

Filing Category: PLASTICS

LEXAN® POLYCARBONATE PLASTIC SHEET PRODUCTS

**GE PLASTICS
ONE PLASTICS AVENUE
PITTSFIELD, MASSACHUSETTS 01201**

1.0 SUBJECT

Lexan® Polycarbonate Plastic Sheet Products.

2.0 DESCRIPTION

2.1 General:

Lexan polycarbonate sheet products are plastic extruded from polycarbonate resins and are available in smooth, matte and textured surface finishes in a full range of transparent, translucent and opaque colors. Sheet products are available in monolithic, laminated (Lexgard® laminates), corrugated (Lexan sheet), and multi-walled (Lexan Thermoclear sheet) configurations.

The sheet products are thermoplastic materials. Except for Margard MR15 and MR10 monolithic products, and Lexgard laminated products, all sheet products may be formed into shapes without changing physical or chemical properties. The sheet products are available in neat and/or ultraviolet stabilized formulations.

Sheet surfaces are covered with either paper or polyethylene masking for protection during shipping and handling.

The sheet products comply with Chapter 26 of the 1997 *Uniform Building Code*™ (UBC) as light-transmitting plastics, and with the weathering requirements in Section 5.2 of the ICBO ES Acceptance Criteria for Plastic Skylights (AC16), dated April 1997.

2.2 Monolithic Sheet Products:

The Lexan Monolithic Sheet is a Class CC1 approved plastic and is manufactured in sizes up to a maximum width of 96 inches (2438 mm) and a maximum length of 240 inches (6096 mm). Sheets with a minimum thickness of 0.080 inch (2.03 mm) are permitted to be used as safety glazing in compliance with Section 2406 of the UBC. See Table 1 for additional details.

2.3 Corrugated Sheet Products:

The Lexan Corrugated Sheet is a Class CC2 approved plastic extruded in a nominal 0.030-inch (0.76 mm) thickness, and is protected with an integral ultraviolet-resistant surface. See Figure 1.

The Lexan Mega-Corrugated Sheet is a Class CC1 approved plastic and Class 1 interior finish material

extruded in a nominal 0.082-inch (2.1 mm) thickness, and is protected with an integral ultraviolet-resistant surface. See Figure 1.

2.4 Lexgard Laminated Sheet Products:

The Lexgard Laminated Sheet is a Class CC1 approved plastic and is a composite of Lexan polycarbonate sheet products, laminated together, except for the Lexgard Laminate MP-750 product, which is a Class CC2 approved plastic and contains an acrylic sheet laminated with polycarbonate sheets. See Table 2 for dimensions and additional details.

2.5 Multi-walled Sheet Products:

The Lexan Thermoclear Sheet, also known as LTC, LTUV and LTS, is an extruded multi-walled sheet, and is provided with an organic coating on the outer face. The sheets are manufactured in sizes up to a maximum width of 96 inches (2438 mm) and a maximum length of 600 inches (15.2 m). See Table 3 for plastic classifications, flame-spread index, smoke-developed index, and additional details.

2.6 Identification:

The sheet products bear a label specifying the type of sheet, the GE Plastics name and address, the plastic classification (CC1 or CC2) and the evaluation report number (ICBO ES ER-3286). The identification label on safety glazing materials also bears the words "Lexan Sheet Safety Glazing."

3.0 EVIDENCE SUBMITTED

Reports of tests in accordance with UBC Standards 8-1, 24-2, 26-6, 26-7, and applicable portions of the ICBO ES Acceptance Criteria for Plastic Skylights (AC16), dated April 1997; descriptive information and product brochures; and a quality control manual.

4.0 FINDINGS

That the Lexan polycarbonate sheet products described in this report comply with the 1997 *Uniform Building Code*™ (UBC) and the 1997 *Uniform Sign Code*™ (USC), subject to the following conditions:

- 4.1 The sheet products are manufactured and identified in accordance with this report.**
- 4.2 The sheet products are installed in accordance with the UBC, the USC and the manufacturer's instructions.**
- 4.3 End use of the sheet products requires justification of compliance with appropriate code requirements, including structural and durability considerations.**

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- 4.4 Monolithic sheet products used as glazing, in locations subject to human impact as set forth in Chapter 24 of the UBC, have a minimum 0.080-inch (2.03 mm) thickness.
- 4.5 The sheet products are not used in glazed openings required by Item 1 of Section 904.2.2 of the UBC.

- 4.6 The sheet products are permitted in skylight, exterior wall and roof panel applications, provided the skylight, exterior wall or roof panel products utilizing the sheets are specifically recognized in an ICBO ES evaluation report.

This report is subject to re-examination in one year.

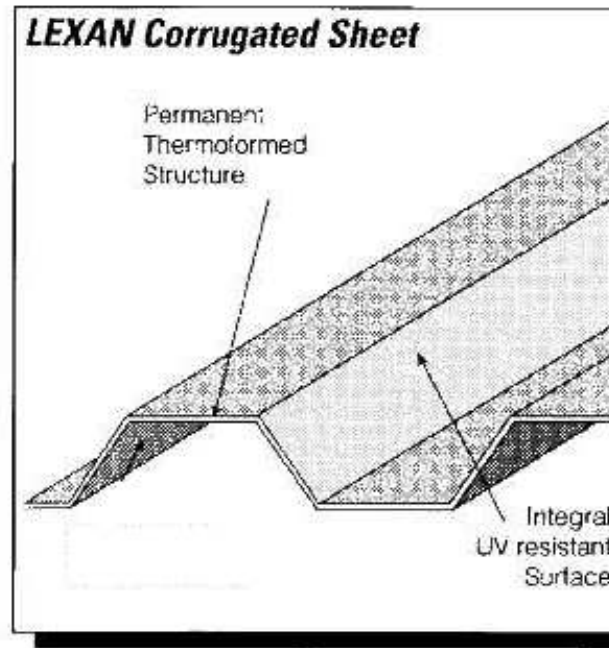


FIGURE 1

TABLE 1—MONOLITHIC SHEET PRODUCTS

ITEM	PRODUCT	THICKNESS ² (inch)		DESCRIPTION
		Min.	Max.	
1	903 (b) ¹	0.094	0.500	Ultraviolet light stabilized for use as an exterior glazing material. CC1 material
2	FMR (a) ¹	0.094	0.500	Similar to Item 1. 903 (b) grade material that is provided with an organic coating. CC1 material
3	Margard: MR 10 MR 15	0.125 0.093	0.500 0.500	Similar to Item 1. 903 (b) grade material that is provided with a silicone coating. CC1 material
4	SG100	0.078	0.500	Similar to Item 1. 903 (b) grade material that is provided with an organic coating. CC1 material
5	XL10	0.125	0.500	Similar to Item 4, only different in name

For SI: 1 inch = 25.4 mm.

¹(a) and (b) represent one, two or three digits representing color, tint, texture and type of masking material.

²Minimum thickness is 0.08 inch for use as safety glazing as specified in Section 2.2 of this report.

TABLE 2—LEXGARD LAMINATED SHEET PRODUCTS¹

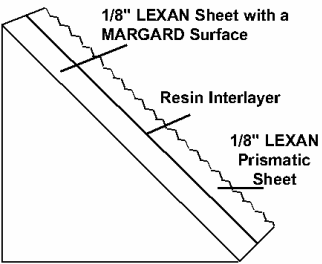
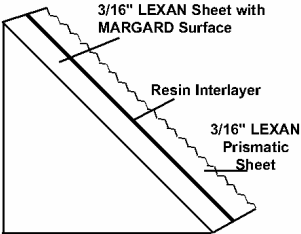
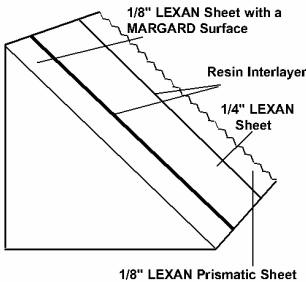
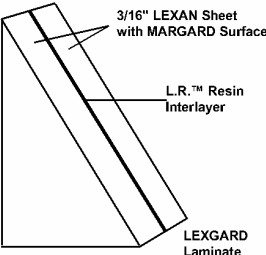
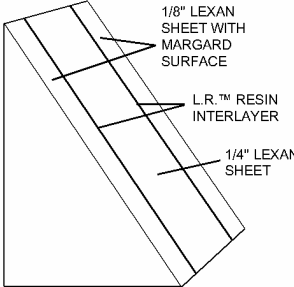
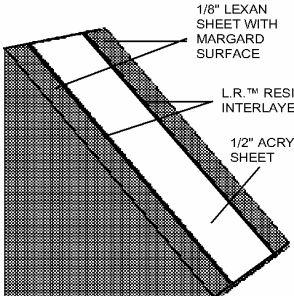
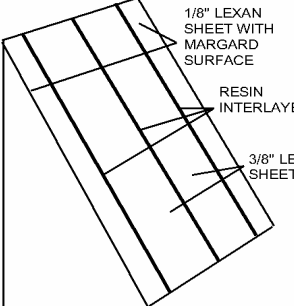
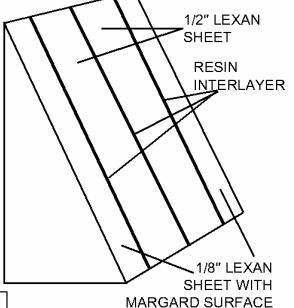
Catalog No.	Thickness Inch, $\pm 5\%$	Weight Lbs/Sq.Ft.	Description	Classification
PL-250	0.265	1.5	 <p>1/8" LEXAN Sheet with a MARGARD Surface</p> <p>Resin Interlayer</p> <p>1/8" LEXAN Prismatic Sheet</p>	CC1
PL-375	0.390	2.2	 <p>3/16" LEXAN Sheet with MARGARD Surface</p> <p>Resin Interlayer</p> <p>3/16" LEXAN Prismatic Sheet</p>	CC1
PL-500	0.530	3.2	 <p>1/8" LEXAN Sheet with a MARGARD Surface</p> <p>Resin Interlayer</p> <p>1/4" LEXAN Sheet</p> <p>1/8" LEXAN Prismatic Sheet</p>	CC1
MPC-375	0.390	2.4	 <p>3/16" LEXAN Sheet with MARGARD Surface</p> <p>L.R.[™] Resin Interlayer</p> <p>LEXGARD Laminate</p>	CC1

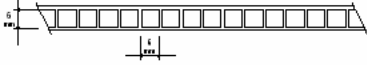


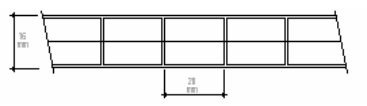
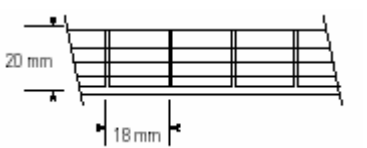
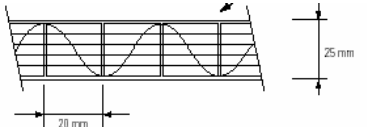
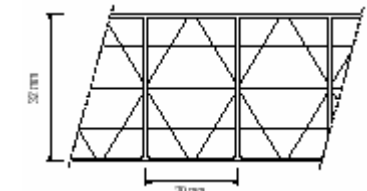
TABLE 2—LEXGARD LAMINATED SHEET PRODUCTS¹— (Continued)

MPC-500	0.530	3.3	 <p>1/8" LEXAN SHEET WITH MARGARD SURFACE L.R.TM RESIN INTERLAYER 1/4" LEXAN SHEET</p>	CC1
MPC-750	0.775	5.1	 <p>1/8" LEXAN SHEET WITH MARGARD SURFACE L.R.TM RESIN INTERLAYER 1/2" ACRYLIC SHEET</p>	CC2
MP-1000	1.050	6.5	 <p>1/8" LEXAN SHEET WITH MARGARD SURFACE RESIN INTERLAYER 3/8" LEXAN SHEET</p>	CC1
SP-1250	1.300	8.1	 <p>1/2" LEXAN SHEET RESIN INTERLAYER 1/8" LEXAN SHEET WITH MARGARD SURFACE</p>	CC1

For **SI**: 1 inch = 25.4 mm.

¹Maximum sheet width is 48 inches; maximum length is 96 inches.

**TABLE 3—LEXAN THERMOCLEAR
MULTI-WALLED SHEET PRODUCTS**

Catalog No.	Thickness (mm)	Weight (g/m ²)	Cross Section	Flame Spread Index	Smoke Density Index	Plastic Classification
LTC 2R6 1300 LTUV 6/2RS 1.3	6	1300		25 or less	450 or less	CC1
LTC 2R8 1700 LTUV 8/2RS 1.7 LTS 2R8 SC	8	1700		25 or less	450 or less	CC1
LTC 2R10 2000 LTUV 10/2RS 1.7	10	2000 1700		25 or less	450 or less	CC1
LTC 3T16 2800 LTUV 16/3TS 2.8	16	2800		75 or less	450 or less	CC1
LTC 20/5RS 3300	20	3300		Not available	Not available	CC2
LTC 25/6RS 3500	25	3500		200 or less	450 or less	CC2
LTC 32/5X 3.8 SC	32	3800		200 or less	450 or less	CC1

For SI: 1 mm = 0.039 in, 1 gram/meter² = 2.048 x 10⁻⁴ pound/foot².