



Gerber LexEdge™ FR65

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DESCRIPTION

LexEdge FR65 is a custom-formulated, 10-mil LEXAN®-based polycarbonate (LEXAN FR65) designed for use with the GERBER EDGE®, GERBER EDGE 2®, and GERBER EDGE FX™ thermal transfer printing systems, in conjunction with GerberColor™ Foils. LexEdge FR65 is a UL94 V-0 rated, flame-retardant, clear, polycarbonate film with a velvet finish on one side and a matte finish on the other. LexEdge FR65 meets stringent requirements in a vast array of electronic, electrical, and transportation applications, such as aircraft panels and displays, and circuit board, business equipment, and TV and monitor insulation.

INTENDED APPLICATIONS

LexEdge FR65 is ideally suited for the production of dynamic sub-surface graphics including membrane switches, keyboard overlays, architectural signs, and exhibit/display work.

Continuous exposure to ultra-violet light may cause discoloration. LexEdge FR65 is therefore not recommended for outdoor or backlit applications.

SHELF LIFE AND STORAGE

Store LexEdge FR65 in the plastic bag provided in the original shipping box. Printed or unprinted LexEdge FR65 should not be stored on a roll that has less than a 3-inch inside diameter.

Use a paper interleaf between printed materials that are rolled or stacked. Do not store printed graphics face to face. LexEdge FR65 should be stored in a clean area free from excessive moisture and sunlight. An ambient temperature below 100° F (38°C) is recommended. Unprinted LexEdge FR65 can be stored for one year at 70°F (21°C) and 50% relative humidity.

CAUTION: Polycarbonate film is commonly used in conjunction with sensitive electronic devices either as a label, window or membrane switch overlay. These devices or components of the same are often packaged in anti-static materials to protect the electronics against damage caused by electrostatic discharge (ESD). One type of anti-static packaging material is commonly referred to as **Pink Poly**. It is a clear pink (hot pink) polyethylene that is available as a film for bags, bubble pack or foam. It is treated with an amine type compound that imparts the anti-static qualities. This compound works by blooming to the surface of the polyethylene and together with airborne moisture produces ions that increases the electrical conductivity at the surface of the polyethylene. **All amines are chemically aggressive to polycarbonate.** A polycarbonate part that comes in contact with amines will eventually degrade. The degradation shows up as a surface haze or clouding, stress cracking of formed parts, complete ink delamination or -in the advanced stages- de-polymerization of the polycarbonate. **Pink Poly should not be used in close proximity to any polycarbonate product including hard-coated polycarbonate film.** Anti-static packaging materials that are safe to use are those that are made conductive by using a metallized coating or inert conductive filler.

PRINTING

A tension roll holder should be used with LexEdge FR65.

LexEdge FR65 has a light tack, protective mask on the print side of the material which must be removed before printing. Mask should remain on any unused portions of the roll until time of printing.

Fine particles may be attracted to the surface of this material. If this occurs, LexEdge FR65 can be cleaned with distilled water and a lint-free cloth. Allow the material to completely dry before printing. Do not use an alcohol or solvent based cleaner on this product as they will cause the surface to haze and become unprintable.

Please use LexEdge palette for this material.

The velvet side of this material will generally be the viewing side. Since the polished print surface is the opposite side and LexEdge FR65 will most often be used in second-surface applications, reverse-print procedures will need to be followed. LexEdge FR65 is shipped with the polished print surface rolled out.

When printing on LexEdge FR65, a specific color of foil will typically be used as a solid backing color. This color will generally be assigned as an overprint. In order to ensure that this color covers the other printed graphics as completely as possible, it may be necessary to alter its print settings. (This will be especially needed when the backing foil will be printed on top of more than two other colors.)

The print settings for the backing foil can be changed in the QuickPlot screen. Go into the "Print Order" screen (F11) and select SETTINGS. Click on "DARK" in the overprint side only.

GerberColor Spot (GCS), GerberColor Process Pro™ (GCP), and GerberColor Transparent (GCT) Series Foils can be used to print onto LexEdge FR65.

Recommended working environment is as follows:

- Operating temperature: 50°F to 95°F / 10°C to 35°C
- Recommended temperature for assured printing accuracy: 68°F to 78°F / 20°C to 26°C
- Operating humidity: 20% to 90% relative humidity, non-condensing (maximum range; actual range varies by material used)

CUTTING

LexEdge FR65 should be score cut on any 15-inch EDGE-compatible sprocketed plotter. A 45° SuperSharp blade is recommended. Plotters should be set at 50% speed.

The ideal cut will penetrate halfway through the material. To punch out finished pieces, find a straight cutline and fold the material backwards. Pinch the cut line with fingers and the material will break. Slowly remove the finished piece one edge at a time. The user should perform a test cut to determine tool force setting.

If using a plotter with a swivel blade, you will be able to cut simple shapes easily. However, when cutting complex shapes, the ability to maintain an accurate and consistent cut depth may be compromised.

Cutting weed borders on LexEdge FR65 is not recommended or necessary.

MAINTENANCE

To clean printed graphics, use a mild, non-abrasive soap with a soft cloth or sponge. Avoid using alcohol-based cleansers or soaps containing grit or abrasives.

UL FLAMMABILITY RATING / PERFORMANCE LEVELS

Thickness	Rating	HWI	HAI
> = 0.010" (0.250mm) and < 0.015" (0.375mm)	UL94V-0	1	0
> 0.015" (0.375mm)	UL94V-0	0	0

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PHYSICAL PROPERTIES

Thickness	10 mils (without premask)
Protective print mask	1-mil polyethylene
Base Material	Coated polycarbonate
Film Color	Velvet/polished

THERMAL PROPERTIES

Maximum Heat Deflection / Temperature Threshold	275 °F (135°C)
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CHEMICAL RESISTANCE (UNPRINTED)

Chemical Agent	Result
Mild Acids	No effect
Alcohols	Hazing

Chemical Agent	Result
Alkalis	No effect at low concentration and below 85°F (29°C). Higher concentrations and temperatures result in physical decomposition.
Aliphatic Hydrocarbons	No effect
Amines	Crystallization
Aromatic Hydrocarbons	Severe stress cracking
Detergents and sprays	Mild soap solutions have no effect. Strongly alkaline materials should be avoided.
Esters	Crystallization
Fruit juices/soft drinks	End user test recommended.
Ketones	Crystallization/stress cracking
Silicone oils/greases	No effect up to 85°F (29°C)

RELATED LITERATURE

Refer to Product Bulletins of relevant foils and materials for product-specific handling, production, and finishing information.

CONTACT INFORMATION

For help with questions concerning Gerber products, please call your distributor or Gerber Sales Support at 1-800-222-7446 or (860) 644-1551. Visit us on the Internet at www.gspinc.com to learn more about our many other foils, materials and equipment.

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