

POLYCASA® XT 610

Polymethyl Methacrylate Acrylic

Polycasa

Message:

XT is one of the trade names of Polycasa for extruded acrylic (polymethylmethacrylate PMMA) in the form of large dimensional sheets. Offering solutions to both indoor and outdoor applications, Polycasa XT is available in clear and opal white standard, and in a wide range of colours and designs.

Sheets are produced and tested according to DIN EN ISO 7823-2.

CHARACTERISTICS

Good optical properties — brilliant transparency showing excellent colour.

High-quality surfaces — very good weathering and ageing resistance.

Can be used in contact with foodstuffs — meets all current European food control legislation.

Does not contain any toxic materials or heavy metals which may cause environmental damage or health risks.

Easy to recycle.

High impact grades Polycasa XT610, XT620 and XT630 have outstanding mechanical properties and excellent impact strength.

APPLICATIONS

Construction components: light domes, partition walls, glazing, roofing, caravan windows.

Lighting: prismatic control lenses, opal diffusers.

Engineering components: housings, machine covers.

Advertising and decoration: letters, shop fittings, panels, Point Of Purchase displays.

Other applications: containers, lettering templates, solariums UVT (UV-transmitting grade).

General Information	
Features	Food Contact Acceptable
	Good Surface Finish
	Good Weather Resistance
	High Impact Resistance
	Non-Toxic
	Opticals
	Recyclable Material
Uses	Building Materials
	Construction Applications
	Displays
	Fittings
	Glazing
	Housings
	Lenses
	Lighting Diffusers
	Protective Coverings
	Wall Panels
	Windows & Doors
Agency Ratings	EN 7823
Appearance	Clear/Transparent

Colors Available

Glossy Finish

Opaque

White

Forms	Sheet		
Physical	Nominal Value	Unit	Test Method
Density	1.15	g/cm ³	ISO 1183
Molding Shrinkage	0.60 to 0.90	%	
Water Absorption ¹ (23°C, 24 hr)	0.30	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness	100	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	1800	MPa	ISO 527-2
Tensile Stress	40.0	MPa	ISO 527-2
Tensile Strain (Break)	35	%	ISO 527-2
Flexural Modulus	1800	MPa	ISO 178
Flexural Stress	65.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength	5.0	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength	60	kJ/m ²	ISO 179
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature ²	98.0	°C	ISO 306/B50
CLTE - Flow	1.1E-4	cm/cm/°C	DIN 53752
Specific Heat	1500	J/kg/°C	ISO 11357
Thermal Conductivity	0.18	W/m/K	DIN 52612
Maximum Service Temperature			
continuous use	65	°C	
short term use	75	°C	
Refractive Index	1.4920		ISO 489
Degradation Temperature	> 280	°C	
Forming Temperature			
air pressure	130 to 150	°C	
vacuum	140 to 170	°C	
Electrical	Nominal Value	Unit	Test Method
Dielectric Strength	30	kV/mm	IEC 60243
Relative Permittivity (1 MHz)	2.90		DIN 53483
Dissipation Factor (1 MHz)	0.030		DIN 53483
Optical	Nominal Value	Unit	Test Method
Transmittance (3000 µm)	90.0	%	ISO 13468-1
NOTE			
1.	50x50x4mm ³ (Method 1)		

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