

Polycasa PC

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

QUINN PC sheets have excellent optical properties and a brilliant surface. The QUINN PC range contains sheets that are easy to fabricate and show exceptional performance at both low and high temperatures (range from -40°C to +135°C). Important benefits of QUINN PC sheets are their excellent mechanical, thermal and electrical properties. They are virtually unbreakable in normal use. QUINN PC sheets also combine the following excellent properties: Easy to vacuum form, (pre-drying required), exceptional low and high temperature performance, easy to recycle, very high impact properties, virtually unbreakable, normally inflammable - Building Regulations I Class B2 to DIN 4102, Part 1. QUINN PC Molded containers, bowls, tubs Machine safety guards, vending machine fascias Vehicle and boat construction, aircraft (only for internal use) Safety Glazing Street and traffic signs Office machinery Industrial construction Partition walls Advertising panels Replacement glazing Quinn Manufacturing Group rebranded its Plastics Division as Polycasa in 2013.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Polycasa-PC.php

Physical Properties	Metric	English	Comments
Density	1.20 g/cc	0.0434 lb/in ³	ISO 1183

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	60.0 MPa	8700 psi	ISO 527
Elongation at Break	80 %	80 %	ISO 527
Tensile Modulus	2.20 GPa	319 ksi	ISO 527
Flexural Strength	>= 95.0 MPa	>= 13800 psi	ISO 178
Charpy Impact Unnotched	NB	NB	ISO 179
Charpy Impact, Notched	1.00 J/cm ²	4.76 ft-lb/in ²	ISO 179

Thermal Properties	Metric	English	Comments
CTE, linear	65.0 μm/m-°C	36.1 μin/in-°F	DIN 53328
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Specific Heat Capacity	1.17 J/g-°C	0.280 BTU/lb-°F	
Thermal Conductivity	0.200 W/m-K	1.39 BTU-in/hr-ft ² -°F	DIN 52612
Maximum Service Temperature, Air	115 °C	239 °F	Continuous Use
	130 °C	266 °F	Short Term Use
Deflection Temperature at 1.8 MPa (264 psi)	135 °C	275 °F	ISO R75

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

Optical Properties	Metric	English	Comments
Refractive Index	1.585	1.585	T3
Transmission, Visible	86 %	86 %	DIN 5036

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	DIN 53482
Surface Resistance	1.00e+15 ohm	1.00e+15 ohm	DIN 53482
Dielectric Constant	3.0 @Frequency 50 Hz	3.0 @Frequency 50 Hz	DIN 53483
Dielectric Strength	30.0 kV/mm	762 kV/in	DIN 53481
Dissipation Factor	0.00080 @Frequency 50 Hz	0.00080 @Frequency 50 Hz	DIN 53483

Processing Properties	Metric	English	Comments
Processing Temperature	180 - 210 °C	356 - 410 °F	Sheet Forming

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