

POLYCASA® XT

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 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	1.19	g/cm ³	ISO 1183
Molding Shrinkage	0.50 to 0.80	%	
Water Absorption ¹ (23°C, 24 hr)	0.20	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness	235	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	3200	MPa	ISO 527-2
Tensile Stress	70.0	MPa	ISO 527-2
Tensile Strain (Break)	4.0	%	ISO 527-2
Flexural Modulus	3300	MPa	ISO 178
Flexural Stress	115	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength	2.0	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength	17	kJ/m ²	ISO 179
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature ²	105	°C	ISO 306/B50
CLTE - Flow	7.0E-5	cm/cm/°C	DIN 53752
Specific Heat	1470	J/kg/°C	ISO 11357
Thermal Conductivity	0.18	W/m/K	DIN 52612
Maximum Service Temperature			
continuous use	70	°C	
short term use	90	°C	
Refractive Index	1.4920		ISO 489
Degradation Temperature	> 280	°C	
Forming Temperature			
air pressure	140 to 160	°C	
vacuum	160 to 190	°C	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	3.0E+15 to 3.0E+16	ohms	IEC 60093
Volume Resistivity	1.0E+15 to 5.0E+15	ohms · cm	IEC 60093
Dielectric Strength			
--	30	kV/mm	IEC 60243
--	10	kV/mm	IEC 60243-1
Relative Permittivity			
50 Hz	2.70		DIN 53483
1 kHz	3.10		

1 MHz	2.70		
Dissipation Factor			DIN 53483
50 Hz	0.060		
1 kHz	0.040		
1 MHz	0.020		
Optical	Nominal Value	Unit	Test Method
Transmittance (3000 μm)	92.0	%	ISO 13468-1
NOTE			
1.	50x50x4mm ³ (Method 1)		
2.	Pre treatment 16h at 80°C		

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