

# Avery Dennison® Technical Bulletin

## 1.07

# Removal of Pressure Sensitive Adhesive Films

Revision 1

## Introduction

Avery Dennison pressure sensitive adhesive films have been designed for use in the manufacture of high quality architectural, fleet, general signage and promotional graphics. Should removal of the film be required, differences in film characteristics (e.g., cast vs. polyester) and the substrate surface (e.g., painted vs. unpainted) will combine to make each removal slightly different. Removability of pressure sensitive adhesive (PSA) films is not a property of the adhesive alone. It is a combination of face film, adhesive, substrate and exposure conditions. The purpose of these instructions is to provide a general removal method useful in many common situations. Always test a small area before commencing decal removal to ensure that the substrate will not be negatively affected.

## Definitions

**Removability:** the ability of a pressure sensitive adhesive (PSA) film to be removed in large pieces leaving little or no adhesive on the substrate.

**Removable Adhesive:** an adhesive designed to have relatively low adhesion level to facilitate removal after a stated period of use.

## Suggested Removal Tools

- Electric heat gun
- Wall paper steamer
- Knife
- Razor Blade
- Putty Knife / plastic scraper
- Avery Dennison Surface Cleaner or IPA
- Avery Dennison Adhesive Remover

## Cold Pull Method

In many instances, it is merely a matter of picking or lifting an edge of an applied film and pulling to remove the entire graphic. This can be achieved with the use of a fingernail, putty knife, knife, or razor blade. Once an edge has been lifted, grasp the decal with your hand and pull the decal away from the substrate. Minimising the degree of the pull angle will reduce the potential for adhesive transfer typically less than a 45° angle will meet this requirement. However, success can be achieved at greater than 45° angles, but adhesive residue may be present.

When the temperature is below 10° C there may be instances where difficulty in removal is encountered. Such difficulty could cause tearing of the decal to be removed or excessive adhesive residue. When these situations arise, the Heat Method (below) is recommended.

## Heat Method

With a heat gun, heat the entire decal by holding a heat source approximately 15 - 30cm away from the surface. After heating the entire graphic for approximately 30-60 seconds, loosen a corner of the film and pull back slowly. Using a slow, steady pulling and lifting action at less than 90° angle will usually prevent the film from breaking and will remove most of the adhesive from the substrate. If the film becomes hard to pull, stop, reheat, and proceed with removal.

Adhesive residue may be removed with the use of Avery Dennison Adhesive Remover. Spray the adhesive with Avery Dennison Adhesive Remover and let it soak in, if the adhesive appears to dry then re-apply until soaked. Allow to dwell for a couple of minutes and then with the use of a squeegee or plastic scraper, remove the residue. Once all of the adhesive residue has been removed clean the area with Avery Dennison Surface Cleaner.

## Chemical Method

Avery Dennison recommends an environmentally safe, non-toxic, non-flammable decal remover that will minimise the time required to remove decals. Some important instructions regarding chemical removers are:

- Apply with spray dispenser. Wait approximately 10-15 minutes until vinyl begins to bubble.
- Peel vinyl from surface.
- If vinyl does not remove easily from surface, a hot water pressure washer can be used to separate the vinyl from the surface. A minimum pressure of 2500 psi (175 kg/cm<sup>2</sup>) is required. The minimum temperature required is 74°C.
- If adhesive remains, apply again and wait 3-5 minutes.
- Use a pressure washer to remove adhesive with a top-to-bottom, side-to-side motion. Keep the water stream narrow and the nozzle 60cm from the surface with a minimum pressure of 2500 psi.

**NOTE:** When using chemical vinyl removers, follow the manufacturer's recommended instructions.

## Precautions

- Always test the suitability of the chosen chemical or solvent for the particular substrate surface. If any damage is visible, do not proceed with the removal.
- Solvents are flammable. Do not use or store solvents near heat, sparks, or open flames.
- Avoid prolonged breathing of solvent vapours. Work only in well-ventilated areas with sufficient air exchange to prevent vapour build-up. Avoid eye and skin contact.
- Follow all instructions and safety warnings on solvent and chemical containers

For further information, contact your local Avery Graphics representative.

## Warranty and Limited Remedy

This instructional 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.

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.

Avery Dennison has a vast network of Certified Installers who have been specially trained and certified in accordance with our recommended techniques.

You can review the Certified Installer list here: [Find a Graphics Installer](#)

Consider hiring a professional whenever the application requires:

- Multiple panels to be registered
- Complex surfaces, such as rivet and corrugated trucks
- Harsh environmental conditions (i.e. outdoor applications in high heat climates)
- Remote geographic locations

For further information, contact your local Avery Dennison representative.

