

POLYCASA® CAST

Polymethyl Methacrylate Acrylic

Polycasa

Message:

CAST is the brand name for cast polymethylmethacrylate sheets from Polycasa® .
The composition of the final product is 90-95% PMMA + additives (stabilisers, plasticisers, dyes and pigments, and release agents).

CHARACTERISTICS

Optical transparency of 93% light transmission for transparent sheets — significantly lighter and far more impact-resistant than glass of the equivalent thickness.

Resistant to UV rays, good thermal stability and low water absorption.

Easy to handle — most fabricating and moulding techniques are applicable to it, allowing attractive designs.

APPLICATIONS

- Signs.
- Displays.
- Furniture.
- Sanitary fittings.
- Gift articles.
- Shopfittings.
- Solariums.
- Boat windows.
- Projection screens.
- Skylights.
- Barrel vaults.
- Partitions.
- Doors.

General Information	
Additive	Mold Release
	Plasticizer
	Unspecified Stabilizer
Features	Good Impact Resistance
	Good Thermal Stability
	Good UV Resistance
	Low to No Water Absorption
Uses	Building Materials
	Construction Applications
	Displays
	Fittings
	Furniture
	Industrial Applications
	Marine Applications
	Sanitary Products
	Windows & Doors
Appearance	Clear/Transparent

Colors Available

Opaque

Translucent

White

Forms	Sheet		
Physical	Nominal Value	Unit	Test Method
Density	1.19	g/cm ³	ISO 1183
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	105		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	3300	MPa	ISO 527-2
Tensile Stress	75.0	MPa	ISO 527-2
Tensile Strain (Break)	6.0	%	ISO 527-2
Flexural Modulus	3000	MPa	ISO 178
Flexural Stress	125	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength	2.0	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength	18	kJ/m ²	ISO 179
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	105	°C	ISO 75-2/A
Vicat Softening Temperature	115	°C	ISO 306/A50
CLTE - Flow	7.0E-5	cm/cm/°C	ISO 11359-2
Specific Heat (60°C)	2160	J/kg/°C	ISO 3146
Thermal Conductivity	0.19	W/m/K	DIN 52612
Maximum Service Temperature			
continuous use	80	°C	
short term use	90	°C	
Refractive Index	1.4920		ISO 489
Degradation Temperature	> 280	°C	
Sheet Temperature - Forming	160 to 190	°C	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+14	ohms	DIN 53482
Volume Resistivity	> 1.0E+15	ohms · cm	DIN 53482
Electric Strength	30	kV/mm	DIN 53481
Dielectric Constant (50 Hz)	3.60		DIN 53483
Dissipation Factor (50 Hz)	0.060		DIN 53483
Optical	Nominal Value	Unit	Test Method
Transmittance	93.0	%	ISO 13468-1

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