

Avery® Instructional Bulletin 1.14

Application Instructions for Easy Apply (EZ) Films

General Information

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

PRODUCT	PRINT METHOD	FACE	ADHESIVE	APPLICATION SURFACE
MPI 1005 EZ	Solvent Inkjet/Thermal Transfer	50 micron Gloss White Cast	Grey EZ Removable	Flat – Compound Curves
1002 EZ	Screen	50 micron Gloss White Cast	Grey EZ Removable	Flat – Compound Curves
XL 1000 EZ	Screen	50 micron Gloss White Cast	Clear EZ Permanent	Flat – Compound Curves
MX 3200 EZ	Screen	80 micron Gloss White Polymeric Calendered	Clear EZ Permanent	Flat – Simple Curves
MX 3400 EZ	Screen	86 micron Matt White Polymeric Calendered	Clear EZ Permanent	Flat - Simple Curves
IPM 2000 EZ	Aqueous Inkjet	80 micron Matt White Polymeric Calendered	Clear EZ Permanent	Flat - Simple Curves

NOTE: Be sure to read the appropriate product data sheet 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.

Benefits of Avery Dennison™ Easy Apply

Avery Dennison™ Easy Apply (EZ) 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 reposition 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.

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.

Application Instructions

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 Instructional Bulletins 1.01 Substrate Cleaning and Preparation and 1.4 Application Methods for specific technical recommendations.

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 reposition once it has made contact with the applications surface. If the air temperature or the application surface temperature exceeds 40°C, 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 16°C is recommended.

Select installation tools and techniques

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

Traditional Application Tools

Avery Dennison™ Easy Apply Fleet Marking Films can be applied using traditional tools and techniques, special tools are not required (refer to Instructional Bulletin 1.4).

- Squeegee (or Squeegee with felt strip)
- Low Friction Sleeve
- Heat gun
- Razor / Knife
- Rivet Brush
- Air Release Tool (straight pin)

- Masking Tape
- Marking Pencil (chalk like marking pencil is strongly not recommended).

Apply the Graphic

NOTE: Reference Instructional Bulletin 1.01 for Substrate Cleaning and Preparation and 1.4 Application Methods for Avery 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. Refer to Instructional Bulletin 1.01 before application of any graphic.
- Be sure the air, film and substrate are within the temperature range recommended for the film.
- Experiment to find the tools and techniques that work 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.

- Use firm, uniform strokes, and overlap all strokes by about 50%.
- If a squeegee is used, hold it at a 50-70 degree angle 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 the hinge method illustrated in Instruction Bulletin 1.4.
- If the graphic is less than 1m², remove the entire liner. Position the graphic on the marked points using light tacking pressure similar to other Avery 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.
- Once application has been completed, post-heating is required to all areas of conformed or stretched graphics.

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 25mm in diameter. In that case, use an air release tool and remove the air using conventional techniques.
- Tenting around rivets can be handled in one of two ways:
 1. Use an air release tool, heat source, and rivet brush.
 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 motion back towards the base of the rivet head.

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.

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 recommended 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, up to 25mm 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.

Warranty 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.

The above information provides basic information on how to apply pressure-sensitive graphics. The instructions are designed to help ensure success across a broad range of applications. Depending on the size and complexity of applications, a certain amount of expertise is needed.

Professional applicators can be hired to ensure proper application of finished graphics. When mounting graphics in remote geographic areas, professional applicators can offer the added benefit of local service.

Consider hiring a professional whenever the application requires:

- Multiple panels to be registered
- Complex surfaces, such as rivet and corrugated trucks
- Harsh environmental conditions (i.e. outdoor applications in high heat climates)
- Remote geographic locations

For further information, contact your local Avery Graphics representative.