

FUNCTIONAL FORMS

LEXAN™ MRAC1 SHEET

PRODUCT DATASHEET

DESCRIPTION

LEXAN MRAC1 flame-retardant sheet is a one-side, hard-coated polycarbonate material offering excellent impact resistance, optical clarity and the state-of-the-art in abrasion and UV resistance. LEXAN MRAC1 sheet is specifically designed for aircraft window dust covers, acoustical panels, visors, diffusers, and any other similar application not requiring forming.

PROPERTIES	Unit	Typical Value (◆)	Test Method
PHYSICAL			
Specific Gravity (color dependent)	-	1.2-1.27	ASTM D729
Water Absorption, Equilibrium, 24 hrs.	%	.20	ASTM D570
Sound Transmission (STC Ratings 36"x84")			ASTM E9070
@ .125"		25	
@ .187"		29	
Abrasion Resistance, CS10F wheels, 500 gram load, 100 cycles	%	1-4	ASTM D1044-76
MECHANICAL			
Tensile Strength @ Yield		10,000	ASTM D638
Tensile Strength ultimate		9,500	ASTM D638
Tensile Modulus	psi	245,000	ASTM D638
Tensile Elongation, Ultimate	%	>80	ASTM D638
Flexural Strength (Gauge Dependent)#	psi	14,000	ASTM D790
Flexural Modulus (Gauge Dependent)#	psi	350,000	ASTM D790
Dynatup Impact Strength, 1/2" dia. dart (Gauge Dependent)# @ 73°F	ft-lbs	50	ASTM D3763
Izod Impact Strength (Gauge Dependent)#	ft-lbs/in		ASTM D256A
Notched		2.4	
Unnotched		NB	ASTM D256A
Gardner Impact Strength, round tip (Gauge Dependent)# @ 73°F	in-lbs	>320	ASTM D3029
THERMAL			
Coefficient of Thermal Expansion	in/in/°F	3.75 x 10 ⁻⁵	ASTM D696
Heat Deflection Temperature @ 264 psi	°F	270	ASTM D648
FLAMMABILITY			
FAA Flammability @ .060" to .500"	-	Pass	FAR 25.853F1AI/ BSS 7230

- ◆ These typical values are not intended for specification purposes. If minimum certifiable properties are required please contact your local SABIC representative.
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Abrasion Resistance Comparison

LEXAN MRAC1 sheet exhibits significantly less hazing on first surface with coating applied than uncoated polycarbonate sheet as shown in the abrasion resistance chart.

	Test Method	% Haze		
		Uncoated Polycarbonate	LEXAN MRAC1 Sheet	Glass
Taber Abrasion 100 Cycles CS 10F	ASTM D 1044 Z26.1	35.0	<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.

Chemical Resistance

LEXAN MRAC1 sheet has sufficient resistance on first surface with coating applied 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 MRAC1 sheet will come into contact with aggressive chemicals.



CONTACT US:

Middle East and Africa
 SABIC Global Headquarters
 PO Box 5101
 Riyadh 11422
 Saudi Arabia
 T +966 (0) 1 225 8000
 F +966 (0) 1 225 9000
 E info@sabic.com

Email
 sfs.info@sabic.com

Americas
 SABIC
 Functional Forms
 2500 City West Boulevard
 Suite 100
 Houston, TX 77042
 USA
 Toll-free (800) 323 3783
 F (888) 443 2033
 E spinside.sales@sabic.com

Europe
 SABIC
 Functional Forms
 Plasticslaan 1
 4612 PX
 Bergen op Zoom
 The Netherlands
 T +31 (0)164 293678
 F +31 (0)164 293272
 E sfs.info@sabic.com

Asia Pacific
 SABIC
 Functional Forms
 2550 Xiupu Road
 Pudong
 201319 Shanghai
 China
 T +86 21 2037 8188
 F +86 21 2037 8288
 E sfs.info@sabic.com

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