

Polycasa XT PMMA

Category : Polymer , Thermoplastic , Acrylic (PMMA)

Material Notes:

QUINN XT sheets have good optical properties and a brilliant surface. QUINN XT sheets offer excellent transparency, good mechanical properties, are UV resistant, have very good weathering and ageing resistance and remain color constant for years. High impact grades, QUINN XT610, XT620, XT630, have outstanding mechanical properties and excellent impact strength. Both QUINN XT sheets and all high impact grades can be used in contact with foodstuffs, as they meet all current European food control legislation. QUINN XT sheets and the high impact grades do not contain any toxic materials or heavy metals, which may cause environmental damage or health risks. It is insoluble in water, and not subject to hazardous materials identification. QUINN XT sheets and the high impact grades are easy to recycle. Construction Components Light domes Partition walls Door Glazing Roofing Skylights for caravans Lighting Lighting control lenses Domestic light fittings Engineering Components Machine housings, machine safety covers Advertising and Signage Molded letters Store displays Shop fittings Illuminated graphics panels Other Applications Containers Lettering Templates Solariums Sound Barrier Walls Quinn Manufacturing Group rebranded its Plastics Division as Polycasa in 2013.

Order this product through the following link:

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

Physical Properties	Metric	English	Comments
Density	1.19 g/cc	0.0430 lb/in ³	ISO 1183
Water Absorption	0.20 %	0.20 %	24h/23°C - 50x50x4mm; DIN 53495 Method 1
Linear Mold Shrinkage	0.0050 - 0.0080 cm/cm	0.0050 - 0.0080 in/in	

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	235 MPa	34100 psi	ISO 2039-1
Tensile Strength at Break	70.0 MPa	10200 psi	ISO 527-2
Elongation at Break	4.0 %	4.0 %	ISO 527-2
Tensile Modulus	3.20 GPa	464 ksi	ISO 527-2
Flexural Strength	115 MPa	16700 psi	ISO 178
Flexural Modulus	3.30 GPa	479 ksi	ISO 178
Charpy Impact Unnotched	1.70 J/cm ²	8.09 ft-lb/in ²	ISO 179-1
Charpy Impact, Notched	0.200 J/cm ²	0.952 ft-lb/in ²	ISO 179-1

Thermal Properties	Metric	English	Comments
CTE, linear	70.0 µm/m-°C	38.9 µin/in-°F	DIN 53752

Thermal Properties	@Temperature 20.0 °C Metric	@Temperature 68.0 °F English	Comments
Specific Heat Capacity	1.47 J/g-°C	0.351 BTU/lb-°F	IEC 1006
Thermal Conductivity	0.180 W/m-K	1.25 BTU-in/hr-ft²-°F	DIN 52612
Maximum Service Temperature, Air	70.0 °C	158 °F	Continuous Use
	90.0 °C	194 °F	Short Term Use
Vicat Softening Point	105 °C	221 °F	ISO 306
Decomposition Temperature	>= 280 °C	>= 536 °F	

Optical Properties	Metric	English	Comments
Refractive Index	1.492	1.492	DIN 5036-3
Transmission, Visible	92 % @Thickness 3.00 mm	92 % @Thickness 0.118 in	DIN 5036-3

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 - 5.00e+15 ohm-cm	1.00e+15 - 5.00e+15 ohm-cm	IEC 60093
Surface Resistance	3.00e+15 - 3.00e+16 ohm	3.00e+15 - 3.00e+16 ohm	IEC 60093
Dielectric Constant	2.7 @Frequency 50 Hz	2.7 @Frequency 50 Hz	
	2.7 @Frequency 1e+6 Hz	2.7 @Frequency 1e+6 Hz	
	3.1 @Frequency 1000 Hz	3.1 @Frequency 1000 Hz	
Dielectric Strength	30.0 kV/mm	762 kV/in	DIN 53481
Dissipation Factor	0.020 @Frequency 1e+6 Hz	0.020 @Frequency 1e+6 Hz	DIN 53483-2
	0.040 @Frequency 1000 Hz	0.040 @Frequency 1000 Hz	DIN 53483-2
	0.060 @Frequency 50 Hz	0.060 @Frequency 50 Hz	DIN 53483-2

Descriptive Properties	Value	Comments
Electrical Strength, kV/mm ²	10	IEC 60243-1
Forming Temperature, Air Pressure, °C	140-160	
Forming Temperature, Vacuum, °C	160-190	

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