

LEXAN EXELL™ D SOLAR CONTROL IR SOLID SHEET

PRODUCT DATASHEET

DESCRIPTION

LEXAN EXELL™ D SC 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 1.24 for the color GN9A047T and 1.18 for 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 SC IR sheet can be easily cold formed into gentle curves which make it ideal for skylights, covered walkways, barrel vaults etc. LEXAN EXELL D SC IR sheets are thermoformable 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/cm ³	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/m ²	75
Izod impact, unnotched 23°C, 3.0 mm	ISO 180/1U	kJ/m ²	NB
Izod impact, notched 23°C, 3.0 mm	ISO 180/1A	kJ/m ²	70
THERMAL			
Vicat softening temperature, rate 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	7x 10 ⁻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 RATINGS			
Building & Construction			
Europe	EN13501-1	-	b,s2,d0 (2-6mm)
Electrical			
Limited Oxygen Index	ISO 4589-2	-	34

- ◆ 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. If minimum certifiable properties are required please contact your local SABIC, 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.

PRODUCT AVAILABILITY

LEXAN EXELL™ D SC IR sheet is normally manufactured in the standard sizes listed below. Deliveries from stock or cut to size can be ordered via our customer service organization.

Standard gauge:

3.00 mm , 6.00mm and 8.00mm (other gauges possible upon request with a max. of 12.00mm)

Standard sizes

2050 x 3050 mm
2050 x 6050 mm

Masking:

Top side: Co-ex opal white PE/ purple print
Bottom side: Co-ex transparent PE clear

LIGHT TRANSMISSION

Transparent LEXAN EXELL D SC IR sheets have an excellent light transmission and solar-transmission.

Color : Natural GN8A081T at 3.00mm

LT value : 74 % (+/- 4%) Solar transmission 61% (max.68%)*

Color : Natural GN9A047T at 3.00mm

LT value : 63 % (+/-4%) Solar transmission 50% (max. 55%)*

UV PROTECTION

LEXAN EXELL™ D SC IR sheet has proprietary UV protected surfaces, giving excellent durability to outdoor weathering. LEXAN EXELL D SC IR 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 SC IR sheet.

*) see tolerances.

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