

# MAGIC® PRODUCT APPLICATIONS GUIDE



Display Paper & Film

## PRINTLAM2 - LUSTRE PRINTABLE LAMINATE

MAGIC® PRINTLAM2 is an improved product design from the original Printlam-L product. Printlam2 is an all-in-one product with improved print quality and color gamut (equal to a satin-laminated photobase), and improved adhesion to boards like Gatorfoam® and Sintra®. The product construction consists of a 4 mil polyester film with a thermally-active coating with both adhesive and image receptive properties. After reverse-imaging on the film, it can be mounted to a variety of rigid substrates resulting in a lustre-finished protected graphic. Printlam2 is ideal for short-term indoor rigid promotional and display graphic applications. Printlam2 is a time and cost savings solution for producing mounted, photo-quality graphics. PRINTLAM2 product is available with (Printlam2HP) and without (Printlam2EN) removable edge stripes for media sensing purposes. Printlam2 is available in both 36", 42", 50", 54" width rolls.

### PRINTING GUIDELINES

**Printer & Ink Compatibility:** The recommended printing systems are Hewlett-Packard DesignJet® 2000,3000, & 5000 series printers, Encad Novajet/Pro® printers, and Colorspan® printers equipped with dye-based inks. Pigmented inks and piezo ink jet printers are not recommended to use. Optimal printing environment is 70°F (21°C) and 20-70% relative humidity conditions.

**Printer Settings:** Material is converted with image side out. Printing is performed in "MIRROR" image. Maximum ink saturation level is 350% for all printer types. To optimize print quality, printers should be set for highest print quality. Select the same print modes when using satin photobases. Select "Semi Gloss Photo" on HP2000/3000 printers and "Photo Imaging Satin" on HP5000 printers. Allow print to dry completely prior to mounting. Dry time will vary with ink type, ink saturation levels, and relative humidity. There will be some level of print tackiness even after inks are dry. Check the [www.magicinkjet.com](http://www.magicinkjet.com) website for available color profiles. It is recommended to use a board with a similar white point when creating color profiles for Printlam2.

**Material Storage:** To protect unused material, it is recommended to store material in its original packaging, in the poly bag at 72°F/22°C (+/-5°).

### MOUNTING GUIDELINES

**Recommended Substrates:** Printlam2 product is compatible on a variety of rigid substrates (Fome-Cor®, Gatorfoam®, Mighty-Core®, Sintra®, Amisign®). Sintra® board compatibility will vary depending on laminator model. See page 2 for additional board information and successful lamination tips. It is always a good idea to pretest your board with your laminator set-up to determine compatibility.

**Pre-Lamination Tips:** Allow print to completely dry prior to mounting (at least 10 minutes). Printlam2 works best if graphics are mounted within 24 hours of printing. Take-up reels can be used between 20-70%RH. Prints remain tacky even after being dry so it is recommended to store prints in areas free of debris/dirt. It is not recommended to place interleaf sheets for storage or transport. Adhesion may be adversely affected. It is recommended to trim print and board to desired dimensions prior to mounting. Leaving an edge of unprinted film will increase the adhesion to the board. When using Printlam2HP, remove the edge stripes prior to mounting.

**Board Preparation:** Mounting substrates should be cleaned with a dry tack or damp cloth so it is free of dirt and debris. **Do not use** isopropyl alcohol to clean boards; it will decrease the adhesion bond of Printlam2 especially on Sintra® boards.

**Post-Lamination Tips:** Allow mounted graphic to cool to room temperature prior to installing or shipping. Like all thermal adhesives, the bond strength improves over time. If possible, wait 24 hours before installing or shipping for optimal results.

### LAMINATION GUIDELINES

**Mounting:** Place the image face down on the board. The image should be right side viewing.

#### Laminator Settings:

Top Roll Temperature:	250°F +/- 2°F (120°C)	Set point may need to be higher to achieve 250°F. Use an IR gun to determine ACTUAL roll temp when moving. Board adhesion can be improved by increasing temp above 250°F or reducing roll speed.
Bottom Roll Temperature:	OFF	Bottom heat can be on to speed up roll heating time (100°F)
Roll Speed:	2 ft/min	
Pressure:	80-100 psi or max pressure	without crushing the board
Gap:	Gap should be 1/8" less than the thickness of the mounting board	

**Laminator Compatibility:** Board adhesion will vary depending on laminator model. See page 2 to determine what type you are using. High-end laminators will result in better adhesion and in a greater number of compatible substrates. Low-end laminators may have difficulty providing the appropriate heat or pressure needed to achieve desired adhesion. A mid to high-end laminator will provide better overall adhesion to Sintra® board. If possible, use an IR gun to determine actual roll temperature. Set points may have to be higher than 250°F. In general, adhesion can be improved by either increasing the top roll temperature or reducing the roll speed. However, changes in temperature or speed may result in board warpage. Max temperature is 270°F (130°C).

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#### USA

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or visit our website: [www.magicinkjet.com](http://www.magicinkjet.com)**

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

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### SUBSTRATE CLASSIFICATION

**Class I:** Class I boards include clay-coated paper-faced boards. Common brands are Fome-Cor®, GatorFoil®, Mighty-Core®, Amisign®, etc. Class I substrates are recommended to be used with laminators capable of maintaining the target settings (250°F, 80-100 psi, 2 fpm).

**Class II:** Class II boards include expanded PVC (most commonly Sintra®) and Plexiglas®. Class II substrates are recommended to be used on mid-range to high-end laminators. Class II substrates show thermal stability in that it does not distort in the lamination process at the recommended laminator settings.

**\*\* If your board type is not mentioned on this guide, pretest the board for Printlam2 compatibility .**

### LAMINATOR CLASSIFICATION

Laminators vary depending on their temperature range, pressure, roll size, roll construction, speed control, etc. Below is a list of common hot roll laminators broken up into low, mid, and high-end laminators depending on their laminating capabilities. Printlam2 will have varying results depending on the laminator that is used during mounting. Determine what type of laminator you have and what boards can be used. It is recommended to use an IR gun to determine actual roll temperature when rolls are in dynamic mode. Set points may have to be set higher than 250°F to achieve 250°F. Use a tach meter to determine roll speed.

#### LOW END

Spartan  
Titan 110/165  
Catena 105  
Seal 44  
Image® 410

#### MID-RANGE

Falcon 36  
Falcon 60+  
Falcon 160  
Image® 600  
ProSeal 25

#### HIGH-END

Orca 1600  
Orca I  
Orca III (III-T)  
Image® 6000 series

### TIPS FOR SUCCESSFUL LAMINATION

If you need additional technical support, please call 1-800-831-9551, press #4, and ask for Keith or Wendi.

#### Standard Foam Boards

- Most hot roll laminators (low-high)
- Top Roll Temp = 250 °F
- Pressure = 80-100 psi
- Speed = 2 fpm
- Roll Gap = 1/8" less than board thickness
- Clean board with damp/dry cloth before mounting. Do not use alcohol to clean board.
- Mounting can be performed once the ink is dry (10 minutes). Best results occur when mounting is performed within 24 hours of printing.

#### Sintra® Boards

- Most hot roll laminators (low-high)
- Top Roll Temp = 250 °F
- Pressure = 80-100 psi
- Speed = 2 fpm
- Roll Gap = 1/8" less than board thickness
- Lightly sand the board prior to mounting (200 grit sandpaper). Be sure to clean board of any dust with a damp/dry cloth. Do not use alcohol to clean board.
- When application allows, leave a thin unprinted safe edge for even stronger durability.
- Mounting can be performed once the ink is dry (10 minutes). Best results occur when mounting is performed within 1 hour of printing.

#### Plexiglas®

- High end laminators
- Top Roll Temp = 250 °F
- Pressure = 80-100 psi
- Speed = 2 fpm
- Roll Gap = 1/8" less than board thickness
- Clean board with damp/dry cloth before mounting. Do not use alcohol to clean board.
- Mounting can be performed once the ink is dry (10 minutes). Best results occur when mounting is performed within 1 hour of printing .

Substrate categories not listed in this document either have not been tested or are not recommended for use with Printlam2. It is recommended to pretest the board with your laminator setup to determine compatibility.

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