POLYVANTIS

PRODUCT DATASHEET

LEXAN™ 9330XL SHEET

DESCRIPTION

LEXAN™ 9330XL Sheet is based on siloxane copolymer resin that offers extreme low temperature (-60°C) ductility in combination with excellent processability. LEXAN™ 9330XL is an excellent candidate for a broad range of applications where high ductility is required at low temperatures such as telecom infrastructure components such as radomes and in other high demanding outdoor applications.

TYPICAL PROPERTY VALUES*

PROPERTY	TEST METHOD	UNITS	VALUE
PHYSICAL			
Density	ISO 1183	g/cm³	1.19
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	>55
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	2100
Flexural strength 2 mm/min	ISO 178	MPa	85
Flexural modulus 2 mm/min	ISO 178	MPa	2200
IMPACT			
Charpy impact, notched 23°C, 3.0 mm	ISO 179/1eA	kJ/m²	75
Charpy impact, unnotched 23°C, 3.0 mm	ISO 179/1eU	kJ/m²	NB
Izod impact, notched 23°C, 3.0 mm	ISO 180/1A	kJ/m²	70
Izod impact, unnotched 23°C, 3.0 mm	ISO 180/1U	kJ/m²	NB
Charpy impact, notched -30°C, 3.0 mm	ISO 179/1eA	kJ/m²	60
Charpy impact, unnotched -30°C, 3.0 mm	ISO 179/1eU	kJ/m²	NB
Izod impact, notched- 30°C, 3.0 mm	ISO 180/1A	kJ/m²	55
Izod impact, unnotched -30°C, 3.0 mm	ISO 180/1U	kJ/m²	NB
THERMAL			
Vicat softening temperature, B/120	ISO 306	°C	142
Temperature of deflection under load (type A), 1.8 MPa, edge	ISO 75/Ae	°C	124
Temperature of deflection under load (type A), 0.45 MPa, edge	ISO 75/Be	°C	135
Thermal conductivity	ISO 8302	W/m.°C	0.2
Coefficient of linear thermal expansion, 23-80°C flow	ISO 11359-2	1/°C	7.2×10^{-5}
Coefficient of linear thermal expansion, 23-80°C, x-flow	ISO 11359-2	1/°C	7.7×10^{-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			
Flame Characteristics			
Limited Oxygen Index	ISO 4589-2	%	35
Glow Wire Ignitability Temperature, 1.0-3.0mm	IEC 60695-2-13	°C	825
Glow Wire Flammability Index, 1.0-3.0mm	IEC 60695-2-12	°C	960
UV-light, water exposure/immersion	UL 746C	-	f1
UL Recognized, ≥1.5 mm	UL94	-	V-0
UL Recognized ≥3 mm	UL94	-	5VA
UL Recognized ≥2.5 mm	UL94	-	5VB

*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.

PROCESSING

LEXAN™ 9330XL sheet is ideally suited to thermoforming. It offers high, deep draw ratios, equal wall thickness distribution and it can be formed into complex shapes using standard thermoforming equipment. Sandwich type heating systems give the best results. LEXAN 9330XL sheet has a forming temperature range of 185 - 205°C. When forming, a draft angle of at least 3° should be allowed, and post mold shrinkage of 0.3 – 0.8% taken into account, depending on mold temperature.

PRE-DRYING

It is important to ensure that Lexan 9330XL sheets are free of moisture prior to thermoforming. A hot air circulating oven set at 120°C is recommended. Pre-drying of 2 hours/mm thickness.

ASSEMBLING

Parts made from LEXAN 9330XL sheet can be assembled with plastics, metals, rubber and other materials using many types of adhesive bonding, welding and mechanical fastening techniques. Since some of these materials can cause environmental stress cracking, please consult an POLYVANTIS representative for advice on specific applications.

PAINTING

For either functional or decorative reasons it may be necessary to apply finish to LEXAN 9330XL sheets or vacuum formed parts. The product is ideally suited for use with a wide variety of modern decoration techniques. A list of approved paint systems and suppliers is available upon request.

CHEMICAL RESISTANCE

LEXAN 9330XL sheet has sufficient resistance to most mineral oils, greases, aliphatic hydrocarbons, and acids under low or moderate stress levels. In applications where the LEXAN 9330XL sheet will be in contact with aggressive chemicals, specific (application related) testing is always advised.

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™ 9330XL Sheet
Standard width:	1300mm
Gauges:	1-3mm
Textures:	Suede / Smooth
Colors:	7T8A3287 - Light grey

Other colors/sizes are available by special request.

POLYVANTIS

Polycarbonate products are sold globally under the trademark LEXAN™ Film & Sheet, owned by SABIC or its subsidiaries or affiliates.

www.polyvantis.com

LEXAN™ POLYCARBONATE FILM & SHEET | Tough, Virtually Unbreakable

LEXAN is a trademark of SABIC