

# Technical Bulletin

## Direct Printing or Painting

### Fome-Cor<sup>®</sup> & Gator<sup>™</sup> Products



Date: March 17, 2004

## Direct Printing

Painting Information Provided Below

Direct printing can be accomplished by either digital printing or screen-printing. Both the Fome-Cor and Gator products can be utilized very effectively with direct print techniques.

Direct printing and painting information is provided for the products listed below. Products marked with an “\*” do not have a recommended application with direct printing.

<b>Fome-Cor<sup>®</sup> Products</b>	<b>Gator<sup>™</sup> Products</b>
Fome-Cor <sup>®</sup> Board	Gatorfoam <sup>®</sup>
<i>Specialty Products</i>	<i>Specialty Products</i>
Acid-Free Fome-Cor <sup>®</sup> Board	GatorLite <sup>™</sup>
Heat-Activated Fome-Cor <sup>®</sup> Board	Gatorplast <sup>®</sup>
Self-Adhesive Fome-Cor <sup>®</sup> Board	Gatorblanks <sup>®</sup> - *
JetMount <sup>®</sup>	
JetPrint Board <sup>™</sup>	
ValuBoard <sup>™</sup> - *	

### **Fome-Cor Products:**

Fome-Cor products offer a variety of liner colors (white, black, and natural kraft). The white, clay-coated paper liners are chosen for their excellent direct print capabilities.

Both digital printing and screen-printing work very well with the white clay-coated liner. Digital printing has several products to choose from. The standard 1/8”, 3/16” and 3/8” Fome-Cor are well suited with the white liner. The new JetMount Board has an increased density to the foam that provides better dent resistance for 1/4” thick printing. Should an ink-jet receptive surface be needed for direct printing you have the great choice of JetPrint Board. The product comes standard with one-side printable, but special order of a two-sided printable.

Typical characteristics for screen-printing includes fine line detail, good ink holdout, and fast drying rates. Water-based, solvent-based, or UV inks are generally suitable. Fome-Cor's smooth surface makes it ideal for any printing operation which can utilize rigid, flat sheet stock.

**JetPrint Board:** JetPrint Board's proprietary coating was developed and tested for use with many water-based digital inks (dye or pigment) on the market today. JetPrint Board is endorsed by Encad<sup>®</sup>, Inc., for use with Graphic Standard PLUS<sup>™</sup> high-gamut, indoor, dye-based ink and Graphic Extend<sup>™</sup> lightfast, indoor dye-based inks.

The coating and substrate are designed for indoor applications and are not recommended for outdoor use or applications where exposure to moisture is anticipated. It is recommended that the user test JetPrint Board for use with other manufacturers' printers and ink systems to determine compatibility and operating conditions before running commercial jobs.

JetPrint Board is designed for use with printers capable of handling rigid media of ¼ inch thickness or greater. Boards may be trimmed to smaller sizes if required by the printer. Printers should be equipped with thermal inkjet heads that are designed to use a water-based ink system (dye or pigment). In some cases, special modifications, adjustments or additions need to be made to printers to accommodate rigid media. Contact your printer supplier for details on specific printer models. See the JetPrint Board Information Sheet for more information on thickness and available sizes.

### **Gator Products:**

Gator product foam panels are rigid, lightweight and easy to handle. They may be used in either direct print method of digital or screen-printing. Although you can print on any color of the 3 facers (white, natural kraft or black) the predominant choice is the white facer. With the introduction of Bright White Gatorfoam the direct print method now has a dramatic facer that delivers excellent vibrant colors. The new bright white facer has demonstrated excellent ink adhesion.

Large format digital printing on flatbed printers has excellent application for the Gator products, particularly the white Gatorfoam, and Gatorplast. GatorLite may also be used but proto-typing is recommended.

Gator products are also widely used in the screen print industry. The suppliers of equipment and inks can provide you with specific recommendations to achieve maximum results. The surface should, of course, be cleaned and free of any surface contaminates (i.e. oils, dust particles, etc.) prior to commencing. If surface has become soiled or scratched, it may be lightly hand sanded with a silicon carbide dry paper 180 grit or finer. To avoid clogging of screens be sure that loose dust is completely removed from panels.

Oven temperature must be controlled to a maximum of 180 F for 1-½ minutes to prevent deterioration of foam and possible warpage of the Gator panel. When using ambient drying racks, drying time is usually approximately ten minutes

Gator products offer a good surface for ultra violet inks. Normal curing times should be followed as opposed to slow line speeds. GatorLite will require some proto-typing for digital printing, due to the natural colored facer. GatorLite will usually absorb more ink and may require additional coats to insure the panel has the desired appearance. Screen printers are currently printing on a coated paper and laminating to the natural facer on GatorLite.

# Painting

## Fome-Cor Products:

Fome-Cor products can be painted with poster colors, acrylic paints, tempera, India ink, and latex-based pigments. Depending on the application, oil or water-based paints may also be suitable. Lacquers, shellacs, and solvent-based paints should be used only when not allowed to penetrate the liner or contact the foam edge.

When coating most of one side of a panel, the backside of the panel should also be coated to maintain more perfect long-term flatness. When possible, place weights at the edges when allowing the board to dry.

## Gator Products:

Gator products (excluding Gatorplast and Gatorblanks) need no special preparation before priming or painting. The surface should of course, be kept clean and free of any oil contaminates as with any other surface to be painted. If the surface has become lightly soiled or scratched, it may be hand sanded with a silicon carbide dry paper 180 grit or finer. After sanding, be sure to clean surface well to remove any dust particles. For optimum results, we recommend that the surface be sealed with a good primer. See following section on "Paint System".

Gator products (excluding Gatorplast and Gatorblanks) can be painted with acrylic base enamels (water base or oil base), or oil base lacquers (solvent base). Caution should be exercised, however, when using oil base or solvent base systems, not to allow paint to make contact with the polystyrene foam. These types of paints are likely to attack and deteriorate the foam core.

Any of the common methods of spray, roll or brush coating paint may be used:

Spray coating normally offers the best all-around results with smoother, more uniform coverage. Curtain coating is not recommended due to a bubbling action created in the paint. The bubbling is caused by an air displacement and solvent flashing situation when applying a high volume of paint so quickly. This problem may be minimized by specifying flat pigment and slower solvents in the paint or by using water base paints.

The paint system may vary depending on the individual requirement or desirability. There are currently a wide range of systems in use. These include:

### High Grade System

2 coats primer  
2 coats pigmented enamel  
2 coats clear topcoat

### Low Grade System

1 coat primer  
1 coat-pigmented topcoat

Any good grade of paint from a reputable manufacturer would be adequate. In cases where the foam edges might be subjected to exterior exposure, it will be necessary to protect the edges from deterioration by the high intensity ultra-violet light from the sun. A good coating of a pigmented water-base paint or similar UV barrier should be sufficient to provide this protection (please note that in exterior applications, edges must be inspected and touched up as necessary). From time to time, customers have experienced problems from UV penetration due to insufficient UV inhibiting pigment in the paint. This is particularly true with darker colors, i.e. dark red, deep brown, black, etc. If such colors are used and exposed edges of foam are not covered with a water base paint that has a heavy load of UV inhibiting pigment or with a good quality UV barrier, we will not be liable in the event of a foam/glue line failure. For full information on UV inhibitors contact your paint suppliers.

Drying by oxidation and evaporation is preferred. When it is possible, allow the freshly painted Gator product to dry the length of time suggested by the particular paint manufacturer.

Painting of Gatorplast: Gatorplast's matte finish requires special preparation. The board's surface should be clean and free from dust before painting. Sanding of Gatorplast cap sheets is not recommended. Gatorplast board can be painted with several types of paint including water-based and some solvent-based paints. Paints must be compatible with polystyrene and capable of adhering to polystyrene. Contact your paint supplier for specific recommendations.

Latex- or water-based enamel paints can be used with a minimum of concern about the compatibility of the paint and the cap sheets. A small area should be tested to ensure that adhesion is adequate. Solvent-based paints such as acrylics; some enamels and lacquers have been used on Gatorplast. The paints selected have mild solvent systems and are recommended for polystyrene. In any case, it is a good practice to prevent the foam from coming into contact with solvent-based paints. Paints should not be applied in excessively heavy coats. This will retard drying and also may trap solvents, reducing adhesion. Air-drying, following manufacturers' instructions, is recommended for all paint systems. It is a good practice to test adhesion to ensure that the paint has properly dried and cured.

Foam edges can be protected from UV exposure through the application of a water-based paint with UV barrier properties.

Painting of Gatorblanks: Gatorblanks can be painted with non-solvent based paints. Water based is well suited for Gatorblanks.

For details about our full line of Fome-Cor or Gator products, call (800) 438-1701 to request printed product literature or visit our web site at [www.fomecor.com](http://www.fomecor.com) or [www.gatorfoam.com](http://www.gatorfoam.com).

Additional product/technical support documents are available from this service, including:

- **Product Information Sheets** – describing the features and benefits of each graphic arts board in the Fome-Cor and Gator™ board lines and designed to aid in your product selection/specification process. Products available include:

**Fome-Cor Product Line**

1. Fome-Cor®
2. Acid-Free Fome-Cor
3. Heat-Activated Fome-Cor
4. Self-Adhesive Fome-Cor
5. JetMount®
6. JetPrint Board™
7. ValuBoard™

**Gator Product Line**

1. Gatorfoam®
2. GatorLite™
3. Gatorplast®
4. Gatorblanks®

- **Technical Bulletins** – describing the following decorating/fabricating techniques that may be used with Gator and Fome-Cor board products:
  1. Direct Printing and Painting
  2. Mounting
  3. Laminating
  4. Cutting
  5. Die cutting/Embossing
  6. Framing

- **Products for Use** – describing other manufacturers’ products that are recommended for use with Gator and Fome-Cor boards.

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#### LIMITED WARRANTY

Disclaimer of implied warranties and limitation of remedies: Except where seller has provided a written limited warranty for its product(s) seller warrants only that at the time of shipment the goods sold hereunder will be as described in the order. Seller makes no other warranties of any kind, express or implied, including without limitation, any implied warranty of merchantability or fitness for a particular purpose. Seller shall have no liability of any incidental or consequential damages. The sole and exclusive remedy provided by seller on account of any warranties or claims of any kind shall be limited to the replacement of the goods in question or at the seller’s option, a credit to buyer of the purchase price paid. No person is authorized to make any representation of warranty on behalf of seller except as expressly set forth above and any such statement shall not be binding on seller.

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