

Quick Links

[3M Graphics Warranties](#)
[Technical Information](#)
[Safety Data Sheets \(SDS\)](#)
[Flammability \(ASTM E84 Reports\)](#)

Product Description

Product Features

- Dual cast vinyl film
- Use the film right out-of-the-box without graphic protection
- Pressure-activated adhesive for easy sliding, tacking, snap-up and repositioning
- Non-visible, air release channels for fast, easy, bubble-free installations
- Available in 60 inch rolls—allowing almost any section of the vehicle to be wrapped without seams
- Removable with heat and/or chemicals
- Expected Performance Life of 3-6 months (unprinted film with no graphic protection, applied to a flat, vertical, vehicle surface).

i IMPORTANT NOTE

All fluorescent pigments fade extremely quickly and the customer needs to be aware that this may happen within 3 months.

Recommended Types of Graphics and End Uses

- Solid color vehicle detailing
- Standard vehicle graphics, detailing and decoration, multiple layers of graphics
- Commercial vehicle and fleet graphics, emblems or striping
- Watercraft graphics applied above the static water line only

When used as described in this Bulletin, these types of graphics and end uses are warranted by the 3M™ Basic Product Warranty. Please read the entire Bulletin for additional details.

i IMPORTANT NOTE

Before using these films, please review "Handling Films" on page 4.

Characteristics

These are typical values for unprocessed product. Processing may change the values.

Physical Characteristics

Characteristic	Value
Material	Vinyl, cast
Colors	See "Colors" on page 2.
Thickness	Without adhesive: 3.5 mil (0.09 mm) With adhesive: 4.5 mil (0.11 mm)
Adhesive	Pressure-activated, slideable, repositionable, air release channels
Adhesive Color	Gray
Liner	Polyethylene-coated paper

Characteristic	Value
Adhesion, Typical <i>24 hours after application</i>	Substrate: Automotive clear coats (OEM) Adhesion: 3 – 5 pounds/inch (0.54 – 0.89 kg/cm)
Tensile Strength	5 pounds/inch at 73 °F (0.9 kg/cm at 23 °C)
Chemical Resistance	<ul style="list-style-type: none"> Resists mild alkalis, mild acids, and salt Excellent resistance to water (<i>does not include immersion</i>) Resists occasional fuel spills
Flammability	N/A

Application Characteristics

Characteristic	Value
Finished Graphic Application Recommendation	Surface type: Flat, simple curves, moderate compound curves Substrate type: ABS resins, chrome, glass, paint (check adhesion to power-coated or water-based paints) fiberglass with gel coat Application Temperature: 60 – 90 °F (16 – 32 °C) Application Method: Dry
Applied Shrinkage	0.015 inches (0.4 mm)
Temperature Range After Application	-65 to +225 °F (-60 to +107 °C)
Graphic Removal	Removable with heat and/or chemicals from most substrates within the Expected Performance Life at 50 °F (10 °C) minimum (air and substrate)

Colors

Texture	Color No.	Color
Satin	VCW 17070	Satin Neon Pink
	VCW 17072	Satin Neon Red
	VCW 17074	Satin Neon Orange
	VCW 17076	Satin Neon Yellow
	VCW 17120	Satin Neon Green

Warranty Information

Warranty Coverage Overview

The warranty coverage for each graphic is based on the user(s) both reading and following all applicable and current 3M Product and Instruction Bulletins. 3M will honor eligible graphics for the warranty period stated in the 3M Graphics Warranties Matrices found at 3Mgraphics.com/warranties, that is current when the film was purchased. The warranty period may be reduced and stipulations may apply for certain constructions and applications, as covered in this Bulletin.

The following is made in lieu of all other express or implied warranties, including any implied warranty of merchantability or fitness for a particular purpose or implied warranty arising out of a course of dealing, custom or usage of trade.

3M Basic Product Warranty

3M Graphics Products are warranted to be free of defects in materials and manufacture at the time of shipment and to meet the specifications stated in its applicable 3M Product Bulletin and as further set forth in the [3M Graphics Warranties Bulletin](#).

Limited Remedy

3M will replace or refund the price of any 3M materials that do not meet this warranty within the specified time periods. These remedies are exclusive.

Limitation of Liability

Except where prohibited by law, 3M SHALL NOT UNDER ANY CIRCUMSTANCES BE LIABLE TO PURCHASER OR USER FOR ANY DIRECT (EXCEPT FOR THE LIMITED REMEDY PROVIDED ABOVE), INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, LABOR, NON-3M MATERIAL CHARGES, LOSS OF PROFITS, REVENUE, BUSINESS, OPPORTUNITY, OR GOODWILL) RESULTING FROM OR IN ANY WAY RELATED TO 3M'S PRODUCTS, SERVICES or THIS BULLETIN. This limitation of liability applies regardless of the legal or equitable theory under which such losses or damages are sought including breach of contract, breach of warranty, negligence, strict liability, or any other legal or equitable theory.

Warranty Period Matrices

See the 3M Graphics Warranties Matrices at 3Mgraphics.com/warranties, for Warranty Period information specific to your film.

Additional Limitations

See the 3M Graphics Warranties Bulletin at 3Mgraphics.com/warranties, for terms, additional limitations of your warranty, if any, and limitations of liability.

Factors that Affect Graphic Performance Life

The actual performance life of a graphic is affected by:

- selection, condition and preparation of the substrate.
- surface texture.
- application methods.
- angle and direction of sun exposure.
- environmental conditions.
- cleaning or maintenance methods.

Graphics Manufacturing

CAUTION

Before using any equipment, always read the manufacturer's instructions for safe operation.

Layout Considerations for Graphic Panels

Take into account these considerations when planning your graphic layout:

- Certain film colors may have a directional characteristic in their appearance. For the best overall appearance, do not alternate between lengthwise and widthwise graphic panels.
- Film colors can vary from lot-to-lot. For consistent looking color, use the same lot number of film for an entire vehicle.

Cutting

See [3M Instruction Bulletin 4.1](#) for Sheeting, Scoring and Film Cutting details.

IMPORTANT NOTE

The thickness and texture of this film makes it more difficult to cut and weed cleanly. Use clean, sharp, properly aligned blades. The user must assume responsibility of the outcome, so always test and approve before cutting a large job.

Application Tapes

See [3M Instruction Bulletin AT-1](#) to determine what application tape is recommend for your film or finished graphic.

Premasking Tape

Increases stiffness during application while preventing stretching and damage. Use when little or no liner is exposed. See [3M Instruction Bulletin 4.3](#) for complete details.

Prespacing Tape

Holds cut and weeded letters or graphics in place during application and after removing the film liner, while preventing stretching and damage. Use when large amounts of liner are exposed. See [3M Instruction Bulletin 4.3](#) for complete details.

Application and Installation

In addition to other 3M Bulletins specified in this document, the following Bulletins provide details that you may need to successfully apply a graphic.

- [3M Instruction Bulletin 5.36](#). Application Techniques for Automobiles, Vans and Buses. Complete the 3M Pre-Installation Inspection Record found in this Instruction Bulletin prior to manufacturing or applying a graphic to an automobile, van, or bus.
- [3M Instruction Bulletin 5.4](#). Application, Fleet Trucks.
- [3M Instruction Bulletin 5.42](#). Application, Special Considerations for Watercraft. Complete the 3M Pre-Installation Inspection Record found in this Instruction Bulletin prior to manufacturing or applying a graphic to a watercraft.
- [3M Product and Instruction Bulletin V-Tools](#). 3M™ Vehicle Channel Applicator Tools.

CAUTION

3M recommends using additional heat in the post-application process for vehicle wraps. During this process, 3M only recommends using a heat gun to make sure the film surface temperature does not exceed 212° F (100° C).

Handling Films

- Align the graphic using masking tape, never a grease pencil.
- Use a felt squeegee for installing the film to minimize scratching.
- Use a heat gun instead of a torch, when heat is needed. A torch may alter the appearance of the finish.

Pressure-activated Adhesive

The pressure activated adhesive on this film offers:

- smooth sliding into position on a substrate;
- fast finger tacking to check position; and
- easy snap-up and repositioning when you need it.

The **snap-up and reposition feature is lost:**

- when firm pressure with a squeegee or other application tool is applied.
- at application temperatures above 100 F (38 C) even if only light finger pressure was used for tacking.
- if any part of the film is removed from the original liner and reapplied to the same or another liner.
- solvent from inkjet ink has not completely dried or cured, which affects both slideability and snap-up.

Working with Air Release Channels

Air release channels are a characteristic of films with Comply™ adhesive. Films designated as Cv3 offer the ultimate in invisible air release channels.

- The channels will be damaged and effective air removal affected if you remove and attempt to change liners or reapply the same liner.
- For the best results, always work from the center out to the edges of the graphic to allow trapped air to exit through the air release channels. If the channels are closed off by firm pressure and air is trapped, use an air release tool to aid in removing air bubbles. See [3M Instruction Bulletin 5.4](#) for details.

Video

Click [here](#) to see how 3M's Comply™ adhesive technology works.

3M™ Tape Primer 94

3M recommends that where the film will be stretched, use primer to maximize a graphic's bond to its substrate.

Heating and Stretching the Film

This film can be stretched up to 130% (i.e., a 10 inch film piece can be stretched to 13 inches). See [3M Instruction Bulletin 5.36](#) for more details.

Maintenance and Cleaning

Use care to avoid scratching the film. Never scrub the film. Scratching and abrasion marks may be visible and you may not be able to work them out of the unique finish of the film. Avoid using harsh chemicals and brushes when cleaning your vehicle, and avoid parking near shrubs and trees or any other items that could scratch the vehicle.

Use a cleaner designed for high-quality painted surfaces. The cleaner must be wet, non-abrasive, without strong solvents, and have a pH value between 3 and 11 (neither strongly acidic nor strongly alkaline). See [3M Instruction Bulletin 6.5](#) for details.

Removal

Removal requires heat and/or chemicals. The ease and rate of removal depends on a number of factors. See [3M Instruction Bulletin 6.5](#) for details.

Shelf Life, Storage and Shipping

Shelf Life

The shelf life is **never more than 3 years** from the date of manufacture on the original box.

If you process the film, the shelf life is changed to **1 year** from the processing date, but not later than the 3 year maximum from the manufacturing date.

Storage Conditions

- 40° to 100°F (4° to 38°C)
- Out of sunlight
- Clean, dry area
- Original container
- Bring the film to print room temperature before using

Shipping Finished Graphics

Flat, or rolled printed side out on 6 inch (15 cm) or larger core. This helps prevent the application tape, if used, from popping off.

Health and Safety

CAUTION

When handling any chemical products, read the manufacturers' container labels and the Safety Data Sheets (SDS) for important health, safety and environmental information. To obtain SDS sheets for 3M products go to 3M.com/MSDS, or by mail or in case of an emergency, call 1-800-364-3577 or 1-651-737-6501.

When using any equipment, always follow the manufacturers' instructions for safe operation.

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