

Description

Mar/UV-resistant Lexan MR10 and MRT based sheet combines the impact strength of Lexan polycarbonate sheet with a proprietary abrasion/UV resistant surface that approaches glass in performance.

Lexan MR10 Sheet two side coated Margard backed by a ten-year limited warranty against yellowing, abrasion resistance, breakage, loss of light transmission, and coating failure^f.) Lexan MR10 sheet's unique coating is graffiti-resistant enabling restoration to a like-new condition. In addition, Lexan MR10 sheet offers improved resistance to weathering as well as forced-entry protection. It is an excellent candidate for use in stores, public buildings, schools, bus shelters and other high traffic areas. Lexan MR10 sheet is for transparent applications only. Because of its high mar-resistant surface, paint, adhesives and other materials will not adhere to its surface. The coating is applied to both sides, therefore helps eliminate second-surface decoration. Also due to its mar-resistant coating, Lexan MR10 sheet cannot be cold-formed.

Lexan MRT and MRTF sheets are transparent, high impact Lexan polycarbonate sheet with a proprietary abrasion-resistant surface. Lexan MRT sheet meets the performance requirements of ANSI Z26.1, required by the Department of Transportation per FMVSS 205, and UMTA guidelines for flammability for windows and lighting lenses.

Typical Property Values ♦

Property	Test Method	Unit	MR10 Value	MRT(F)
Physical				
Specific Gravity (color dependent)	ASTM D792	-	1.20	1.20
Light Transmission @ 0.118"	ASTM D1003	%	86	86
Chemical Resistance	ANSI Z26.1	-	Pass	Pass
Initial Haze		HU	<1	<1
Taber @ 100 cycles	ASTM D1044 (ANSI Z26.1)	% haze	<3	<3
Sound Transmission, STC Rating @ 0.125"	STC Rating		25	25
Sound Transmission, STC Rating @ 0.187"	STC Rating		29	29
Sound Transmission, STC Rating @ 0.250"	STC Rating		31	31
Sound Transmission, STC Rating @ 0.375"	STC Rating		34	34
Mechanical				
Tensile Strength, Yield	ASTM D638	psi	9,500	9,500
Tensile Modulus	ASTM D638	psi	340,000	340,000
Flexural Strength	ASTM D790	psi	13,500	13,500
Compressive Strength	ASTM D696	psi	12,500	12,500
Thermal				
Coefficient of Thermal Expansion	ASTM D696	in/in/°F	3.75 x 10 ⁻⁵	3.75 x 10 ⁻⁵
Heat Deflection Temperature @ 264 psi	ASTM D648	°F	270	260
Flammability				
Horizontal Burn (Flame Spread) AEB	ASTM D635	in	<1	<1
Ignition Temperature	ASTM D1929	°F		
Self			>1000	>1000
NBS Smoke	ASTM E662			Pass
Surface Flammability	ASTM E162	Pass/Fail		Pass
UMTA Guidelines / Docket 90A (Glazing)				Pass

♦ These typical values are not intended for specification purposes. If minimum certifiable properties are required please contact your local SABIC Innovative Plastics' representative.

Chemical Resistance

Lexan MR10 sheet has sufficient resistance to most mineral oils, greases, aliphatic hydrocarbons and acids under low or moderate stress levels. Specific (application related) testing is always advised, especially in applications where the MR10 sheet will come into contact with aggressive chemicals.

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Lexan* Margard*

Abrasion Resistance Comparison

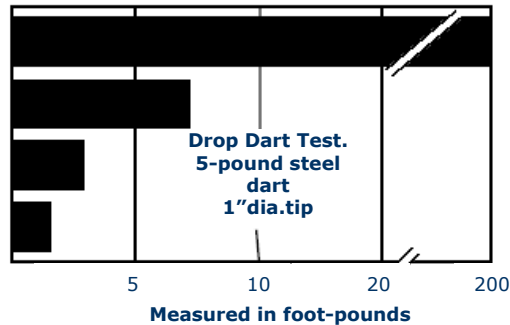
Lexan MR101 sheet exhibits significantly less hazing than uncoated polycarbonate sheet as shown in the abrasion resistance chart.

	Test Method	% Haze		
		Uncoated Polycarbonate	Lexan MR10 Sheet	Glass
Taber Abrasion 100 Cycles CS 10F	ASTM D 1044 Z26.1	35.0	1-3	0.5

* The Taber Abrader test measures the percent of change in haze that results from the grinding action of two abrasive impregnated wheels on the test samples. A constant load of 500 grams is maintained as the samples rotate on a turntable for a predetermined number of revolutions.

Impact Resistance

¼" Lexan MR10 sheet
¼" Acrylic
¼" Tempered Glass
¼" Laminated Glass



Code Compliance

Lexan MR10 sheet meets the requirements of all major model building codes

- Model Building Code Organizations: The Approved Light Transmitting Plastics requirements set by the three major Model Building Code organizations (BOCA, ICBO, and SBCCI) and Dade County. Lexan MR10 sheet meets the highest rating —Class CC1 Approved Plastic.
- Underwriters Laboratories: Lexan MR10 sheet is listed as a Burglary-Resisting Glazing Material according to UL Standard 972.
- CPSC: 16 CFR 1201, I, II: Lexan MR10 sheet complies with the Consumer Product Safety Commission's Safety Standard for architectural glazing materials for both Category I and Category II applications.
- ANSI Z26.1: MRT sheet meets the performance requirements of ANSI Z26.1, required by the Department of Transportation per FMVSS 205, and UMTA guidelines for flammability for windows and lighting lenses.



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