

TITLE: 3M™ Controltac™ Plus Series 250 with Comply™ Performance
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Summary: 3M™ Controltac™ Plus Series 250 with Comply™ Performance Product Bulletin

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DESCRIPTION

3M Controltac *Plus* Series 250 with Comply™ Performance is a 2 mil, repositionable vinyl graphic film. Its unique construction, custom formulated exclusively for Gerber Scientific Products, Inc., is designed to eliminate air bubbles to make graphic application faster and easier than ever.

The Comply™ Performance feature of Series 250 allows air to easily escape through microreplicated channels under the film's surface for easier application.

INTENDED APPLICATIONS

3M Controltac *Plus* Series 250 Films are ideal for large graphics over corrugated and riveted surfaces such as tractor trailers, buses, and other fleet graphic applications. Series 250 can be used on a wide variety of substrates including ABS resins, aluminum, chrome, glass, fiberglass reinforced plastics, painted surfaces and flat or simple curved surfaces, with and without rivets. Series 250 Films have a grey-pigmented, pressure-sensitive adhesive which allows for optimum color opacity.

This film is not recommended for use on stainless steel, non-3M films, or substrates that do not have a clean, smooth surface or have poor paint-to-substrate adhesion. It is also not intended for applications where petrochemical contact may occur. If petrochemical exposure is anticipated, refer to the section below on protecting graphics.

PERFORMANCE LIFE (UNPRINTED)

When applied vertically, Series 250 will have an expected performance life of 7 years. If applied nonvertically, the unprinted vinyl will have a performance life of 4 years.

Performance statements are based upon field experience and exposure tests conducted throughout the United States. Substrate selection, exposure angle, environmental conditions, and maintenance of markings will affect actual performance. Continuous exposure in regions that experience maximum sunny days will result in decreased performance.

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.

MAINTENANCE

To clean printed or cut graphics, use a mild, non-abrasive soap with a soft cloth or sponge. Avoid using alcohol-based cleaners or soaps containing grit or abrasives. Automated vehicle washing systems of any sort including those that use rotary cleaning brushes or brushless technology should also be avoided.

PRINTING WITH THE GERBER EDGE®

If your GA™ software does not have palettes for Controltac *Plus* Series 250, use 3M Controltac 180 normal print settings.

GerberColor Spot (GCS) Series, GerberColor Process SUPER CMYK™ (GCP) Series, GerberColor Medal (GCM) Series and GerberColor Transparent (GCT) Series Foils can be used to print onto Series 250. (For information on the performance lives of GerberColor Foils, refer to the appropriate GerberColor Product Bulletin.)

PRINTING WITH THE GERBER EDGE 2

At this point in time, the same settings can be used with the GERBER EDGE ® 2 however optimal EDGE 2 print settings will be released in the near future. Until that time, Controltac *Plus* Series 250 will print on the EDGE 2 using GERBER EDGE settings.

PROTECTING GRAPHICS

Gerber Scientific Products, Inc. offers three products that are designed to protect vinyl and printed graphics.

Gerber Guard™ 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 will allow for simple cleaning of graffiti and mildew. The adhesive system of Gerber UVGuard is petrochemical resistant. (*The performance life of GerberColor Spot Pink will not be affected by Gerber UVGuard.)

Abrasion Guard™ is a clear, top-coat GerberColor Finishing (GCF) Foil designed to protect graphics from moderate contact or handling.

CUTTING

3M Controltac *Plus* Series 250 Vinyl can be cut on any 15" GRAPHIX ADVANTAGE® compatible plotter. A 30° SuperSharp blade is recommended. Though plotters can be set to full speed for simple geometric shapes and panels over 6" high, slowing the speed of the plotter is found to optimize cut performance. User is advised to test cut before running entire job. This product is not recommended for complex contour cutting.

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 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.

Similar to Controltac Series 180, Series 250 can be removed with heat or chemicals within 7 years. Please note that this film is not designed for short-term graphics and may cause damage upon removal from painted surfaces.

APPLICATION TECHNIQUES

Dry application should be used with Series 250. Panels can be overlapped. Graphics should be allowed to cure for 15 minutes prior to application.

IMPORTANT – PLEASE READ

Gerber standard tack application tape is required for all graphics produced with Gerber Digital Color Printing Systems. Due to the unique adhesive construction of Series 250, application tape can sometimes curl if exposed to the liner for prolonged periods of time. Therefore, to minimize contact between application tape and the liner, we suggest any of the following options for graphic application:

OPTION #1: Apply application tape immediately prior to installing graphic

OPTION #2: Trim excess application tape from graphic to reduce exposure to liner.

OPTION #3: If transporting graphic, secure the applied application tape to the back of the material liner with masking tape.

PHYSICAL PROPERTIES

Thickness	2 mil
Adhesive	Pressure sensitive
Adhesive Color	Grey
Liner	94#polyethylene-coated paper
Tensile Strength	5lb/in min at 73°F (0.9 kg/cm min at 23°C)
Dimensional Stability	.0015" (0.4 mm)
Application Temperatures	
Flat Surfaces (with and without rivets)	40°F - 100°F (4°C - 38°C)

Corrugated Surfaces	50°F - 100°F (10°C - 38°C)
Removal Temperature	50°F (10°C) minimum (air and substrate)
Operating Temperature	-65°F to 225° F (-40°C to 107°C)

CHEMICAL RESISTANCE (UNPRINTED)

Chemical Agent	Exposure Time	Result
Water	24 hours	No effect
50/50 Ethylene glycol/water	24 hours	No effect
10% Ammonium Hydroxide	10 minutes	No effect
SAE 20 motor oil	24 hours	No effect
10% Hydrochloric acid	10 minutes	No effect
Reference Fuel	1 hour	Film softening
Mineral spirits	10 minutes	No effect
VM & P Naphta	10 minutes	No effect
Methyl Alcohol	10 minutes	No effect

RELATED LITERATURE

GerberColor Spot (GCS) Series, GerberColor Process (GCP) SUPER CMYK Series, GerberColor Medal (GCM) Series, GerberColor Transparent (GCT) Series GerberColor Finishing (GCF), and Gerber Guard Product Bulletins.

For help with questions concerning Gerber products, please call your distributor or Gerber Customer Service at 1-800-222-7446 or (860) 643-1515.

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