

Commercial Solutions Division

3M™ Wrap Film Series 1080

Preparation of Substrates, Application, Maintenance and Removal

Instruction Bulletin

Recommended Types of Graphics and End Uses

3M™ Wrap Film Series 1080 are long-term, dual cast films designed for solid color vehicle detailing, decoration and full wraps without the need of additional graphic protection. 3M™ Wrap Film 1080 uses 3M™ Controltac™ and 3M™ Comply™ technology.

Controltac™ minimizes the initial contact area of the adhesive and allows the applicator to reposition the graphic during application. This allows easier installation of large formats in a wide temperature range.

Comply™ are air release channels allowing fast and easy, bubble free installation of graphics.

General Information

Refer also to the Product Bulletin of 3M™ Wrap Film Series 1080 for more specific details.

Important Notice

3M™ Wrap Film is not intended for wet applications. Residual water reduces adhesion and can cause lifting after application.

Application of Metallic Films

On adjacent car parts application of metallic wrap films should be done in the same pattern direction of the roll in order to maintain the same appearance.

Light Colors

Pre-stretching (e.g. for side mirror application) of light colored films might lead to slight color change.

Important Notice Controltac™ Films

Films require high squeegee pressure to avoid air entrapment between film and substrate. Therefore the use of 3M™ PA-1 Gold Squeegee with thin and soft sleeve is recommended. Wetting of sleeves helps to avoid scratches on film surface during application. Please refer to the product's instruction bulletin for detailed information.

Cleaning

Cleaning the application surface properly is an important step for a good application result. First step is a car wash (without hot wax) and thorough drying of the vehicle.

Then clean the surface thoroughly with 3M™ Surface Preparation System as grease and oil prevent the film from adhering properly. Use lint-free paper towels. Remaining car wax and polish must be completely removed. Edges and recesses must be properly cleaned.



After cleaning make sure that the substrate, edges and seams are completely dry. Film adheres poorly even to a properly cleaned substrate if there is any remaining liquid on the substrate, edges or seams.



Note: Do not use isopropyl alcohol as this can affect the adhesion of the film. Other solvents than 3M™ Surface Preparation System may affect the adhering properties of the film, too.

Application Tools

Notice: Use thin, soft sleeves when applying Wrap Film 1080.

- 3M™ Squeegee PA-1 Gold
- Soft and thin microfibre sleeves
- Cutter
- Magnets
- Industrial heat gun
- Infrared pyrometer
- 3M™ Air Release Tool
- Gloves
- Masking Tape
- 3M™ Knifeless™ Tape
- Ruler



Application Temperature

Minimum application temperature: +16°C (air and surface temperature)

Optimum application temperature: +18°C to +23°C

Application

General Procedure Remove the liner carefully from the film.



Application on Flat Surface

Place the film without tension on the substrate. Controltac™ adhesive technology provides easy sliding of the film.



Span the film with low tension on the substrate to remove larger wrinkles but do not stretch the film at the edges.



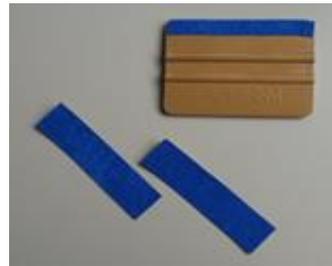
Set the heat gun to the maximum and warm the film surface by circulating movements of the heat gun.



The film surface should reach a temperature of +30°C to +40°C.



By heating the film and letting it cool down, wrinkles disappear and the film will conform to the surface so that squeegeeing will be possible without repositioning of the film.



1080 requires high squeegee pressure to avoid air entrapment between film and substrate. Therefore the use of 3M™ PA-1 Gold Squeegee with thin and soft sleeve (microfibre sleeve) is recommended. Wetting of sleeves helps to avoid scratches on film surface during application.



Apply the film lengthwise from the center outwards with overlapping strokes and ensure that the squeegee is in constant contact with the film. 3M Controltac technology ensures that the film is flexible on the surface and adheres only when pressure is applied, whilst 3M Comply technology allows air to be easily removed without causing bubbles.



Apply the film with your finger in concave parts where necessary and continue squeegeeing.

Using the advantage of Controltac and Comply technology, it is possible to apply the film from edge to edge on the complete substrate without repositioning in order to achieve a smooth film surface without adhesion lines.

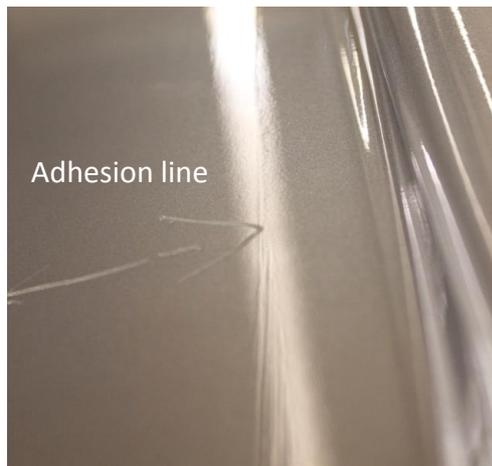
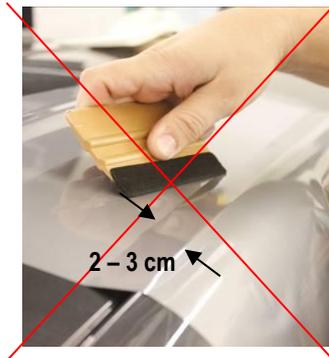




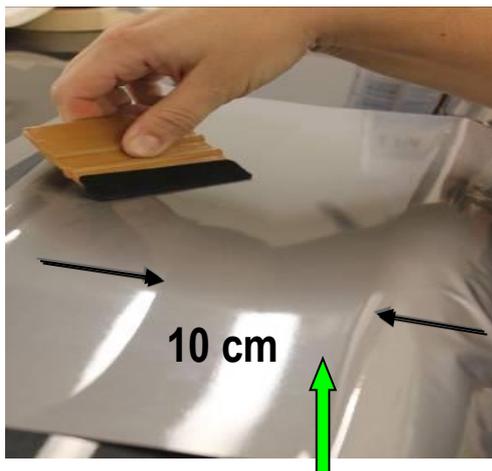
Check film application on air entrapment by re-heating. Remove air bubbles between the film and the substrate with an air release tool and press the film again onto the substrate.

Adhesion Lines

In certain situations, e.g. bridging of the film under tension, undesired effects as adhesion lines can occur. If the film is squeegeed under tension too close to the edge (up to 2 cm – 3 cm), snapped and re-squeegeed as shown in the pictures below, adhesion lines may become visible which cannot be removed.



Application Recommendation In bridging situations, stop applying the film at least 10 cm before the edge in order to reduce tension of the film. Then lift the film slightly and continue tension-free squeegeeing to the edge. It is recommended to do the application in one step without interruption.



It is very important NOT to squeegee the film directly after heating. Let the film cool down for a few seconds after heating, then firmly squeegee without stretching the film. Stretching at the edges might cause shrinkage of the film and color fading.





Application on Recesses with Inlays

The film is designed for application on flat and simply curved surfaces. On recesses and deep channels it is recommended to apply the film with inlays. Please refer to the Instruction Bulletin Inlay Method for details.

Finishing of Edges

It is recommended to heat and re-squeegee the edges of the film in order to assure a good adherence.



1080 Carbon Fiber and Brushed may tear at higher temperatures if being slightly stretched. Therefore, heating temperatures for these films should not be higher than +40°C to +50°C.

Application at Window Trim Gaskets



Cut the film at an overlap of approx. 2 mm on the gasket and apply the film with the squeegee underneath the gasket. For cutting the use of Knifeless Tape is recommended.



Important Notice Partial wrinkling of the film may occur at window trim gaskets because of possible mechanical movements of the gasket resulting in stress on the film.



Important Notice The wrapped vehicle should remain in the shop floor for at least 24 hours to allow the adhesive to build up adhesion on the car paint. Car wash should not be done before 7 days after wrapping.

Automated Car Washing and Pressure Washing Automated car washing may be used. Be aware that brush-type car washes may influence the visual appearance of the film. The use of hot wax is not recommended.

Pressure washing may be used under these conditions:

- Ensure water pressure is kept below 80 bar.
- Keep water temperature below +60 °C.
- Keep the spray nozzle at least 30 cm away and perpendicular (at 90° +/- 30°) to the graphic.

Difficult Contaminants Difficult contaminations by bird droppings or tree sap should be removed immediately from the film surface with warm soapy water.

Removal Applied graphics can be removed with heat or chemicals.

Remarks This bulletin provides technical information only.

Important notice All questions of warranty and liability relating to this product are governed by the terms and conditions of the sale, subject, where applicable, to the prevailing law.

Before using, the user must determine the suitability of the product for its required or intended use, and the user assumes all risk and liability whatsoever in connection therewith.

As outdoor graphics age, natural weathering occurs causing a gradual reduction in gloss, slight color changes, some lifting of the graphic at the edges or around rivets, and ultimately a minor amount of cracking. These changes are not evidence of product failure and are not covered by a 3M warranty.

Additional information Visit the web site of your local subsidiary at www.3Mgraphics.com for getting:

- more details about 3M™ MCS™ Warranty and 3M™ Performance Guarantee
- additional instruction bulletins
- a complete product overview about materials 3M is offering



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