



# Paint Protection Film

## Patterning, Cutting and Application Procedures for Roll Goods For Professional Applicators

Instruction Bulletin 2-18

September 2002

Replaces IB 2-18 dated October 1999  
**GLOBAL USE**

### General Description

These instructions describe the process used to pattern, cut and apply 3M™ Paint Protection Film to the surface of a vehicle when the film is not supplied as a die-cut part customized for the vehicle.

**Important Note:** One of the steps in the process involves trimming the film with a sharp razor or Akukut device while the film is in contact with the paint. Cutting into the film and not into the paint requires practice and skill. ***Cutting into the paint must be avoided.*** These instructions are intended for use by professional applicators only. Please read all instructions before beginning application.

### General Requirements

#### Application Tools

#### 3M Part Number

Orange Squeegee

#71607

(Note: This squeegee is preferred for application of protective films to avoid scratching of paint or film.)

Air Release Tool

#71604

Scalpel, Akukut\* or sharp razor blade

Alcohol and water solution: 25% isopropyl (rubbing) alcohol with 75% water for application

Spray bottle

3M™ General Purpose Adhesive Cleaner

#08984

3M™ Prep Solvent 70

#08973

Isopropyl Alcohol

Clean work table

3M™ Application Tape

#75906, #75951 or #76051

3M™ Perfect-It™ III Detailing Cloth

#06016

### Storage

It is recommended that temperatures of 13°C - 32°C (55°F - 90°F) and 44% - 55% relative humidity be maintained in the film storage location. Film should be used within one year of purchase.

\* The Akukut is available from Tobias Associates Inc., 50 Industrial Drive, Warminster, PA 18974. (215-322-1500)

## Instruction Bulletin 2-18

Page 2

---

|                    |  |
|--------------------|--|
| <b>Temperature</b> | Roll goods film should be applied when air and application surface temperatures are between 13°C - 32°C (55°F - 90°F). Surfaces may be heated in order to raise the surface temperature. This may be done with a portable heater, heat lamps or hot water. |
|--------------------|--|

---

|                            |   |
|----------------------------|---|
| <b>Surface Preparation</b> | <p>All surfaces must be cleaned prior to application of roll goods film. On repainted vehicles, paint must be thoroughly dry and cured before any attempt to apply film to the vehicle is made in order to avoid film bubbling due to paint outgassing. Check paint manufacturer's instructions for recommended cure time and method.</p> <p>The following procedure is recommended:</p> <ol style="list-style-type: none"><li>1. Remove any grease or tar which might be present.</li><li>2. Wipe with isopropyl alcohol or other residue-free cleaner (3M™ Prep Solvent 70 or 3M™ General Purpose Adhesive Cleaner).</li><li>3. Dry the surface with a clean, lint-free cloth (such as a 3M™ Perfect-It™ III Detailing Cloth) before the cleaning solvent evaporates.</li></ol> |
|----------------------------|---|

---

|                              |  |
|------------------------------|--|
| <b>Application Procedure</b> | <ol style="list-style-type: none"><li>1. Make sure the film and vehicle temperatures are between 13°C - 32°C (55°F - 90°F) for best results.</li><li>2. Vehicle surface must be free of wax, grease, oil, etc. This includes edge areas under the hood of the vehicle.</li><li>3. Always handle adhesive side of the film with clean, wet hands to avoid any potential transfer of fingerprints to the adhesive.</li><li>4. Measure the length of the surface to be covered by the film. For hoods and front fenders, include 2 extra inches in length that will be trimmed later.</li><li>5. On a cutting table, cut the product to length.</li><li>6. The width of the film depends on the vehicle. The edge should be blended with a feature line where possible. For example, because of the contours of the vehicle, a Chevrolet Suburban can utilize only a 4-inch wide film strip on the leading edge of the hood. A Dodge minivan can use a 12-inch wide film for the hood.</li><li>7. Place the film face down on a flat surface. Remove the liner by pulling liner directly back upon itself at an angle of 180°. This will minimize stretching of the film. Be careful not to allow dirt to contaminate the adhesive.</li><li>8. A wet application is highly recommended for protective film. Use a solution of 25% isopropyl alcohol and 75% water. Spray the entire adhesive surface of the film and the surface of the vehicle on which it is to be applied. DO NOT use detergent and water or apply dry, as it may result in a hazy appearance of the film and long-term adhesion may be adversely affected. Keep the adhesive wet during application to facilitate repositioning.</li></ol> <p><b>Tip:</b> Excess application solution allows repositioning and easier part placement. Use the application solution liberally.</p> |
|------------------------------|--|

9. Position the film onto the surface of the vehicle such that the product is straight. When doing a hood, masking tape markers can be used to ensure the product is aligned correctly. If you wish to wrap the leading edges for added protection, extend the film 0.75 inch past the leading edge and fold the excess material underneath.
10. Spray the water/isopropyl solution onto the surface of the film. This allows the squeegee to slide on the film surface.
11. Starting in the center, squeegee the solution and air from under the film using overlapping strokes. Always squeegee the trapped air or solution to the nearest edge. Be gentle and avoid creasing the film. Film may be removed to be repositioned, but remember to keep the adhesive wet at all times and allow film to relax back to original size and shape before reapplying. Take care to avoid stretching the film more than 20%.
12. If bubbles appear in the film after application, remove by piercing the bubble at the outer edge with the Air Release Tool or pin and gently forcing the air and excess wetting solution out through the hole with a squeegee or finger. If the film appears hazy after applying as recommended, it is because there is still a thin film of air or solution present beneath the film. The film should be carefully removed, allowed to relax back to original shape and size, and reapplied.
13. The film has a unique property. If the 8-mil film is scored to a depth of 2-6 mils, it tears cleanly along the scored line. Using a scalpel, Akukut or razor knife, score the film where trimming is needed. Initiate a tear and remove the excess by tearing the film along the score line. **(DO NOT CUT INTO THE PAINT.)**
14. Wrap film under the leading edge of the hood, trim where needed using the scoring technique. Use firm pressure or a heat gun to securely attach the film under the hood.
15. Wipe the vehicle and film dry.

### **Handling Emblems, Hood Ornaments, etc.**

Squeegee the film as close to the edges of the emblem as possible. Using a scalpel, Akukut or razor knife, score the film. **(DO NOT CUT INTO THE PAINT.)** Trim carefully around the emblem and remove the excess film.

### **Handling Contours**

Each vehicle offers unique challenges when applying a two-dimensional film to a three-dimensional surface.

For example, a Chevrolet full-size pickup truck will have an excess of film in the center of the hood. The excess film in this area needs to be removed. The film is removed by squeegeeing the film into a compact wrinkle in the center of the hood. Score around the wrinkled area with the blade. **(DO NOT CUT INTO THE PAINT.)** Tear the film from the wrinkled area.

Moderate heat can be used to help contour the film. The film should always remain cool enough to touch with your fingers. Excess heat will cause film distortion. Never stretch the film more than 20%.

# Instruction Bulletin 2-18

Page 4

---

## Patterning

Patterning can be used to make custom cut parts to fit around emblem, lights, or other body structures.

1. Remove a strip of 3M™ Application Tape a few inches longer than the surface to be covered with 3M™ Paint Protection Film.
2. Starting from the center, press the application tape onto the surface as you travel towards the edges. Allow the application tape to follow the curves and contours of the vehicle. Use multiple strips of application tape to mask the entire surface. Lay the tape as flat as possible, leaving a minimum amount of creases. For concave areas, do not press the application tape into the recessed areas. (Later you will be able to stretch the paint protection film into these areas.)
3. Use the edge of a pencil to outline the feature lines and sheet metal edges. Trace around any hood ornaments or emblems.
4. Remove application tape from vehicle and apply to the face of the protective film.
5. Cut the pattern with a sharp razor blade or scalpel. For best results, cut slightly inside the lines. For hood pieces, leave an extra inch at each end to be trimmed later. If preferred, leave excess material to wrap under the sheet metal.
6. Remove application tape by peeling back at a 180° angle.

---

## Maintenance

Once applied, refrain from washing vehicle in an automated car wash for 24 hours. Washing after that time presents no problem, and no special care need be taken for the film. When waxing the vehicle, some wax may build up along the film edges. This can easily be removed when dry with a soft brush such as an old toothbrush.

---

## Removal

If desired, film can be removed at any time by picking up a corner of the film and pulling the film off the vehicle surface. If the film has been present a long time, or if the film and vehicle are cold, a heat gun or hair dryer may be used to soften the adhesive, allowing easier removal. The 3M™ Scotchbrite™ Stripe Removal Disk System will not remove the film.

**IMPORTANT NOTICE:** All statements, technical information and recommendations in this document are based on tests 3M believes are reliable. 3M does not warrant or guarantee the accuracy or completeness of this information. 3M WARRANTS THAT THIS PRODUCT WILL CONFORM TO 3M'S SPECIFICATIONS FOR THREE YEARS FOLLOWING PURCHASE FROM 3M, IF APPLIED IN ACCORDANCE WITH 3M'S INSTRUCTIONS. 3M MAKES NO OTHER WARRANTIES REGARDING THIS PRODUCT, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. User is responsible for determining whether this product is suitable for user's application. Because there are many factors that can affect the use and performance of this product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate this product to determine whether it is fit for a particular purpose, is suitable for user's application, and meets user's performance specifications and expectations.

Limitation of Remedies and Liability: If this 3M product is proved to be defective, the exclusive remedy, at 3M's option, will be to refund the purchase price of or to replace such defective product. 3M WILL NOT BE LIABLE FOR ANY OTHER LOSS OR DAMAGES, WHETHER DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL, ARISING OUT OF THE USE OF OR INABILITY TO USE THIS PRODUCT REGARDLESS OF THE LEGAL THEORY ASSERTED, INCLUDING NEGLIGENCE, WARRANTY AND STRICT LIABILITY. The foregoing warranty and limitation may only be amended by a written agreement signed by an authorized 3M officer.



Automotive Aftermarket Division

3M Center, Building 223-6N-01  
St. Paul, MN 55144-1000

*Recycled Paper*

40% Post-consumer waste paper  
10% Pre-consumer waste paper

Printed in U.S.A.  
© 3M 2002

2757-EMC M  
75-3469-1131-8