

Application Instructions for Avery Dennison® Façade 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 Façade Film Installer Handbook and also extensively discussed and trained in a series of 3 specialized Façade Film training sessions 'Painting with Films 1 and 2, plus Project management with Façade Film one can apply for under the header of Avery Dennison Academy on the Avery Dennison Graphics website (www.graphics.averydennison.eu)

1. Recommended Tools:

To ensure proper application of the film, you will need the following tools:

- Avery Dennison surface cleaner to clean the surfaces prior to application when appropriate.
- Felt squeegee or soft plastic squeegee with velvet strip in order to avoid damaging the film.
- Soft roller to ease application onto uneven or micro-structured surfaces.
- Heat gun to ease seam finishing and applications where stretching is required
- Cutter with new sharp blades.
- Avery Dennison application gloves to protect the film.
- Lint-free cloth for cleaning.

2. 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.

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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 Façade 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

3. Application :

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General application information

Avery Dennison Façade 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. Recommended application substrate for façade films are exterior building Façades, window frames, door frames and panels. The product is designed for flat substrates and micro-structured panels (<0.5 cm depth), where only a limited stretching is required. Please note that under all circumstances the application of the Finished Graphic on top of any other Graphic Product is excluded from warranty.

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.

Façade film is available in two different versions: 50 um facefilm combined with flat liner and 100 um facefilm combined with Easy Apply liner:

- The 100um version is equipped with easy apply system, which facilitates the removal of bubbles during application. It is specifically recommended for application on wide flat panels, where large pieces of material are used during application. Please note that Façade Film with Easy apply is suitable only for dry application, and not warranted for wet application.
- The 50um version with flat liner is specifically recommended for application on window and door frames, where a reduced thickness can support in applying the material on edges and corners, following the complex contour of the frame.

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. At temperature lower than 10°C, the intrinsic flexibility of the film is heavily reduced and application on curves and/or repositioning of the vinyl can lead to tearing of the film. For such low temperature application, it is strongly recommend to apply heat on the product when stretching or repositioning.

During the application process with a selected Avery Dennison Façade 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.

Dry application method (suitable for both version of Façade Film):

Façade 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.

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- 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 (only suitable for 50um flat liner version):

- 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.

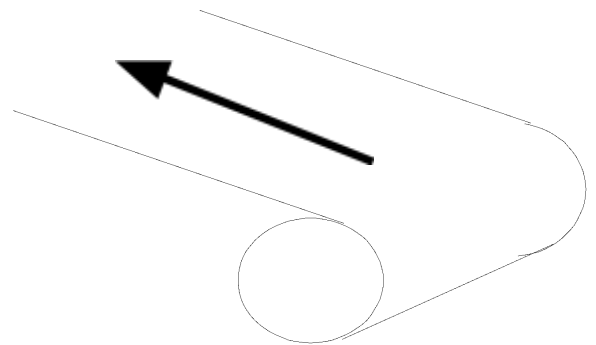
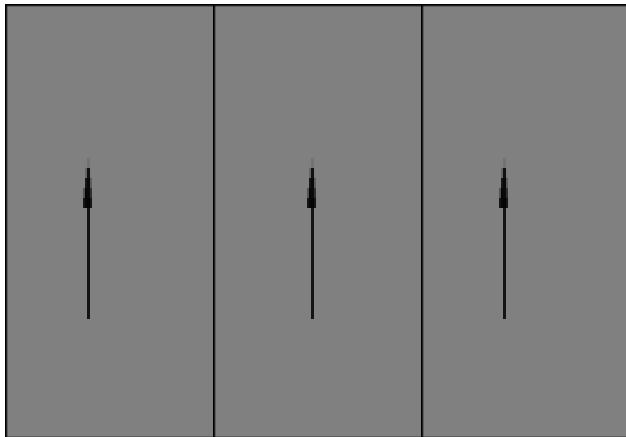
Application orientation of metallic and matt/ lustre finished films:

Application of metallic films and matt or lustre finished Façade 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.



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.

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- 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.

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 Façade 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 Façade 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

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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 Façade 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.

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.

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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 Façade Film

Façade Film has been designed for exterior building Façades, 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 Façade Film
- Façade Film adhesive has permanent bond characteristics.

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
- Avery Dennison Academy: Theory module 5; application technique

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