



# Perspex® Cell Cast Acrylic

## Technical Datasheet

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### 1. Range

Perspex® Cell Cast Sheet is available in clear, opal and many colours in a range of thicknesses, sizes and special grades.

### 2. Masking

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

### 3. Table of Properties (overleaf)

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



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Property	Test Method	Units	Values
<b>General Properties</b>			
Density	ISO 1183	g cm <sup>-3</sup>	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
<b>Optical Properties</b>			
Light Transmission	ASTM D1003	% (3 mm)	> 92
Refractive Index	ISO 489 A		1.49
<b>Thermal Properties</b>			
Vicat Softening Point	ISO 306 A	°C	> 110
Coefficient of Thermal Expansion - Linear	ASTM D696	x 10 <sup>-5</sup> . K <sup>-1</sup>	7.7
Maximum Working Temperature		°C	80 - 85
Specific Heat	ASTM C351	cal/g °C	0.35
Thermal Conductivity Coefficient (K Value)		W m m <sup>-2</sup> °C	0.189
Heat Transfer Coefficient (U Value)		W m <sup>-2</sup> °C	
- 3 mm single pane			5.2
- 5 mm single pane			4.9
<b>Mechanical Properties</b>			
Tensile strength	ISO 527 (5 mm/min)	MPa	75
Elongation at Break	ISO 527 (5 mm/min)	%	4
Flexural Strength	ISO 178 (2 mm/min)	MPa	116
Flexural Modulus	ISO 178 (2 mm/min)	MPa	3210
Impact Strength – Charpy (unnotched)	ISO 179	kJ M <sup>-2</sup>	12
Poisson's Ratio			0.38
<b>Sound Insulation Properties</b>			
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
<b>Electrical Properties</b>			
Surface Resistivity	IEC 93	Ω.m-2	> 10 <sup>14</sup>
Electrical Strength	IEC 243	kV.mm-1	15
Arc Resistance	ASTM D495		No tracking
Dielectric Constant	ASTM D150		
- 60 cycles			4
- 103 cycles			3
- 106 cycles			3
Power Factor	ASTM D150		
- 60 cycles			0.06
- 103 cycles			0.04
- 106 cycles			0.02

Perspex® is a registered trademark of the Lucite International UK Limited (registered in England No 3830161) group of companies.

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