

**Quick Links**

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

**with Comply™ Adhesive**  
**VC19161 - Matte Black**  
**VC19162 - Gloss Black**

**Product Description**

- 3-mil calendered black vinyl film.
- Indoor and outdoor applications for thermal mass transfer and electronic cutting.

**Product Features**

- Pressure-activated adhesive for easy sliding, tacking, snap-up and repositioning.
- Features non-visible air release channels for fast and easy, bubble-free graphic installations.
- Removable with heat and/or chemicals for up to three years and permanent up to five years.
- Expected Performance Life of 5 years (unwarranted period for unprinted film with no graphic protection, applied to a flat, vertical, outdoor surface).

**Recommended Types of Graphics and End Uses**

- Prespaced, electronically-cut graphics
- Thermal transfer graphics
- Commercial and industrial signage including emblems, vehicle graphics, labels and striping

**Graphic Protection**

- [3M™ Scotchcal™ Gloss Overlaminat e 8508](#)
- [3M™ Scotchcal™ Luster Overlaminat e 8509](#)
- [3M™ Scotchcal™ Matte Overlaminat e 8510](#)

**Application Tapes**

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

**Characteristics**

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

**Physical Characteristics**

Characteristic	Value
Material	Calendered vinyl
Film Color	<b>VC19161: Matte Black</b> <b>VC19162: Gloss Black</b>
Thickness	<b>Without adhesive:</b> 3 mil (0.076 mm) <b>With adhesive:</b> 4 mil (0.102 mm)
Adhesive	Pressure-activated (slide, tack, snap-up, reposition) with air release channels
Adhesive Color	Clear
Liner	Polyethylene-coated paper
Flammability	Call 1-800-328-3908 for information



## Application Characteristics

Characteristic	Value
<b>Finished Graphic Application Recommendation</b>	<b>Surface type:</b> - Smooth, flat with or without rivets (expect tenting); simple curves <b>Substrate type:</b> - Painted metal and other painted substrates, rigid plastic, glass <b>Application temperature:</b> 50° – 100°F (4.4° – 38°C) air and substrate <b>Application method:</b> Dry
<b>Temperature Range After Application</b>	-50 to +150 °F (-45 to +65 °C) (not for extended periods of time at the extremes)
<b>Graphic Removal</b>	Removable with heat and/or chemicals from most substrates for up to 3 years; leaves little or no adhesive residue

 **WARNING**

Glass surfaces exposed to sunlight will absorb heat. A glass surface covered by a film with high opacity or dark-colored ink, including films with small areas of high opacity or dark-colored ink, will absorb more heat. Heat absorption can create thermal stress that results in glass breakage, or thermal cracking. This can cause personal injury and property damage. 3M specifically does not recommend using a film with high opacity or dark-colored ink on glass surfaces with significant exposure to sunlight.

## Warranty Information

### 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 Graphics Product Bulletin and as further set forth in the [3M Graphics Warranties Bulletin](#).

### Limited Remedy

The limited remedy applicable to each warranty is addressed in the 3M Graphics Warranties Bulletin found at [3MGraphics.com/warranties](http://3MGraphics.com/warranties).

### 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 IN THE 3M GRAPHICS WARRANTIES BULLETIN), 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 GRAPHICS 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.

## Additional Limitations

See the 3M Graphics Warranties Bulletin at [3MGraphics.com/warranties](https://www.3mgraphics.com/warranties), for terms, additional limitations of your warranty, if any, information on reduced warranties for different exposures, and limitations of liability.

## Factors that Affect Graphic Performance Life

The actual performance life of a graphic is affected by:

- the combinations of graphics materials used.
- 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



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

## Cutting

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

## Graphic Protection

Graphic protection may improve the appearance, performance and durability of the graphic. Click on the graphic protection options listed in Product Bulletin or see the [3M Graphics Market Product Catalog](#), for more information.



During installation, scratches may occur on films without graphic protection.

## Application Tapes

There are two types of application tapes. See [3M Instruction Bulletin AT-1](#) to determine what application tape is recommended 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 2.1](#) Design of Graphics
- [3M Instruction Bulletin 5.1](#) Select and Prepare Substrates for Graphic Application
- [3M Instruction Bulletin 5.5](#) Application, General Procedures for Interior and Exterior Dry Application

### IMPORTANT NOTE

3M recommends using additional heat in the post-application process for finished graphics. During this process, 3M only recommends using a heat gun to make sure the film surface temperature reaches a minimum of 200° F (93° C) and does not exceed 225° F (107° C).

## 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 that allow trapped air to exit through the edges of the graphic.

- 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.

## Maintenance and Cleaning

Use a cleaner designed for high-quality painted surfaces. The cleaner must be wet, non-abrasive, without 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 room temperature before use

### 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 manufacturer's 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/SDS](http://3M.com/SDS), 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 manufacturer's instructions for safe operation.

### 3M Commercial Solutions

3M Center  
Building 220-12E-04  
St. Paul, MN 55144-1000

Phone 1-888-328-3908  
Web 3M.com/Graphics

### 3M Canada

PO Box 5757  
London, ON N6A 4T1  
1-800-265-1840  
Fax 519-452-6245

### 3M México S.A. de C.V.

Av. Santa Fe No. 55  
Col. Santa Fe, Del. Alvaro Obregón  
México D.F. 01210  
General 5255-5270-0400  
Fax 5255-5270-2277

### 3M Puerto Rico, Inc.

350 Chardon Avenue  
Suite 1100  
San Juan, PR 00918  
General 787-620-3000  
Fax 787-620-3018