Gerber Luminous Film manufactured by 3M

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DESCRIPTION

Gerber Luminous Film is a 9-mil, rechargeable, durable, “glow-in-the-dark” vinyl custom formulated by 3M for use with the GERBER EDGE®, GERBER EDGE 2®, and GERBER EDGE FX™ thermal transfer printing systems, in conjunction with GerberColor™ Series Foils. This film recharges with as little as three minutes of exposure to sunlight, fluorescent, or incandescent light, but longer exposure will improve performance. A perceptible glow can be detected for up to seven hours. This film is compatible with Gerber High Performance Series 220, 225, 280, and 280i vinyl films all manufactured by 3M. No heavy metals or radioactive materials are used in the production of this product.

Gerber Luminous Film meets the following standards and requirements:

The luminosity meets and exceeds both ASTM 2072 and the International Maritime Organization A.752 (18) luminosity standards and it meets the ASTM 2073 luminosity standard.

Gerber Luminous Film meets the requirements of the National Fire Protection Association Class A as defined NFPA 101, Life Safety Code; tested per ASTM E84-95 and E648-94a.

Gerber Luminous Film meets the Federal Railroad Administration guidelines for flame spread and smoke density; tested per ASTM E162 and E662.

This product can be safely disposed of in a sanitary landfill or by incineration in the United States. Contact Gerber for disposal information in other geographic regions.

INTENDED APPLICATIONS

Gerber Luminous Film is ideally suited for the production of interior safety signage in buildings, ships, aircraft, railroads, as well as interior identification signs and symbols. Gerber Luminous Film can also be used for short-term outdoor markings.

This film is intended for use on flat or simple curved surfaces. It is not intended for applications where petrochemical contact may occur. If petrochemical exposure is anticipated, refer to the PROTECTING GRAPHICS section below. The user should determine the suitability of all substrates and the use of any over laminates prior to actual application.

PERFORMANCE LIFE (UNPRINTED)

Interior Applications	Up to 7 years
Exterior Applications	Up to 1 year

SHELF LIFE AND STORAGE

Apply film within one year of receipt. Printed graphics should also be applied within one year. Film and printed graphics (with or without premask) should be kept in a clean area free from excessive moisture and direct sunlight. Maintain temperature at less than 100 °F (38 °C) and 50% relative humidity. Use a paper interleaf between layers of stacked or rolled printed materials. Do not stack printed graphics face to face.

PRINTING

For optimum print results, select Gerber Luminous Film from the material palette in the OMEGA™ software.

Four-color process images can be printed, however the color will shift due to the color of the face film. Image quality in four-color process prints may be compromised.

GerberColor Finishing (GCF), GerberColor Spot (GCS), GerberColor Process Pro™ CMYK (GCP), and GerberColor Transparent (GCT) Series Foils can be used to print onto Gerber Luminous Film.

Recommended working environment is as follows:

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

PROTECTING GRAPHICS

Gerber Technology offers products that are designed to protect vinyl and printed graphics.

Gerber Guard™ manufactured by 3M is a durable, dimensionally stable, glossy vinyl overlaminate. This film has a petrochemical-resistant construction and is intended to be used when markings may be exposed to petrochemical spillage and/or severe handling conditions.

Gerber UVGuard™ is a custom-formulated, 1-mil, clear, TEDLAR® polyvinyl fluoride (PVF) laminating film designed to further expand the resistance to weathering of printed graphics for up to five years.

Gerber UVGuard™ 9 manufactured by 3M is a 2-mil, glossy, clear, mildew-resistant, polyvinyl fluoride laminating film with a petrochemical-resistant adhesive system. It is designed to further expand the resistance to weathering of printed graphics up to nine years. Gerber UVGuard 9 has the highest protection from UV fade.

Gerber StrikeGuard™ is an 8.0-mil, clear, glossy overlaminate film designed for a variety of applications. This heavy-duty overlaminate film is ideal for the protection of graphics, up to two years, and is especially beneficial where printed graphics experience severe handling and forceful impact. Gerber StrikeGuard is not recommended in applications that require petrochemical protection or where additional UV or vandal resistance is desired.

Abrasion Guard™ SPF (Sign Protection Formula) is a clear, top-coat GerberColor Finishing Series (GCF) Foil designed for use with EDGE® Series thermal transfer printing systems, to protect graphics from moderate contact and exposure to harmful effects of UV rays. It has an expected performance life of up to five years (when printed by itself). When applied as a protective overprint on other GerberColor Foils, Abrasion Guard SPF will extend the life of the base color by up to 30%.

Matte Clear is a clear matte finish, top coat GerberColor Foil designed for use with EDGE® Series thermal transfer printing systems, to reduce glare and protect graphics from moderate contact or handling. It has an expected performance life of up to three years.

CUTTING

Gerber Luminous Film can be cut on any 15-inch EDGE-compatible sprocketed plotter. A 45° SuperSharp blade is recommended. Plotters should be set to 50% cut speed. The user should perform a test cut to determine the ideal tool force setting.

SUBSTRATE PREPARATION

Gerber Luminous Film is recommended for use on anodized aluminum, etched aluminum, fiberglass, painted metal, ceramic, and sealed concrete.

Before applying your graphic, wash the surface of your substrate with warm water and detergent. Do not use soaps or other cleaners with lotions or creams as they will leave a residue. Thoroughly rinse the surface and allow it to completely dry. Saturate a clean paper towel with a solvent-based cleaner and wipe the substrate surface. Be certain to follow all manufacturer safety guidelines when using any solvent. Dry the surface with a lint-free paper towel before the solvent evaporates.

Many paint systems (e.g. two-part urethane) and some polycarbonate substrates will outgas if they are not fully cured. Outgassing can cause permanent bubbling in most films; substrates should be tested for outgassing prior to final application.

APPLICATION TECHNIQUES

Dry application methods should be used with Gerber Luminous Film and panels should be butted. Gerber standard tack application tape is required for all graphics produced with EDGE® Series printing systems.

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.

PHYSICAL PROPERTIES

Thickness	8 to 9 mil
Film Color	Matte light yellow-green
Adhesive	Permanent solvent-based pressure-sensitive adhesive
Adhesive Color	Clear adhesive on grey-backed film
Liner	78-lb kraft paper
Dimensional Stability	.031 in (.8 mm)
Application Temperature	50°F to 100°F (10°C to 38°C)
Operating Temperature	-30°F to 200°F (-34°C to 93°C)

LUMINANCE CHARACTERISTICS

The afterglow of Gerber Luminous Film degrades with time after the charging source is removed. This characteristic must be taken into account when designing markings and signs. The amount of afterglow depends on the observation conditions such as ambient (background) light and the observer.

Typical afterglow (luminance) values for Gerber Luminous Film (unprinted) are as follows:

Elapsed Time (minutes)	**Typical Luminance (mcd/m^2)**
1	117
10	50
60	8

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 Customer Service 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.

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.

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GERBER TECHNOLOGY

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