

Application, Maintenance and Removal of Textured Wall™ Films

Instruction Bulletin

Recommended Types of Graphics and End Uses

This bulletin describes the application, maintenance and removal of 3M™ Textured Wall™ Film IJ8624, 3M™ Envision™ Print Wrap Film LX480Cv3 and 3M™ Envision™ Print Wrap Film SV480Cv3.

Recommendations

Low VOC paints are driving change in wall film applications. The chemistry of paints has been changing over the years to drive down the level of Volatile Organic Compounds, VOCs, due to both sustainability efforts and regulatory requirements. These new paint formulations have changed how the painted surface interacts with the adhesive on films, affecting the films' ability to adhere to the paint.

Simple steps can maximize film adhesion. Because the paint formulations are protected by trade secrets, it is difficult for any film manufacturer to understand how film adhesives interact with these paints. We have found through extensive testing that there is no single film or adhesive that works "best" on each paint tested. In fact, one film can perform well on one paint and poorly on another paint. However, by using the new 3M™ Enhanced Adhesion Cleaning Method and testing the film's adhesion to the walls, which are covered in this Bulletin, you can quickly, easily and successfully adhere almost any 3M wall film to nearly any paint.

Reading and following the techniques in this Bulletin can be the difference between a successful installation and a happy customer, and a graphic that falls off the wall prematurely.

Important Considerations

- Due to the wide variety of surface types and surface finishes, including low VOC paints, 3M provides only a Basic Product Warranty for unused material; no warranty is implied or offered for the adhesion, printed or applied appearance, durability or removability.
- A change in gloss or wall staining after film removal is possible. It is usually the result of one or more of the following: the initial wall cleaning process, paint and pigment quality, exposure to heat and light, migrating particles in the paint, and/or adhesive residue.

Limitations of End Uses

Application problems can occur with the following substrates:

- Too highly textured paint.
- Poor initial paint bond.
- Poorly painted wall edges.
- Patched areas that have not been primed.
- Moisture behind the wallboard, which can cause adhesive problems. Watch for walls that back up to cooling systems, water pipes, overhead windows or water pipes that could drip on the graphic and boarded up windows.
- Dust, dirt or vehicle exhausts contamination on the wall.
- Vinyl wall covering as a substrate: always test the surface for acceptable adhesion characteristics.
- Contamination by other products on the wall that was not properly cleaned.

Application Tools

- Scotch® Masking Tape*
- 3M™ Textured Surface Applicator TSA-1*
- 3M™ Comply™ Magic Pad CMP-1*
- 3M™ Air Release Tool 391X*
- Heat resistance gloves
- Cutting tools, such as a razor blade with a safety holder
- Industrial heat gun; must be capable of attaining 50 °C to 600 °C, or equivalent

*Available from 3M Commercial Solutions Division

Substrate Cleaning and Preparation

Clean the substrate immediately before applying 3M™ Textured Wall™ film IJ8624, 3M™ Envision™ Print Wrap Film LX480Cv3 or 3M™ Envision™ Print Wrap Film SV480Cv3. If the substrate has any contaminants e.g. dust, dirt, grease, loose paint, etc., the film will not stick to it.

Pay extra attention to cleaning wall edges and corners.

For interior walls where grease and/or oil is present on the substrate: Wash the substrate with a solution of detergent and lukewarm water.

Smooth poured concrete walls or concrete block walls may require power washing or hand washing with a stiff brush and a detergent cleaner followed by a clean water rinse to remove grease and/or exhaust contaminants. Allow the surface to dry thoroughly (at least 24 hours) before applying the films mentioned.

Application Method

For Textured Wall™ film, 3M™ Envision™ Print Wrap Film LX480Cv3 and 3M™ Envision™ Print Wrap Film SV480Cv3 only dry application method is recommended.

Application Temperature

Apply Textured Wall™ film only if air and surface temperature is within the range of +12°C to +38°C

Plan Your Layout

- Outside corner of the graphic. Try to position the graphic so its edges are in the least vulnerable position possible.
- Mortar joints. 3M film for textured surfaces works best if the mortar joints are not more than 0.3 cm deep, and are flush, concave or V-shaped.
- Overlaps. Plan 1 cm overlap on all multi-panel graphics.
- Narrow panels are easier to work with, especially if you are working from a ladder.

Outgassing

As a wall finish dries, it releases certain gases until it is fully dried and cured. Applying a graphic before the finish has cured can result in lifting, bubbles and premature graphic failure.

Paint and Primer Application Tips

Use two coats of primer, if necessary, to get good coverage.

Use a roller or high pressure spray system to apply primer and paint. These tools provide better coverage than a brush. A short nap (0.6 cm) paint roller generally creates a smooth surface. A long nap roller tends to create a heavier texture.

Always allow at least 5 days for the final coat of paint to dry before applying to the wall. Graphics applied to insufficiently dried paint may lift or fall off.

Primer

- Oil based, high quality primers offer a good coverage.
- Tinted primers may bleed through certain films or be stained by the film's adhesive. Use the highest quality paint to reduce staining or bleed through problems.

Paint

It is recommended to perform standard paint/primer adhesion tests.

- Solvent based, latex, powder coated*, and urethane paint offer a good film adhesion.
- Baked enamel paints have an excellent film adhesion and removability.
- Semi-gloss paints offer the best universal painted surface.

*Waxes used in powder coatings negatively affect adhesion; always test for acceptable film adhesion.

Paint additives

It is recommended to perform standard paint/primer tests

- Low luster, matte or satin types of paint additives may inhibit good film adhesion. Matting agents may reduce bonding characteristics.
- Silicone or graffiti resistance agents may inhibit a good film adhesion.
- Migration particles* may inhibit a good film adhesion, but they may stain.
- Textured paint: Select a film designed for the amount of textured on your surface. Test the surface for acceptable initial adhesion result.

*Some particles in paint's chemistry can migrate over time. Although it is difficult to know if this will be a problem until the graphic is removed, you should be aware of it.

Film Application Tips

Before starting with applying the film find out the heat, the speed of application and the pressure of the roller to avoid application problems.

Apply film so that there is always an open edge through which the trapped air can escape. NEVER work from the edge to the center or from an open edge, to a sealed edge such as at a panel overlap.

The most common application error is moving too fast. Try moving about 5 cm per second at first and adjust from there.

Film Application Technique

Standard application; cover the whole wall as over the mortar joints.

Mosaic Graphic application; applying film over the whole wall and cut out after application the mortar joints.

Removal of Textured Wall™ Film

The film can be removed under using heat before starting remove. Using two hands, start at the top of the graphic and pull it down slowly at consistent 120 to 180 degree angle. If graphic is difficult to remove, cutting into strips may ease the removal process. Do not cut the substrate.

Do not use chemicals for indoor wall graphic removals.

If the substrate appears stained after graphic removal, it is the result of one of the following: poor quality paint, exposure to heat and light, migrating particles in the paint and adhesive residue.

See Instruction Bulletin 6.5 for more details.

Application Tools



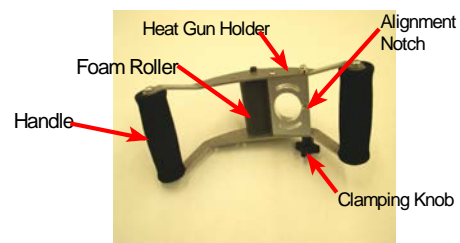
TSA-1



TSA-2 Tool for application in mortar lines



TSA-3 Tool for application in a tight spot.



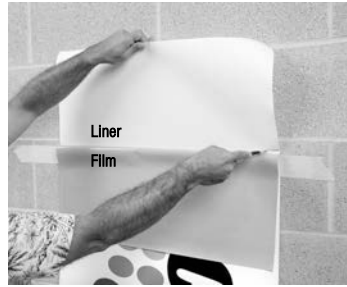
TSA-4 Two-hand roller for large format application

Application Guide

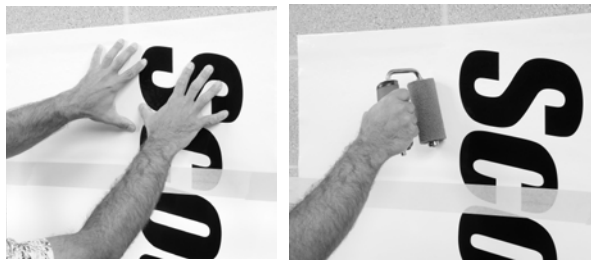
1. Place the material at the area of application



2. Remove the liner



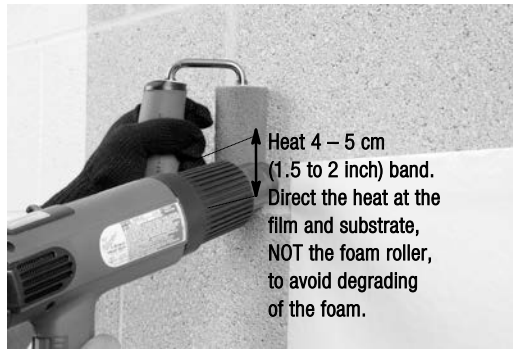
3. Fix the material with less heat using the TSA-1 tool



4. Start with the application but do not heat in direction of the roller. The following picture shows the procedure that will destroy the foam of the roller.



Make sure that the heat is not directed to the roller!



5. Follow the roller with a speed of 5 cm per second



6. Go step by step down with the roller



7. For large format application TSA-4 can be used.

Direction of movement with gun mounted this way

Alignment Notch



Start each pass of the film

Maintain consistent temperature of 538 °C (1000 F)

8. Remove bubbles using the air release tool.



9. Removal of applied graphic is possible using heat.

Removal

Removing film from walls is significantly different than removing film from semi-trailers and vehicles. Remove at your own risk. 3M is not responsible for damage to the paint or wall.

Using two hands, start at the top of the film and pull it down slowly at a consistent 120 to 180 degree angle.

- If the film is difficult to remove, cutting it into strips may ease the removal process. Do not cut the wall.
- Do NOT use chemicals for indoor wall film removal.
- If the walls are not made of wallboard, heating the film as you remove it may help. The heat softens the adhesive, reducing the pull-off force and making the film more elastic, which reduces the tendency to tear.
- If the wall appears stained or the gloss has changed after graphic removal, it is usually the result of one of the following: the initial wall cleaning process, paint and pigment quality, exposure to heat and light, migrating particles in the paint, and/or adhesive residue.
- See [Instruction Bulletin 6.5](#) for more details.

Application Pictures

See below some possible applications.



Remarks

This bulletin provides technical information only.

Important Notice

All questions of warranty and liability relating to this product are governed by the terms and conditions of the sale, subject, where applicable, to the prevailing law.

Before using, the user must determine the suitability of the product for its required or intended use, and the user assumes all risk and liability whatsoever in connection therewith.

Additional Information

Visit the web site <http://www.3Mgraphics.com> for getting:

- more details about 3M™ MCS™ Warranty and 3M™ Performance Guarantee
- additional instruction bulletins
- a complete product overview about materials 3M is offering.



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