

Avery® Instructional Bulletin 2.03

Application of Translucent Films to Flex-Face Material

This bulletin gives specific instructions for the application of Avery translucent films to recommended flexible-face signage materials.

Recommended Tools

- Plastic applicator or squeegee
- Low friction sleeve (use a low friction sleeve on the plastic applicator to minimize the possibility of surface scratching of un-premasked film)
- Pin or air release tool
- Razor blades/cutting knives

Avery Approved Flexible-Face Signage Material

The following flexible-face substrates have been tested and found compatible with Avery 5500 Series and A9 Series translucent films.

An ICS warranty may be available on some of these substrates. Refer to the individual warranty statements for details.

Manufacturer	Product Name
Verseidag Seemee US	Seemee IV (B1149 & B3852)
Ultraflex Systems	Ultralon V
Signtech	Flexface FX® MP Flexface
3M	Panaflex 945
Avery	AvFlex 1 AvFlex 2

Note: All statements, technical information and recommendations about Avery products are based upon tests believed to be reliable but do not constitute a guarantee or warranty. All Avery Dennison products are sold with the understanding that Purchaser has independently determined the suitability of such products for its purposes.

Storage of Translucent Film

- The fabricator may store films for a period consistent with information contained in respective technical data sheets. Film and markings must be stored in a clean area away from excessive moisture and direct sunlight, with ambient temperatures of 23°±3° C.

Storage of Flexible-Face Signage Material

- Store in a clean environment free from excessive moisture and direct sunlight, with ambient temperatures of 23°±3° C.

Substrate Preparation

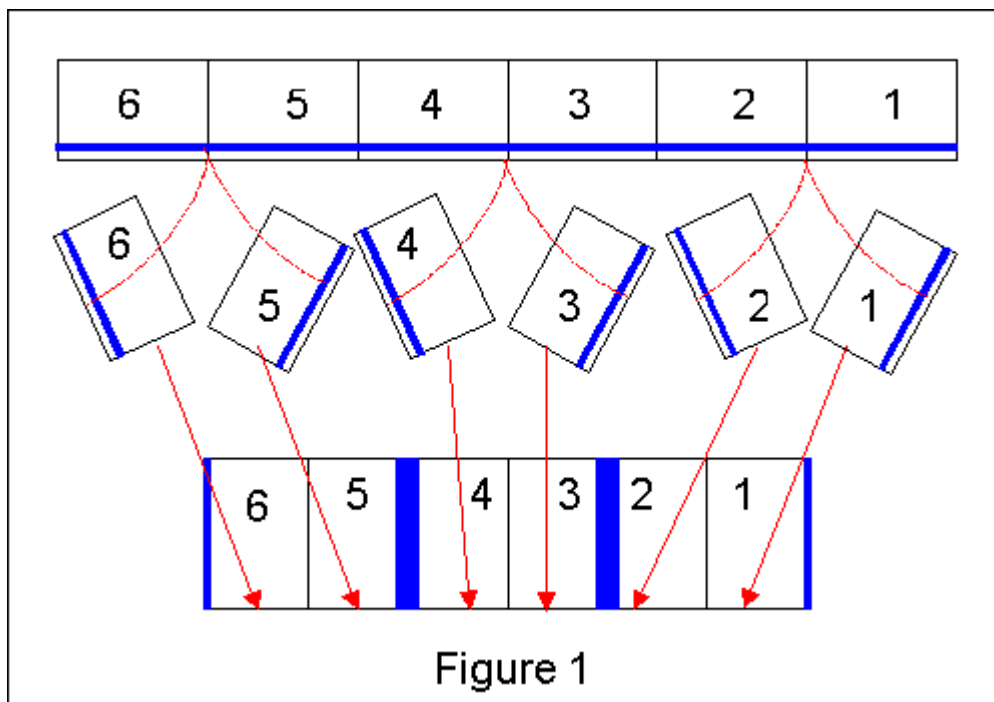
- It is recommended the film be applied when air and application surface temperature is in the range of 4° to 32° C. All surfaces must be considered contaminated and **MUST** be cleaned prior to application of film. See Instructional Bulletin 1.01 Substrate Cleaning and Preparation for recommended procedure.
- Wash surface with detergent and water, then rinse with clean water.
- Wipe dry with a lint free cloth.
- Saturate clean lint free paper towel with IPA and wipe small area (1m²).
- Dry the surface with lint free paper towel **BEFORE** the solvent evaporates.

Film Applied Over Film (Other than Overlaps)

NEW: Translucent film may be applied over other recently applied translucent film using the application technique described in this bulletin.

OLD: New translucent film may be applied over weathered film, which is in good condition and cleaned as described in Surface Preparation.

NOTE: In general, translucent film from a roll can be matched as shown in Figure 1. The dark line represents one edge of the film. This procedure will ensure consistent colour across the sign face.



Premasked (Application Tape) Film

Generally, film applied using the detergent and water method does not need to be premasked. If premasking is desired or the application is to be made without detergent and water. Be sure to use appropriate application tape.

Registration Marks

As an aid for aligning and registering markings on surfaces prior to application, registration marks may be made on top or side edge with a lead pencil, marking pen, or small pieces of masking tape.

CAUTION: Do not use chalk lines or grease pencils.

Application Procedure

- Make sure the surface and surrounding area are properly cleaned.
- Air and surface temperatures must be in range specified.
- Translucent films are usually applied using the wet method. (Other application techniques will cause dark marks, which will become visible in transmitted light.)
- Firm pressure with the plastic squeegee is necessary.
- Always use a good quality squeegee, ensuring that the edge is smooth and not nicked.
- Use overlapping strokes when applying markings.
- Always remove premask at a 180° angle (if premask is used).
- Film must be re-squeegeed after 24 hours to ensure complete adhesion is achieved. The use of a low friction sleeve (or equivalent) is necessary to prevent scratching of the film during application.
- Puncture air bubbles with a pin or air release tool (do NOT use a knife or razor).
- Exposure of newly fabricated sign faces to direct sunlight is not recommended for at least 24 hours after application.

Application Sequence

1. Mix one teaspoon (6ml) of mild liquid detergent (do NOT use soap; avoid the use of enzyme detergents) in 3.8 Lt of cool water to make necessary application solution.
2. Begin liner removal at a corner holding the film face down on a clean surface, completely remove the liner. Do NOT get liner wet prior to removal!
3. Flood the adhesive side of film with wetting solution. (To apply small pieces of film, a spray bottle containing the wetting solution may be used to wet the surface).

Note: Avoid wetting pre-spaced markings on the non-adhesive side of the application tape when applying the wetting solution. Moisture will be quickly absorbed into the paper tape causing wrinkling of the weeded areas making application difficult.

4. Thoroughly flood application surface with wetting solution.
5. Position the film with the wet adhesive (Step 3) against the wet application surface (Step 4), and if the film is not premasked, spray the wetting solution on the top surface.
6. Using light, overlapping applicator strokes to smooth out the wrinkles. Squeegee from the centre to the edges.

NOTE: An applicator squeegee, not a window squeegee, must be used in Step 7 and all other steps where an applicator is mentioned.

7. Use firm, overlapping applicator strokes to adhere film to substrate. Squeegee from centre to outside edges. Dry with a clean cloth or soft paper towel, then resqueegee edges. (If film is premasked, continue with Step 8, if NOT premasked, go to Step 10.)
8. When film is premasked, it is recommended that you wait 15-20 minutes before removing the premask. To remove premask, begin at a corner and carefully pull it away from the film at a 180° angle.

NOTE: If film separates from substrate, stop premask removal, re-squeegee entire graphic, wait an additional 30 minutes.

9. After removing the premask, re-squeegee all edges. To remove entrapped bubbles, puncture the film at one edge of the bubble with a pin or air release tool (do NOT use a knife or razor), and press out the entrapped air or wetting solution with the thumb moving toward the puncture.
10. To complete the application, the film and edges MUST be re-squeegeed after 24 hours.

Film Overlaps

Tools/Materials Needed for Overlaps

- 5.0cm wide masking tape.
- A cutting strip made from sheet metal (or scrap plastic) 1.3 mm to 1.6 mm by 25 mm to 38 mm wide by the length of the seam. Sharp knife or razor blade.

When it is necessary to join pieces of film, rather than using a butt joint (which can leave a light leak), it is recommended that the film pieces be overlapped about 0.8 mm (which will leave a dark line when viewed at a short distance). To achieve this 0.8 mm overlap, use the following procedure:

1. Determine where the film overlap is to occur. Lay cutting strip on the sign surface at this location. Tape cutting strip to sign surface with 5.0cm masking tape.

Note: The cutting strip thickness determines the width of the overlap. For example, a 16 gauge thick cutting strip should yield about a 0.8mm thick seam. (If you prefer a thinner overlap seam, use a thinner cutting strip, and use a thicker cutting strip for a wider seam.)

It is recommended that a minimum overlap of not less than 0.5mm be maintained to prevent potential light leaks as the sign weathers.

Apply the first (base) piece of film making sure that it overlaps the cutting strip. Apply using techniques shown in application instructions. (If film pieces are premasked, remove premask in the overlap area prior to seaming.)

2. Apply second piece of film (make sure that it is long enough to overlap the width of the cutting strip), then overlap the base film with the second piece.
3. Using a sharp knife or razor, cut along the entire length of the overlap through both layers of film. The use of a straight edge is recommended.
4. Remove top film weed, then fold back overlapped film so that underneath film weed can be removed.
5. Remove the taped down cutting strip and spray with application fluid where the cutting strip was positioned.
6. Squeegee the first piece of film onto the sign surface and then the second. An overlapped seam will be created.
7. Resqueegee after 24 hours.

Cutting and Weeding

NOTE: It is recommended that cutting and weeding of graphics be done prior to application to prevent possible damage to the substrate. If cutting is done after application, exercise caution to prevent the cutting of the substrates.

1. Cutting may be done with conventional 'graphic' knives, either fixed or swivel, or with a sharp razor blade.
2. Patterns may be pounced on to applied films using chalk or carbon dust. (Some carbon papers and some marking pens may permanently mark the film so check suitability before using.)
3. Avoid or minimise over-cuts to eliminate or reduce light leaks.
4. Weeding may best be done by carefully holding a corner of the 'weed' and removing it by pulling with sharp, short jerks at a 90° angle. Any adhesive residue left on the substrate may be removed by rubbing with thumb or finger.
5. If the graphic is to go up to the edge of the substrate, the fabricator should consider the film thickness 0.08mm to 0.1mm to determine if it will interfere with the clamping hardware.

Please Observe the Following Notes and Cautions!

1. When fabricating signs with this film, keep in mind that constant rubbing against the film by retainers or other parts of the sign body may tear the film, possibly causing light leaks.
2. Avery translucent film may be applied to substrate either untensioned and laying flat on a table or it may be applied after the substrate has been installed and tensioned in the sign cabinet.

NOTE: If applied prior to tensioning, caution should be taken during tensioning to prevent overstressing or cracking the film.

3. Application of Avery translucent film to a flexible-faced signage material (other than noted substrates) is not warranted.
4. When Avery translucent films are used on approved substrates; neither the film nor substrate should be over sprayed with spray paint.
5. It is generally recommended that if graphics are to come near the outside edge of the substrate, those graphics should, if possible, be applied to a tensioned face to prevent 'scalloping'.

NOTE: Scalloping is normally visible only with lines running in the same direction as the edge of the sign and within about 30 cm of the visible opening.

For further information, contact your local Avery Graphics representative.