

LEXAN® XL-1 SHEET

UV RESISTANCE

LEXAN XL-1 sheet was compared to acrylic in Florida weathering tests. After three years, LEXAN XL-1 sheet showed only minimal changes in light transmission and clarity.

IMPACT RESISTANCE

Virtually unbreakable, LEXAN XL-1 sheet has 250 times the impact strength of glass and 15 times that of acrylic.

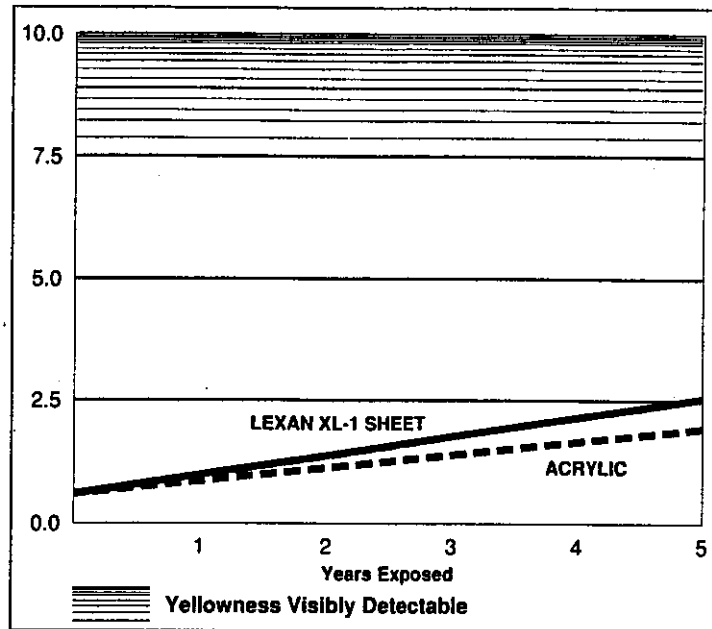
WEIGHT

Only 15% the weight of double-pane glass, LEXAN XL-1 sheet requires less structural support than either glass or acrylic. Its light weight also results in easier handling and installation, as well as transportation cost savings.

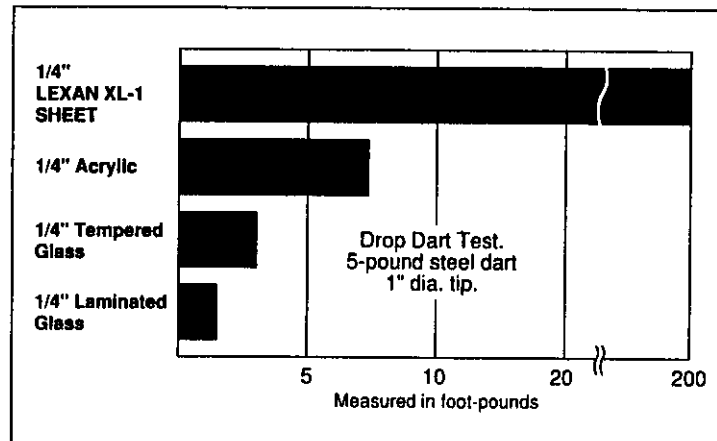
**For more information
call: (800) 451-3147.**

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YELLOWNESS INDEX, %



IMPACT RESISTANCE



WEIGHT (lbs./ft.²)

Thickness	LEXAN XL-1 Sheet	Glass
.118	.74	1.60
.177	1.11	2.40
.236	1.47	3.20
.375"	2.34	4.80
.500"	3.12	6.40



GE Plastics
Structured Products

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LEXAN® XL-1 SHEET

DESCRIPTION

LEXAN® Extended Life XL-1 sheet combines the impact strength of LEXAN polycarbonate sheet with a proprietary UV-resistant surface treatment on one side that protects it from weathering. LEXAN XL-1 sheet is the only polycarbonate glazing material backed by a five-year limited warranty against yellowing, loss of light transmission and breakage.*

Providing long-lasting clarity over a wide range of weather conditions and environments, LEXAN XL-1 sheet improves service life and reduces life-cycle material costs. Cold formable and thermoformable, it is ideally suited for all types of vertical glazing and overhead applications such as skylights, covered walkways and barrel vaults.

ENERGY EFFICIENCY

LEXAN XL-1 sheet provides up to 25% better thermal insulation than single-pane glass. Double glazing increases the advantage.

TYPICAL PROPERTY VALUES

Property	Test Method	Units	Value
PHYSICAL			
Specific Gravity	ASTM D792	—	1.20
Sound Transmission, STC Rating (36 x 84")	ASTM E9070	—	25
@ 0.118"			29
@ 0.177"			31
@ 0.236"			34
@ 0.375"			34
@ 0.500"			89
Light Transmission (Average)	ASTM D1003	%	M70, R118
Rockwell Hardness	ASTM D785	—	Passes
Chemical Resistance	ANSI Z26.1		
MECHANICAL			
Tensile Strength	ASTM D638	psi	
Ultimate			9,500
Tensile Modulus	ASTM D638	psi	345,000
Flexural Strength	ASTM D790	psi	13,500
Flexural Modulus	ASTM D790	psi	340,000
Flexural Endurance	ASTM D671	psi	
@ 1,800 Cycles/Min, 73°F, 50% RH			1,000
Compressive Strength	ASTM D695	psi	12,500
Elongation	ASTM D638	%	110
Izod Impact Strength, up to 125 mils	ASTM D256A	ft-lbs/in	
Notched			16
Drop Dart Impact Strength, 1" dia. dart	GE Test**	ft-lbs	
@ 73°F			> 200
@ 0°F			> 200
THERMAL			
Coefficient of Thermal Expansion	ASTM D696	in/in/°F	3.75 x 10 ⁻³
Thermal Shrinkage	GE Test	%	1
Heat Deflection Temperature	ASTM D648	°F	
@ 264 psi			275
@ 66 psi			280
Shading Coefficient	ASHRAE	—	
Clear			1.02
Gray/Bronze			.79
FLAMMABILITY			
Horizontal Burn (Flame Spread)	ASTM D635		
AEB			< 1
Ignition Temperature	ASTM D1929	in °F	
Flash			873
Self			1,076

* Request details of limited warranty and maintenance instructions.

** Measured by dropping a 5-pound dart (1" dia. tip) from a height of 40 feet.

* Registered Trademark of General Electric Company.

U-VALUE COMPARISON

WINTER HEAT LOSS (Btu/hr./sq. ft./°F)			
Thickness	LEXAN XL-1 Sheet	Glass	LEXAN Sheet % Advantage Over Glass
.118	1.05	1.16	10
.177	1.01	1.15	12
.236	.96	1.14	16
.375"	.88	1.11	21
.500"	.82	1.09	25
Double Glazed*	.43	.49	12

* Two 1/4" lites with 1/2" air space.

SUMMER HEAT GAIN (Btu/hr./sq. ft./°F)			
Thickness	LEXAN XL-1 Sheet	Glass	LEXAN Sheet % Advantage Over Glass
.118	.97	1.04	7
.177	.93	1.04	11
.236	.90	1.04	14
.375"	.83	1.03	19
.500"	.77	1.03	25
Double Glazed*	.43	.56	20

* Two 1/4" lites with 1/2" air space.

(Continued on Reverse)