



# LEXAN® FRA 25C Sheet

## Product Data Sheet

## TRANSPORTATION

### DESCRIPTION

**LEXAN® FRA 25C sheet** is a .250" monolithic, high impact resistant LEXAN polycarbonate sheet with a proprietary abrasion resistant surface. LEXAN FRA 25C sheet provides 70 times the impact resistance of laminated glass with no spalling.

LEXAN FRA 25C sheet has been specifically developed for rail glazing applications. Dual-glazed LEXAN FRA 25C 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	Units	Value
<b>PHYSICAL</b>			
Specific Gravity	ASTM D792	—	1.20
Light Transmission (Average), 1/4" Thick	ASTM D1003	%	83
Chemical Resistance	ANSI Z26.1	—	Passes**
<b>MECHANICAL</b>			
Tensile Strength, Ultimate	ASTM D638	psi	9,500
Flexural Strength	ASTM D790	psi	13,500
Flexural Endurance	ASTM D671	psi	1,000
@ 1,800 Cycles/Min, 73°F, 50% RH			12,500
Compressive Strength	ASTM D695	psi	340,000
Modulus of Elasticity	ASTM D638	psi	
Drop Ball Impact Strength***	GE Test	ft-lbs	
@ 73°F			>200
@ 32°F			>200
@ 0°F			>200
<b>THERMAL</b>			
Coefficient of Thermal Expansion	ASTM D696	in/in/°F	3.75 x 10 <sup>-5</sup>
Heat Deflection Temperature @ 264 psi	ASTM D648	°F	260
<b>FLAMMABILITY</b>			
Horizontal Burn (Flame Spread)	ASTM D635	in	<1
AEB			
Ignition Temperature	ASTM D1929	°F	873
Flash			1,076
Self			Pass
UMTA Guidelines (Glazing)	—	—	Pass
<b>FEDERAL RAILWAY ADMINISTRATION</b> (FRA) Type I & II	—	—	Meets all requirements

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

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

®Registered Trademark of General Electric Company

(continued on reverse)

*\*These are typical properties and are not intended for specification purposes. If minimum certifiable properties are required, please contact your local GE Plastics Structured Products representative or the GE Plastics Structured Products Quality Services Department.*

LEXAN

For more information  
call: (800) 451-3147  
or (413) 448-5400.

Although all information, recommendations, or advice contained herein is given in good faith, no guarantee is made that the same results as those described will be obtained or, as to the effectiveness or safety of any design, and General Electric Company\*, USA, its subsidiaries, affiliates and authorized representatives shall in no event be held responsible for any loss incurred through such use of the products. Each user shall make its own determination of the suitability of the products or any such information, recommendations or advice for its own particular use. The products of General Electric Company, its subsidiaries or affiliates are sold in any event subject to the Conditions of Sale constituting part of the applicable representative or other sales agreement or printed on the back of order acknowledgments or invoices or are available upon request. Nothing in this or any other document or any oral recommendation or advice shall be deemed to alter, vary, supersede, or waive any of the Conditions of Sale. Statements concerning possible or suggested uses of the materials or designs described herein are not to be construed as constituting a license under any General Electric Company or subsidiary or affiliate company patent covering such use or as recommendations for use of such materials or designs in the infringement of any patent.

## ABRASION RESISTANCE COMPARISON\*\*\*\*

	% Haze			
	Test Method	Uncoated Polycarbonate	LEXAN FRA 25C Sheet	Glass
Taber Abrasion 100 Cycles CS10F	ASTM D1044 Z26.1	35.0	0.8 – 2.0	0.5
Falling Silica Carbide, 1600 grams	Z26.1	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.



## GE Structured Products

General Electric Company  
One Plastics Avenue  
Pittsfield, MA 01201

[www.structuredproducts.ge.com](http://www.structuredproducts.ge.com)

® Registered Trademark of General Electric Company

\* Not connected with the English company of similar name.