

Product Description

- 3-mil translucent film that reflects light to produce a glossy chrome appearance in a finished graphic

Product Features

- Medium to long-term film
- Can be applied to any plastic sheet
- Can be thermoformed on a high temperature copolyester sheet

Recommended Types of Graphics and End Uses

- Single film layer signs mounted in an internally-illuminated sign box
- Graphics thermoformed on a high temperature copolyester sheet

When constructed and used as described in this bulletin, these types of graphics and end uses may be warranted by the 3M™ MCS™ Warranty. Read the entire bulletin for details.

Characteristics

These are the typical values for unprocessed product. Processing may change the values.

Physical Characteristics

Characteristic	Value
Film	Non-vinyl, translucent
Film Color	Glossy chrome appearance
Light Transmission	17% light transmission
Thickness	3 mil (0.8 mm)
Adhesive	Pressure-sensitive
Adhesive Color	Clear
Liner	Paper
Tensile Strength	7-8 lbs/in. at 73°F (1.3-1.4 kg/cm at 23°C) minimum
Chemical Resistance	<ul style="list-style-type: none"> • Resists mild alkalis, mild acids, and salt • Excellent resistance to water (<i>does not include immersion</i>)

Application Characteristics

Characteristic	Value
Finished Graphic Application Recommendation	<p>Surface type: Flat only</p> <p>Application temperature: 60°F (16°C) minimum air, substrate</p> <p>Substrate without thermoforming: any plastic sheet or glass</p> <p>Substrate for thermoforming: high temperature copolyester sheet*</p> <p>Typical thermoforming temperature: TBD</p>

*NOTE: A dull appearance that results from thermoforming at too high a temperature and then stretching the film is not covered by the 3M™ MCS™ Warranty.

Quick Links

- [3M Graphics Warranties](#)
- [Technical Information Selector](#)
- [Safety Data Sheets \(SDS\)](#)
- [Flammability](#)
- [Videos](#)

Factors Affecting Graphic Performance Life

The actual performance life of a graphic is affected by:

- The combination of graphic materials used
- Complete ink drying or curing
- Selection, condition, and preparation of the substrate
- Surface texture
- Application methods
- Angle and direction of sun exposure
- Environmental conditions
- Cleaning and maintenance methods

Graphics Manufacturing



Before using any equipment, always read the manufacturer's instructions for safe operation.

Fabrication

Refer to [3M Instruction Bulletin 5.16](#) for thermoforming film on plastic.

Also, heed the following information:

- **Diffusion.** Without diffusion, light sources will be seen through the chrome film.
- **Substrate drying.** PETG substrate may need to be oven dried to remove moisture; users should test and approve themselves.
- **Clear top surface liner.** Always remove the clear protective surface liner from the film after applying it to the substrate and before drying.
- **Thermoformable temperature.** While determining the proper temperature to form your signs, consider the following:
 - Film temperatures over 330°F (165°C) may cause the chrome appearance to lose gloss and become dull as the film is stretched.
 - Failure to follow substrate manufacturers' recommended minimum thermoforming temperatures may cause the film to wrinkle around the returns.
- **Mold design.** The emboss or mold height must be at least four times the thickness of the copolyester sheet to prevent wrinkles.
- **Butt seams.** Use precisely matched butt seams or overlaps after thermoforming. Butt seams done before thermoforming are likely to separate and cause a light leak.

Application Tapes

There are two types of application tapes. See [3M Instruction Bulletin AT-1](#) to determine what application tape is recommended for your film or finished graphic.

Premasking Tape

Premasking tape increases stiffness during application while preventing stretching and damage. Use when little or no liner is exposed. See [3M Instruction Bulletin 4.3](#) for complete details.

Prespacing Tape

Prespacing tape holds cut and weeded letters or graphics in place during application and after removal of the film liner, while preventing stretching and damage. Use when large amounts of liner are exposed. See [3M Instruction Bulletin 4.3](#) for complete details.

Application and Installation

In addition to other 3M bulletins specified in this document, the following bulletins provide details you may need to successfully apply a graphic.

- [3M Instruction Bulletin 2.1](#) Design of Graphics
- [3M Instruction Bulletin 5.7](#) Application, Wet Method for Translucent, Inkjet, Screen Printed and Cut Graphics
- [3M Instruction Bulletin 5.16](#) Thermoforming
- [3M Instruction Bulletin 6.5](#) Storage, Handling, Maintenance and Removal of Films and Sheetings

Maintenance and Cleaning

Use a cleaner designed for high-quality painted surfaces. The cleaner must be wet, non-abrasive, without strong solvents, and have a pH value between 3 and 11 (neither strongly acidic nor strongly alkaline). See [3M Instruction Bulletin 6.1](#) for details.

Removal

This film uses a permanent adhesive. This film is not easily or cleanly removable. See [3M Instruction Bulletin 6.5](#) for details.

Shelf Life, Storage, and Shipping

Shelf Life

The shelf life is **never more than two years** from the date of manufacture on the original box.

If you process the film, the shelf life is changed to **one year** from the processing date, but no later than the two years from the manufacturing date.

Storage Conditions

- 40°F to 100°F (4°C to 38°C) maximum
- Out of sunlight
- Clean, dry area
- Original container
- Bring the film to print room temperature before using

Shipping Finished Graphics

Flat.

Health and Safety

CAUTION

When handling any chemical products, read the manufacturers' container labels and the safety data sheets (SDS) for important health, safety, and environmental information. To obtain SDS for 3M products go to [3M.com/SDS](https://www.3m.com/SDS). To request SDS by mail, or in case of an urgent situation, call 1-800-364-3577 or 1-651-737-6501.

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

Warranty Information

Warranty Coverage Overview

The warranty coverage for eligible graphics is based on the user both reading and following all applicable and current 3M Graphics product and instruction bulletins. The warranty period for eligible graphics is as stated in the 3M Graphics Warranties Matrices at the time the film was purchased. Information found at [3M.com/graphicswarranties](https://www.3m.com/graphicswarranties) includes:

- [3M Graphics Warranties Bulletin](#)
 - This bulletin contains information on limitations, exceptions, and warranty period reductions for 3M Graphics warranties. The warranty period may be reduced and stipulations may apply for certain constructions, applications, and graphic exposures as covered in this bulletin.
- [3M Graphics Warranties Selector](#)
 - Use this selector to search for your vertical warranty period by product type, ink type, film name, and/or ink/printer platform.
- [U.S. Desert Southwest Region Map](#)
 - Use this map of hot, arid desert areas to determine if you are subject to reduced warranted durabilities.

Technical Information

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