

2080-GC451 Gloss Silver Chrome

Product Features

- 5.9-mil film with a glossy chrome appearance
- Pressure-activated adhesive for easy sliding, tacking, snap-up, and repositioning
- Non-visible air-release channels for fast, easy, bubble-free installations
- A protective film layer protects the film's mirror-like appearance

NOTE: Unlike the protective sheet used on 1080-GC451, the protective film layer can remain on the film until post-heating.

- Ability to stretch and conform using heat
- Usable without graphic protection
- Available in standard 60 in. roll width
- Removable with heat from most surfaces within the warranty period
- Expected performance life of one year (unwarranted period for unprinted film with no graphic protection, applied to a flat, vertical, vehicle surface)

IMPORTANT NOTE

This product may not remove similarly to other 3M™ Wrap Film Series 2080 films.

IMPORTANT NOTE

Over-heating or over-stretching the film can permanently alter its appearance (making its mirror-like finish appear cloudy).

Recommended Types of Graphics and End Uses

The user is responsible for determining the product's suitability for their intended application. This product should be used on a test-and-approve basis. Applications may include:

- Solid color detailing and special effects
- Standard vehicle graphics, detailing, and decoration
- Commercial vehicle and fleet graphics, emblems, and striping
- As a compliment to other 3M wrap films, including [3M™ Wrap Film Series 2080](#)
- Watercraft graphics applied above the static water line only
- Not recommended for salt water applications.

CAUTION

Before using chrome wrap, please ensure compliance with all applicable laws and regulations. Restrictions on chrome wraps may vary by jurisdiction. The user accepts responsibility for legal and regulatory compliance and for any liability arising from the use of chrome wrap.

IMPORTANT NOTE

Before using these films, please review "Pressure-activated Adhesive" on page 5.

Quick Links

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

Some of these links lead to web-based resources that are not product-specific.

Characteristics

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

Physical Characteristics

Characteristic	Value	
Material	Multi-layer non-PVC	
Colors	Silver chrome	
Finish	Gloss	
Thickness	5.9 mils with adhesive (not including protective film layer)	
Adhesive	Pressure-activated (slideable, repositionable) with air release channels	
Adhesive Color	Clear	
Release Liner	Polyethylene-coated paper	
Typical Adhesion 24 Hours After Application	Substrate	Adhesion:
	ABS	2 – 4 lbs/in. (0.36 – 0.71 kg/cm)
	Acrylic enamel	2 – 4 lbs/in. (0.36 – 0.71 kg/cm)
	Aluminum, anodized	5 – 7 lbs/in. (0.89 – 1.25 kg/cm)
	Aluminum, etched	4 – 6 lbs/in. (0.71 – 1.07 kg/cm)
	Fruehauf pre-painted panels Automotive clear coats (OEM)	2 – 4 lbs/in. (0.36 – 0.72 kg/cm) 3 – 5 lbs/in. (0.54 – 0.89 kg/cm)
Tensile Strength	13 lbs/in. at 73°F (2.3 kg/cm at 23°C)	
Flammability	To view the ASTM E84 test report, go to the online catalog at 3M.com/graphics . For all available test reports call 1-800-328-3908	

Application Characteristics

Characteristic	Value
Finished Graphic Application Recommendation	Surface type: Flat, simple curves, moderate compound curves Substrate type: ABS resins, aluminum, chrome, glass, fiberglass reinforced plastics, paint (check adhesion to powder-coated or water-based paints), fiberglass with gel coat Application Temperature: 60°F to 90°F (16°C to 32°C) Application Method: Dry
Temperature Range After Application	-65°F to +225°F (-54°C to +107°C) (Though not for extended periods of time at the extremes)
Graphic Removal	Removable with heat from most substrates within the expected performance life. Note: This product may not remove similarly to other 3M™ Wrap Film Series 2080 films.

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
- The angle and direction of sun exposure
- Environmental conditions
- Cleaning or maintenance methods.

Graphics Manufacturing

This film is intended for detailing and decorating solid color vehicles without graphic protection. Cutting may be required.

CAUTION

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

Printing

This film may be printed with some inkjet printers. 2080-GC451 is intended to be used without further processing. To maximize the durability of the printed film, use a graphic protection such as 3M™ Scotchcal™ Gloss Overlamine 8518.

IMPORTANT NOTE

2080-GC451 has a protective film layer on the non-adhesive side of the film. This must be removed before printing.

IMPORTANT NOTE

If the film is printed, with or without wrap protection, the wrap shop assumes all risk for testing, approving, ensuring suitability, and warranties.

IMPORTANT NOTE

2080-GC451 is not directional. However, it is always best practice to avoid alternating between length-wise and width-wise graphic panels. Follow the directional arrows on the back of the liner wherever possible.

Cutting

See [3M Instruction Bulletin 4.1](#) for Sheeting, Scoring and Film Cutting details.

Methods

- Hand cut
- Flat-bed electronic cutting

IMPORTANT NOTE

Always remove the film's protective film layer prior to cutting the film.

Make sure the cutting blades are sharp, clean, and properly set.

The construction of this film makes it more difficult to achieve a smooth edge with an electronic cutter; always test and approve before using this cutting method.



Figure 1. Friction-fed plotter damage

Cut Shapes

This film can be cut into a variety of straight and simple curved designs.

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

Install the film using the dry application method after ensuring the vehicle is freshly washed and dried to remove all contaminants.

Special Considerations

3M™ 2080-GC451 Gloss Silver Chrome requires special installation considerations relative to typical cast vinyl wraps. Proper heating and stretching techniques are needed to achieve the desired mirror-like appearance. Infrared lamps and electric heat guns are the only heat sources recommended for installation. Using a torch can damage the film. Like vinyl, avoid overheating and overstretching, as the film's appearance will be negatively affected. Do not use isopropyl alcohol (IPA) and heat together. The use of IPA and heat has been shown to haze the film.

Wetting a felt squeegee or wrap glove helps installers achieve a better slide when conforming 2080-GC451. Inlays and overlaps are recommended in deep recesses or contours. This can be achieved using 3M™ Knifeless Tape Design Line.

Once the installation is complete, remove the protective film layer, and use a mixture of 70% IPA and 30% water or rubbing alcohol to wipe the film down to give it the desired final appearance. 3M recommends using only clean microfiber cloths to wipe down 2080-GC451.

Instructional videos with tips and tricks will be available to assist installers. The videos demonstrate both traditional and untraditional installation methods.

Finishing

- Use the Classic Series of 3M™ Knifeless Tape (Finish Line, Perf Line, and Bridge Line) for all finishing cuts around the edges of body panels.
- Use the Design Line series of 3M™ Knifeless Tape for all accenting and striping with 2080-GC451.
- Never use a knife or razor blade for finishing cuts.
- Use a mixture of 70% IPA and 30% water, followed by Meguiar's® liquid wax, to clean the film surface post-installation.
- Post-heat the wrap thoroughly after installation to relax stretched areas of film.

IMPORTANT NOTE

Always remove the protective film layer from the film before post-heating

- Use only microfiber rags to clean the film after installation
 - Paper towels or other rougher cleaning products will scratch the surface
- Wrapping and post-heating 1/8 in. to 1/4 in. of film around the edges of working body panels helps prevent edge-lifting after installation

IMPORTANT NOTE

Never use a wet application method to apply this film.

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

- [3M Instruction Bulletin 5.36](#) Application Techniques for Automobiles, Vans and Buses.
 - Complete the 3M Pre-Installation Inspection Record found in 5.36 prior to manufacturing or applying a graphic to an automobile, van, or bus.
- [3M Instruction Bulletin 5.4](#) Application: Fleet Trucks
- [3M Instruction Bulletin 5.42](#) Application: Special Considerations for Watercraft
 - Complete the 3M Pre-Installation Inspection Record found in 5.42 prior to manufacturing or applying a graphic to a watercraft.
- [3M Product and Instruction Bulletin V-Tools](#) 3M™ Vehicle Channel Applicator Tools
- [3M FAQ 2080 for Consumers](#) 3M™ Vehicle Care Frequently Asked Questions

Pressure-activated Adhesive

The pressure activated adhesive on this film offers:

- smooth sliding into position on a substrate;
- fast finger tacking to check positioning; and
- easy snap-up and repositioning when you need it.

The **snap-up and reposition feature is lost:**

- when firm pressure with a squeegee or other application tool is applied;
- at application temperatures above 100°F (38°C) even if only light finger pressure was used for tacking;
- if any part of the film is removed from the original liner and reapplied to the same or another liner; or
- if solvent from inkjet ink has not completely dried or cured, affecting both slideability and snap-up.

Working with Air Release Channels

Air release channels are a characteristic of films with Comply™ adhesive, allowing trapped air to exit through the edges of the graphic.

- The channels will be damaged if you remove and attempt to change liners or reapply the same liner.
- For the best results, always work from the center of a graphic out to the edges of the graphic to allow trapped air to escape. If air becomes trapped, use an air release tool to help remove air bubbles. See [3M Instruction Bulletin 5.4](#) for details.

Removing the Protective Film Layer

Click [here](#) to see how to remove the protective film layer from the product.

3M™ Tape Primer 94

3M recommends using primer where the film will be stretched, particularly on the edges of the film, to maximize a graphic's bond to its substrate.

- In concave channels, apply a thin layer of primer over most of the concave area. Allow the primer to dry for five minutes.
- When going around convex areas, apply a thin layer of primer at the outer edges of the curve to prevent film edge lifting. Allow the primer to dry for five minutes.
- For the most effective bond and to avoid contamination, install the graphic within one hour of applying the primer.

Heating and Stretching the Film

This film can be stretched using heat. See [3M Instruction Bulletin 5.36](#) for more details (also see the Important Note below).

Follow these recommendations to ensure a successful application:

- Before stretching, heat the film to between 150°F to 180°F (66°C to 82°C). Use an infrared thermometer to monitor the temperature. See Figure 2.
- Working around complex curves, such as bumpers, heat a large section of the film to minimize any stress or squeegee lines and minimize film shrinkage.

i IMPORTANT NOTE

Overheating or overstretching the film may result in areas of slight hazing and a loss of reflectivity (see note). Over-heating or overstretching can permanently alter the film's appearance (making its mirror-like finish appear cloudy.)



Figure 2. Heat the film to 150°F to 180°F (66°C to 82°C) and use an infrared thermometer to monitor the

Post-Heating

Always remove the protective film layer prior to post-heating. Post-heat the film so the film temperature is 200°F to 225°F. Measure the temperature using an infrared thermometer. This is the most critical element in the process. If this is not done correctly, the film could lift in the channels and fail to adhere.

Maintenance and Cleaning

Use care to avoid scratching the film. Never scrub the film. Scratching and abrasion marks may be visible and you may not be able to work them out of this film's unique finish. Avoid using harsh chemicals and brushes when cleaning your vehicle, and avoid parking near shrubs and trees or any other items that could scratch the vehicle. See [3M FAQ Vehicle Care](#) for details.

Use a cleaner designed for high-quality painted surfaces. The cleaner must be wet, non-abrasive, without solvents, and have a pH value between 3 and 11 (neither strongly acidic nor strongly alkaline). See [3M Instruction Bulletin 6.5](#) for details.

Removal

Removing this film requires heat and 3M makes no claims as to the ease or speed of its removal. This product may not remove similarly to other products in the same category. See [3M Instruction Bulletin 6.5](#) for details.

Using the 3M™ Wrap Film Series 2080 Emblem



Wrap Film
Series 2080

This emblem may be placed on the wrapped surface of your 3M™ Wrap Film Series 2080 installation or used in your marketing collateral. Please review and follow these [guidelines](#) to help ensure each and every exposure to the emblem is positive, and that you maintain a clear and consistent identity in the minds of your customers and potential customers.

Shelf Life, Storage, and Shipping

Shelf Life

The shelf life is **never more than three years** from the date of manufacture on the original box. Processing the film changes its shelf life to **one year** from the processing date, but no later than three years from the manufacturing date.

Storage Conditions

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

Shipping Finished Graphics

Flat, or rolled printed side out on a 6 in. (15 cm) or larger core. This helps prevent the application tape, if used, from popping off.

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.



Figure 3. Use dampened, soft-sided squeegee for application. Always ensure the soft side is saturated with slip solution.

Warranty Information

i IMPORTANT NOTE

Due to the mirror finish of this film, small particles and imperfections are more easily seen than in standard films. These particles are not considered defects.

i IMPORTANT NOTE

The expected performance life (unwarranted period for unprinted film with no graphic protection, applied to a flat, vertical, vehicle surface) is one year.

In wet or humid environments, applying a hydrophobic coating to the film after application, such as Meguiar's® Ultimate Liquid Wax or Meguiar's® NXT Generation® Tech Wax® 2.0, may extend the expected performance life of this product. The installer assumes all risk for testing, approving, ensuring suitability, and warranties if provided.

i IMPORTANT NOTE

When converting and sampling 2080-GC451 chrome, always ship and store the product on a core, with the paper liner facing inwards towards the core.

Technical Information

The technical information, guidance, and other statements contained in this document or otherwise provided by 3M are based upon records, tests, or experience that 3M believes to be reliable, but the accuracy, completeness, and representative nature of such information is not guaranteed. Such information is intended for people with knowledge and technical skills sufficient to assess and apply their own informed judgment to the information. No license under any 3M or third party intellectual property rights is granted or implied with this information.

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Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's application, including conducting a workplace hazard assessment, reviewing all applicable regulations and standards, and reviewing the product label and use instructions. Failure to properly evaluate, select, and use a 3M product in accordance with instructions or to meet all applicable safety regulations may result in injury, sickness, death, and/or harm to property.

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