POLYVANTIS

PRODUCT DATASHEET

LEXAN™ EXELL™ D OB SHEET

DESCRIPTION

LEXAN EXELL™ D OB sheet is an optical bright opal white polycarbonate sheet with unique light diffusing properties while retaining a high light transmission. This both sides UV protected extruded polycarbonate sheet offers significant advantages over many other materials in terms of impact resistance, weathering properties, design freedom and aesthetics. LEXAN EXELL D OB sheet is available in an optical bright opal white color with diffusion properties for uniform illumination and has a polished/polished surface. LEXAN EXELL D OB sheet is an excellent candidate for a variety of industry applications like:

- LED Back lighted signs
- Channel letters
- Lamp diffusers
- Projection screens
- Roller shutters with advertising features

TYPICAL PROPERTY VALUES*

PROPERTY	TEST METHOD	UNITS	VALUE
PHYSICAL			
Density	ISO 1183	g/cm³	1.20
Water absorption, 50% RH, 23 °C	ISO 62	%	0.15
Water absorption, saturation, 23°C	ISO 62	%	0.35
MECHANICAL			
Yield stress 50 mm/min	ISO 527	MPa	>60
Yield strain 50 mm/min	ISO 527	%	6
Nominal strain at break 50 mm/min	ISO 527	%	>100
Tensile modulus 1 mm/min	ISO 527	MPa	2300
Flexural strength 2 mm/min	ISO 178	MPa	90
Flexural modulus 2 mm/min	ISO 178	MPa	2300
IMPACT			
Charpy impact, notched 23°C, 3.0 mm	ISO 179/1eA	kJ/m²	75
Izod impact, unnotched 23°C, 3.0 mm	ISO 180/1U	kJ/m²	NB
Izod impact, notched 23°C, 3.0 mm	ISO 180/1A	kJ/m²	70
THERMAL			
Vicat softening temperature, B/120	ISO 306	°C	145
Temperature of deflection under load (type A), 1.8 MPa, flat	ISO 75-2	°C	127
Thermal conductivity	ISO 8302	W/m.°C	0.2
Coefficient of linear thermal expansion, 23-55°C	ISO 11359-2	1/°C	$7x10^{-5}$
Ball pressure test 125 ±2°C	IEC 60695-10-2	-	Pass
ELECTRICAL			
Volume resistivity	IEC 60093	Ohm.cm	$>10^{15}$
Dielectric strength, in oil, 3.2 mm	IEC 60243-1	kV/mm	18

PROPERTY	TEST METHOD	UNITS	VALUE
FIRE RATING			
Electrical			
Glow Wire Flammability Index	IEC-60695-2-12	°C	Pass 850°C (3mm)

*These are typical properties and are not intended for specification purposes. If minimum certifiable properties are required, please contact your local POLYVANTIS representative or the POLYVANTIS Quality Services Department.
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OPTICAL PROPERTIES

GAUGE / COLOR	LIGHT TRANSMISSION	DIFFUSION FACTOR
2 MM / WH7D136O	55 ± 4%	0.80
3 MM / WH7D136O	47 ± 4%	0.86
4 MM / WH7D136O	41 ± 4%	0.86
5 MM / WH7D136O	36 ± 4%	0.87
6 MM / WH7D136O	31 ± 4%	0.87
8 MM / WH7D136O	24 ± 4%	0.87
9.5 MM / WH7D136O	21 ± 4%	0.87

UV PROTECTION

LEXAN EXELL™ D OB sheet has proprietary UV protected surfaces, giving excellent durability to outdoor weathering. The superior UV protected surface treatment is not affected by forming and fabricating and LEXAN EXELL D OB sheets are therefore backed by a 10-year limited warranty# against yellowing, loss of light transmission and breakage.

PRODUCT AVAILABILITY

Product code: LEXAN™EXELL™ D OB Sheet
Gauges: 2-9.5 mm
Standard size: 2050 x 3050 mm
Color: Opal White WH7D136O
Masking: Top side: Coex. opal white PE/purple print
Bottom side: Coex transparent PE

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