



Product Data Sheet

Lexan® FR60, FR63, FR65, FR66

Description

Lexan FR60, FR63, FR65, FR66 films are a family of flame retardant clear polycarbonate films with UL94-V0 listing and a variety of different surface textures, which also benefit graphic applications.

Lexan FR6x films offer ease of thermoforming, hydroforming, embossing, die-cutting, folding, and bending and are very suitable for applications such as:

- printed circuit board insulation
- backlit aircraft in-flight panels and displays
- business equipment insulation
- computer rack partitions
- TV/monitor insulation

Configuration

Product	Finish	Standard gauges (mm)
FR60	polished/polished	0.250, 0.375, 0.500, 0.635, 0.750, 1.0, 1.5, 2.0
FR63	matt/polished	0.250, 0.375, 0.500, 0.635
FR65	velvet/matt	0.250, 0.375, 0.500
FR66	suede/matt	0.250, 0.375, 0.500

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Property	Test	Unit	Value+
Physical			
Specific Gravity	ISO 1183	g/cm ³	1.32
Water Absorption, saturation, 23°C	ISO 62	%	0.28
Optical			
Haze	ASTM D1003	%	1.0
Light Transmission	ASTM D1003	%	85-88
Mechanical			
Tensile stress at yield	ISO R527	MPa	70
at break		MPa	60
Strain at break	ISO R527	%	25
Tensile Modulus	ISO R527	MPa	2200
Tear Strength			
Initiation	ASTM D1004	kN/m	298
Propagation	ASTM D1922	kN/m	6
Thermal			
Tensile Heat Distortion, 0.35 N/mm ²	ASTM D1637	°C	150
DTUL, 1.82 N/mm ²	ISO 75	°C	135
Electrical			
Dielectric Strength, 23°C, in oil, short term, 375 micron	IEC 243-1	kV/mm	59
Relative permittivity	IEC 250		
at 50 Hz	-		2.9
at 1 kHz	-		2.8
at 1 MHz	-		2.8
Dissipation Factor	IEC 250		
at 50 Hz	-		0.0026
at 1 kHz	-		0.0028
at 1 MHz	-		0.0117
Volume Resistivity	IEC 93	Ohm.m	10 ¹⁴
Flammability			
Oxygen index	ISO 4589	-	33%
UL Flammability *	UL94		V0, 0.250 mm
Flash Point	-	°C	440
Self Ignition Temperature	-	°C	605
FMVSS 302	ASTM D618	-	all pass
NFPA 258-NBS	ASTM E662	-	
Smoke Chamber Test (0.25 mm)			D(4)=6 D(max)=36

+ Typical values only.

Variation within normal tolerances are possible for the various textures.

* These ratings are not intended to reflect hazards presented by this or any other material under actual fire conditions.

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Agency Summary

Lexan FR60, FR63, FR65, FR66 film have been tested under a number of agency testing protocols including UL746A and UL 746B, IEC publication 85 and CSA 22.2 Class 905230. The tables below summarize our UL and CSA listings for Lexan FR60, FR63, FR65, FR66.

UL Listing Summary

File #E61257 (R)											
Material	Colour	Thickness mm	UL-94 Flame Rating*	Relative Thermal Index			Performance Level Categories (PLCs)				
				Elect.	Mechanical		H	H	V	4	C
					With	Without					
				Elong.	Elong.	W	A	T	9	T	
				(tensile)		I	I	R	5	I	
Lexan FR6x	c1	0.25 - 0.35	V0	130	125	130	1	0	-	-	3
	c1	0.375 - 0.74	V0	130	125	130	0	0	-	-	3
	c1	>= 0.750	V0	130	125	130	0	0	-	-	3

CSA Listing Summary

File #LR4942											
Material Type	Minimum Thickness mm	Temp. Class	Requirements in standard							IEC No.	
			CSA C22.2 No.							65	950
			1-M1990	6-M1984	66-1988	223-1987	234	950			
Lexan FR60	0.250	130°C	A	A	A	A	A	A	A	A	
Lexan FR63	0.250	130°C	A	A	A	A	A	A	A	A	
Lexan FR65	0.250	130°C	A	A	A	A	A	A	A	A	
Lexan FR66	0.125	130°C	A	A	A	A	A	A	A	A	

Note: 'A' indicates compliance with all of the requirements of the indicated agency standard.

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