



Gerber Wide Format Specialty Digital Media: LexEdge FR-65 WF

DESCRIPTION

Gerber LexEdge FR-65 WF flame-retardant film is a clear, thin-gauge Lexan* brand polycarbonate with a velvet finish on one side, a matte 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. LexEdge FR-65 WF film offers ease of printing, 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.

Typical Property Values ♦

Property	ASTM Test Method	Units (USCS)	Value	ISO Test Method	Units (SI)	Value
Mechanical						
Tensile Strength @ Yield	ASTM D882	psi	10000	ISO 527	MPa	70
Ultimate	ASTM D882	psi	8700	ISO 527	MPa	60
Tensile Modulus	ASTM D882	psi	319000	ISO 527	MPa	2200
Tensile Elongation at Break	ASTM D882	%	100-160	ISO 527	%	100-155
Gardner Impact Strength at 0.03" (0.75 mm)	ASTM D3029	ft-lb	21	ISO 6603-1	J	28
Tear Strength						
Initiation	ASTM D1004	lb/mil	1.4-1.8		kN/m	298
Propogation	ASTM D1922	g/mil	30-55		kN/m	16
Puncture Resistance (Dynatup)	ASTM D3763	ft-lb	9		J	12
Fold Endurance (MIT)						
0.010" (0.25 mm)	ASTM D2176-69	double folds	60			
0.020" (0.50 mm)	ASTM D2176-69	double folds	20			
Thermal						
Coefficient of Thermal Conductivity	ASTM D5470	Btu/hr/ft2/°F/in	1.35		W/m°K	0.2
Coefficient of Thermal Expansion	ASTM E831	(x10 ⁻⁵ /°F)	3.2	ISO 11359	(x10 ⁻⁵ /°C)	5.8
Specific Heat @40°F (4°C)	ASTM E1269	Btu/lb/°F	0.3		KJ/Kg-°C	1.25
Glass Transition Temperature	ASTM D3417 / D3418	°F	307	ISO 11357	°C	153
Vicat Softening Temperature, B Heat Deflection Temp. by TMA at 1.8 Mpa	ASTM 1525-00 modified	°F	347			175
Shrinkage at 302°F (150°C)	ASTM D1204	%	0.02	ISO 75 Modified	°C	145
Brittleness Temperature	ASTM D746	°F	-211		°C	0.02
Physical						
Density	ASTM D792	slug/ft ³	2.6	ISO 1183	kg/m ³	1344
Water Absorption, 24 hrs.	ASTM D570	% change	0.28	ISO 62	% change	0.28
Surface Energy(1 st surface/ 2 nd surface)	ASTM D5946-01	-	34/36			
Surface Tension(1 st surface/ 2 nd surface)	Dyne Pens	Dyne	>44/>44			
Optical						
Refractive Index @77°F (25°C)	ASTM D542A		1.6			
Light Transmission	ASTM D1003	-	86.1			
Yellowness Index	ASTM D1925	%	1.3			
Haze	ASTM D1003	%	97			
Gloss over Flat Black min/max @ 60°	ASTM D523-60	%	7	ISO 2813		10

UL Flammability Rating / Performance Levels

Thickness Rating HWI HAI

>= 0.010" (0.250mm) and < 0.015" (0.375mm) > 0.015" (0.375mm)	UL94V-0	1	0
	UL94V-0	0	0
CTI: 3			
File Number	E61257		

Manufacturing Specifications

Nominal Gauge Ranges	Min./Max Limit of Nominal
0.010 - 0.020" (0.250 - 0.500mm)	-/+ 5%

Property	ASTM Test Method	Units (USCS)	Value	ISO Test Method	Units (USCS)	Value
Electrical						
Dielectric Strength in oil, short time @ 72°F (23°C), 10 mils (0.25mm)	ASTM D 149-97a Method A	kV/mil	1.5	IEC 60243	kV/mm	59
Dielectric Constant @ 60 Hz	ASTM D150	-	2.9	IEC 60250	-	2.9
@1,000,000 Hz	ASTM D150	-	2.8	IEC 60250	-	2.8
Dissipation Factor @ 60 Hz	ASTM D150	-	0.0026	IEC 60250	-	0.0026
@1,000,000 Hz	ASTM D150	-	0.0117	IEC 60250	-	0.0117
Volume Resistivity	ASTM D257	Ω-cm	1.00E+17	IEC 60093	Ω-cm	1.00E+17
Surface Resistivity	ASTM D257	Ω/square	1.00E+16	IEC 60093	Ω/square	1.00E+16
Arc Resistance, Tungsten Electrodes	ASTM D495	s	64			

Lexan*

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Note: Technical Specifications are subject to change without prior notice. Output may vary depending on the type of print data/file, application, media, environmental conditions, print speed, or other variables. CONTACT INFORMATION For help with questions concerning Gerber products, please call your distributor or Gerber Customer Service at 1-800-222-7446 or (860) 644-1551. Visit us on the Internet at www.gerbertechnology.com/sign-graphics to learn more about our many other foils, materials and equipment. When sold by Gerber, use only the corresponding Gerber Product Bulletin to determine product details, including but not limited to appropriate uses, warranty and processing. Gerber Scientific Products is a Registered Trademark of Gerber Technology. All Right Reserved Category: Large Format FastFact #: 7042 Supplied by: Aftermarkets Last Modified: 10/1/2019