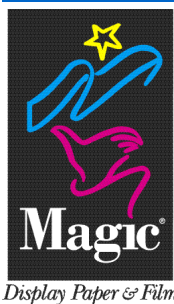


MAGIC® PRODUCTS APPLICATIONS GUIDE

DMBPC12

UNIVERSAL POLYCARBONATE BACKPRINT FILM

MAGIC® DMBPC12 is a 12 mil backprint polycarbonate film which can 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 can be used with most dye-based inks for frontlit and backlit applications.



PHYSICAL PROPERTIES

Caliper	.11.5 mil
%Opacity	.58 (+/-5)
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

*Product life is dependent on strength of light source and distance from light source.

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 piezo printers with pigmented ink. Using water-based pigments will usually yield good print quality, but expect lower transmitted and reflective ink densities than with most dye-based inks. Inks NOT recommended for use are Encad GX, Ilford Archiva and ColorSpan EnduraChrome 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 HP 2000/3000 and "Photo Imaging Gloss" for HP 5000 series printers when using dye-based inks. "Backlit UV" setting can be used with HP5000 UV ink 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 those applications where dye inks are used, it is important to overlamine 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: If mounting polycarbonate to any white backing film, it is **essential** to follow these guidelines or polycarbonate film coating delamination can occur. It is recommended to laminate in an environment less than 55%RH. Lamination failure may happen if materials are exposed to high relative humidity. Heavy gauge materials can delaminate or shrink over time, so pretest all films. After lamination the image should lay flat for at least 12 hours to ensure maximum adhesive curing and bond strength. It is not recommended to roll laminated prints into smaller than a 12" diameter tube, as this can stress the lamination bond and cause splitting of the laminated layers. If trimming laminated material, trim by cutting and penetrating through the back side of the vinyl. A rotary cutter provides the best results. When hand trimming, the knife should be kept absolutely straight. Blades should be new. Angle cutting can cause delamination. Do not use a cutting mat. This soft underbody makes it more difficult to hold the blade straight.

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. Overlamine imaged side when dye-based inks are used.

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.

USA

28 GAYLORD STREET
SOUTH HADLEY MA 01075-2894

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