

## Lexan\* FMR + FMR604 Sheet Grades

## Product Datasheet

### Description

The Lexan\* FMR family of sheet products are two side hard coated polycarbonate materials offering excellent impact resistance, optical clarity and abrasion resistance. Lexan FMR sheet may be cold-formed or heat-drape formed to soft radii. Lexan FMR sheet is an excellent candidate for functional parts requiring exceptional toughness and surface hardness.

Typical applications include motorcycle windscreens, race car windshields, industrial conveyor covers and aircraft components if FMR604 is selected. Available in thicknesses from 0.125" through 0.500", Lexan FMR sheet is easily fabricated on common equipment. Applicable to:

- FMRxxxx
- FMR1102
- FMRTHD
- FMR604 – aircraft grade

### Typical Property Values ♦

Physical	Test	Unit	Value	
			FMR	FMR604
Specific Gravity	ASTM D792	g/cm <sup>3</sup>	1.2	1.2-1.26
Light transmission (average at 0.118")	ASTM D1003	%	83%	
Initial Haze	ASTM D1003	%	<1	<1
Taber @ 100 cycles	ASTM D1044 (ANSI Z26.1)	% haze	10	<10.0
Chemical resistance	ANSI Z26.1	Pass/Fail	Pass	Pass
Water absorption (24 hrs)	ASTM D570	%	0.15	0.15
Water absorption (Equilibrium)	@ 73°F	%	0.35	0.35
Sound Transmission @ 0.125"	STC Rating	None	25	25
Sound Transmission @ 0.187"	STC Rating	None	29	
Sound Transmission @ 0.250"	STC Rating	None	31	
Sound Transmission @ 0.375"	STC Rating	None	34	
Sound Transmission @ 0.500"	STC Rating	None	34	
<b>Mechanical</b>				
Tensile Strength, Yield	ASTM D638	psi		9,500
Tensile Modulus	ASTM D638	psi	345,000	240,000
Flexural Strength	ASTM D790	psi	13,500	14,000
Flexural Modulus	ASTM D790	psi	340,000	345,000
Compressive Strength	ASTM D695	psi	12,500	
Instrumented impact 1/2" dia. Dart (gauge dependent) @73F (average at 0.118")	ASTM D3763	ft-lbs	40	40
<b>Thermal</b>				
Coefficient of Thermal Expansion	ASTM D696	in/in/°F	3.75 x10 <sup>-5</sup>	3.75 x10 <sup>-5</sup>
Heat Deflection Temperature @ 264 psi	ASTM D648	°F	270	280
Heat Deflection Temperature @ 66 psi	ASTM D648	°F	280	
<b>Flammability</b>				
Horizontal Burn (Flame Spread) AEB	ASTM D635	in	<1	<1
Ignition Temperature, Self		°F	>1000	
Smoke density	FAR 25.853 (d) Apdx F, part V	Passes/Fail		Pass at 0.040 to 0.125"
Vertical Burn (60 sec)	FAR 25.853 (a) Apdx F, Part I, (a), 1(i)	Passes/Fail		Pass at 0.040 to 0.125"
Vertical Burn (12 sec)	FAR 25.853 (a) Apdx F, Part I, (a), 1(ii)	Passes/Fail		Pass at 0.040 to 0.125"

♦ Typical values only. Variations within normal tolerances are possible.

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## Chemical Resistance

Lexan FMR sheet has sufficient resistance to most moderate chemicals. In applications where it will come into contact with aggressive chemicals, specific (application related) testing of the material is strongly recommended.

## Formability / Processing

Lexan FMR can be cold bent up to a radius of 300 times gauge. Drap forming is possible. Please contact your local SABIC-IP sales office for forming guidelines.



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