



Lamination For Floor Graphics

Health and Safety

CAUTION

When handling any chemical products, read the manufacturers' container labels and the Material Safety Data Sheets (MSDS) for important health, safety and environmental information.

To obtain MSDS sheets for 3M products:

- By fax, call 1-800-364-0768 in the US and Canada or 1-650-556-8417 for all other locations.
- Electronically, visit us at <http://www.3m.com/msds>.
- By mail, or in case of an emergency, call 1-800-364-3577 or 1-651-737-6501.

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

Laminating Information

Lamination is a required step in the production of finished Scotchprint® Floor Graphics and 3M™ MCS™ Floor Graphics. This process provides durable, scuff-resistant protection to the graphics. This bulletin gives specific instructions for cold laminating floor graphics created with these films.

Screen Printing

- 3M™ Scotchcal™ Luster Overlamine 3645 and 3M™ Controltac™ Plus Graphic Film Series 162
- 3M™ Scotchcal™ High Gloss Overlamine 3648 and 3M™ Controltac™ Plus Graphic Film 164

Electrostatic Imaging

- 3M™ Scotchcal™ Luster Overlamine 8945 ES and 3M™ Controltac™ Plus Graphic Film Series 8660 ES

Piezo Ink Jet Imaging

- 3M™ Scotchcal™ Luster Overlamine 3645 and 3M™ Controltac™ Plus Graphic Film RG162-10
- 3M™ Scotchcal™ Luster Overlamine 3645 and 3M™ Controltac™ Plus Graphic Film IJ162-10

Cold Roll Lamination Procedures

Caution

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

1. Make 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 into the laminator.
 - a. Tape the liner to the top of the clutch roll, if the laminator is provided with one.
 - b. Pull the film through the nip until it is about 1 foot (25 cm) past the roll.

Laminator Design and Pressure Gage Control Settings

4. Generally, the pressure gage control setting of the laminator air cylinder should be adjusted to a nominal 30 pounds per square inch (2.1 kg/cm²). This setting is a minimum recommended value. The value is based on results obtained from a laboratory laminator.

The laboratory laminator has the following design attributes.

- 3 inch (8 cm) diameter rolls
- 30 inch (76 cm) wide roll face
- 70 durometer (hardness) rolls
- 2 air cylinders, 1 inch (2.5 cm) 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 (5 cm) diameter air cylinder produces a higher nip pressure than the 1 inch (2.5 cm) 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.

If the graphic is screen printed with 3M™ Four Color Screen Printing Ink Series 9700UV and areas of the graphic have a dot coverage less than 20%, you may need to increase the pressure control settings to remove trapped air.

In these situations, a roller heated to 95° to 105°F (35° to 41°C) may be used for better lamination results.

Lamination procedures continued

5. Lower the roller.
6. As the film is moving out of the nip, make sure there are NO WRINKLES in the web.
7. Increase the web speed to approximately 15 feet per minute (4.5 m per minute).
8. Feed the graphic from the front of the laminator using the guide bar.
9. Cut the finished graphic from the web using a safety knife.
10. Trim the graphic and store stacked or rolled with image side out until the time for shipment.

Note: There may be some delamination of the liner when the graphics are rolled due to the thickness of the assembly. This does not affect the graphic or its application.

Warranty

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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, 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.
Product Bulletins		
3M™ Controltac™ Plus Graphic Film Series 162	162	1004
3M™ Controltac™ Plus Graphic Film IJ160-30	IJ160-10	4567
3M™ Controltac™ Plus Graphic Film RG162-10	RG162-10	4523
3M™ Controltac™ Plus Graphic Film 164	164	1011
3M™ Scotchcal™ Luster Overlaminate 3645	3645	1508
3M™ Scotchcal™ Luster Overlaminate 3648	3648	1524
3M™ Controltac™ Plus Graphic Film Series 8660 ES	8660	3512
3M™ Scotchcal™ High Gloss Overlaminate 8945 ES	8945	3515
Instruction Bulletins		
Application/maintenance for floor graphics	5.26	7026
Warranties		
Worldwide 3M™ MCS™ Warranty Packet <i>(includes all Commercial Graphics MCS Warranties)</i>		9503
Worldwide 3M™ MCS™ Warranty Overview-Folder		9504
Scotchprint® Floor Graphics Warranty <i>(includes overview)</i>		9508

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Bulletin Change Summary

Added film IJ160-10; changed film number RG160-30 to RG160-10; updated other product names and 3M Related Literature list.



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Health & Safety

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