

## SABIC Innovative Plastics Lexan® FR65 Polycarbonate Film, Flame Retardant

Category : Polymer , Film , Thermoplastic , Polycarbonate (PC) , Polycarbonate, Unreinforced, Flame Retardant

### Material Notes:

Lexan FR65 flame-retardant film is a clear, thin-gauge polycarbonate film with a velvet finish on one side and a matt finish on the other, and a UL94 V-0 listing to meet the stringent requirements in a wide range of electrical, electronic and transportation applications. Lexan FR65 film offers ease of thermoforming, hydroforming, embossing, die-cutting, folding and bending and is very suitable for applications such as printed circuit board insulation, backlit aircraft in-flight panels and displays, business equipment insulation, computer rack partitions, TV and monitor insulation. Information provided by SABIC Innovative Plastics

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Lexan-FR65-Polycarbonate-Film-Flame-Retardant.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-FR65-Polycarbonate-Film-Flame-Retardant.php)

Physical Properties	Metric	English	Comments
Density	1.34 g/cc	0.0484 lb/in <sup>3</sup>	ASTM D792
Water Absorption	0.28 %	0.28 %	24 hrs; ASTM D570
Surface Tension	>= 44 dynes/cm	>= 44 dynes/cm	1st surface; units: Dyne; Dyne Pens
	>= 44 dynes/cm	>= 44 dynes/cm	2nd surface; units: Dyne; Dyne Pens

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	60.0 MPa	8700 psi	ASTM D882
Tensile Strength, Yield	68.9 MPa	9990 psi	ASTM D882
Elongation at Break	100 - 160 %	100 - 160 %	ASTM D882
Tensile Modulus	2.20 GPa	319 ksi	ASTM D882
Gardner Impact	28.5 J	21.0 ft-lb	ASTM D3029
	@Thickness 0.762 mm	@Thickness 0.0300 in	
Impact Test	12.2 J	9.00 ft-lb	Puncture Resistance, Dynatup; ASTM D3763
Tear Strength	11.6 - 21.2 kN/m	66.2 - 121 pli	propogation; ASTM D1922
	245 - 316 kN/m	1400 - 1800 pli	initiation; ASTM D1004

Thermal Properties	Metric	English	Comments
CTE, linear	57.6 µm/m-°C	32.0 µin/in-°F	ASTM E831
Specific Heat Capacity	1.26 J/g-°C	0.301 BTU/lb-°F	ASTM E1269
	@Temperature 4.00 °C	@Temperature 39.2 °F	

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	143.3 °C	289.9 °F	TMA
Vicat Softening Point	175 °C	347 °F	ASTM 1525-00 modified
Brittleness Temperature	-135 °C	-211 °F	ASTM D746
Glass Transition Temp, Tg	153 °C	307 °F	ASTM D3417/D3418
Flammability, UL94	V-0	V-0	
	@Thickness 0.250 - 0.375 mm	@Thickness 0.00984 - 0.0148 in	
	V-0	V-0	
	@Thickness >=0.375 mm	@Thickness >=0.0148 in	
Shrinkage	0.020 %	0.020 %	ASTM D1204
	@Temperature 150 °C	@Temperature 302 °F	

Optical Properties	Metric	English	Comments
Refractive Index	1.60	1.60	ASTM D542A
	@Temperature 25.0 °C	@Temperature 77.0 °F	
Haze	97 %	97 %	ASTM D1003
Gloss	7.0 %	7.0 %	over Flat Black min/max @ 60°; ASTM D523-60
Yellow Index	1.3 %	1.3 %	ASTM D1925
Transmission, Visible	86.1 %	86.1 %	ASTM D1003

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+17 ohm-cm	1.00e+17 ohm-cm	ASTM D257
Surface Resistivity per Square	1.00e+16 ohm	1.00e+16 ohm	ASTM D257
Dielectric Constant	2.8	2.8	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	2.9	2.9	ASTM D150
	@Frequency 60.0 Hz	@Frequency 60.0 Hz	
Dielectric Strength	59.0 kV/mm	1500 kV/in	in oil, short time. 0.25mm; ASTM D149-97a Method A
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Electrical Properties	Metric	English	Comments
Dissipation Factor	@Frequency 60.0 Hz	@Frequency 60.0 Hz	ASTM D150
	0.0117	0.0117	
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	ASTM D150
Arc Resistance	64 sec	64 sec	Tungsten; ASTM D495

Descriptive Properties	Value	Comments
Fold Endurance (folds)	20	MIT; ASTM D2176-69; double, 0.50mm
	60	MIT; ASTM D2176-69; double, 0.25mm
Nominal Gauge Variation (%)	5	0.250 - 0.500mm
Surface Energy	34	1st surface; ASTM D5946-01
	36	2nd surface; ASTM D5946-01

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