POLYVANTIS

PRODUCT DATASHEET

LEXAN™ MARGARD™ MRAC SHEET

DESCRIPTION

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

TYPICAL PROPERTY VALUES◆

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	3.75×10^{-5}	ASTM D696
Heat Deflection Temperature @ 264 psi	°F	270	ASTM D648
FAA Flammability @ .060" to .500"	-	Pass	FAR 25.853F1AI/ BSS 7230

◆These are typical property values and are not intended for specification purposes.

Abrasion Resistance Comparison

LEXAN™ MARGARD™ MRAC sheet exhibits significantly less hazing than uncoated polycarbonate sheet as shown in the abrasion resistance chart.

		% Haze		
	Test Method	**Uncoated Polycarbonate**	**LEXAN MRAC Sheet**	**Glass**
Taber Abrasion	ASTM D 1044	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™ MARGARD™ MRAC 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 LEXAN MARGARD MRAC sheet will come into contact with aggressive chemicals.

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LEXAN™ POLYCARBONATE FILM & SHEET Tough, Virtually Unbreakable

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