POLYVANTIS

PRODUCT DATASHEET

LEXAN™ EXELL™ D SCIR SHEET

DESCRIPTION

LEXAN EXELL™ D SCIR (solar control IR) solid sheet is a transparent polycarbonate sheet with proprietary UV protection on both sides offering excellent weathering properties and IR absorption with a light to solar gain ratio of 1.18 in the color GN8A081T, resulting in outstanding heat management properties. With its excellent impact resistance, it is ideally suited to a wide variety of building and construction applications. LEXAN EXELL D SCIR sheet can be easily cold formed into gentle curves which make it ideal for skylights, covered walkways, barrel vaults etc. LEXAN EXELL D SCIR sheets are thermo-formable and can be thermoformed into the desired geometry whilst retaining the UV resistant properties specially developed for weather resistant applications.

TYPICAL PROPERTY VALUES*

PROPERTY	TEST METHOD	UNITS	VALUE
PHYSICAL			
Density	ISO 1183	g/cm³	1.22
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

*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.

PROPERTY	TEST METHOD	UNITS	VALUE
FIRE RATING			
Building & Construction			
Europe	EN 13501-1	-	B, s2, d0 (2-6mm)
Electrical			
Limited Oxygen Index	ISO 4589-2		34

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UV PROTECTION

LEXAN™ EXELL™ D SCIR sheet has proprietary UV protected surfaces, giving excellent durability to outdoor weathering. LEXAN EXELLD SCIR sheet is essential opaque to all wave lengths below 385 nanometers. This useful shielding property can prevent discoloration of sensitive materials placed under or behind LEXAN EXELL D SCIR sheet.

LIGHT TRANSMISSION

Transparent LEXAN EXELL D SCIR sheets have an excellent light transmission and solar transmission.

Color:	Solar Control IR - GN8A081T
LT 3mm:	74 % (+/- 4%)
Solar transmission:	61% (max.68%)

PRODUCT AVAILABILITY

Product code:	LEXAN™ EXELL™ D SCIR Sheet
Gauges:	3-6 & 8 mm
Standard size:	2050 x 3050 mm
Color:	GN8A081T
Masking:	Top side: Co-ex. opal white PE/purple print Bottom side: Co-ex transparent PE

Other gauges possible upon request with a max. of 12mm

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