# Application Instructions for Avery Dennison™ Easy Apply Film

Instructional Bulletin #4.04 (Revision 3)

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#### 1.0 General Information

Avery Dennison™ Easy Apply Films offer a patented performance feature designed to make installation easier and more effective no matter what the skill level of the applicator. All EZ and EZ RS products have been designed to make the installation of large panel graphics on fleet and vehicles much easier and quicker than in the past.

NOTE: Be sure to read the appropriate Product Data Bulletin for details about each film for complete information regarding minimum and maximum application temperatures, recommended substrates, and immediate service conditions before and after application. These factors are critical to a successful application and future decal performance. Once assured that all factors are understood with respect to the product, and all factors comply with the product recommendations, cleaning and surface preparation can begin.

IMPORTANT: Documentation of application date, material lot number, and application conditions (temperature, substrate, etc.) is required to support warranty claims in the event of decal failure.

### 2.0 Benefits of Avery Dennison™ Easy Apply

Avery Dennison™ Easy Apply is an enhanced performance feature offered only on the EZ Series Films referenced above. It enables an installer to apply faster and limit the risks associated with graphic application such as wrinkling and entrapped air bubbles. In addition to minimizing these risks during application, an installer can also re-position a graphic within the first few minutes of applying material. If air bubbles are trapped, it is possible for small bubbles to be pressed out with relative ease.

The Easy Apply RS (EZ RS) films have the added advantage of repositionability, or slideability of graphics as well as air egress.

Avery Dennison™ Easy Apply films will allow installers of all levels to install graphics with greater ease and in less time. Professional looking graphics can be easier and less costly to achieve when using EZ Series films.

#### 3.0 Application Instructions

#### 3.1 Prepare the application surface.

 A clean, dry application surface is absolutely necessary to facilitate the proper bonding of an adhesive to the application surface. Refer to Avery Dennison Instructional Bulletins #1.10 Substrate Cleaning and Preparation and #4.00 Application Instructions for Avery Dennison for specific technical recommendations.

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## 3.2 Take time to review the recommended application temperature for film, air, and substrate.

- Air, film, and application surface temperature are important and must match the characteristics of the adhesive and film being applied.
- Lower temperatures restrict good adhesion properties, which increase the risk of a graphic failure due to low levels of adhesion.
- EZ Series films have a broad application temperature range (refer to the appropriate product data bulletin). While the film can be applied at the lower end of the temperature range, more pressure will be needed and it will take longer for a functional bond to be achieved during application. Until a "functional" bond is achieved, it is risky to remove premask or allow a vehicle to be transported. Higher heat and humidity conditions may also make a graphic more difficult to re-position once it has made contact with the applications surface. If the air temperature or the application surface temperature exceeds 100°F, Avery Dennison™ Easy Apply performance may be limited.
- The ability to move trapped air can be adversely affected by the amount of pressure used previously to adhere the graphic to the substrate.
- For optimal application performance and ease-of-use characteristics, a minimum temperature of 60 °F (16 °C) is recommended.

#### 3.3 Select installation tools and techniques.

EZ films can be applied using either traditional or new tools and techniques.

### 3.4 Apply the graphic

NOTE: Reference Instructional Bulletin #4.00 Application Instructions for Avery Dennison Films. CAUTION: Do not use wet application for EZ films.

- Ensure that the application surface is clean and dry before application of any graphic film.
- Be sure the air, film, and substrate are within the temperature range recommended for the film
- Experiment with what tool and technique works best before applying large graphics. EZ
  Series films are designed to work with a variety of tools and techniques. Whatever the
  tools or technique, it is important to use enough pressure to make sure the graphic firmly
  adheres to the substrate. NOTE: Pre-masked graphic requires additional pressure.
- Overlap all strokes by about 50%.
- If a squeegee is used, hold it at 50-70 degrees to the surface. The flatter the squeegee
  the better!
- Locate where to position graphics and mark the spot using small pieces of masking tape.
- If the graphic is large, tape it into position securely with masking tape and use a masking tape hinge method illustrated in Instruction Bulletin #4.00.
- If the graphic is less than 8 square feet, remove the entire liner. Position the graphic on the marked points using light tacking pressure similar to other Avery Dennison materials.
- Squeegee the film using moderately firm, overlapping strokes, making sure the applicator is flat with the substrate along the entire length of the stroke.
- Remove air bubbles and tenting around rivets by using an air release tool and heat source.

#### 3.5 Remove air bubbles and tenting around rivets.

Air bubbles in an installed graphic can be removed easily by applying pressure to the middle
of the bubble with your thumb and rub out toward the bubble edges. The air will disperse
along the air egress channels. There is no need to make air release holes unless the air
bubble is over 1" in diameter. In that case, use an air release tool and remove the air using
conventional techniques.

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- Tenting around rivets can be handled in one of two ways:
  - 1) Use an air release tool, heat source, and rivet brush. (Reference Section 5 for recommended tools)
  - 2) Press the top of the rivet head down then force air away from the rivet and into the flat area surrounding the rivet head. Use an air release tool and make a small hole to release the air then, heat the film around the rivet. While still warm, press the film down tightly around the rivet head using a squeegee with a low friction sleeve, rivet brush, and/or your thumb.
- To secure the film around the rivet head, a heat source must be used and work the film in a circular counter clockwise motion back towards the base of the rivet head.

#### 3.6 Final Squeegee Pass. Tips on Good Re-Squeegee Techniques:

NOTE: This is a key final step and will help prevent premature graphic failure due to edge lifting.

- Wait at least 5–10 minutes after the application to allow the adhesion to build to the functional bond level.
- Remove the pre-mask.
- Re-squeegee all graphic edges, overlaps, and seams using firm pressure. Use a squeegee
  with a low friction sleeve to prevent scratching or damage to the decal.
- Re-squeegee is a must on ALL edges of the decal.

#### 4.0 Confirmation of Adequate Adhesion

Ambient temperature is a key environmental factor affecting adhesion of pressure sensitive adhesive films. The warmer the ambient temperature is, the less time it takes the film to achieve adequate adhesion. Temperatures below the recommended low application temperature may take significantly longer, even days, to achieve adequate adhesion.

Until you are comfortable applying the film in various service temperature conditions and using any new application methods or tools, it is recommend that a quick test be performed to ensure that there is no air trapped under the graphic.

- Wait several hours after application so the adhesive has reached its functional bond level.
- Using a squeegee with a friction sleeve, rub a small section of the graphic using firm pressure.
- If air bubbles are apparent and large than a ½" to 1" in diameter during the test, the application method and/or the temperature used was not adequate.
- If the adhesion is not adequate and the graphic must be put into service right away, carefully
  re-squeegee the graphic (using a squeegee with a friction sleeve). Re-Squeegee the film
  using greater pressure, overlapping strokes, and making sure the applicator is flat with the
  substrate along the entire length of the stroke. This will help improve the adhesion of the
  graphic.

#### 5.0 Tools and Techniques

#### 5.1 Traditional Application Tools:

Avery Dennison™ Easy Apply Films can be applied using traditional tools and techniques special tools are not required. (Refer to Instructional Bulletin #4.00)

- Squeegee (or Squeegee with Velcro strip)
- Low Friction Sleeve

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- Heat Source
- Razor Knife
- Rivet Brush
- Air Release Tool (Straight Pin)
- Masking Tape
- Weed Burner (torch with flame spreader attached)
- Marking Pencil (chalk like marking pencil is strongly not recommended).

#### **5.2 General Application Techniques**

As with any technique, the skill of the installer can make a big difference. However, with Avery Dennison™ Easy Apply Films, most installers can achieve high quality results and the installer can usually complete the job in less time than with most other films.

- Ensure that the application surface is clean and dry before application of any graphic film.
- Use the conventional methods for positioning and hinging the graphics as described in Instructional Bulletin #4.00.
- Select the proper installation tool.
- Always use adequate pressure and be sure to use more pressure when applying graphics that have a pre-mask.
- Use firm, uniform overlapping strokes to adhere the film to the substrate
- Re-squeegee all graphics edges, overlaps, and seams using firm pressure.

#### 6.0 Warranties and Limited Remedy

This instructional bulletin describes a technique. The information contained herein is believed to be reliable, but Avery Dennison makes no warranties, express or implied, including but not limited to any implied warranty of merchantability or fitness for a particular purpose. To the extent allowed by law, Avery Dennison shall not be liable for any loss or damages, whether direct, indirect, special, incidental or consequential, in any way related to the technique of making a graphic regardless of the legal theory asserted.

Revisions have been italicized.

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