

Computer Sign Cutting Avery Dennison Traffic Sign Products

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Introduction

To assist you in the successful processing of Avery Dennison films on computer sign cutting equipment, the following processing guidance is provided. This applies to T-1500, T-2500, T-5500, T-6500, XR-1000 and XR-2000 Avery Dennison Reflective sheeting, XL 1000 Series Cast Vinyl Films and XL 6000 Series Transparent Overlay film.

Hole punched material is available from Avery Dennison in both standard and Gerber formats to assist you in pin-fed computer sign cutting. If you decide to make your own hole punched material from Avery Dennison reflective sheeting, make sure the blades you use are sharp.

Cutting

Determining the correct amount of weight or pressure to place on your knife depends on several factors, which only you can determine. A general rule of thumb is that more is not necessarily better. The lightest weight or the least amount of pressure that will cut through the facstock and adhesive is the best to use. Generally for good release of the cut image from the material a slight scoring of the release liner is acceptable. If too much weight or pressure is used it may cut the liner, fracturing the silicone release coating and exposing uncoated paper to the adhesive. This may inhibit the graphic releasing from the liner with the premask as well as damaging the reflectivity of the sheeting. Always make a test cut prior to cutting the desired legend.

With Avery Dennison films, a very sharp blade is essential when cutting reflective sheeting. Our market research indicates that most blades are made from carbide (carbide stays sharper longer than plain steel). There are also ceramic blades on the market that give a nice cut, but seem to wear out quickly.

There are several types of blades available: Testing has indicated that both 45 and 60 degree angle carbide blades work well for the products mentioned above. Avery Dennison T-5500 reflective sheeting is capable of being cut on a variety of computer plotters. Determining your machine settings will need to be tested before cutting. As a general starting point for T-5500 sheeting, 270-300g/f of pressure is needed at a machine speed of 8-12cm/s. It is important to always test prior to production.

Avery Dennison films can be run on both pin-fed and friction-fed computer sign cutting equipment.

Due to the nature of retroreflective material, cutting and application of a multiple panel job (such as a fleet application) and graphics which are comprised of more than one panel, different color perceptions could result for the different panels from certain angles of viewing. This is not considered a defect in the material and is not covered in the material warranty. To minimize the risk of this occurring, cut large letters from a continuous piece of material or use material as closely adjacent as possible.

In case static occurs between Reflective films and sign cutting equipment, a static string can be purchased from Alpha Innovations in Boston, MA. Phone number 781-593-7901.

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Weeding

Since the “open side” of most letters is on the right side, it is recommended that the matrix be weeded using a rocking motion from right to left.

When weeding large letters/graphics (larger than 5 in. or 13 cm height), there may be a large, hard-to-handle matrix area. It helps to cut the matrix into sections, before weeding.

If you are making your own hole punched material, it is important to strip away 3/8” – 1/2” of material on each edge of the roll after the holes are punched prior to use on your computer cutting equipment.

Handling Premask (Application Tape)

Using the proper premask is paramount in the successful conversion of the Avery Dennison films. A premask incorporating enough adhesion to lift the legend from the liner is needed. At the same time, the premask adhesion cannot be so high as to lift the legend back off the ultimate application surface. Always test the premask for adequate tack to lift the legend from the liner.

The following premasks have the characteristics necessary for the successful conversion of both large and small letters using Avery Dennison films. This is not an exhaustive list of premasks.

Manufacturer	Premask Tape
American Biltrite	6600, 6700, 6760, 6782
Main Tape	GXP-600, GXP-625, GXP-650, GXP-675
R-Tape	4600, 4690, 4695, 4700, 4750, 4775, 4885

Pressure must be used when applying premask. The use of either a squeegee or a roll laminator is recommended.

Application

The recommended method of removing graphics from the release liner is as follows:

1. Place the premask on the material as recommended.
2. Turn the piece over so the material is face down (liner side up).
3. Grasp the edge of the release liner, holding the premask down with one hand.
4. Pull the liner off at 180° angle with the other hand.

Note: The use of application fluid is not recommended with any Avery Dennison Reflective sheeting including T-1500, T-2500, XR-1000, XR-2000, XL 6000 Transparent Overlay Film, and XL 1000 Cast Series. The use of such products will void the warranty.

The durable print surface of Avery Dennison Reflective sheeting can also be used as a substrate for pressure sensitive or heat activated adhesives. Thus, computer cut graphics or letters, even from competitive retroreflective sheeting products,

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can be successfully applied to the surface of both Reflective sheeting. Avery Dennison will extend its full warranty when computer cut graphics from Avery Dennison products are applied to Avery Dennison Reflective sheeting.

Avery Dennison's liability for defective products shall not exceed the purchase price paid therefore by Purchaser and in no event shall Avery Dennison be responsible for any incidental or consequential damages whether foreseeable or not, caused by defects in such product, whether such damage occurs or is discovered before or after replacement or credit, and whether or not such damage is caused by Avery Dennison's negligence.

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