

PERSPEX® CAST



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Perspex® from Lucite® Cast - Technical Data Sheet

Range

Perspex® from Lucite® Cast Sheet is available in clear, opal and many colours in a range of thicknesses, sizes and special grades. Details are available in the Perspex Product Range (PX TC 602); further sizes, thicknesses or variants may be available on enquiry.

Masking

Perspex® from Lucite® sheet is supplied with double-sided, non-thermoformable PE masking. The showface masking is printed with the Perspex® logo.

Table of Properties

Values quoted for the properties of Perspex® from Lucite® Cast sheet are the results of tests on representative samples and do not constitute specifications

Talk to us
Tel: +44 (0)1254 874000
info@lucitesolutions.com
www.lucitesolutions.com

LUCITE®
The source of inspiration

Property	Test Method	Units	Values
General Properties			
Density	ISO 1183	g cm ⁻³	1.19
Rockwell Hardness	ISO 2039-2	M scale	102
Water Absorption	ISO 62	%	0.2
Flammability	BS 476 Part 7	Class	3
	DIN 4102	-	B2
	NFP 92-507	-	M4
	UL94	-	HB
	ISO 11925-2	-	E
Optical Properties			
Light Transmission	ASTM D1003	% (3 mm)	> 92
Refractive Index	ISO 489 A		1.49
Thermal Properties			
Vicat Softening Point	ISO 306 A	°C	> 110
Coefficient of Thermal Expansion - Linear	ASTM D696	x 10 ⁻⁵ . K ⁻¹	7.7
Specific Heat	ASTM C351	cal/g °C	0.35
Thermal Conductivity Coefficient (K Value)		W m m ⁻² °C	0.189
Heat Transfer Coefficient (U Value)		W m ⁻² °C	
- 3 mm single pane			5.2
- 5 mm single pane			4.9
Mechanical Properties			
Tensile strength (5 mm/min)	ISO 527	MPa	75
Elongation at Break (5 mm/min)	ISO 527	%	4
Flexural Strength (2 mm/min)	ISO 178	MPa	116
Flexural Modulus (2 mm/min)	ISO 178	MPa	3210
Impact Strength – Charpy (unnotched)	ISO 179	kJ m ⁻²	12
Poisson's Ratio			0.38

Property	Test Method	Units	Values
Sound Insulation Properties			
Sound Reduction Index		db	
- 3 mm single pane			18
- 6 mm single pane			22
- 2 x 3 mm panes (20 mm air gap)			25
- 2 x 6 mm panes (20 mm air gap)			31
Electrical Properties			
Surface Resistivity	IEC 93	$\Omega.m^{-2}$	$> 10^{14}$
Electrical Strength	IEC 243	kV.mm ⁻¹	15
Arc Resistance	ASTM D495		No tracking
Dielectric Constant	ASTM D150		
- 60 cycles			4
- 10 ³ cycles			3
- 10 ⁶ cycles			3
Power Factor	ASTM D150		
- 60 cycles			0.06
- 10 ³ cycles			0.04
- 10 ⁶ cycles			0.02

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