POLYVANTIS

PRODUCT DATASHEET

LEXAN™ EXELLDP SHEET

DESCRIPTION

LEXAN™ EXELLDP sheet is a transparent polycarbonate sheet with proprietary UV protection on both sides offering excellent weathering properties. With its excellent impact resistance, it is a good candidate for a wide variety of building and construction applications. LEXAN™ EXELLDP sheet can be easily cold formed into gentle curves, which makes it a good material choice for skylights, covered walkways, barrel vaults etc.

TYPICAL PROPERTY VALUES*

PROPERTY	TEST METHOD	UNITS	VALUE
PHYSICAL			
Density	ISO 1183	g/cm³	1.2
Water Absorption, (23°C/sat)	ISO 62	%	0.35
Moisture Absorption (23°C / 50% RH)	ISO 62	%	0.15
MECHANICAL			
Tensile Stress, yield, 50 mm/min	ISO 527	MPa	63
Tensile Strain, yield, 50 mm/min	ISO 527	%	6
Tensile Strain, break, 50 mm/min	ISO 527	%	120
Tensile Modulus, 1 mm/min	ISO 527	MPa	2350
Flexural Stress, yield, 2 mm/min	ISO 178	MPa	90
Flexural Modulus, 2 mm/min	ISO 178	MPa	2300
IMPACT			
Izod Impact, unnotched 80*10*3 +23°C	ISO 180/1U	kJ/m²	NB
Izod Impact, notched 80*10*3 +23°C	ISO 180/1A	kJ/m²	70
Charpy Impact, notched, 23°C	ISO 179/2C	kJ/m²	35
THERMAL			
Thermal Conductivity	ISO 8302	W/m-°C	0.2
CTE, 23°C to 80°C, flow	ISO 11359-2	1/°C	7.E-05
Ball Pressure Test, 125°C +/- 2°C	IEC 60695-10-2	-	PASSES
Vicat Softening Temp, Rate B/120	ISO 306	°C	145
Relative Temp Index, Elec	UL 746B	°C	130
Relative Temp Index, Mech w/impact	UL 746B	°C	130
Relative Temp Index, Mech w/o impact	UL 746B	°C	130
ELECTRICAL			
Volume Resistivity	IEC 60093	Ohm-cm	>1.E+15
Dielectric Strength, in oil, 3.2 mm	IEC 60243-1	kV/mm	17

- These property values have been derived from 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, Functional Forms 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 to ISO 294.

PROPERTY	TEST METHOD	UNITS	VALUE
Electrical[+]			
Dielectric Constant			
(3 mm sheet & 5 mm sheet @ 1.1 GHz)	ASTM D150	-	2.78
Dissipation Factor			
(3 mm sheet & 5 mm sheet @ 1.1 GHz)	ASTM D150	-	0.063

[+]These property values have been derived from Sheet product.

Light Transmission

Color/Gauge	Light Transmission (%)	SHGC*
Clear 112/2mm-4mm	Min.82%	0.82 for 2mm 0.81 for 3mm 0.80 for 4mm
Clear 112/4.5mm-8mm	Min.80%	0.82 for 5mm 0.78 for 8mm
Clear 112/8.5mm-12mm	Min.78%	0.78 for 9.5mm
Bronze 515081/2mm-6mm	Min.47% to Max.53%	0.62 for 3mm & 6mm 0.61 for 4mm & 5mm

*These are typical values

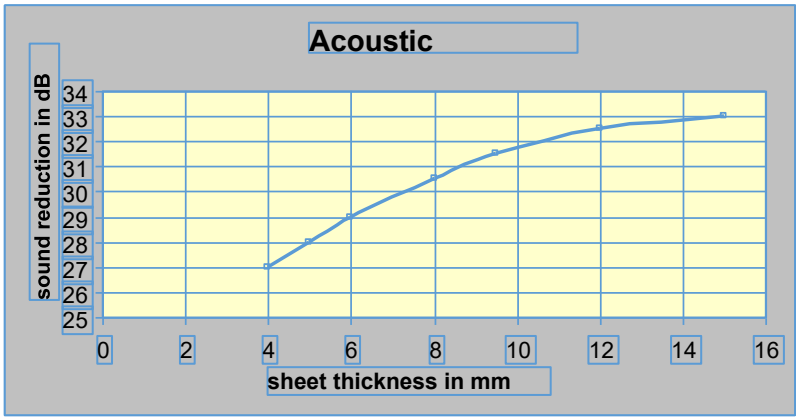
LEXAN™ EXELLDP is essential opaque to all wavelengths below 385 nanometers. This useful shielding property can help prevent discoloration of sensitive materials placed under or behind LEXAN™ EXELLDP sheet.

UV Protection

LEXAN™ EXELLDP sheet has proprietary UV protected surfaces, giving excellent durability to outdoor weathering. This superior UV resistance and toughness of LEXAN™ EXELLDP sheet is backed by 10 years limited written warranty against yellowing, loss of light transmission and breakage. See Warranty for exact details.

Sound Reduction

Below graph shows the acoustic properties for different thicknesses of the sheet:



Fire Performance

LEXAN™ EXELLDP sheet has good fire behaviour characteristics. LEXAN sheet does not contribute significantly to the spread of fire or to the generation of toxic gases. For details, please contact your local sales office.

Product Availability*

LEXAN™ EXELLDP sheet is normally manufactured in the standard sizes listed below. Deliveries from stock can be ordered via our customer service organization.

Product Code	: LEXAN™ EXELLDP
Gauges in mm	: 2 - 3 - 4 - 5 - 6 - 8 - 10 - 12
Standard sizes*	: 1220 x 2440 mm and 2050 x 3050 mm
Masking	: LEXANT™ printed masking on top, clear masking on bottom
Colors	: Clear code 112, Bronze code 515081

LEXAN™ EXELLDP sheet can be supplied by prior arrangements in non - standard widths, lengths, and color. Such arrangements may affect prices, terms and/or other conditions of sales and are subject to minimum order quantities.
*For more specific details, please refer Baroda Product Guide.

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