



3M™ Controltac™ Film 180, sold by Gerber (discontinued)

DESCRIPTION.....	1
PRODUCT CHARACTERISTICS	1
INTENDED APPLICATIONS	2
PERFORMANCE LIFE – (UNPRINTED)	2
SHELF LIFE AND STORAGE	2
PRINTING	2
PROTECTING GRAPHICS	3
CUTTING	3
SUBSTRATE PREPARATION	3
APPLICATION TECHNIQUES	4
POSITIONING STATEMENT	4
MAINTENANCE	4
PHYSICAL PROPERTIES.....	4
ADHESION CHARACTERISTICS	4
CHEMICAL RESISTANCE	5
RELATED LITERATURE.....	5
CONTACT INFORMATION	5

DESCRIPTION

3M™ Controltac™ Film 180 is a high performance film made exclusively for Gerber by 3M. It is a versatile durable film with a repositionable, pressure-activated adhesive. Controltac Film 180 is available in several colors (see Product Characteristics chart) and in a 15-inch punched format as an EDGE READY™ material.

PRODUCT CHARACTERISTICS

Property	Description
Thickness (film and adhesive)	3 to 4 mils (0.08 to 0.10 mm)
Film color	White
Adhesive	Positionable, pressure activated grey pigmented adhesive
Liner	Paper

Property	Description
Application substrates	For flat, flat with rivets, corrugated and moderate compound curves
Application surfaces	ABS, aluminum, chrome, class, enamel-based paints
Removability	Removable

INTENDED APPLICATIONS

Controltac Film 180 features a unique repositionable, pressure activated adhesive system, which is ideal for making the installation of large decals or paneled graphics easier. Controltac Film 180 is suitable for making interior and exterior applications including commercial signs, emblems, labels and graphics for fleet, vehicle, and recreational equipment. It can be applied to flat, flat with rivets, and corrugated surfaces as well as for first surface applications.

PERFORMANCE LIFE – (UNPRINTED)

The exterior performance life of Controltac Film 180 is based upon field experience and exposure tests conducted throughout the United States. When the graphics are processed and used according to Gerber recommendations, they should a performance life up to the values shown in the charts below. The actual performance depends on the following conditions:

- ◆ Selection and preparation of substrate
- ◆ Application methods
- ◆ Exposure conditions
- ◆ Cleaning methods

Vertical Exposure - Face of graphic is vertical 90° +/- 10°	U.S. ¹ years	S. W. ² Years
Vehicle - Unprinted	7	5
Sign - Unprinted	7	4

1 For exterior performance life statements outside of the United States, contact Gerber Technology.

2. The United States Desert Southwest area includes Arizona, New Mexico, and the desert areas of California, Nevada, Utah, and Texas.

3 Unprinted Controltac 180 has a tendency to chalk in exterior applications and is considered normal.

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). Use a paper interleaf between layers of stacked or rolled printed materials. Do not stack printed graphics face to face.

PRINTING

Use standard Controltac Film 180 settings when printing with EDGE® Series thermal transfer printing systems. Gerber standard tack application tape is required to be used as the transfer carrier for all printed graphics.

Controltac Film 180 is compatible with GerberColor™ Process Pro™ CMYK (GCP), Spot (GCS), Transparent (GCT), Medal (GCM), and Finishing (GCF) Series Foils.

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)

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 overlamine. 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 overlamine film designed for a variety of applications. This heavy-duty overlamine 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%.

CUTTING

Controltac Film 180 EDGE-printed graphics can be cut on any EDGE-compatible sprocketed plotter.

Non-printed graphics can be cut on friction cutters or the Gerber ODYSSEY™. Excess film should be weeded within 24 hours of cutting to minimize the effect of adhesive flow.

SUBSTRATE PREPARATION

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.

If applying to glass, wipe the surface with a 2-to-1 mixture of water and isopropyl alcohol. Glass temperatures can vary across the surface. These temperature variations can produce stresses, which may cause the glass to break. Use caution when applying to glass.

Some polycarbonate substrates may weaken when certain vinyl films are applied to them. Because of this possibility, the user will need to determine if safety items such as helmets, safety shields, and some windshields are compatible with their vinyl's adhesive.

Many paint systems (e.g. two-part urethane) and some plastic substrates will outgas if they are not fully cured. Out gassing can cause permanent bubbling in most films; substrates should be tested for out gassing prior to final application. Plastics should be dried at 150°F (66°C) for 24 hours prior to application to help avoid out gassing.

APPLICATION TECHNIQUES

Dry application method is recommended with Controltac 180. Panels should be overlapped by 0.0625 in (1/16 in). Gerber standard tack application tape is recommended for all EDGE-printed applications.

POSITIONING STATEMENT

This film has a repositionable adhesive. Application pressure bonds the adhesive to the substrate and destroys the repositionability feature. The film loses its repositionability feature at application temperatures above 100°F (38°C).

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

Property	English Units	Metric Units
Applied Shrinkage	0.015 in	0.4 mm
Service temperature range	-65°F to 225°F	-60°C to 107°C
Tensile Strength	5 lb/in at 73°F	0.9 kg/cm at 23°C
Min. Application Temperature	50°F	10°C

ADHESION CHARACTERISTICS

Substrate	Value
ABS, Acrylic Enamel, Fruehauf painted panels	4 lb/in (0.7 kg/cm)
Aluminum (alodine), aluminum (etched)	6 lb/in (1.1 kg/cm)
Chrome	5 lb/in (0.9 kg/cm)

CHEMICAL RESISTANCE

Controltac Film 180 is resistant to mild acids, mild alkalis and salts. Film has excellent water resistance.

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. EDGE, GERBER EDGE, GERBER EDGE 2, Gerber Scientific Products, GerberCal, GerberGraphics, GRAPHIX ADVANTAGE, GSP, and Images on Vinyl are Registered Trademarks of Gerber Technology.

Abrasion Guard, ColorSet, EDGE Positive, EDGE READY, Gerber AutoMag, GERBER EDGE FX, Gerber FastFacts, Gerber Guard, Gerber HoloGraphix, Gerber ImageCal, Gerber ImageCast, Gerber InstaChange, Gerber OMEGA, Gerber PermaGrip, Gerber PlastiGraphix, Gerber QUANTUM, Gerber Stardust, Gerber StrikeGuard, Gerber Tone, Gerber UVGuard, GerberCal, GerberColor, GerberColor Spectratone, GerberGauge, GerberGlow, GerberMag, GerberMask, GerberVision, GS 15, GS15plus, GSP Plot, GSxplus, GSx, ImagePerfect, IMAGE READY, LexEdge, Matched Technology System, MTS, ODYSSEY, OMEGA, Process Pro, SpectraShade, and SpectraTint are Trademarks of Gerber Technology.

3M and Controltac are trademarks of 3M Company.

TEDLAR is a registered trademark of DuPont.

©2017 Gerber Technology. All Right Reserved

Category: EDGE READY™	FastFact #: 5592	Supplied by: Aftermarkets	Last Modified: 04/04/17
------------------------------	-------------------------	----------------------------------	--------------------------------