

Application Instructions for Avery Dennison Surface Protection Films

Instructional Bulletin #4.03 (Revision 4)

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1.0 Surface Preparation

All application surfaces must be considered contaminated and must be cleaned according to Instructional Bulletin #1.10 Surface Cleaning and Preparation.

NOTE: Always ensure the painted surface has been properly processed per the paint manufacturer's specifications or recommendations. The drying or curing period of the paint system must be followed. Failure to adhere to the above can result in poor decal performance and difficult removal characteristics.

2.0 Application Tools

- Squeegee
- Alcohol and water solution: 25% isopropyl (rubbing) alcohol with 75% water for application
- Spray bottle
- Razor Knife or Razor Blade

3.0 Temperature

The film can be applied if the ambient air and substrate surface temperatures are between 50°F (10°C) and 90° (32°C). If the substrate surface temperature is below minimum requirements, the substrate must be heated until minimum application temperature has been achieved. During cold temperature months, it is recommended to use a heat gun or hair dryer on the surface of the substrate before and after application. This will increase the surface temperature of the substrate and accelerate the ultimate adhesion of the film.

Ambient Air Temperature - Air temperature of environment.

Surface Temperature - Substrate temperature of vehicle or surface .

4.0 Key Application Tips Before Proceeding

- Surfaces must be completely clean and prepared according to Avery Dennison Instructional Bulletin #1.10. This is a critical first step toward successful decal application.
- Follow the guidelines toward minimum and maximum application temperatures and required service conditions before and after application.
- Use application fluid or the "wet method" during installation. A solution of (25% isopropyl/75% water) will allow for easier part placement and repositioning.
- The film must be thoroughly squeegeed to remove any entrapped application fluid or air bubbles after the decal has been properly placed. Wrap a squeegee sleeve or soft clean rag around the squeegee to prevent potential damage to the decal.
- The film may appear to gain clarity and gloss after application and exposure to direct sunlight (once the adhesive "wets out" and bonds to the surface the clarity and gloss of the film tends to improve

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5.0 Application Procedures

The following instructions show a step by step procedure for installing plotter cut surface protection film for application to flat, curved, and compound curved, substrates. The recommended method for applying the surface protection film is using a “wet application method” to provide ease of placement and repositioning of the pressure sensitive film. For questions regarding application procedures on proper application techniques contact Avery Dennison's Customer Technical Support Department.

5.1 Application Procedure

1. Make sure the surface protection film and substrate temperatures are between 50° - 90°F

(10° – 32°C) for the best results.



2. The vehicle surface must be free of wax, grease, oil, dirt, etc.



3. Make sure you have clean, wet hands (use application fluid) when handling the adhesive side of the film to avoid any potential transfer of fingerprints, dirt, or oils, to the adhesive.



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- Place film down on flat surface and remove the liner by pulling back directly upon itself at an angle of 180°F (depending on the size of the part you may want to remove the liner in portions jumping to step #8). This will minimize stretching of the film. Be careful not allow dirt or other contaminants to get on the adhesive.

- A wet application is strongly recommended for the surface protection film. The recommended application solution is a mixture of 25% isopropyl (rubbing) alcohol and 75% water. Spray the entire adhesive surface of the film and the surface of the vehicle to which it is to be applied. Keep the adhesive wet during the application to aid repositioning of the film. You can never use too much application fluid, when using the mixture of 25% isopropyl alcohol and 75% water. (Be cautious of using other solutions and applications methods for the application of surface protection film. They may affect the adhesion performance as well as promote a hazy appearance of the film).



- Position the film onto the surface of the vehicle so that the product is straight or between registration marks if you have chosen to use. When doing a hood, masking tape can be used to ensure the product is aligned correctly.

- Spray the application fluid onto the surface of the film. This allows the squeegee to slide on the film surface.

- Beginning in the center of the film, squeegee the solution and air from underneath the surface of the film using overlapping strokes. Always squeegee the trapped air or application fluid to the nearest edge. The film may be removed and repositioned, but remember to keep the adhesive wet at all times and allow the film to relax back to original size and shape before reapplying. Take care to avoid over stretching the film (do not stretch more than 20%).



5.2 Application procedures for 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.

5.3 Application procedures for contours

Each vehicle application will offer different challenges when trying to apply the surface protection film. The surface protection film may need to be trimmed in cases where there is excess film.

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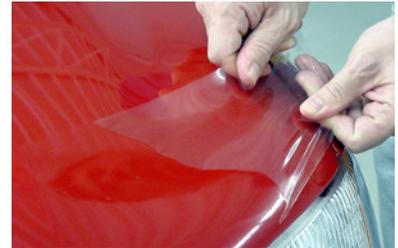
6.0 Maintenance

It is recommended to refrain from using any automated car wash or power wash for a minimum of 24 hours after application of the surface protection film. After that time frame, there are no special care requirements that need be taken for washing the car. Cleaning may be performed by using most commercial cleaners or protectants recommended for auto applications.

However, for tough stains such as tar, bugs, etc., it is recommended to use a mineral spirits based cleaner. Never use any Methyl Ethyl Ketone (MEK) – based cleaning solutions on these films. Surface protection film may be waxed by hand (it is not advisable to use a power buffer because it may cause damage to the film) with most commercial waxes or glazes. Wax may tend to build up along edges and can be easily removed with a soft brush.

7.0 Removal

This film may be removed from a vehicle at any time by picking up a corner and stretching the film somewhere between a 0° and 45° angle. As the film is being stretched it will start to pop off of the surface and should remove cleanly. As you increase the angle of removal beyond 45° the occurrence of leaving adhesive residue will also tend to increase. It may be difficult to remove film that has been applied for a long time, or if the film and vehicle are cold. For the best results, try removing when the temperature of the film and surface are above 55°F. If removing in colder temperatures, you can also try using a heat gun or hair dryer to aid removal.



Revisions have been italicized.

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