



Printing and Lamination

For 3M™ Ink Jet Kit 8566CP for Graphics for Floors

General Information

This Bulletin gives specific instructions for the printing and lamination of graphics for floors created with 3M™ Ink Jet Kit 8566CP for Graphics for Floors.

Health and Safety

Caution

Read the manufacturers' container labels and the Material Safety Data Sheets (MSDS) for health hazard data, precautionary information, suggested first aid, and environmental information when handling any chemical products. For health and safety information for 3M products, or in case of an emergency, call 800-364-3577 or 651-737-6501.

When using any equipment, always follow the manufacturers' instructions for safe operation.

Shelf Life and Storage

- The media described in this Bulletin have a shelf life of 12 months.
- Storage conditions (new and partially used rolls):
 - Original container, including plastic wrap
 - Clean, dry area, away from direct sunlight
 - Relative humidity of 20% to 80%
 - Ambient temperature of 33° to 104°F (0° to 40°C)
- Do not stack unprotected rolls or lay sharp or heavy objects on them.

Fabrication

To fabricate a graphic for floors that is covered by the 3M™ MCS™ Warranty, you must be a 3M Thermal Ink Jet Graphics Certified Fabricator. In addition to being certified, you must use the media, overlamine and ink described in this bulletin. To become certified, complete and fax the registration certificates included with the media and overlamine.

Compatible Products and Equipment

These products and equipment must be used in order for the finished graphic to be covered by the MCS warranty.

- 3M™ Ink Jet Kit 8566CP for Graphics for Floors, a kit that consists of the following components:
 - 1 roll 3M™ Scotchcal™ Opaque Imaging Media 8533CP
 - 1 roll 3M™ Scotchcal™ Overlamine Film 3645
 - 3M™ Ink Jet Application Kit for Graphics for Floors, which includes a 3M™ PA-1 Blue Squeegee
- HP DesignJet Printers
 - Model 2500CP: HP Part No. C4704A
 - Model 2000CP: HP Part No. C4703A
 - Model 3500CP: HP Part No. C4724A
 - Model 3000CP: HP Part No. C4723A
- HP DesignJet CP Ink System UV (also called pigment-based ink)
 - Black: HP Part No. C1892A
 - Cyan: HP Part No. C1893A
 - Magenta: HP Part No. C1894A
 - Yellow: HP Part No. C1895A

Note: The use of dye-based inks is not warranted.

The following 3M products are referenced on this page:

- 3M™ Scotchcal™ Overlamine Film 3645
- 3M™ Scotchcal™ Opaque Imaging Media 8533CP

Fabrication Conditions

Different combinations of shop temperature and humidity can affect the handling of the media, the overlamine and the printed graphic. For optimum performance, use the *middle* of each of these ranges whenever possible.

- Shop temperature
 - Acceptable: 60° to 95°F (15° to 35°C)
 - Optimum: 65° to 73°F (18° to 23°C)
- Shop humidity
 - Acceptable: 20% to 80%
 - Optimum: 45% to 60%

Conditioning the Media

Condition the media before using it. These steps are especially important if you are operating outside the conditions recommended under **Fabrication**, above.

- Leave the media in its original packaging until you are ready to condition and use it.
- The day before you need it, remove the media from the box and remove the plastic.
- Condition the media for 24 hours in the same environment as the printer.
- For optimum performance the printing environment should have a relative humidity of 45% to 60% and an ambient temperature of 65° to 73°F (18° to 23°C).

At the End of the Day

- Unthread the web from the printer and tape the roll closed at the center. It is not necessary to remove the roll from the printer.
- If the media will not be used for a few days, remove it from the printer and rewrap it.

Storing Open Rolls of Media

When an open roll of media is not being used:

- Cover the roll with plastic to protect it from contaminants.
- If you are storing it on end, use an end plug and tape down the edge to prevent damage to the edge of the roll.
- Do not lay sharp or heavy objects on unprotected rolls and do not stack them.

Printer Settings for Optimum Quality

Refer to your Hewlett Packard printer manual for detailed operating instructions.

Imaging media 8533CP has been specifically designed for use with the HP DesignJet 2500CP/2000CP and 3500CP/3000CP printers. These printers have print mode options that are programmed specifically for this media. The following chart shows the various modes and printing dpi, and the quality results you can expect. We recommend that you print the same image at all of these settings so that you can determine the acceptable print and productivity for your needs.

Mode	dpi	Results
Best	600	Excellent quality
Best	300	Very good quality Slightly higher productivity
Normal	300	Good quality Greater productivity
Fast	300	Lower quality Highest productivity

The correct media selection makes all other necessary adjustments to the printer. For 3M ink jet imaging media 8533CP for graphics for floors, select the **UV Opaque Vinyl** setting.

Drying Guidelines

Imaging media 8533CP has been developed to dry very quickly when used with the HP DesignJet CP Ink System UV in the HP DesignJet 2500CP/2000CP and 3500CP/3000CP Printers. Usually, the media can be laminated immediately following printing. However, especially in high humidity conditions, we recommend waiting 15 to 30 minutes before laminating.


Use care when handling graphics that have not been laminated to avoid scratching and abrasion.

Laminating Information

Lamination is a necessary step in the production of finished ink jet graphics for floors. This process provides durable, scuff-resistant protection to the graphics. This section gives specific instructions for laminating ink jet graphics for floors created with these materials:

- 3M™ Scotchcal™ Overlamine Film 3645
- 3M™ Scotchcal™ Opaque Imaging Media 8533CP

Cold Roll Lamination Procedures

 Caution
When using any equipment, always follow the manufacturers' instructions for safe operation.

1. Makes sure the rolls of the laminator are clean.
2. Set the motor controls to **RUN** and **FORWARD**. Set the **SPEED** to approximately 2 feet per minute (61 cm per minute).
3. Thread the overlamine film 3645 into the laminator.
 - a. If the laminator has a clutch roll, tape the liner to the top.
 - b. Pull the film through the nip until it is about 1 foot (305 mm) past the roll.

Laminator Design and Pressure Gauge Control Settings

Laboratory Laminator Design Attributes

These settings are based on the laminator used by 3M Commercial Graphics Division in testing this procedure.

- 3 inch (80 mm) diameter rolls
- 36 inch (910 mm) wide roll face
- 70 durometer (hardness) rolls
- 2 air cylinders, 1 inch (25 mm) in diameter

If the design of your laminator differs from the above attributes, adjust the pressure control settings as needed. For example, at the nominal 30 pounds per square inch gauge (psig) setting, a 2 inch (50 mm) diameter air cylinder produces a higher nip pressure than the 1 inch (25 mm) diameter cylinder equipped on the laboratory laminator. If wrinkles occur, the pressure control setting may be too high; reduce it to achieve the desired results.

Procedure

1. Generally, the pressure gauge control setting of the laminator air cylinder should be adjusted to a nominal 30 pounds per square inch (128 N/25 mm²). This setting is a minimum recommended value. The value is based on results obtained from a laboratory laminator.
2. Lower the roller.
3. As the film is moving out of the nip, make sure there are no wrinkles in the web.
4. Increase the web speed to approximately 15 feet per minute (4572 mm per minute).
5. Feed the graphic from the front of the laminator using the guide bar.
6. Cut the finished graphic from the web using a safety knife.
7. Trim the graphic and store stacked or rolled with image side out until the time for shipment.

Warranty and Limited Remedy

Refer to the Product Bulletins for the media and overlaminates being used for complete warranty information and other details about these products.

Printing and Lamination For 3M™ Ink Jet Kit 8566CP for Graphics for Floors is a technique for printing a graphic and mounting it. The information contained herein is believed to be reliable, but 3M makes no warranties, express or implied, including but not limited to any implied warranty of merchantability or fitness for a particular purpose. To the extent allowed by law, 3M shall not be liable for any loss or damages, whether direct, indirect, special, incidental or consequential, in any way related to the technique of making a weatherable graphic regardless of the legal theory asserted.

3M Related Literature

Listed below is related 3M technical literature that may be of interest. You may view and print these Bulletins from our website at www.3M.com/imagegraphics, or order them via our Fax-on-Demand (FOD) system. Call one of these phone numbers to order the desired bulletins by the FOD number provided below.

United States or Canada: 800-364-0768
International: 650-556-8417

Subject	Bulletin No.	FOD No.
Product Bulletins		
3M™ Thermal Ink Jet Kit 8566CP for Graphics for Floors	8566CP	4508
Instruction Bulletins		
Application and maintenance of ink jet graphics for floors	5.29	7029

HP DesignJet CP is a tradename of Hewlett Packard.

For the United Kingdom and Republic of Ireland:-

Health & Safety

Refer to the package label and the Material Safety Data Sheet for health, safety, and handling information on the products referenced in this bulletin. For 3M products, if necessary, you may contact our Toxicology/Product Responsibility Department on 01344 858000.

Important Notice to Purchaser

The 3M products described in this publication are covered by a 3M warranty and limitation of liability.

3M's warranty provides that if 3M finds that goods are defective in material or workmanship they will be replaced or the price refunded at 3M's option but note that 3M does not accept liability for other direct losses (except for personal injury or death) or consequential losses relating to defective products or from information supplied by 3M.

Purchasers and users of 3M products, and not 3M supplying companies, are always solely responsible for deciding on the suitability of the 3M product for their required or intended use.

Technical Assistance

For help on specific questions relating to 3M Commercial Graphics Division Products, contact your local Technical Service Representative.

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