

# Acrylic

Acrylic, also known as **Perspex®**, **Lucite®** and **Plexiglas®**, is a transparent thermoplastic that is often chosen as a light, durable and cost-effective replacement for glass.

It is 17 times stronger than glass, weather resistant, easy to cut and shape, and shatter-resistant, making it safer than glass and suitable for a wider range of applications, from aquariums to retail signs.

It is also used as an economical alternative to polycarbonate.

Perspex® and Lucite® are registered trademarks of Lucite International.  
 Plexiglas® is a registered trademark of Evonik Industries.

Key Properties		Units	Test Method
<b>General</b>			
Density	1.20 (0.04)	g/cm <sup>3</sup> (lb/in <sup>3</sup> )	ISO 1183
Density relative to water (=1)	1.22 (0.05)	g/cm <sup>3</sup> (lb/in <sup>3</sup> )	ISO 1183
Water absorption (24 hrs)	0.03	%	ISO 62
<b>Thermal</b>			
Continuous Service Temperature	85 (185)	°C (°F)	-
Heat Distortion Temperature	110 (>230)	°C (°F)	ISO 306/A
Melting point	90 (194)	°C (°F)	ASTM D648
Linear Thermal Expansion	7	x10 <sup>-5</sup> / °C	ASTM D696
Melting point	160 (320)	°C (°F)	-
Flammability Rating	HB	-	UL 94
<b>Mechanical</b>			
Impact Strength, Notched Izod @ 23°C	0.21 (0.4)	J/cm (ft-lbs/in)	-
Flexural Strength	114	MPa	ISO 178
Flexural Modulus	3200	MPa	ISO 178
Tensile Strength at Break	70	MPa	ISO 527
Elongation at Break	4	%	ISO 527
Rockwell Hardness	93	M scale	ISO 2039-2
<b>Optical</b>			
Light Transmission	>92	%	ASTM D1003
Refractive Index	1.49	-	ISO 489/A

## Notes

Figures shown are for panel thickness 3mm

**DISCLAIMER:** The purpose of this data sheet is to enable a consistent comparison with other products to help users to make an informed choice. The information provided in this product data sheet is for comparison and reference purposes only and is based on generic information gathered from a number of sources. In some cases the data provided is an average value only and represents our best attempt to describe the material's properties under typical factory conditions. We make no representations or warranties as to the completeness or accuracy of any of the data contained in this data sheet and users should use them as a general decision-making guide only. Branded data sheets are available on request. The information contained in this data sheet is subject to copyright. This data sheet cannot be reproduced for commercial purposes, apart from assisting users with making a purchasing decision, without the express permission of Plastic Wholesale.