

**Colorwave Graphics suggests performing an adhesion test prior to producing any graphics. It is recommended that you do any/all repairs prior to this test. Please allow fresh paint to cure for a minimum of 2 weeks.**

### Common Wall Problems

Each of the following problems can contribute to poor graphic adhesion and damage during graphic removal if the problem is not repaired or considered prior to graphic application.

- 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 the wallboard paper to release. 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. These areas are prone to condensation that may not be obvious at the time of installation.
- Dust, dirt or vehicle exhaust contamination on the wall.
- Wallpaper that is not securely bonded to the wall in all areas.
- 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.
- Cuts made to the graphic during the installation that penetrate both the film and substrate.



#### Key to Success

Inspecting and repairing walls before you apply the film eases installation and helps ensure good removal.

### Unsound or Damaged Wall Surfaces

An unsound wall surface is one that shows signs of a loose, inconsistent or damaged surface finish. This may include loose paint, mixed surface finishes, abrasion, gouges, etc.

Poured concrete wall systems may look sound but upon using the wall test kit, you may find that the film strip pulls off the paint and the very fine top surface of the poured concrete. This is due to the way the concrete surface sets up at the first 0.5-1.0 mm of depth. The top layer is often loosely bonded together, even though it does not appear to be. When paint bonds tightly to this surface, the force used in pulling off an adhesive product may fracture the concrete layer, pulling it and the paint off.

Every effort should be made to repair unsound or damaged wall surfaces before applying the film. If this is not done, the application may be more time consuming, the applied graphic may not look satisfactory, and the surface may be damaged when the graphic is removed.



### Key to Success

Choosing and using the right primer and paint can have a significant affect on film adhesion.

When possible, we recommend using primer and paint from the same manufacturer, since the products are usually designed to work together. The goal is to achieve a good bond between the substrate, primer and paint.

Laboratory tests using Pittsburgh® Paints and Sherwin-Williams™ Paints have provided acceptable film adhesion and removability characteristics on sound surfaces, although paint from other manufacturers may be satisfactory. 3M does not endorse any particular paint manufacturer.

### About 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.

### Air Quality Regulations

State Volatile Organic Compound (VOC) regulations may prohibit the use of certain cleaning solutions. For example, the California South Coast Air Quality Management District prohibits use of certain solvent-based solutions without a permit and other California AQMD's prohibit use of certain solutions without a permit or a regulatory exemption. You should check with your State environmental authorities to determine whether use of this solution is restricted or prohibited.

### 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 (1/4 inch) paint roller generally provides a smoother coating. A long nap roller tends to apply a heavier coat of paint, producing a texture that may be too heavy for direct application of 3M graphic films.
- Always follow the drying and curing times recommended by the paint manufacturer. Paint may continue to dry over a period of several days and up to a month. Graphics applied to an uncured paint may lift or fall off.

Primer		
Type of Primer	Considerations	Recommendations
Oil based, high quality	Good coverage	Kilz® brand primers have shown excellent results.
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		
Type	Considerations	Recommendations
Solvent based	Good film adhesion	Perform standard paint/primer adhesion tests
Latex		
Powder-coated		
Urethane		
Baked Enamel Paints	Excellent film adhesion and removability	
Semi-gloss	Best universal surface	

Paint Additives		
Type	Film-to-Paint Adhesion Characteristics	Recommendations
Low luster, matte or satin	Usually good film adhesion	Determine if matting agents reduce bonding characteristics. Perform both paint/primer tests.
Silicone or graffiti-resistance agents	May inhibit good film adhesion	Perform standard paint/primer adhesion tests
Migrating particles*	May inhibit good film adhesion, may stain	
Textured paint	Too heavy a texture may not allow direct application of 3M graphic film. Always test the surface for acceptable initial adhesion results. For further assistance contact CG Technical Service at 1-800-328-3908.	

\*Some particles in a 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.