

**Product Bulletin 8453**

 Release B, Effective January 2003  
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# Mesh Banner Material 8453

## For Piezo Ink Jet Printing

### Description

3M™ Mesh Banner Material 8453 is a lightweight, but tightly woven mesh, vinyl-coated, scrimmed material designed for interior and exterior single-sided banners.

#### Advantages

- Lightweight
- Tight mesh and highly receptive surface for crisp, clear images
- Flame resistant, passes NFPA 701 part 2

#### Applications and End Uses

Banner material 8453 is intended for making the following types of interior and exterior banners. These banners may be warranted depending on the construction (refer to Warranted Durability).

- Single-sided piezo ink jet printed banners

#### Limitations of End Uses

These applications are not warranted:

- Seamed banners are not warranted.
- Banners with wind slits

### Compatible Products for Warranted Graphics

Note: The printer may require a special kit to print on mesh material; contact your printer supplier.

- 3M™ Piezo Ink Jet Ink Series 2300
  - VUTEk UltraVu™ 2360/3360 Printers
  - Mesh printing kit (required)
- 3M™ Piezo Ink Jet Ink Series 4000
  - VUTEk UltraVu™ 3000/3300 and 5000/5300 Printers

#### Other Products

3M™ VHB™ Double Coated Foam Tape 4941 or 4945

### Characteristics

This information is subject to change. Be sure this is the most current Product Bulletin. See 3M Related Literature at the end of this bulletin.

Characteristic	Description
Material	Vinyl fabric with polyester scrim
Roll sizes	80.0" x 50.0 yards (203 cm x 46 m)

### Expected Performance Life

A Scotchprint® Graphics Authorized Manufacturer or 3M Piezo Ink Jet Registered Fabricator can produce 3M™ MCS™ Warranted banners when they are made in accordance with 3M recommended procedures. The following finished graphic performance may be expected. However, 3M does not warrant banner material 8453 for seaming or against ripping, tearing, or damage due to the effects of the weather or the environment or a force majeure.

#### Factors that Influence Performance Life

- Use of compatible products
- Printing and drying techniques
- Angle and direction of exposure
- Environmental conditions
- Cleaning methods

#### Warranted Durability

Banner material 8453 printed with ink series:	Overlaminates or Clear	 Vertical Exposure face of graphic is ± 10° from vertical
		US <sup>1</sup> (all areas) years
2300 4000	None	6 months <sup>2</sup>

<sup>1</sup> For warranty periods outside the United States, contact the 3M sales organization for that country.

<sup>2</sup> Not warranted against tearing.

Note: For the full product names of the 3M products listed on this page, please see page 1.

## Printing with Solvent-Based Piezo Ink Jet Inks

For the best results, follow the guidelines and procedures in Instruction Bulletin 4.27 or 4.35 for printing with piezo ink jet ink series 4000 or 2300, respectively.

Be sure the operator reads and follows “Understanding Printing with Solvent-Based Piezo Ink Jet Inks,” which is in the ink’s Instruction Bulletin. An operator who understands pre-press operations and the relationship between banner material characteristics, printer setup, total ink coverage and drying time can produce graphics that achieve the performance expectations of the banner material and the customer. The operator should also work with the graphic designer and/or color conversion operator so there is a common understanding of print and media parameters.

### Total Ink Coverage

Do not exceed a total ink coverage of 270% for banner material 8453. Too high a total physical ink amount on the banner material results in media characteristic changes, inadequate drying and/or poor graphic performance.

### Drying

 <b>Caution</b>
<p>Always build enough time into your process to ensure adequate drying of the graphic. Poorly dried graphics can cause difficulty when applying an overlamine or rolling the graphic.</p>

### Fabrication

Refer to Instruction Bulletin 4.15, and particularly the sections on **Design Considerations** and **Finishing the Edges of the Banner**.

Banner material 8453 may be seamed on a test-and-approve basis (not warranted). However, the image may be damaged during stitching.

### Maintenance and Cleaning

Use a cleaner such as the kind used for high-quality painted surfaces. The cleaner must be wet, non-abrasive, without strong solvents or alcohol, and have a pH value between 3.0 and 11.0 (neither strongly acidic nor strongly alkaline).

## Shelf Life and Storage

- Store banner material in a clean, dry area, away from direct sunlight, and at an ambient temperature less than 86°F (30°C).
- Process the banner material within six months of receipt from 3M.
- Use processed banners within six months of fabrication.
- Allow banners to dry thoroughly before stacking or rolling for storage or shipment. Do not stack other objects on top of the banners.
  - For flat banners, place a brown kraft paper slip sheet between banners.
  - For rolling, use a minimum 6 inch (15 cm) diameter core, place a slip sheet over the banner and roll the banner with the image side out.

## Health and Safety

 <b>Caution</b>
<p>When handling any chemical products, read the manufacturers’ container labels and the Material Safety Data Sheets (MSDS) for important health, safety and environmental information.</p> <p>To obtain MSDS sheets for 3M products:</p> <ul style="list-style-type: none"> <li>• By fax, call 1-800-364-0768 in the US and Canada or 1-650-556-8417 for all other locations.</li> <li>• Electronically, visit us at <a href="http://www.3M.com/MSDS">http://www.3M.com/MSDS</a>.</li> <li>• By mail, or in case of an emergency, call 1-800-364-3577 or 1-651-737-6501.</li> </ul> <p>When using any equipment, always follow the manufacturers’ instructions for safe operation.</p>

## Physical Properties

These properties are for banner material 8453.

Property	Value
Weight	7 ounces/square yard (245 gr/meter <sup>2</sup> )
Tensile strength	
Warp	181 pounds/inch (32 kg/cm)
Fill	153 pounds/inch (27 kg/cm)
Tear strength	
Warp	74 pounds/inch (13 kg/cm)
Fill	69 pounds/inch (12 kg/cm)

## Flammability Characteristics

3M™ Banner Material 8453 when printed with 3M inks and not laminated, passes NFPA 701, "Standard Methods of Fire Tests for Flame-Resistant Textiles and Films." Customer independently should determine local code requirements and whether this banner meets those requirements.

## Warranty and Limited Remedy

The following is made in lieu of all other express or implied warranties, including any implied warranty of *merchantability* or *fitness for a particular purpose*: Banner material 8453 is warranted to be free of defects in materials and manufacture at the time of shipment and to meet the specifications stated in this Product Bulletin. 3M will replace or refund the price of any 3M materials that do not meet this warranty within the specified time periods. See the worldwide 3M™ MCS™ Warranty bulletin, which gives the terms and limitations of the warranty.

**These remedies are exclusive. In no case shall 3M be liable for any direct, indirect, or consequential damages, including any labor or non-3M materials charges.**

### Scotchprint® Graphics Network

There's a whole other world behind the Scotchprint® Graphics Internet site ([www.scotchprint.com](http://www.scotchprint.com)) and you can travel there with the Scotchprint® Graphics Network. This password-protected Web site opens the door to exclusive Scotchprint® Graphics product information, services and e-deals (product promotions) that are not available on our regular Internet site.

There's no charge and you can sign up today. Just ask your Commercial Graphics Division sales representative, or contact Lisa Burns ([ljburns3@mmm.com](mailto:ljburns3@mmm.com) or 651-736-9719).

## 3M Related Literature

Listed below is related 3M technical literature that may be of interest. You may view and print these Bulletins from our Web site at [www.scotchprint.com](http://www.scotchprint.com), or order them via our Fax-on-Demand (FOD) system. Call one of these phone numbers to order the desired bulletins, and specify the FOD document number provided in the chart.

United States or Canada: 1-800-364-0768  
International: 1-651-732-6506

Subject	Bulletin No.	FOD No.
<b>Product Bulletins</b>		
3M™ Piezo Ink Jet Ink Series 2300	2300	4538
3M™ Piezo Ink Jet Ink Series 4000	4000	4515
<b>Instruction Bulletins</b>		
Printing with piezo ink jet ink series 2300	4.35	6535
Printing with piezo ink jet ink series 4000	4.27	6527
Ink change-over for ink series 4000	4.28	6528
Ink change-over for ink series 2300	4.34	6534
Making digitally imaged, single- and double-sided promotional banners	4.15	6515
<b>Warranties</b>		
Worldwide 3M™ MCS™ Warranty Packet (includes all Commercial Graphics MCS Warranties)		9503
Worldwide 3M™ MCS™ Warranty Overview-Folder		9504

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### Bulletin Change Summary

Corrected banner product number in Warranted Durability table.

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