



## GE Structured Products

# LEXAN® FR-60, FR-63, FR-65, FR-66 FILM

### Product Data Sheet

#### DESCRIPTION

**LEXAN® FR-60 flame retardant film** is a clear, thin-gauge polycarbonate film with polished surfaces on both sides. With UL94 V-0\*\* listing, this film meets stringent requirements in a wide range of electrical/electronic, automotive and construction applications.

**UL File Number: E61257(R).**

Potential applications include:

- power supply insulation
- disc drive insulation
- bus bar insulation
- keyboard insulation
- TV/monitor insulation
- PC board insulation
- business equipment insulation
- foil laminated for insulation and shielding

#### TEXTURES

FR-60 Polished/Polished  
FR-63 Matte/Polished

FR-65 Velvet/Matte  
FR-66 Suede/Matte

#### CONFIGURATION

Standard Roll Width: 48"  
Minimum Gauge: .010"

Standard Gauges: .010", .015", .020", .030"  
Custom Gauges: .010" – .030"

#### TYPICAL PROPERTY VALUES\*

Property	Test Method	Units	FR-60 Value
<b>PHYSICAL</b>			
Specific Gravity	ASTM D792	—	1.32
Haze	ASTM D1003	%	1
Area Factor	Calculation	ft <sup>2</sup> /lb/mil m <sup>2</sup> /lb/mil	145.75 13.54
Water Absorption, Equilibrium, 24 Hrs	ASTM D570	%	0.28
<b>MECHANICAL</b>			
Tensile Strength	ASTM D882	psi	
@ Yield			10,000
Ultimate			8,800
Tensile Modulus	ASTM D882	psi	320,000
Elongation	ASTM D882	%	25–50
Gardner Impact Strength @ .030"	Gardner	in-lbs	60
Tear Strength			
Initiation	ASTM D1004	g/mil	770–910
Propagation	ASTM D1922	g/mil	16–80
Puncture Resistance	ASTM D1048	lb/in	332
<b>THERMAL</b>			
Tensile Heat Distortion @ 50 psi	ASTM D1637	°C	150
Heat Deflection Temperature @ 264 psi	ASTM D648	°C	135
Thermal Conductivity	ASTM C177	Watt/M-°C	0.19
Glass Transition	DSC	°C	156

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*\*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.*

(continued on reverse)

# Lexan

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## AGENCY SUMMARY

LEXAN FR-60 film has been tested under a number of agency testing protocols including UL 746A and UL 746B, IEC Publication 85 and CSA C22.2 Class 9052 30. The tables to the right summarize our UL and CSA listings for LEXAN FR-60.

In addition to the significant breadth of CSA and UL listings that LEXAN FR-60 has received, GE Plastics is proud to state that our facility has been registered by The British Standards Institute to the International Organization for Standardization, ISO 9002 Standards for Quality.

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

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## TYPICAL PROPERTY VALUES\*

Property	Test Method	Units	FR-60 Value
<b>ELECTRICAL</b>			
Dielectric Strength (@ 10 mils)	ASTM D149	Volts	17,000
Dielectric Constant @ 25°C, 50% RH	ASTM D150	—	2.9
@ 60 Hz			2.8
@ 1,000 Hz			2.8
@ 1,000,000 Hz			
Dissipation Factor @ 25°C, 50% RH	ASTM D150	—	0.0026
@ 60 Hz			0.0028
@ 1,000 Hz			0.0117
@ 1,000,000 Hz			
Volume Resistivity @ 25°C, 50% RH	ASTM D257	ohm-cm	10 <sup>16</sup>
Surface Resistivity @ 25°C, 50% RH	ASTM D257	Ω/□	10 <sup>15</sup>
<b>FLAMMABILITY</b>			
UL Flammability**	UL Bulletin 94	—	V-0 ≥ .010"
Oxygen Index	ASTM D2863	—	33
Self-Ignition Temperature		—	1120°F(605°C)
FMVSS 302	ASTM D618	—	All Pass

\*\*This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.  
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## UL LISTING SUMMARY

File #E61257(R)

Material	Color	Thickness		UL-94 Flame Rating*	Relative Thermal Index			Performance Level Categories (PLCs)				
		mils	mm		Elect.	Mechanical		H W I	H A I	H V T R	D 4 9 5	C T I
						With Elong.	Without Elong. (Tensile)					
LEXAN FR-60 (FR6+)	cl	10-14	.23-.35	V-0	130	125	130	1	0	—	—	3
	cl	15-29	.38-.74	V-0	130	125	130	0	0	—	—	3
	cl	.30	.76	V-0	130	125	130	0	0	—	—	3

\*This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

## CSA LISTING SUMMARY

File #LR84942

Material Type	Minimum Thickness		Temp. Class	Requirements in Standard								
	mm	inches		CSA C22.2 No.						IEC No.		
				1-M1990	6-M1984	66-1988	223-1987	234	950	65	950	
LEXAN FR-60	.25	.010	130°C	A	A	A	A	A	A	A	A	A
LEXAN FR-63	.25	.010	130°C	A	A	A	A	A	A	A	A	A
LEXAN FR-65	.25	.010	130°C	A	A	A	A	A	A	A	A	A
LEXAN FR-66	.25	.010	130°C	A	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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