

PERSPEX™

Cast Perspex UVT (Ultra Violet Transmitting) 0UV0 sheet

PERSPEX®



PXTD 301
FIRST EDITION

Introduction

Perspex™ Cast acrylic sheet has been produced and developed for over 60 years and in many of the most enduring applications extreme UV resistance and clarity have been important features of the performance of Perspex™.

A new Perspex™ product, Perspex™ UVT cast (Product Code 0UV0) has been added to the range for use in applications requiring Ultraviolet transmission e.g. tanning beds, therapeutic appliances, whilst maintaining many of the renowned physical properties of Perspex™ cast sheet.

Perspex™ 0X02, an extruded sheet, has been available from Lucite International for many years. An extruded product that provides good definition during thermoforming but lacks the superior chemical resistance of Perspex™ UVT cast.

To maximize the UV resistance of Perspex™ UVT cast, Lucite International have developed a modified acrylic formulation and **Table I** shows details of the typical standard physical properties.

Figure I shows the UV transmission of sheet:

- a) prior to exposure
- b) after thermoforming and subsequent exposure for 100 hrs
- c) and after 200 hours exposure

Sheets were exposed to High Power (180 W) Cosmolux VHR 200 lamps.

Product Range

Perspex™ UVT cast is supplied in:

- A standard sheet size of 3050mm x 2030mm (cut to size on request)
- A range of sheet thicknesses (3, 4, 5 and 8mm)
- Other variants of Perspex™ including single sided satin finish are available on request

Benefits of Perspex™ UVT cast sheet are:

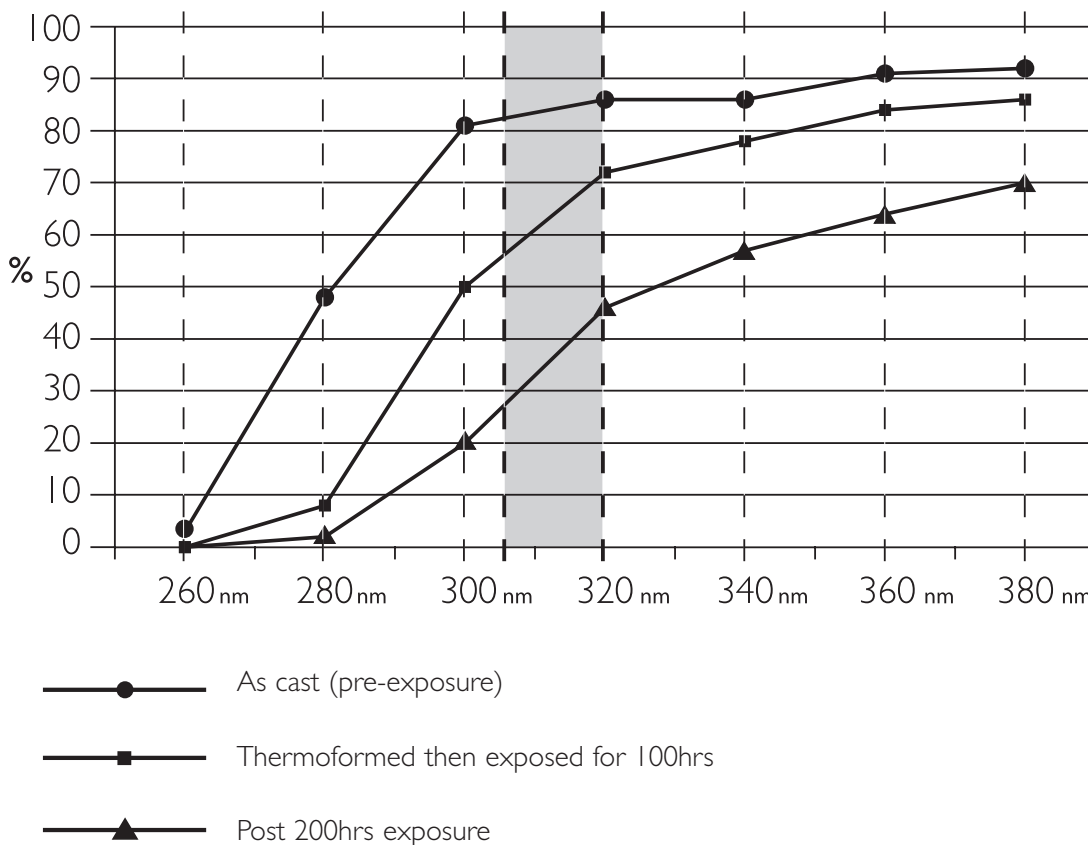
- High vicat softening point (improved resistance to heat generated in service)
- High flexural modulus (rigidity)
- Excellent resistance to the yellowing effects of UV irradiation - longer service life
- Increased resistance to chemical cleaners and essential oils compared to extruded acrylic sheet

Table I

Typical Physical properties of Perspex™ 0UV0	Physical Performance Property	Test Methods
Tensile Strength	70 MPa	ISO 527 (a)
Tensile Modulus	3 GPa	ISO 527 (a)
Flexural Strength	115 MPa	ISO 178 (b)
Flex Modulus	2.9 GPa	ISO 178 (b)
Charpy Impact	12 kJm ⁻²	ISO 179 (c)
Vicat Softening Point	100°C	ISO 306A
Density	1.19	ISO 1183
Co-efficient of linear thermal expansion	$7.7 \times 10^{-5} .K^{-1}$	ASTM D696
Transmission in UVA range from 315-380nm	87%	DIN 5036, part3

- (a) 5mm/min
- (b) 2mm/min
- (c) un-notched

Figure I UV transmission characteristics of Perspex™ cast 0UV0. Measured using 4mm sheet prior to and after exposure to Cosmolux VHR200, 180 Watt lamps.



PERSPEXTM

Enquiries should be addressed to your local PerspexTM Sales Offices:

Toute demande de renseignements doit être adressée au bureau de ventes PerspexTM le plus proche:

Bitte richten Sie eventuelle Fragen an eines der folgenden PerspexTM Verkaufsbüros:

Lucite International UK Ltd

PO Box 34
Darwen
Lancs BB3 1QB

UK Sales:

Tel: +44 (0) 1254 874000

Fax: +44 (0) 1254 873300

Technical queries only:

Tel: +44 (0) 1254 874427

Fax: +44 (0) 1254 874478

Lucite International France SAS

B.P. 40
39130 Clairvaux-les-lacs
France

Tel: +33 (0) 3 84 25 89 01 / 02

Fax: +33 (0) 3 84 25 89 04

Lucite International Trading LTD

Niederlassung Mitteleuropa
Birkenwaldstrasse 38
D-63179 Obertshausen
Germany

Tel: +49 (0) 6104 / 6681-00

Fax: +49 (0) 6104 / 6681-50

Lucite International Local Contact:



Distributed by
Mitchell Plastics
37 - 53 Crockford Street
Port Melbourne VIC 3207
Telephone (03) 9646 7877
Facsimile (03) 9646 7570
sales@mitchellplastics.com.au
www.mitchellgroup.com.au

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Registered Office: Queens Gate, 15-17 Queens Terrace, Southampton, SO14 3BP
United Kingdom.

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Siège Social: Queens Gate, 15-17 Queens Terrace, Southampton, SO14 3BP
United Kingdom.

Lucite International Ltd ist eingetragen in England unter Nr. 3830161
Eingetragener Firmensitz: Queens Gate, 15-17 Queens Terrace, Southampton, SO14 3BP
United Kingdom.

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www.perspex.co.uk

Email: info@perspex.co.uk

The logo features a stylized red and white graphic to the left of the text 'Lucite International' in a bold, sans-serif font. Below it, the tagline 'Going further' is written in a smaller, italicized font.
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Going further

PERSPEX[®]
A horizontal bar consisting of several colored squares: green, black, red, blue, yellow, and light blue.