

Description

Lexan FRA 236 sheet is a .236" monolithic, high impact resistant Lexan polycarbonate sheet with a proprietary abrasion resistant surface. Lexan FRA 236 sheet provides 70 times the impact resistance of laminated glass with no spalling. Lexan FRA 236 sheet has been specifically developed for rail glazing applications. Dual glazed Lexan FRA 236 sheet with a .250" air gap meets the UMTA glazing guidelines and the FRA (Federal Railway Administration) Type I & II ballistic and impact requirements.

Typical Property Values ♦

Property	Test Method	Unit	Value
Physical			
Specific Gravity	ASTM D792	-	1.20
Light Transmission (Average), 1/8" Thick	ASTM D1003	%	83
Chemical Resistance	ANSI Z26.1	-	Passes#
Mechanical			
Tensile Strength, Ultimate	ASTM D638	psi	9,500
Flexural Strength	ASTM D790	psi	13,500
Flexural Endurance @ 1,800 Cycles/Min, 73°F, 50% RH	ASTM D671	psi	1,000
Compressive Strength	ASTM D695	psi	12,500
Modulus of Elasticity	ASTM D638	psi	340,000
Drop Ball Impact Strength‡ @ 73°F	SABIC Test	ft-lbs	>200
@ 32°F			>200
@ 0°F			>200
Thermal			
Coefficient of Thermal Expansion	ASTM D696	in/in/°F	3.75 x 10 ⁻⁵
Heat Deflection Temperature @ 264 psi	ASTM D648	°F	260
Flammability			
Horizontal Burn (Flame Spread) AEB	ASTM D635	in	<1
Ignition Temperature Flash Self	ASTM D1929	°F	873 1,076
UMTA Guidelines (Glazing)	-	-	Pass
Federal Railway Administration			
(FRA) Type I & II	-	-	Meets all requirements

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

‡ 5-lb steel ball dropped from a height of 40 feet

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Gasoline and kerosene - no tackiness, crazing or loss of transparency for a minimum of 48 hours.

Abrasion Resistance Comparison[‡]

	Test Method	% Haze		
		Uncoated Polycarbonate	Lexan FRA 236 Sheet	Glass
Taber Abrasion 100 Cycles CS 10F	ASTM D 1044 Z26.1	35.0	1-3	0.5
Falling Silica Carbide, 1600 grams	ASTM 673	30.0	5-8	15-20

‡ 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.



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