

## Pressure Sensitive Graphics in Interior Drywall Applications

- 1) **Pressure Sensitive graphics in drywall applications are challenging for many reasons:**
  - a) Drywall is an extremely porous surface and sealing it up is critical to a good application.
  - b) New drywall (anything less than one year old) does a lot of moving as the new building settles and the wood studs and the drywall dries out. This can result in graphics lifting. Finally, new drywall can outgas as it dries out resulting in bubbles or blisters forming under the graphics.
  - c) Paint Manufacturers are constantly changing their formulas. What worked 'yesterday' may not work 'tomorrow'.
  - d) Different paints require different cure times. Heavily pigmented paints take significantly longer time to cure. Environmental conditions can speed up or retard cure times. Graphics applied to un-cured paint may fail. **Consult with your paint manufacturer** for the proper primer and paint to use and their respective cure time.
  - e) Even with the best of conditions some jobs may require touch ups.
  - f) For these reasons, there is no guarantee for Pressure Sensitive graphics in drywall applications.
  
- 2) **Keys to a successful application of interior wall graphics:**
  - a. Do not apply graphics to unsealed drywall. Drywall finish should be at level 4 or 5.
  - b. Avoid textured wall surfaces. These surfaces do not allow for good surface contact of the adhesive. Use graphic products designed specifically for these textured surfaces like Mactac's *RR100 RoughRAP* or *STR328P StreetRAP*.
  - c. The ideal wall surface is **smooth with a semi-gloss paint**.
  - d. Do not apply graphics until the paint is fully cured. A minimum of one (1) week after painting is required. The more color pigments in the paint, the longer it takes to cure. Heavily pigmented paints may take as long as three (3) months to cure.
  - e. **Do not apply graphics to matte finish paints.** These have matting agents that float to the surface and can cause interference with ultimate adhesion.
    - i. Avoid using paints that are "scrub-able" or "washable" as migratory agents in these paints may cause graphic failure.
    - ii. If paints are identified as **low- or no-VOC** you must wash the walls with a cleaning solution 1st, followed by multiply (2 or more) alcohol washes to achieve a good bond. An alternative solution is to use a more aggressive adhesive system which you will find in ROODLE (RO628), Perm. WallNOODLE (PN628) or REBEL H (RB528H).
    - iii. Water-base latex paints may require 30 to 90 days to completely cure. **Consult with your paint manufacturer** for proper cure times.
    - iv. Paints dry from the outside in so dry to the touch may not be fully cured.
    - v. Heavier pigment loading, e.g. paints with dark or intense colors, will extend the cure time, possibly out to 90 days, or more.
    - vi. Avoid oil based paints. These paints are designed to never fully cure.
    - vii. Good film adhesion is possible with solvent-based, latex, urethane and epoxy paints.
    - viii. Always test your wall graphic media on the wall first.
  - f. Repair any existing wall damage.
  - g. Clean the wall prior to priming and painting.
  - h. Use short nap rollers (¼"), sponge rollers or spray units to apply the paint.

- i. To insure proper compatibility use a primer and finish paint designed to work together from the same paint supplier.
- j. All air drying paints must be allowed to cure at or near to 70°F and 50% R.H. for at least one week (7 days) prior to film application. Consult with the paint manufacturer for complete cure times. *Note: some paints may take months to fully cure.*
- k. Apply the graphics above the recommended minimum application temperature of the graphic media – ideal application temperature is 70°F. Consult the product Performance Guide which can be found at [www.mactac.com](http://www.mactac.com).
- l. After the paint is fully cured, wipe down the walls with an **alcohol** saturated cloth just prior to applying the graphics to remove any dirt or dust that has accumulated over time as the paint completes its cure.

3) **Substrate preparation for previously wallpapered walls:**

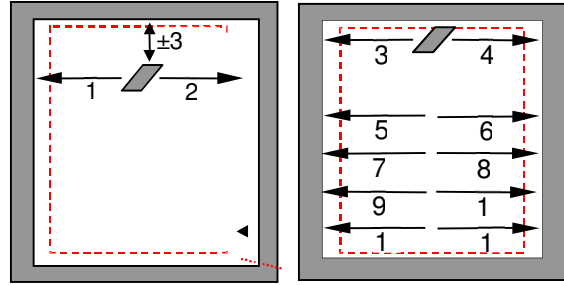
- a. The substrate must be dry, clean and without any residue from previous wallpaper layers.
- b. If a previous layer of wet glue wallpaper has to be removed, please follow instructions from the wallpaper or wet glue manufacturer.
- c. If necessary, sand down or cut out all irregularities with a utility knife. Brush down or wipe over the wall with a clean towel to remove any remaining dust particles on the wall that might be visible in the freshly applied pressure sensitive wallpaper after application.
- d. One final wipe down with warm water or alcohol using a soft towel.
- e. Allow the surface to dry before applying the graphics.

4) **Wall testing procedure:**

- a. Prep the area of the wall for testing just like would if preparing it for the graphic install
  - i. Clean the dirt and grime (Spic and Span®, Fantastik®, etc.)
  - ii. Clean again with Alcohol/water mix (70/30)
  - iii. If needed do it one more time.
- b. Apply 8 inches of a 1" x 10" sample strips of your favorite Mactac wall graphic media to the wall. The unapplied 2" will be used to attach the scale. Leave this hanging from the top.
  - i. Use a firm squeegee to apply the strip.
  - ii. 3 – 5 strips should be tested to get an average pull.
  - iii. Make sure your sample strips are clearly identified.
- c. After 30 minutes, use the spring scale to measure adhesion.
  - i. Spring scale should be able to read 0 – 4 pounds minimum (0 – 1850g or 0 – 64 oz.)
  - ii. Attach hook to un-applied 2".
  - iii. Pull the strip down @ 180° slowly. Use a count of 40 to pull the entire strip off.
  - iv. Read the scale as the average pounds (or ounces depending on your scale) it takes to peel the strip smoothly. Eliminate any spikes in your reading.
  - v. Repeat for the other strips.
  - vi. Average your results for all strips.
- d. What the numbers mean:
  - i. 0 – 0.7 lbs. = Poor adhesion don't use this one!
    - a. 0 - 300 g
    - b. 0 - 11 oz.
  - ii. 0.7 – 2.3 lbs. = Good removable adhesion (may pull some paint if at the high end)
    - a. 300 – 1000g
    - b. 11 – 37oz.
  - iii. 2.3 lbs. and up = Very good adhesion – Permanent. Most likely will damage wall upon removal.
    - a. 1000g and up
    - b. 37 oz. and up

#### 4) Application of pressure sensitive wall graphics:

- a. Test your graphic material to insure good adhesion prior to printing and doing a full application.
- b. Never wet apply the graphic to drywall. Do not use application fluids.
- c. Take care to not stretch the graphics during the application. Stretched graphics will make it difficult to align seams.
- d. Plan to overlap all seems at least  $\frac{1}{2}$ " to 1" to allow for:
  - i) Non-square walls,
  - ii) To allow for the film to relax back from stretching during application, and
  - iii) Most vinyl films will shrink a little over time, (consult the Performance Guide to determine how much to expect) an overlap insures this shrinkage will not result in unsightly seam separation over the life of the graphic.
- e. Allow sufficient time for the adhesive to build to an ultimate bond before removing any application tape.
  - a. Remove the application tape by pulling it back upon itself, at a 180° angle.
  - b. After removal of the application tape, use a soft squeegee to go over the surface one more time, paying special attention to all edges and seams, to insure a good bond with the wall.
- f. If the painted surface is a little rough, use heat to warm and soften the graphic film and then with firm pressure, re-squeegee the graphic to make sure it comes into full contact with the surface.
- g. Trim graphics back  $\frac{1}{4}$ " from all edges and corners.
- h. The final step is to Re-squeegee all edges to insure good contact with the wall.



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