0.125 in	6 mm/min; ASTM D638
Elongation at Break	5.0 % @Thickness 3.18 mm	5.0 % @Thickness 0.125 in	6 mm/min; ASTM D638
Flexural Strength	108 MPa @Thickness 6.35 mm	15700 psi @Thickness 0.250 in	2.8 mm/min; ASTM D790
Izod Impact, Notched	0.200 J/cm @Thickness 6.35 mm	0.375 ft-lb/in @Thickness 0.250 in	ASTM D256

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	100 °C @Thickness 6.35 mm	212 °F @Thickness 0.250 in	Unannealed; ASTM D648

Thermal Properties	Metric	English	Comments
Flammability, UL94	@Thickness 1.59 mm	@Thickness 0.0625 in	UL 94

Optical Properties	Metric	English	Comments
Refractive Index	1.49	1.49	ASTM D542
Transmission, Visible	92 % @Thickness 3.18 mm	92 % @Thickness 0.125 in	ASTM D1003

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	ASTM D257
Dielectric Constant	3.7	3.7	ASTM D150
Dielectric Strength	0.787 kV/mm	20.0 kV/in	ASTM D149
Dissipation Factor	0.19	0.19	ASTM D150

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	185 - 205 °C	365 - 401 °F	
Middle Barrel Temperature	200 - 220 °C	392 - 428 °F	
Front Barrel Temperature	220 - 240 °C	428 - 464 °F	
Mold Temperature	50.0 - 70.0 °C	122 - 158 °F	
Drying Temperature	85.0 - 90.0 °C @Time 14400 sec	185 - 194 °F @Time 4.00 hour	

Descriptive Properties	Value	Comments
Power Factor	0.5	ASTM D150