

Application Instructions for Avery Dennison™ Automotive Window Film

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1.0 Consult Product Data Sheet & Local Tinting Legislation

- Before applying the product, consult the appropriate product data sheet for information regarding recommended substrates and product performance. Once assured that all factors are understood with respect to the product, and all factors comply with the product recommendations, application procedure can begin.
- Before applying the product, the user shall determine the suitability of the product for its intended use. The user shall ensure that the application and the intended use of the product is in accordance with any and all applicable laws and regulations concerning the use of automotive window film, and user assumes all risk and liability in connection therewith.

2.0 Application Tools

- Tool belt – to hold all application tools (Avery Dennison product code CB0650001)
- Microfiber Felt Edge Squeegee, like the following:
 - Squeegee Pro (Avery Dennison product code CA3480002)
 - Squeegee Pro Flexible (Avery Dennison product code CA9080002)
 - Squeegee Pro Rigid (Avery Dennison product code AP8270002)
- Window film squeegee
- Cutter with break off blades (Avery Dennison product code CA8140001)
- Stainless steel blades (Avery Dennison product code BM3290001)
- Lint-free cleaning cloth
- Professional Heat Gun
- A glass scraper
- Spray Bottle (Avery Dennison product code CA8140001) with Soap & Water mixture (1 part baby shampoo/20 parts water).
- Avery Dennison Surface Cleaner (Avery Dennison product code CA3750001)

3.0 Storage conditions

Store AWF film under the recommended conditions, keeping the film at a Temperature of 20 °C (± 2 °C) with 50 %RH (± 5 %) and in original package with plastic roll cover. Proper storage allows the film to keep its maximum performance and also enables a hassle-free application. User assumes all risk and liability for the loss of performance, when the film is stored improperly by user.



Graphics
Solutions

4.0 Preparation and cleaning of the window

Place the vehicle to be tinted in a clean, dust-free and well lit environment.

First, spray the interior and exterior surface of the window with the water and soap solution. Using a glass scrapers, thoroughly scrape the surface. Then, wipe the surface with a paper towel or lint-free clean cloth to remove any remaining water and residues. Please make sure that no fibers or dust is remaining. If needed, for further cleaning, it is possible to wipe the surface again, using the felt side of a squeegee.

Pay attention to properly clean and wipe also along the bottom seal edges, top corners of the window and rubber gaskets.

As a final step, use Avery Dennison Surface Cleaner to remove all remaining dirt, grease and degreaser.

Before installation, ensure that the window surface is fully clean without any residues, in order to avoid air bubbles and imperfection in the applied film. If needed, repeat the cleaning procedure.



5.0 Installation of the film

Fixed side windows/ roll down side windows:

Preparation of the film

As first step, ensure the exterior of the window is clean and spray it generously with the water/soap solution.

Position the film on the exterior of the window with the backing and adhesive on the outside, facing towards you. Using a knife with a sharp blade, size the film by trimming the excess material, cutting to approximately 5 mm over the window size. Please make sure that the film is position on the window with MD of the roll (machine direction) on the horizontal . In order to do so, when cutting sample from roll, you should flip the cut sample 90° and position it on the glass. Once the film is correctly position, fix it on the window, applying pressure with the felt side of the squeegee. Squeegee the material, starting from the middle outwards.



As next step, shrink the film to the window shape, heating the film with a heat gun. When heat shrinking the film, pay attention to heat the film uniformly and do not hold the heat gun too close to the surface to avoid local overheating.



When heating, small tunnels/channels will appear on the surface. Gently squeegee them out of the film, starting from the center going towards the edges. In case large tunnels are formed, separate them in smaller tunnels using the squeegee and then remove them, following the same procedure. Ensure to shrink the whole surface of the film, carefully removing all the tunnels that are formed as explained.



For fixed windows, after shrinking the film, cut the film to the exact side of the window, trimming the excess edges. In order not to cut directly on the car window, it is recommended to use a permanent marker to define the contour of the window on the film and then cut the film to shape. In case of roll down windows, carefully open the windows for a few centimeters. Then align the film with the top of the window and cut away any excess and also trim the corners of the film.

Installation on glass

After cutting the film to size, clean the inside of the window again with abundant water & soap solution. During cleaning, make sure to protect the interior of the car.

When surface is prepared, remove the liner from the film to expose the adhesive and wet it with water & soap solution. During this procedure, it is very important to work in a clean environment to avoid any dust/dirt entrapment in the film adhesive.



Position the film on the inside of the window and align at the top end. Make sure that the interior glass and adhesive side are sufficiently wet to allow slideability and easy positioning of the film. Be careful during this phase to avoid the formation of wrinkles on the film surface.

In case of roll down window, close the window when the top edge of the film is aligned with the window. Once the top part of the film is correctly positioned and aligned with the window, proceed with positioning the bottom part, following the same procedure. Ensure to keep the surface wet to have sufficient slideability during positioning phase. You can use a squeegee as extra help, especially when positioning the film on the corners.



When the film is in position, re-wet the face of the film and apply uniform pressure with the squeegee to activate the adhesive and fix the film, removing all the excess water on the adhesive side.

As final step, wrap adsorbing paper or a cloth around the squeegee and re-squeegee the edges of the film to avoid any lifting.

If tunnels/bubbles appear, re-squeegee out any water or air, applying firm pressure with the squeegee. In this phase, It is possible to use an heat gun to help evaporate moisture and increase initial tack to glass.

After application, allow the film to dry for approximately 2 weeks. During the drying period, don't open the windows and don't clean the glass and film surface.

Rear Curved windows:

Prepare and clean the surface has indicated in Paragraph 4.0. Please be careful not to use scrapers on heat wires to avoid any damage.

Using a sponge wet with soap & water solution, wet horizontally over the middle of the exterior of the window and a vertical line on each outer side of the window. Do not completely wet the glass window.



As described for side windows, position the film on the partially wet exterior of the rear window and size it by trimming the excess material, cutting to approximately 5 mm over the window size. Also for rear window application, ensure to position the film with the backing and adhesive side facing outside. In addition, please make sure that the film is position on the window with MD of the roll (machine direction) on the horizontal. In order to do so, when cutting sample from roll, you should flip the cut sample 90° and position it on the glass.

When the film is position, shrink the film following the same procedure and indications described for side windows. Shrink first the lower half of the film, gently removing the tunnels that are formed upon heating using the squeegee from the middle outward.

Next, shrink the upper half of the film with the same technique, taking care of not locally overheating the film.

Once the film is heat shrunk, size the film to shape of the glass, trimming excess material up to 2-3 mm over the solid part of the dot-matrix print. In order not to cut directly on the car window, it

is recommended to use a permanent marker to define the contour of the window on the film and then cut the film to shape.



Next, prepare the inside of the rear window by cleaning and wetting it with water & soap solution to allow the film to be positioned. When wetting the interior glass, make sure to protect the interior of the car.

As for side windows, remove the liner from the film to expose the adhesive and wet it with water & soap solution. During this procedure, it is very important to work in a clean environment to avoid any dust/dirt entrapment in the film adhesive.

Position the film on the inside of the rear window and align the film edges with the contour of the rear window. When the film is in position, apply firm pressure using the squeegee to fix the film to the rear window. It is recommended to first fix the film with an horizontal stroke in the middle of the window and then squeegee the remaining film moving from the middle towards the edges.

As final step, wrap adsorbing paper or a cloth around the squeegee and re-squeegee the edges of the film to avoid any lifting.

If tunnels/bubbles appear, re-squeegee out any water or air, applying firm pressure with the squeegee.

After application, allow the film to dry for approximately 2 weeks. During the drying period, don't open the windows and don't clean the glass and film surface.

6.0 Cleaning, Maintenance and Removal

As mentioned in Paragraph 5.0, it is important to allow the film to dry after application. The recommended drying time is approximately 2 weeks. During the drying period, don't open the windows and don't clean the glass and film surface.

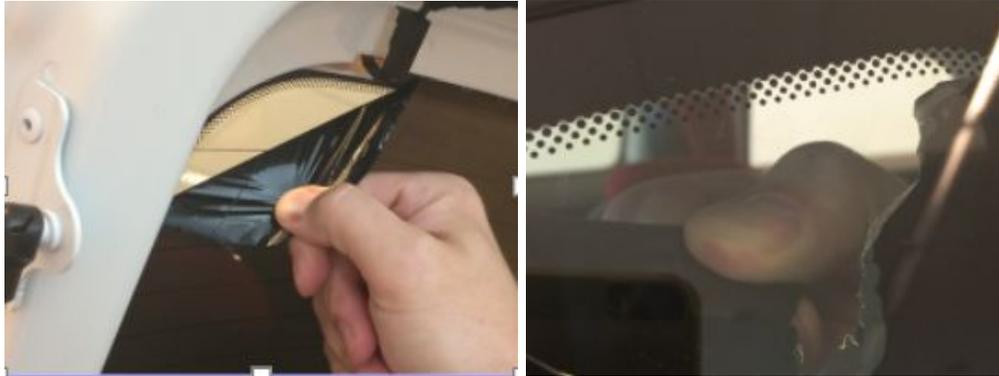
For regular window cleaning, don't use abrasive fluids and tools that can cause scratches on the surface, such as metal brushes or abrasive scrubbing sponges. Regular window cleaner are not expected to cause any damage to the film, although you should avoid ammonia-based cleaners.

For precaution, it is recommended to always test the cleaner on an inconspicuous part of the material before use.

When removing the film, it is recommended to start at a corner of the window. To facilitate removal, slightly heat up the film using a heat gun. Please make sure to not locally overheat the film.

It is recommended to remove the film at an angle of 70 to 80° relative to the surface, in order to minimize the chance of film breakage.

Take particular care when removing the film from the dot-matrix print and window heating wires and ensure that the film is completely removed from these parts.



7.0 Disclaimer

This technical 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.

For more information regarding the warranty of particular Avery Dennison window film products, please refer to the warranty documentation.

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