

# MAGIC® PRODUCTS APPLICATIONS GUIDE

## DMBPC12

### UNIVERSAL POLYCARBONATE BACKPRINT FILM



**MAGIC® DMBPC12** is a 12 mil backprint polycarbonate film which may be used in all Encad NovaJet®, ColorSpan®, Hewlett-Packard DesignJet® and water-based piezo wide format printers. By reverse imaging on the matte surface, the polycarbonate surface protects the image while its texture naturally diffuses light and cuts glare. The stiffness of the polycarbonate base makes it easy to slide into display boxes or to make panels for rigid displays. DMBPC12 may be used with most dye-based inks for frontlit and backlit applications.

### PHYSICAL PROPERTIES

Caliper	11.5 mil	
% Opacity	.58 (+/-5)	*Product life is dependent on strength of light source and distance from light source.
Gloss of Film Side (view side) (60°)	.11	
Whiteness (white backing)	.54	
Optimum Printing Environment	70°F (30-70% RH)	
Life Expectancy as Backlit (dye)	.3 months	
Life Expectancy as Frontlit with backing film (dye)	.6 months	
Flammability Rating (ASTM E84)	Class A	

### APPLICATIONS GUIDELINES

**Imaging:** The print side is the matte side and is wound to the outside of the roll. Images need to be reversed (in mirror image).

**Printer and Ink Compatibility:** The material can be printed with most water-based pigmented thermal and piezo printers equipped with dye-based inks. It can also be used on water-based printers with pigmented ink. Using water-based pigments will usually yield good print quality, but expect lower transmitted and reflective ink densities that with most dye-based inks. Inks NOT recommended for use are Encad GX, Ilford Archiva, and ColorSpan EnduraChromme inks, because premature fading may occur.

**Printer Loading:** When loading DMBPC12, disable the printer cutter mechanism. Most printer cutters are not sharp enough to cut through the 12 mil film. When used in the HP 750 series printer, material should only be sheet fed.

**Printer Settings:** To optimize print quality, printers should be set for highest print quality. The maximum ink saturation level for NovaJet and ColorSpan printers is 350%. To reduce the effects of the "star wheel marks" and to minimize bleed, the recommended maximum ink saturation level is 225% on the HP 2000 and 3000 series printers. The media selection is "Backlit" for the HP2000/3000 and "Photo Imaging Gloss" for HP 5000 series printers when using dye-based inks. "Backlit UV" setting can be used with the HP5000 UV printers. "Heavy coated paper" is the printer setting for the 750 series printers. "Super" and "bi-direction" are the printer settings for water-based piezo wide format printers.

**Waterfastness:** Pigmented inks have excellent water resistance when used in conjunction with DMBPC12. Dye-based inks have a moderate level of water resistance. Condensation in a light box can cause small amounts of ink bleed. Lamination with edge sealer is the best way to ensure complete waterfastness.

**Light Stability:** Pigmented inks will offer greater light stability. For applications where dye inks are used, it is important to overlaminate the imaged side shortly after imaging to prevent image fading.

**Material Handling:** Be sure print is completely dry prior to handling. Lamination is the best way to protect the image from scratches, ink fade, etc.

### INSTALLATION RECOMMENDATIONS

**Mounting:** It is recommended **not** to use the DMBPC12 with a white backer. If a polycarbonate with a white backer is desired, the TSG12 is the product of choice.

**Lamination:** Cold pressure-sensitive overlaminates are recommended. For additional lamination tips, download the film lamination technical bulletin.

**Image protection:** Print a mirror image of the graphic on the matte side of the product and view from the film side. This protects the inks imaged on the surface in the light box, exposing the durable polycarbonate film surface to any outside elements.

**Lighting:** To optimize image appearance, the image should be back illuminated, as the transmitted light yields the desired ink densities. Viewing with reflected light yields slightly lower ink saturation than transmitted light.

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\*The most updated version of this guide can be obtained on our website.

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