

Polycasa CAST PMMA

Category : Polymer , Thermoplastic , Acrylic (PMMA)

Material Notes:

QUINN CAST has an optical transparency of 93% light transmission for transparent sheets. It is significantly lighter and much more impact resistant than glass of equivalent thickness. QUINN CAST is resistant to UV rays, shows good thermal stability and low water absorption. QUINN CAST sheets are easy to handle and most fabricating and molding techniques are applicable to it, allowing attractive designs. Construction Skylights Barrel Vaults Partitions Doors Industry Signs Displays Furniture Sanitary fittings Gift Articles Shop fittings Solariums Boat Windows Projection Screens Quinn Manufacturing Group rebranded its Plastics Division as Polycasa in 2013.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Polycasa-CAST-PMMA.php

Physical Properties	Metric	English	Comments
Density	1.19 g/cc	0.0430 lb/in ³	ISO 1183

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	105	105	ISO 2039-2
Tensile Strength at Break	75.0 MPa	10900 psi	ISO 527
Elongation at Break	6.0 %	6.0 %	ISO 527
Tensile Modulus	3.30 GPa	479 ksi	ISO 527
Flexural Strength	125 MPa	18100 psi	ISO 178
Flexural Modulus	3.00 GPa	435 ksi	ISO 178
Charpy Impact Unnotched	1.50 J/cm ²	7.14 ft-lb/in ²	ISO 179
Charpy Impact, Notched	0.200 J/cm ²	0.952 ft-lb/in ²	ISO 179

Thermal Properties	Metric	English	Comments
CTE, linear	70.0 μm/m-°C	38.9 μin/in-°F	ISO 11359-2
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Specific Heat Capacity	2.16 J/g-°C	0.516 BTU/lb-°F	ISO 3146-C-60°C
Thermal Conductivity	0.190 W/m-K	1.32 BTU-in/hr-ft ² -°F	DIN 52612
Maximum Service Temperature, Air	80.0 °C	176 °F	Continuous Use
	90.0 °C	194 °F	Short Term Use
Deflection Temperature at 1.8 MPa (264 psi)	105 °C	221 °F	no pressure specified; ISO 75

Thermal Properties	Metric	English	Comments
Decomposition Temperature	>= 280 °C	>= 536 °F	

Optical Properties	Metric	English	Comments
Refractive Index	1.492	1.492	ISO 489
Transmission, Visible	93 %	93 %	ISO 1183

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	DIN 53482
Surface Resistance	1.00e+14 ohm	1.00e+14 ohm	DIN 53482
Dielectric Constant	3.6 @Frequency 50 Hz	3.6 @Frequency 50 Hz	
Dielectric Strength	30.0 kV/mm	762 kV/in	DIN 53481
Dissipation Factor	0.060 @Frequency 50 Hz	0.060 @Frequency 50 Hz	DIN 53483

Processing Properties	Metric	English	Comments
Processing Temperature	160 - 190 °C	320 - 374 °F	Sheet Forming

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