

Avery Dennison Instructional Bulletin 1.19

Application Instructions for Avery[®] Supreme Wrapping Film

Introduction

Application of Avery[®] Supreme Wrapping Film has to be done in the best possible manner to ensure that the product will perform as designed. Successful application, results in an adequate bond between the adhesive and the substrate.

Vehicle wrapping and conforming applications are the most demanding applications for graphics. It is most important the correct procedures are followed. Taking short cuts and avoiding the following steps, will drastically increase chances of failure. Below is a summary of the most important points when performing these applications. Please refer to Instructional Bulletins 1.01, 1.14, 1.15, 1.16, 1.4, 2.09 and 4.14 for further information relating to topics outlined below.

Surface Preparation

A clean, smooth and 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.

- Remove all dirt and grime with a commercial detergent solution and water.
- If grease, oil, wax, etc., are present, the substrate must be scrubbed with a mild solvent wipe (Xylene, heptane, ethylacetate, isopropyl alcohol). Ensure that the solvent is wiped off with a second clean, dry, lint free cloth prior to evaporating.

It is recommended to clean the application surface with:

- Avery[®] Surface Cleaner or Isopropyl Alcohol

Many other commercially available cleaning/degreasing products exist. The applicator should establish the suitability of a product prior to actual use. In addition, the following factors should be considered prior to any application:

- Car wax, polish residues and paint protection coatings must be completely removed. The use of Autoglym Power Max III is highly recommended for vehicles which have a co-polymer paint protection coating; failure to remove this coating prior to application will result in graphics failing.
- Paint surfaces must be completely dry, hardened and free of scratches. On most baked paints films can be applied immediately after cooling down. Air dried and car repair paints require at least one week curing prior to films being applied, this can be longer in colder or humid conditions. Solvent residues in painted substrates may adversely affect film adhesion and might cause excessive shrinkage and or blistering.
- Painted substrates for self-adhesive films should be prepared according to the paint manufacturer's instruction. Here, too, it is important to avoid solvent retention. Paint system components which are not compatible or do not adhere properly to each other may cause paint to be lifted when films have to be removed after use.
- Special attention should be given to critical areas as edges, corners, welding seams and rivets etc. One should certify that these areas are thoroughly cleaned and dried before application.

Application Methods

Avery[®] Supreme Wrapping Film provides a similar level of conformability to the Avery[®] 900 Super Cast, therefore most of the instructions given in Instructional Bulletin 2.09 are applicable. Consult this instructional bulletin prior to the application of Avery Supreme Wrapping Film.

However, two major differences exist:

- NO Application Tape is required for the application
- DO NOT apply with water (wet method)

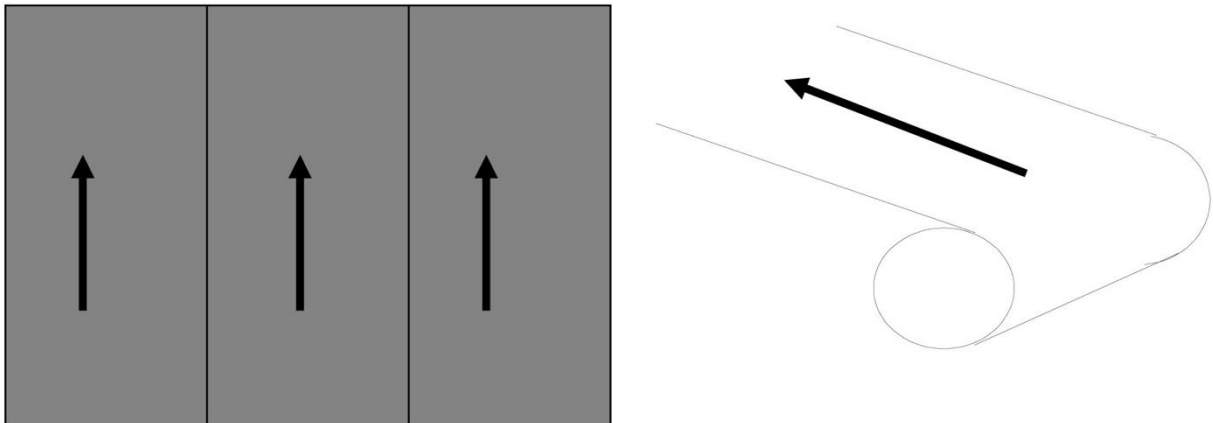


- Avery® Supreme Wrapping Film is powered by Easy Apply RS Technology, which features an easy-to-apply adhesive in combination with a conformable film. This combination allows easy positioning of the material to the application surface without the immediate bond of the film to the substrate.
- Once the material has been positioned gently start to squeegee the film. Use an Avery® Squeegee Pro with felt cover and gradually increase the pressure in order to remove all the air from under the film. Overlap the squeegee strokes by about 50% to avoid remaining air entrapments.
- Re-positioning of the film is only possible at the stage of positioning and low squeegee pressure. If done at a later stage small marks or defects might remain visible in the film surface.
- In order to further facilitate the ease-of-application heat can be applied to the film. Naturally the level of applied heat will depend on the ambient temperature of the area where the application is going to be conducted. In areas with temperatures below 20°C, more heat will be required for easy application. However when ambient temperatures exceed 30°C the use of an external heating source may not be required or may be reduced to a certain extent.
- When stretching or conforming the material in convex, concave and compound shaped surfaces, please ensure that you distribute the stretch over a greater amount of material. This limits the stretch in any one area and reduces stress imparted on the film.
- Avery® Supreme Wrapping Film will need to be post heated no sooner than 30 minutes after application is complete, to between 90-110°C in convex, concave and compound shaped surfaces in order to reset the film's memory and eliminate "popping" or lifting from recesses.
- When applying multiple overlapping panels, start from the back and work forward or the bottom and work up. Note: Where two or more panels overlap, then each panel must be individually post heated prior to application of subsequent panels.
- The purpose of the Avery® Supreme Wrapping Film is primarily to wrap or totally cover many shapes and forms, therefore it is not possible to give individual instructions for each application. It is advised to experiment with a small piece of material on the substrate in order to feel understand the performance and handling of the film and the adhesive.
- Convex and compound shapes are usually very easy to cover with Avery® Supreme Wrapping Film, hence in some extremely deep corrugated shapes it might be needed to make an incision in order to avoid any form of air entrapment in the deep recesses. This incision does not jeopardise the functionality or durability of the product, actually it permits the after treatment with heat to reach the maximum conformability of the product without any restrictions.
- During the wrapping process, using Avery® Supreme Wrapping Film it is recommended to use material of the same production lot from Avery Dennison. The batch number of the material is clearly identified on a label in the core of each roll.

Application of metallic films:

Application of Avery® Supreme Wrapping Film in metallic colours follows the same instructions as above. However, metallic films are made by mixing small metallic flakes in the film formulation. The flakes reflect incoming light to the observer in all directions from their position. The flake distribution in the film is influenced by the process direction of the film; therefore the appearance of the film might slightly change if observed from

different angles. This effect is called: 'flop'. It is important, that the unwind direction of the roll is consistently orientated in the one direction during application. It is evident also that material should be used from the same batch number for one job.



Long Term Removability (LTR)

Avery® Supreme Wrapping Film powered by Easy Apply Technology not only facilitates the application of the film it also features clean removability of the material after the intended period of use. Of course different application substrates and conditions are a variable with this property of Avery® Supreme Wrapping Film. The general instruction of removal of self-adhesive films is described in Instructional Bulletin 1.0.7.

Brief Summary

- use Avery® Surface Cleaner
- use Avery® Squeegee Pro
- no application tape needed
- no wet application
- distribute stretch over larger amounts of film
- pre-heat between 35°- 50°C
- eliminate all air from under film
- re-treat entrapped air
- allow 30 minutes prior to post heating, to allow adhesion build up
- post heat to between 95-110°C
- re-squeegee critical areas

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 watercraft and vehicles
- Harsh environmental conditions (i.e. outdoor applications in high heat climates)
- Remote geographic locations

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recommends that you comply with all applicable safety standards, including the use of the proper personal protective equipment.

For further information, contact your local Avery Graphics representative.

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