POLYVANTIS

PRODUCT DATASHEET

LEXAN™ MARGARD™ SOUNDGLAZE SC SHEET

DESCRIPTION

For demanding applications, such as in an urban area where anti-graffiti properties are needed or in a railway station, rail track or petrol station area where higher levels of cleaning and chemical resistance are needed, then LEXAN™ MARGARD™ SOUNDGLAZE SC is the ideal choice.
LEXAN™ MARGARD™ SOUNDGLAZE SC combines the impact strength with the abrasion and UV resistant properties provided by the proprietary hard coating applied to both sides of the sheet.
Due to the hard coating, LEXAN MARGARD SOUNDGLAZE SC is only recommended for flat sound screen designs, but line bending is a possible option to consider. The hard coating provides significantly improved abrasion resistance and chemical resistance to oils, paints and other fluids compared with uncoated polycarbonate. The unique coating provides a surface that can be easily cleaned, even including the removal of spray-painted graffiti. LEXAN MARGARD SOUNDGLAZE SC is backed by a 10-year limited warranty* against breakage and a 5-year limited warranty against yellowing and loss of light transmission.

TYPICAL PROPERTY VALUES*

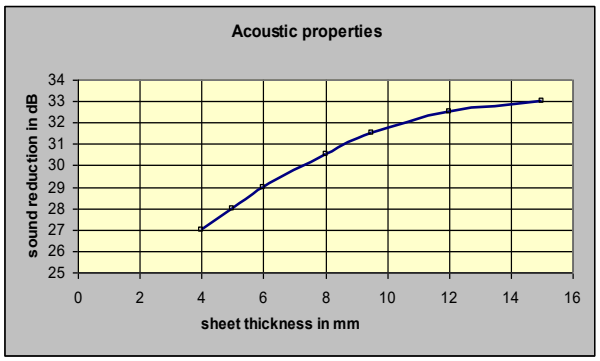
PROPERTY	TEST METHOD	UNITS	VALUE
PHYSICAL			
Density	ISO 1183	g/cm³	1.20
Water absorption, 50% RH, 23 °C	ISO 62	%	0.15
Water absorption, saturation, 23°C	ISO 62	%	0.35
MECHANICAL			
Yield stress 50 mm/min	ISO 527	MPa	>60
Yield strain 50 mm/min	ISO 527	%	6
Nominal strain at break 50 mm/min	ISO 527	%	>100
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
Taber haze - 100 cycles, 500-gram, CS-10F	ASTM D1044	%	1 - 3
Taber haze - 500 cycles, 500-gram, CS-10F	ASTM D1044	%	3-8
THERMAL			
Vicat softening temperature, B/120	ISO 306	°C	145
Temperature of deflection under load (type A), 1.8 MPa, flat	ISO 75/ Be	°C	138
Thermal conductivity	ASTM C 177	W/m.°C	0.2
Coefficient of linear thermal expansion, 23-55°C	ASTM D 696	1/°C	$7x10^{-5}$
Ball pressure test 125 ±2°C	UL 746B	°C	100
ELECTRICAL			
Volume resistivity	IEC 60093	Ohm.cm	$>10^{15}$
Dielectric strength, in oil, 3.2 mm	IEC 60243-1	kV/mm	18

PROPERTY- SHEET	TEST METHOD	UNITS	VALUE
OPTICAL – 112 (Clear)			
Light transmission 4 mm	ASTM D 1003	%	92
Light transmission 5 mm	ASTM D 1003	%	91
Light transmission 6 mm	ASTM D 1003	%	90
Light transmission 8 mm	ASTM D 1003	%	88
Light transmission 9.5 mm	ASTM D 1003	%	87
Light transmission 12 mm	ASTM D 1003	%	85
Light transmission 15 mm	ASTM D 1003	%	82

*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.

SOUND REDUCTION

Below graph shows the acoustic properties for different thicknesses of the sheet:



SOUND INSUCLATION (noise reduction dB)

Below graph shows the acoustic properties for different thicknesses of the sheet:

GAUGE (mm)	ISO 717-1 (R_W)	EN 1793-3 (DL_R)
8	32	28
9.5	33	29
12	34	30
15	35	32

FIRE PERFORMANCE

LEXAN MARGARD SOUNDGLAZE SC sheet has very good fire behavior as polycarbonate has a limiting oxygen index of 25 and so does not contribute significantly to the initiation and spread of fire, nor does it generate toxic gases.

IMPACT STRENGTH

Virtually unbreakable, LEXAN™ MARGARD™ SOUNDGLAZE™ SC sheet has up to 250 times the impact strength of glass.

CHEMICAL RESISTANCE

The hard coating on LEXAN MARGARD SOUNDGLAZE SC is a highly effective chemical barrier which significantly improves its chemical resistance to a range of chemical agents that under normal circumstances would be detrimental to an uncoated LEXAN polycarbonate sheet. The comparative chemical properties between LEXAN MARGARD SOUNDGLAZE and SOUNDGLAZE SC sheet are shown in the table.

Chemicals	EXELL™ D	SOUNDGLAZE™ SC
Toluene	W/S	V
Acetone	S	V
Methylethylketone	S	V
Dichloromethane	W/S	V
Sulphuric acid (95-97%)	V	V
Hydrochloric acid (32%)	V	V
Ammonia (25%)	V	V
Thinner (Sikkens 1-2-3)	W/S	V
Super Gasoline (Esso)	W/S	V
Diesel Fuel (Esso)	V	V
Fuel C	V	V

W = Surface whitening
S= Surface dissolution
V = no reaction

In case of doubt about any aspect of the chemical compatibility of the sheet range, always consult your nearest POLYVANTIS Sales Office for further information and conduct compatibility testing.

CLEANING

For cleaning instructions consult guidelines. Do not use abrasive or highly alkaline cleaners, never scrape the sheet with squeegees, razor blades or other sharp instruments. Do not clean LEXAN MARGARD sheet products in hot sun or at elevated temperatures. For removal of paints, marking pen, inks, lipstick etc. use Butyl Cellusolve. To remove labels, stickers etc. the use of kerosene, naphta, or white spirits is generally effective. Afterwards, a warm final wash should be made, using a mild soap solution, and ending with a thorough rinsing with cold water.

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™ MARGARD™ SOUNDGLAZE™ SC**
Standard gauges:	4-15 mm
Standard size:	2000 x 3000mm
Color:	Clear 112

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