

Description

Lexan Exell D WH7D2870 sheet is a transparent polycarbonate sheet with proprietary UV protection on both sides offering excellent weathering properties. With its excellent impact resistance it is an excellent candidate for a wide variety of building and construction applications. Lexan Exell D WH7D2870 sheet can be easily cold formed into gentle curves which makes it a good material choice for skylights, covered walkways, barrel vaults etc. Lexan Exell D WH7D2870 sheet is thermoformable and can be thermoformed into the desired geometry whilst retaining the UV resistant coating specially developed for weather resistant applications.

Typical Property Values ♦

Property	Test Method	Unit	Value
Physical			
Density	ISO 1183	g/cm ³	1.20
Water absorption, 50% RH / 23 °C	ISO 62	%	0.15
Water absorption, saturation /23°C	ISO 62	%	0.35
Mould shrinkage	SABIC-Method	%	0.6-0.8
Poison's ratio	ASTM-D638	-	0.38
Mechanical			
Tensile stress at yield 50 mm/min	ISO 527	MPa	60
Tensile stress at break 50 mm/min	ISO 527	MPa	70
Tensile strain at yield 50 mm/min	ISO 527	%	6
Tensile strain at break 50 mm/min	ISO 527	%	120
Tensile modulus 1 mm/min	ISO 527	MPa	2300
Flexural stress at yield 2 mm/min	ISO 178	MPa	90
Flexural modulus 2 mm/min	ISO 178	MPa	2300
Hardness H358/30 95	ISO 2039/1	MPa	95
Impact			
Charpy impact, notched	ISO 179/1C	kJ/m ²	35
Izod impact, unnotched 23°C	ISO 180/4U	kJ/m ²	NB
Izod impact, unnotched -30°C	ISO 180/4U	kJ/m ²	NB
Izod impact, notched 23°C	ISO 180/4A	kJ/m ²	65
Izod impact, notched -30°C	ISO 180/4A	kJ/m ²	10
Thermal			
Vicat Softening Temperature, rate B/120	ISO 306	°C	145
HDT/Ae, 1.8 MPa edgew. 120*1*04/sp=100	ISO 75	°C	127
Thermal conductivity	ISO 8302	W/m.°C	0.2
Coeff.of Lin.Therm.Exp.extr. 23-80°C	ISO 11359-2	1/°C	7.00 E-05
Ball pressure test 125 ±2°C	IEC 60695-10-2	-	Passes
Relative Thermal Index. Electri. prop.	UL746B	°C	130
Relative Thermal Index. Mech. prop. with impact	UL746B	°C	125
Relative Thermal Index. Mech.prop. w/o impact	UL746B	°C	125

Continue on next page

- ♦ These property values have been derived from Lexan*resin data for the material used to produce this sheet product. Variation within normal tolerances are possible for various colors. These typical values are not intended for specification purposes. If minimum certifiable properties are required please contact your local SABIC Innovative Plastics, Specialty Film & Sheet representative. All values are measured at least after 48 hours storage at 23°C/50% relative humidity. All properties are measured on injection molded samples. All samples are prepared according ISO 294.

* Trademarks of SABIC Innovative Plastics IP BV

Typical Property Values ♦ (continued)

Property	Test Method	Unit	Value
Electrical			
Volume Resistivity	IEC 60093	Ohm.cm	10 E15
Relative Permittivity 50/60Hz	IEC 60250	-	2.7
Relative Permittivity 1Mhz	IEC 60250	-	2.7
Dissipation Factor 50/60 Hz	IEC 60250	-	0.001
Dissipation Factor 1 Mhz	IEC 60250	-	0.01
Arc Resistance Tungsten	ASTM-D495	sec.	119
Optical			
Light transmission [¶]) 3 mm	ASTM-D1003	%	50

Optical properties

Lexan Exell D WH7D2870 sheet is excellent for buildings in hot climates or with south facing aspects, Lexan Exell D WH7D2870 sheet is available in opal white. Lexan Exell D WH7D2870 is essential opaque to all wave lengths below 385 nanometers.

Lexan Exell D WH7D2870 has a light transmission of 50% at the thickness range 2-5 mm as well as it reflects 25% of IR radiation responsible for heat built up.

Thickness (mm)	LT% [¶]
2	50
3	50
4	50
5	50
6	47
8	37

UV Protection

Lexan Exell D WH7D2870 sheet has proprietary UV protected surfaces, giving excellent durability to outdoor weathering. This superior UV resistance and toughness of Lexan Exell D WH7D2870 sheet is backed by a 10 years limited written warranty against yellowing, loss of light transmission and breakage.

Product Availability

Lexan Exell D WH7D2870 sheet is normally manufactured in the standard sizes listed below. Deliveries from stock or cut to size can be ordered via our customer service organisation.

Standard gauge in mm:

2 - 3 - 4 - 5 - 6 - 8

Standard sizes:

2050 x 3050 mm, 2050 x 6050 mm

Masking:

Top side: Coex. opal white PE/purple print, Bottom side: Coex. transparent PE

Standard colors:

opal white code WH7D2870

[¶] Light transmission value may vary by + or - 5%



* Trademark of SABIC Innovative Plastics IP BV

Americas:
SABIC Innovative Plastics
Specialty Film & Sheet
One Plastics Avenue
Pittsfield, MA 01201
USA
Tel. (1) (413) 448 5400
Fax. (1) (413) 448 7506
Toll free: 1-800 451 3147

Europe:
SABIC Innovative Plastics
Specialty Film & Sheet
Plasticslaan 1
NL - 4612 PX Bergen op Zoom
The Netherlands
Tel. (31) (164) 292911
Fax. (31) (164) 293272

Pacific:
SABIC Innovative Plastics
Specialty Film & Sheet
1266 Nanjin Road (W)
Plaza 66, 17th Floor
200040 Shanghai, China
Tel. (86) 21 62881088
Fax. (86) 21 62880818

THE MATERIALS, PRODUCTS AND SERVICES OF SABIC INNOVATIVE PLASTICS HOLDING BV, ITS SUBSIDIARIES AND AFFILIATES ("SELLER"), ARE SOLD SUBJECT TO SELLER'S STANDARD CONDITIONS OF SALE, WHICH CAN BE FOUND AT <http://www.sabic-ip.com> AND ARE AVAILABLE UPON REQUEST. ALTHOUGH ANY INFORMATION OR RECOMMENDATION CONTAINED HEREIN IS GIVEN IN GOOD FAITH, SELLER MAKES NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, (i) THAT THE RESULTS DESCRIBED HEREIN WILL BE OBTAINED UNDER END-USE CONDITIONS, OR (ii) AS TO THE EFFECTIVENESS OR SAFETY OF ANY DESIGN INCORPORATING SELLER'S PRODUCTS, SERVICES OR RECOMMENDATIONS. EXCEPT AS PROVIDED IN SELLER'S STANDARD CONDITIONS OF SALE, SELLER SHALL NOT BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF ITS PRODUCTS OR SERVICES DESCRIBED HEREIN. Each user is responsible for making its own determination as to the suitability of Seller's products, services or recommendations for the user's particular use through appropriate end-use testing and analysis. Nothing in any document or oral statement shall be deemed to alter or waive any provision of Seller's Standard Conditions of Sale or this Disclaimer, unless it is specifically agreed to in a writing signed by Seller. No statement by Seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right of Seller or as a recommendation for the use of such product, service or design in a manner that infringes any patent or other intellectual property right.

SABIC Innovative Plastics is a trademark of Sabic Holding Europe BV

* Trademark of SABIC Innovative Plastics IP BV