

PRODUCT DATASHEET

LEXAN™ SG305 & SG305SLG SHEET

DESCRIPTION

LEXAN™ sheet sign grades SG305 and SG305SLG offer significant advantages over many other sign materials in terms of design freedom, fire performance and weathering properties. It also combines high impact resistance with optical clarity that provides excellent protection against vandalism, ensuring a positive corporate image. LEXAN SG sheet for Signs are available in clear and opal white sheet with a matte finish on the outside surface for reduced reflection and glare. LEXAN SG305 and SG305SLG sheets have proprietary UV protected surfaces giving excellent durability to outdoor weathering.

TYPICAL PROPERTY VALUES*

PROPERTY	TEST METHOD	UNITS	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
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, 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
FIRE RATINGS			
Building & Construction			
Europe	EN 13501-1	-	B,s1,d0 (2-6mm)

*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. Reported values are based on 0.250 mm (0.010") thickness film unless otherwise noted.

™Trademark of POLYVANTIS.

LIGHT TRANSMISSION

Typical Optical Properties of LEXAN™ SG305 and SG305SLG sheet.

PROPERTY- SHEET	TEST METHOD	SG305	SG305SLG
Light transmission (%)	ASTM D1003	88.1	87.4
Haze (%)	ASTM D1003	5.6	44.8
20 degrees Gloss	ASTM D253		
	Polished side	100.9	98.0
	Matt side	69.2	31.6

Gloss measurement was done with sample put on a black cloth.
Gloss reading was done after 5 seconds.

Light transmission values may vary by +/- 5%

LEXAN SG sheet is essentially opaque to all wave lengths below 385 nanometers. This useful shielding property prevent discoloration of posters placed behind the LEXAN sheet, second surface graphics and lacquers applied to the reverse side.

IMPACT STRENGTH

Using LEXAN SG305 and SG305SLG, signs can be installed in areas of high vandalism. Even at subzero temperatures or high summer temperatures LEXAN sheet maintains its high impact resistance, without shattering or breaking.

FIRE PERFORMANCE

LEXAN SG sheet has good fire behavior 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.

UV PROTECTION

With a proprietary UV resistant surface treatment on both sides LEXAN SG sheets with stand prolonged exposure to harsh sunlight. The superior UV protected surface treatment is not affected by forming and fabricating, and LEXAN SG sheets are therefore backed by a 10-year warranty against yellowing, loss of light transmission and breakage.

CHEMICAL RESISTANCE

Taking into account the complexity of chemical compatibility, all chemicals which come into contact with LEXAN sheet should be tested. For sign products the most common materials are adhesives, paints, inks, vinyl films and cleaning. Consult our Technical Service Centre in the case of doubt about the chemical compatibility of a product which is not mentioned in one of the tables.

POLYVANTIS

www.polyvantis.com/lexan



SAFETY

The processing guidance given in this documentation is given in good faith and the trust that in all cases you wear the correct Personal Protective Equipment (PPE), e.g. helmet, proper gloves, safety goggles etc. to safely fabricate, e.g. (but not limited to) sawing, cutting, forming our sheets and films. In all cases you should follow local and national regulations around the wear of PPE's prescribed or mandatory to perform these tasks in a safely manor.

PRODUCT AVAILABILITY

Product code:	LEXAN™ SG305 & SG305SLG Sheet
Gauge range:	2-6mm
Standard size:	2050 x 3050 mm
Colors:	Clear 112, other colors are upon request

POLYVANTIS

www.polyvantis.com/lexan

