

# MAGIC® TECHNICAL BULLETIN

## INK JET CUSTOM WALL MURALS



A variety of Magic® ink jet products can be used to produce digitally printed custom decorative wall murals for both residential and commercial applications. The DMiBOP10 & Mural-Pro products are available for use in aqueous wide format ink jet printers. The GFIOp140, GFIOp212, and GFTRP products are available for solvent ink jet printers. These products have unique physical properties, which make printing and installing custom wallcovering easy. Mural-Pro, GFIOp140, & GFIOp212 latex-saturated wet strength media are lower in cost but not lower in quality. Most wallcovering applications do not need high tear strength properties. For those applications where higher tear strength is needed, use DMiBOP10 or GFTRP because they are latex-saturated papers with nylon-reinforcement. All the wallcovering products are compatible with a variety of printing systems and common wallpaper pastes. All product base sheets meet the flame spread requirements according to the ASTM E84 tunnel test procedure. All products with a protective coating meet the surface durability characteristics for wallcoverings (ASTM F-793).

### PHYSICAL PROPERTIES

	DMiBOP10	Mural-Pro	GFIOp140	GFIOp212	GFTRP
Basis Weight (oz/yd <sup>2</sup> ):	6.6	6.7	4.1	6.2	6.1
Basis Weight (g/m <sup>2</sup> ):	225	228	140	212	209
Caliper (mil):	11.3	12.1	6	9.9	9.7
Caliper (microns):	288	309	153	253	247
% Opacity:	97	97	95	95	94.5
Whiteness:	104	105	83	83	83
% Wet Expansion:	3	2.5	2	2.07	2.67
Tensile Strength (#/in) (MD/CD):	52/33	65/52	50/37	60/48	50/31
Tear Strength (g) (MD/CD):	115/110	143/173	115/110	200/185	365/382
% Elongation (MD/CD):	30/60	7/13	9.3/16	8/14	9.3/16
Indoor Life Expectancy:	1 year+ when pigment inks are used. Over lamination will increase product life.				

### PRINTING GUIDELINES

**Printer & Ink Compatibility:** It is recommended to use DMiBOP10 & Mural-Pro media in Hewlett-Packard DesignJet® and Canon iPF series printers with pigment inks, Encad NovaJet®/Pro/Proe printers with GO inks, ColorSpan® Displaymakers with Perma-Chrome inks, Epson stylus series, and other piezo water-based pigment printer systems. Ink saturation levels up to 250% can be used. Higher ink saturation can affect waterfast properties and show ink bleed in heavy saturation areas. **It is recommended to print with pigment inks when performing wallcovering applications. Pigment inks provide light and waterfastness.** GFIOp140, GFIOp212, & GFTRP products can be used in solvent ink printing systems such as: Vutek, Nur/Salsa, and Idanit/Scitex printers.

**Printing Guidelines:** Wallcovering jobs are usually performed in panels. Panels should contain a 1" overlap. This will help to match the pattern across panel seams. Be sure to number the panels and provide a map indicating panel segments to the installer. Due to the heavy gauge of these material, they can feed through the printers at different rates, which can cause print alignment issues. Check the printer manual for alignment options. HP printers have a page accuracy option in their software.

### SURFACE PROTECTION RECOMMENDATIONS

A liquid laminate may be used to protect the surface against dirt and stains. There are several manufacturers of liquid laminates. Magic® wallcovering products have been tested with Clearstar liquid laminate products. Clearshield is recommended when printing with dye or pigment inks. Potential air bubble issues may occur if liquid laminates are applied via liquid laminator. Some outgassing (bubbles) can occur when media is submerged in the laminator bath. Hand or aerosol applications do not have air or outgassing issues. Liquid laminates provides water, stain, abrasion, chemical, graffiti, and UV resistance. Liquid laminates are applied prior to installation. Product with liquid laminates meet surface durability requirements for wallcovering (ASTM F-793). More information can be obtained on Clearstar liquid laminates by logging onto their website: [www.clearstarcorp.com](http://www.clearstarcorp.com). Always pretest the material prior to use.

CONTINUED ON PAGE 2

# MAGIC® TECHNICAL BULLETIN

Continued from page 1:

**Vinyl and Polyester laminates are not recommended for wall covering applications.** The added weight could cause installation, delamination, and wall adhesion issues. If hot or cold laminates are used, it is recommended to use double sided adhesive to adhere product to the wall instead of paste.

## INSTALLATION GUIDELINES

Consult with and use a professional paperhanger to perform the installation.

### Wall Preparation:

- \* Wall should be prepped to a smooth, clean, and dry surface prior to installation. Wallcovering will not hide wall flaws such as: nail holes, bumps, or dirt.
- \* Primer sealer should be used on unpainted drywall. Use acrylic wallcovering primers: Professional Ultra Prime (PRO-977), Golden Harvest White Bite, or Allpro Ultra Prep 685. Priming provides a sound surface that wallcovering will adhere to. It is recommended to strip down previous layer(s) of wallcovering. The wallcovering may seem to be firmly adhered to the wall, but the addition of another layer can cause adhesion failure.
- \* Prime over glossy paint with one of the above mentioned primers.

### Paste Information:

- \* Clear adhesives such as Professional Ultra Premium Heavy Duty Clear Strippable (PRO-880), Golden Harvest GH-34 Clear Strippable, and Allpro Pro-Duty 3400 provide good adhesion and allow for easier stripping when the wall covering is to be removed or replaced.
- \* Clay adhesives such as Professional Extra Strength (PRO-732), Professional Clay Strippable (PRO-774), Golden Harvest GH-40, Allpro Extra Strength Vinyl 600, and Allpro Clay Strippable 661 have also been shown to be effective both during installation and the removal of these wallcovering materials.
- \* Pastes such as Professional Heavy Duty Clear PRO-838 or Allpro Clear Hang 610 have a more aggressive adhesion and should be used for more permanent applications.
- \* Vinyl over vinyl pastes tend to dry too quickly on these products and are not recommended.
- \* Apply a coat of the adhesive using a 1/2" nap paint roller. Book for 10 minutes.

### Hanging information:

- \* Do not use tape on imaged surface.
- \* Align top and adjoining edges. Smooth panels into place with a smoothing brush, starting at the center of the panel working towards the edges.
- \* Use a plastic smoother to push air pockets to the edges.
- \* The low wet expansion of these products allows double cutting at the seams. Overlapping the seams is not recommended.

## PRODUCT LIFE EXPECTANCY

Magic® wallcovering products have a 1 year+ indoor life expectancy. Product life will increase if surface protection or a liquid laminate is applied. The use of pigment inks will provide light and waterfastness. Protected digital wallpaper should last as long if not longer than traditional wallcovering.

## FLAMMABILITY DATA

Magic® wallcovering products were fire tested and rated following ASTM E84 test method. The purpose is to ensure the materials used inside buildings are not highly flammable or cause poisonous smoke. The desired classification for wallcovering is class A. All of Magic® ink jet wallcovering products fall under class A. Additional flammability information can be found on our website. Refer to the technical bulletin: Fire Test Data on Magic® Wallcovering Display Media.

USA  
28 GAYLORD STREET  
SOUTH HADLEY MA 01075-2894

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For more information, call 1-800-628-8604,  
or visit our website: [www.magicinkjet.com](http://www.magicinkjet.com)