

POLYCASA® HIPS Glossy/Matt

High Impact Polystyrene

Polycasa

Message:

Polycasa® HIPS is a rubber modified polystyrene sheet that has improved impact strength and is easy to mould and cut to size. The product is available with either a matt finish on both sides or a matt finish on one side, and glossy surface on the other. The standard colour is white, but a range of other colours is available, in addition to colour-matching to order. We can also deliver sheet for special applications. These include, but are not limited to:

- UV treatment: improved colour stability and impact resistance.
- Environmental Stress Cracking Resistance (ESCR).
- Freon resistant grades for the refrigeration industry.
- Corona treatment: process to increase surface tension.

CHARACTERISTICS

- Superior surface quality.
- Excellent low temperature impact performance.
- Suitable for thermoforming.
- Smooth surface with a choice of finish: matt or glossy.
- Excellent for printing.
- Outstanding electrical insulation properties.
- Food contact approved - non UV version.
- Meets fire safety standard - UL standard 94HB.

APPLICATIONS

- Refrigerator liners.
- Sanitary ware.
- Bath panels.
- Shower wall panels.
- Vacuum formed parts.
- Screen printing substrate.
- Point Of Sale display units.
- Mobile home and caravan fittings.

General Information	
Features	Electrically Insulating
	Food Contact Acceptable
	Low Temperature Impact Resistance
	Outstanding Surface Finish
Uses	Appliance Components
	Bathroom Accessories
	Displays
	Electronic Insulation
	Liners
	Printing Sheet
	Sanitary Products
	Screen Printing
Appearance	Thermoforming Applications
	Colors Available

Glossy Finish

Matte Finish

White

Forms	Sheet		
Processing Method	Extrusion		
Physical	Nominal Value	Unit	Test Method
Density	1.05	g/cm ³	ISO 1183
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness	80.0	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (4.00 mm)	1730	MPa	ISO 527-2
Tensile Stress			ISO 527-2
Break, 4.00 mm	18.0	MPa	
4.00 mm	24.0	MPa	
Tensile Strain (Break, 4.00 mm)	2.9	%	ISO 527-2
Flexural Modulus (4.00 mm)	1850	MPa	ISO 178
Flexural Stress (4.00 mm)	34.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1fA
-- ¹	9.0	kJ/m ²	
-- ²	6.0	kJ/m ²	
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	92.0	°C	ISO 306/B50
CLTE - Flow	8.0E-5	cm/cm/°C	DIN 53752
Thermal Conductivity	0.16	W/m/K	ISO 11501
Heat Deflection Temperature	82	°C	ISO 75-2
Maximum Service Temperature - continuous use	70	°C	DIN 52612
Dimensional Change after Heating (4.00 mm)	5.0	%	DIN 15105-1/-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+13	ohms	IEC 60093
Volume Resistivity	> 1.0E+16	ohms · cm	IEC 60093
Electric Strength	160	kV/mm	IEC 243
Dielectric Constant			IEC 60250
100 Hz	2.50		
1 MHz	2.50		
Dissipation Factor			IEC 60250
100 Hz	> 1.0E-4		
1 MHz	> 1.0E-4		
Flammability	Nominal Value	Unit	Test Method
Flame Rating	HB		UL 94

NOTE

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|----|----------------------|
| 1. | glossy side impacted |
| 2. | matt side impacted |

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