

DATASHEET

ACRYLIC (CAST)

Perspex cell cast acrylic sheet is supplied with double-sided, non-thermoformable masking. The showface masking is printed with the Perspex logo.

Applications

- Exterior signage
- Displays
- Automotive
- Window glazing

Availability

- Perspex Cell Cast Acrylic sheet is available in clear, opal, and many colours, and in a range of thicknesses, size, and special grades.

Typical Properties

General Properties	Method	Unit	Test Result
Physical Properties			
Relative Density	ISO 1183	g/cm ³	1.19
Rockwell Hardness	ISO 2039-2	M scale	102
Water Absorption	ISO 62	%	0.2
Flammability	BS476 Part 7 DIN 4102 NFP 92-507 UL 94 ISO 11925-2	Class - - - -	3 B2 M4 HB E
Optical Properties			
Light Transmission	ASTM D 1003	% (3mm)	>92
Refractive Index	ISO 489 A	-	1.49
Thermal Properties			
Vicat Softening Point	ISO 306 A	°C	>110
Coefficient of Thermal Expansion (Linear)	ASTM D 696	X10(-5). K (-1)	7.7
Maximum Working Temperature	-	°C	80-85
Specific Heat	ASTM C 351	Cal/g °C	0.35
Thermal Conductivity Coefficient (K Value)	-	W m m-2 °C	0.189
Heat Transfer Coefficient (U Value)			
- 3mm	-	W m-2 °C	5.2
- 5mm	-	W m-2 °C	4.9
Mechanical Properties			
Tensile Strength	ISO 527 (5mm)	MPa	75
Elongation at Break	ISO 527 (5mm)	%	4
Flexural Strength	ISO 178 (2mm)	MPa	116
Flexural Modulus	ISO 178 (2mm)	MPa	3210

Impact Strength – Charpy - Unnotched	ISO 179	kJ M(-2)	12
Poisson's Ratio	ISO 179	kJ M(-2)	0.38
Sound Insulation Properties			
Sound Reduction Index			
- 3mm Single Pane	-	Db	18
- 6mm Single Pane	-	Db	22
- 2 x 3mm Panes (20mm air gap)	-	Db	25
- 2 x 6mm Panes (20mm air gap)	-	db	31
Electrical Properties			
Surface Resistivity	IEC 93	Ω .m-2	>10(14)
Electrical Strength	IEC 243	kV.mm-1	15
Arc Resistance	ASTM D495	-	No tracking
Dielectric Constant			
- 60 cycles	ASTM D 150	-	4
- 103 cycles			3
- 106 cycles			3
Power Factor			
- 60 cycles	ASTM D 150	-	0.06
- 103 cycles			0.04
- 106 cycles			0.02