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Approved by J. S.

## Product

IMAGin® JT5999MBF

## Product Description

JT5999M BF is a 3.1-mil **gloss clear**, polymeric PVC film designed for solvent-based ink jet printing. The product is coated on one side with a micro-structured, repositionable, permanent, clear acrylic pressure sensitive adhesive and is supplied with 80# Polycoated, layflat liner. The micro-structured adhesive allows for the increased speed of **dry application** on windows with no air bubbles or wrinkling. It also eliminates the messy clean-up of wet-application fluids.

JT5999M BF is designed for indoor and outdoor window graphics. This is not intended for non-printed window shading or wet apply applications. Non-printed B-Free window films may leave squeegee lines in the finished application. If your intent is for unprinted 'privacy' screening applications, use either IMAGin JT5728P or MACmark Glass Décor 700 series translucent films. This product is also not intended for cut lettering applications.

## Physical Properties

Property	Typical Values	Test Method
<b>Peel Adhesion</b> <b>lb./in. (N/25mm)</b> 180° on stainless steel - 24 hr.	3.1 - 3.7 (12 - 18)	FTM - 1
<b>Quick Tack, lb./in<sup>2</sup> (N/25mm)</b> Stainless Steel	4.4 - 5.6 (20 - 26)	FTM - 9
<b>Dimensional Stability, (%)</b> 48 hours @ 158°F	max 0.2	FTM - 14 10" x 10" Sample Bonded to aluminum
<b>Temperature Ranges</b> Minimum Application: End Use:	50°F (+10°C) -40°F to 194°F (-40°C to 90°C)	
<b>Surface Burning Characteristics</b> <b>(Meets ANSI, NFPA, and IFC as class A)</b> Flame Spread Smoke Density	5 20	ASTM E84-01 or ANSI/NFPA 255 or IFC 8-1

## Durability

The outdoor durability of the unprinted film is 5 to 7 years.

## Approved Printing Processes:

<b>Screen Printing:</b>		<b>HP Indigo</b>	<input type="checkbox"/>
UV Cured	<input type="checkbox"/>	<b>Off-set</b>	<input type="checkbox"/>
Solvent	<input type="checkbox"/>	<b>Off-set UV</b>	<input type="checkbox"/>
<b>Digital:</b> UV Inkjet	<input checked="" type="checkbox"/>	<b>Thermal Transfer</b>	<input type="checkbox"/>
Eco-solvent	<input checked="" type="checkbox"/>	<b>Flexographic</b>	<input type="checkbox"/>
True solvent	<input checked="" type="checkbox"/>	<b>Laser</b>	<input type="checkbox"/>
Latex	<input checked="" type="checkbox"/>	<b>Jetrion</b>	<input type="checkbox"/>

To achieve the best possible print quality, please make sure that the correct ICC profiles or printer settings are used. Profiles can be obtained from our Distributors or can be downloaded from [www.mactac.com](http://www.mactac.com). Printer and heater settings and ICC profiles can also be downloaded from some O.E.M. or software manufacturer's websites.

The ICC profiles are provided solely as a customer resource. Print environments, the individual nature of printing systems, inks and software can significantly affect output. It is the customer's responsibility to determine the suitability of any profile for use in their specific print environment.

## Shelf Life

2 year from D.O.M. when stored at 60/77°F (15/25°C) and 50% relative humidity in the original package.

## Removability

While this film is designed to be a permanent application on glass, it is still easily removed with little to no adhesive residue. Gently lift one corner and slowly, but firmly, peel off the window at a 90° angle. For larger graphics it helps to score the graphic with a knife in strips 5" - 6" wide by the length of the window and then peel off one strip at a time.

## Glass Breakage

MACTac accepts no liability for glass breakage due to temperature differences across the glass which can be caused by sunlight on dark areas of the graphic. Size, thickness, quality of cut, edge treatment, tinting and frame design all effect temperature stress.

## Limitations

- 1) The user is responsible for determining the product's suitability, including adhesion and if needed, removal characteristics when used in applications other than listed specifically in this Performance Guide.
- 2) If there are any questions about applications, please contact your Mactac sales representative to discuss your requirements for recommendations.
- 3) If this is a printed Performance Guide it is an uncontrolled document. Please check the Mactac website for the latest, most up-to-date version.

## Recommendations

Always test your combination of JT5000 products, inks and laminating films prior to commercial use.



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- 1) **Printing Conditions:** Print in conditioned pressroom at  $\pm 73^{\circ}\text{F}$  ( $23^{\circ}\text{C}$ ) and 50% RH. The maximum allowable ink saturation is 270%.
- 2) **Drying Requirements:** Solvent, Eco-solvent and Mild-solvent inkjet prints require 24 - 48 hr. drying time - open to the air. Inks do not dry when printed media is rolled up. The prints must be dry prior to lamination.
- 3) **Transportation Conditions:** To allow for easy transportation, IMAGin JT5000 series can be rolled up, with the image out, with a minimum diameter of 6 inches (15cm). When the image is not protected by an overlamine, make sure the print is completely dry and protected in a plastic bag. During transportation or storage, avoid exposing them to extreme temperature and humidity changes.
- 4) **Installation:** Do not use wet application method for installation. This product is designed to be applied without the use of application fluids. Because this material has spaces in the adhesive to let the air out, it must be applied dry. If an application fluid is used, the liquid can become trapped in the spaces in the adhesive. The air-egress technology allows for fast bubble-free applications.
  - a. Remove 1 to 2 inches of the liner from one edge of the graphic.
  - b. Then, carefully positioned the graphic on to the window. Line up all the edges and when it's exactly where you want it, tack it down with the exposed adhesive.
  - c. Using a squeegee with a **soft** sleeve or a **felt** squeegee, work from the center of the graphic out with light, even pressure. CAUTION: using a hard squeegee may result in squeegee marks in the finished graphic.
  - d. You will need to use light pressure due to the nature of an air egress adhesive with a clear film. Practice first, until you understand the touch needed.
  - e. Remove the remaining liner and use the squeegee to apply the remainder of the graphic to the floor with short, overlapping strokes, again from the center out.
  - f. Once the entire graphic is applied, go back and trim all edges off the rubber seal.
  - g. Re-burnish all edges to ensure good contact with the window surface.
  - h. Finally, edge seal to prevent moisture from window washing or heavy storms (if exterior) creeping under the edges and into the air-egress channels.
- 5) **Cleaning Window Films:**
  - a. Use a clean, soft, lint-free cloth.
  - b. Use off the shelf glass cleaner (Windex, Glass Plus, etc.).
  - c. Spray the cleaner onto the cloth, **not** onto the image.
  - d. Wipe down the image with the wet (do not over saturate) cloth.
  - e. Immediately dry with a clean soft dry cloth.
  - f. If the edges of the image are not sealed, take care not to introduce cleaner to the adhesive as over time edge lifting will occur.

- *Values given are typical and are not necessarily for use in specification.*



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**IMPORTANT NOTICE:** The information given and the recommendations made herein are based on our research and are believed to be accurate, but no guarantee of their accuracy or completeness is made. In every case, user shall determine before using any product in full scale production, or in any way, whether such product is suitable for user's intended use for their particular purpose under their own operating conditions. User assumes all risk and liability whatsoever in connection with their use of any product. The products discussed herein are sold without any warranty as to merchantability or fitness for a particular purpose, or any other warranty, express or implied. No representative of ours has any authority to waive or change the foregoing provisions, and no statement or recommendation not contained herein shall have any force of effect unless in an agreement signed by the officers of seller and manufacturer. Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute a permission, inducement or recommendation to practice any invention covered by any patent without authority from the owner of the patent. The following is made in lieu of all warranties, express or implied: Seller's and manufacturer's only obligation shall be to replace or credit such quantity of the product proved to be defective at its discretion.

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