

Issued: 12/2023

Revision: 1

Application Instructions for Avery Dennison® Facade Film

Introduction:

Determine the sequence of the job, prior to any start of the work, by making up an inventory of the general state of the object, surface conditions, finishing, pre-treatments, damage and risk control etc. Details of this preparatory work is summarized in the Avery Dennison Facade Film Installer Handbook and also extensively discussed and trained in a series of 3 specialized Facade Film training sessions 'Painting with Film 1 and 2, plus Calculating with film' one can apply for under the header of Avery Academy on the Avery Dennison Graphics website. (www.averydennison.eu)

1. Surface preparation:

All the surfaces must be prepared thoroughly before any application.

Cleaning:

- Remove any loose dirt with a sponge or brush.
- Organic contamination can be sprayed with a water/alcohol solution. To be left to soak for 24 hours.
- Wash the surface and fittings using plenty of water and soap. Make sure the surface is free of moisture if you intend to proceed with dry application of film to frames/ claddings immediately after cleaning.
- Remove paint stains, glue remains, welding spots by means of a wet glass knife. Be careful to avoid scratching. Perform this action wet!
- If the film stretches to the floor, avoid rising dust (due to static film) by sweeping the floor and slightly wetting it.
- Degrease the surface (giving special attention to the edges) with Avery Dennison Surface Cleaner and generous use of moisture absorbing tissues or cloth. Check for silicon residue.

TECHNICAL BULLETIN 3.21

Preparation:

Surface preparation not only means cleaning the substrate, but often involves repairing it. Use of filler or primer to smoothen out the surface might be required. Repaired substrates need to be sanded with fine grain sanding paper (320/360) to guarantee an absolute smooth surface prior to the application of Facade Film.

Certifying adherence:

After cleaning and preparation of the surface adhesive bond to the substrate must be checked. Proposed methods can be used:

- Feel Fingernail test
- Listen Using masking tape
- See Dyne pens, measuring surface tension substrate

2. Application:

General application information

Avery Dennison Facade Film is powered by a special adhesive designed for the Architecture market segment, which features an excellent bond to many substrates on a permanent basis.

Re-positioning of the film (during dry application) is only possible in the stage of positioning and low squeegee pressure. If done in a later stage small marks or images might remain visible in the film surfaces.

To facilitate the application around curves or edges heat can be applied to the film. With temperatures below 20°C, more heat will be required for ease of application. However, when the temperature rises over 30°C it might not be needed to use an artificial heating source.

During the application process with a selected Avery Dennison Facade Film colour it is recommended to use material of the same production lot of Avery Dennison. The batch number of the material is clearly identified on the backing of the material or on the label in the core of each roll. Individually small slit rolls might form an exception, however the mother roll will carry the basic information.

TECHNICAL BULLETIN 3.21

Dry application method:

Facade Film can conveniently be applied 'from the roll'.

- Position the length of film.
- Fix the film on both sides, using a firm hinge made of masking tape at one side.
- Remove the backing paper from the section of film and squeegee the film.
- Subsequently roll up the loose hanging long section of film from the opposite end up to the squeegeed section.
- Pull part of the backing paper loose from under the role and squeegee the film. Hold the squeegee in one hand and the roll of film in the other.
- Re-squeegee the film and the edges.

Wet application method:

- Determine the starting point.
- Spray the surface wet with water (mix 5 cl pH neutral soap for 10 l water).
- Remove the backing paper from the section of the film.
- Attach this section to the wet surface and slide the film into the correct position.
- Squeegee the water from under the attached section to enable bonding and prevent the film from sliding.

- Remove the rest of the backing paper and squeegee the remainder water from under the film.
- Re-squeegee the film and the edges.

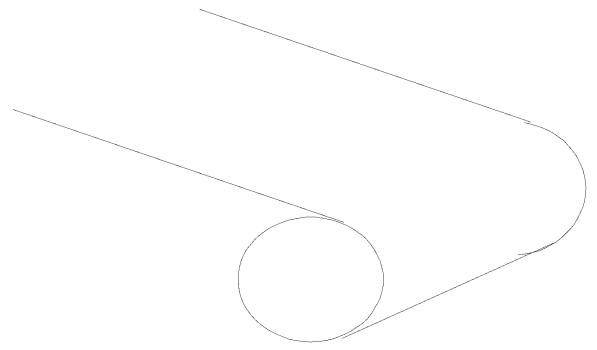
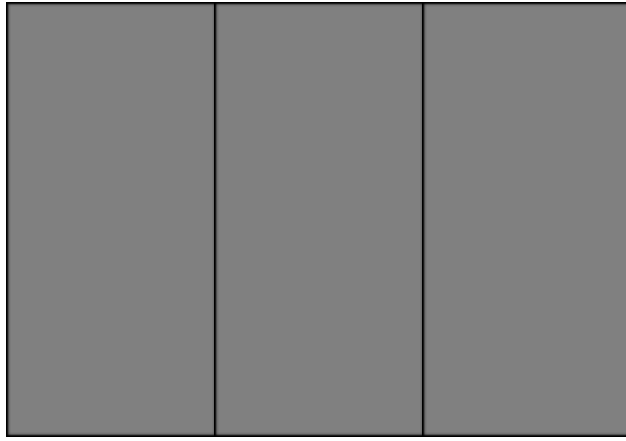
Application orientation of metallic and matt/ lustre finished films:

Application of metallic films and matt or lustre finished Facade Film follows the same application instructions as above. However, matt/lustre films and metallic flake containing films have a directional surface finish, Metallic solid coloured films are made by mixing small metallic flakes in the film formulation. 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').

Matt films also have a directional surface finish. Therefore it is very important for both film types that the unwind direction of the roll is consistently oriented into one direction during application.

With matt and metallic finish products it is even more important that material is used from the same batch number for one job.

TECHNICAL BULLETIN 3.21



3. Application finishing details:

Cutting film on the various surfaces, like coated metal, aluminum, plastic, etc. one must be just as careful as you would be when cutting film on the bodywork of a vehicle. The reason is that it might cause irreparable scratches to the top layer of the surface.

- A cut in the top layer of anodized aluminium will in time lead to corrosion.
- Windows and panels are generally held in a framing finished off with sealant or rubber. Cutting into these finished edges creates the risk of leakage.

Always cut the film along a ruler or squeegee next to the rubber or sealant. Never on it!

Preferably cut the film using 30° stainless steel break-off blades at the smallest possible angle in relation to the surface.

Film along the edges and corners should be applied without any stress. The dry method gives usually better results, since its immediate bond to the substrate. If the bonding is not optimal at these locations it is recommended to use a heat gun to heat up the film in order to improve the adherence level. Nevertheless, it is an absolute must to re-squeegee all edges and corners after the application.

To prevent the film from lifting or curling a protective layer of edge sealer or a strip of film can be applied along the edges and on the corners.

Limit the visibility of overlaps as much as possible. Organize your work sequence in such a manner that you do not look directly at the bare edges of a film section. Gloss finished film surfaces make the overlap more visible compared to lustre or matte. Small overlaps attract more attention than broad overlaps.

TECHNICAL BULLETIN 3.21

Special attention should be paid when covering frames or large claddings in relation to overlaps. Wrap the profile sections in the sequence from bottom to top and from inside to outside. The right sequence ensures that your overlaps are laid in a roof tile pattern and with very low visibility.

If applicable, make a cut in internal frame corners of connecting profile sections. To prevent shrinkage seams in internal corners, wrap the film approx. 1 cm past the corner. If the Facade Film becomes slightly deformed during application it should be reheated to 80-90°C to regain its original appearance. Prevent thermal breakage occurring at the adjoining panels.

4. Maintenance of Facade Film

In addition to keeping the application looking good, regular cleaning is important because it can help prolong the life of the “building wrap”. The frequency of cleaning depends on several external conditions such as location, local or regional pollution, natural elements (birds, trees etc).

We recommend to establish the preferred frequency of cleaning always up-front, but at least one time per year.

Recommended cleaning fluid

The detergent for the cleaning fluid must be free from abrasive components and from strong solvents. Its pH should be between 3 to 11. Nevertheless, it is recommended to test the cleaning fluid before any use in an inconspicuous area.

Persistent stains, like bird droppings, tree sap, and similar contaminants can be softened by soaking for several minutes with warm, soapy water or with Avery Dennison Surface Cleaner. Then rinse the film surface thoroughly.

If a harsher chemical is needed, be sure to test the fluid again.

Avoid using abrasive tools that may scratch the Facade Film.

Natural cleaning:

- Rinse: use plenty of clean water to remove the loose particles and to avoid scratching the film.
- Wash: use a mild detergent or cleaning fluid. Wash with a soft cloth or a sponge, starting from the top and working down.
Note: avoid abrading the surface with unnecessary scrubbing.
- Rinse: thoroughly rinse with clean water.
- Dry: Let the film dry naturally or dab it dry with microfiber towel.

TECHNICAL BULLETIN 3.21

High pressure cleaning:

Using a pressure washer is an option, but strictly under the following conditions:

- Keep pressure below 80 bar
- Keep temperature below 70° C
- Spray distance above 75 cm
- Spray angle perpendicular (at 90 degrees) to the surface to avoid lifting
- Nozzle angle above 40° wide spray angle.

Special notes:

- do not clean within 48 hours after film application
- do not use steam
- register all cleaning sessions (warranty condition)
- never aim the water jet on the film edges

5. Characteristic of Facade Film

Facade Film has been designed for exterior building facades, window frames, door frames and panels for long term use and definitely with permanent character. The substrate certainly will have a direct influence on the bond of the film. In the event that the film should be removed from its substrate one could follow the instructions below:

- Apply heat homogenously to the applied film surface with a heating device.
- Keep the heating device in motion and avoid overheating
- Simultaneously try to remove the film and the adhesive.
- Pull regularly and keep an angle of max. 30° related to the substrate
- If adhesive remains on the substrate then use Avery Dennison Adhesive Remover. Spray onto surface and allow to absorb.
- Remove the adhesive with an used squeegee
- Remove last parts with cloth or paper and finalize with Avery Dennison Surface Cleaner.

6. Brief summary

- Clean the surface using Avery Dennison Surface Cleaner
- Prepare surface for application
- Certify adhesive bond level
- Chose application method
- Apply the film using Avery Dennison Squeegee Pro or Pro XL
- Pay attention to directional influences
- No Application Tape needed
- Re-squeegee critical areas
- Maintenance of applied Facade Film
- Facade Film adhesive has permanent bond characteristics.

TECHNICAL BULLETIN 3.21

7. References

Technical Bulletin 1.2: Removal of self-adhesive films

Technical Bulletin 1.4: Application methods for Avery Dennison self-adhesive films

Technical Bulletin 3.9: Application instructions for Avery Dennison 900 Super Cast

Important notice Information on physical and chemical characteristics and values in this document are based upon tests we believe to be reliable and do not constitute a warranty. They are intended only as a source of information and are given without guarantee and do not constitute a warranty. Purchasers should independently determine, prior to use, the suitability of this material to their specific use.

All technical data are subject to change. In case of any ambiguities or differences between the English and foreign versions of this document, the English version shall be prevailing and leading.

Disclaimer and warranty Avery Dennison warrants that its Products meet its specifications. Avery Dennison gives no other express or implied guarantees or warranties with respect to the Products, including, but not limited to, any implied warranties of merchantability, fitness for any particular use and/or non infringement. All Avery Dennison products are sold with the understanding that the purchaser has independently determined the suitability of such products for its purposes. The period of warranty is one (1) year from the date of shipment unless expressly provided otherwise in the product data sheet. All Avery Dennison's products are sold subject to Avery Dennison's general terms and conditions of sale, see <http://terms.europe.averydennison.com>. Avery Dennison's aggregate liability to Purchaser, whether for negligence, breach of contract, misrepresentation or otherwise, shall in no circumstances exceed the price of the defective, non-conforming, damaged or undelivered Products which give rise to such liability as determined by net price invoices to Purchaser in respect of any occurrence or series of occurrences. In no circumstances shall Avery Dennison be liable to Purchaser for any indirect, incidental or consequential loss, damage or injury, including without limitation, loss of anticipated profits, goodwill, reputation, or losses or expenses resulting from third party claims.