

Commercial Solutions Division

**3M™ Wrap Film
Series 1080**

**Product
Description**

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.

These vinyl films are sold in 1.52 m wide rolls, allowing almost any section of a vehicle to be wrapped without seams.

The films provide excellent opacity to hide high contrast surfaces and are shortly resistant against petrol spillage and extremely resistant to all atmospheric influence.

This film uses 3M™ Controltac™ and 3M™ Comply™ technology.

3M™ Controltac™ minimizes the initial contact area of the adhesive and allows the applicator to reposition the film during application.

This allows easier installation of large format graphics in a wide temperature range.

3M™ Comply™ are air release channels allowing fast and easy, bubble-free application of films.

| Product Line | Car wrapping | | |
|--------------|--------------|-----------|---|
| | | 1080-Gx | x = color code, glossy, permanent adhesive with Comply™. |
| | | 1080-Mx | x = color code, matte, permanent adhesive with Comply™. |
| | | 1080-BRx | x = color code, brushed, permanent adhesive with Comply™. |
| | | 1080-CFSx | x = color code, carbon fiber, permanent adhesive with Comply™. |
| | | 1080-Sx | x = color code, semi-matte, permanent adhesive with Comply™. |
| | | 1080-GPx | x = color code, gloss pearl, permanent adhesive with Comply™. |
| | | 1080-SPx | x = color code, satin pearl, permanent adhesive with Comply™. |
| | | 1080-SB | x = color code, special texture, permanent adhesive with Comply™. |
| | | 1080-MX | x = color code, special texture, permanent adhesive with Comply™. |

**Product
Characteristics**

These are indicative values for unprocessed products.
Contact your 3M representative for a custom specification.

| Physical & Application | | |
|------------------------|---|---|
| Material | cast vinyl | |
| Surface finish | glossy and matte, textured surface (see product line) | |
| Thickness (film) | 90 µm (0.09 mm) | |
| Adhesive type | solvent acrylic, pressure-sensitive, repositionable | |
| Liner | double-sided Polyethylene coated paper | |
| Adhesion | 11 N/25 mm | FTM 1: 180° peel, substrate: aluminium; cond: 24 h 23°C/50%RH |
| Additional reference | Automotive paint: 11 N/25 mm - 22 N/25 mm | |
| Application method | dry only! | |
| Applied shrinkage | < 0.4 mm | FTM 14 |

| | | |
|--|--|--|
| Application temperature (minimum air and substrate) | +16°C | for flat surfaces |
| | +16°C | for curved to corrugated surfaces, with and without rivets |
| Service temperature (after application) | -60°C to +107°C (not for extended periods of time at the extremes) | |
| Surface type | flat to simple curved and moderate compound curves typical to personal vehicles | |
| Substrate type | aluminum, PMMA, PC*, ABS, paint *Might require drying with heat before use | |
| Graphic removal | Removable with heat and/or chemicals from supported substrates. No liability is given for ease or speed of removal of any graphic. Pay attention to adequate air and substrate temperature. | |

The values above are the results of illustrative lab test measurements and shall not be considered as a commitment from 3M.

| | | |
|---------|--------------------|---|
| Storage | Shelf life | Use within two years from the date of manufacture on the sealed original box. Use within one year after opening the box. |
| | Storage conditions | +4°C to +40°C, out of sunlight, original container in clean and dry area. |

The shelf life as defined above remains an indicative and maximum data, subject to many external and non-controllable factors. It may never be interpreted as warranty.

Flammability Flammability standards are different from country to country. Ask your local 3M contact for details, please.

Durability

The durabilities mentioned in the table below are the results of illustrative lab tests. The values show the best performance expected from these products, provided that the film will be processed and applied professionally according to 3M's recommendations.

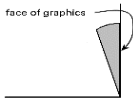
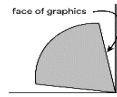
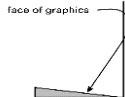
The durability statements do not constitute warranties of quality, life and characteristics.

The durability of products is also influenced by:

- the type of substrate and thorough preparation of the surface (with 3M™ Surface Preparation System)
- application procedures
- environmental factors
- the method and the frequency of cleaning

Climatic zones Graphic durability is largely determined by the climate and the angle of exposure. Find below a table showing the durability of a product according to the angle of exposure and the geographical location of the application.

| | |
|--------|---|
| Zone 1 | Northern Europe, Italy (north of Rome), Russia |
| Zone 2 | Mediterranean area without North Africa, South Africa |
| Zone 3 | Gulf area, Africa |

| | | | |
|----------------|---------------|--|--|
| Exposure types | Vertical: |  | The face of the graphic is ±10° from vertical. |
| | Non-vertical: |  | The face of the graphic is greater than 10° from vertical and greater than 5° from horizontal. |
| | Horizontal: |  | The face of the graphic is ±5° from horizontal. |
| | Interior: | Interior means an application inside a building without direct exposure to sunlight. | |

| Vertical outdoor exposure | Zone 1 | Zone 2 | Zone 3 |
|--------------------------------------|---------------|---------------|---------------|
| white/black | 6 years | 4 years | 3 years |
| colors | 5 years | 3 years | 2.5 years |
| metallics | 5 years | 3 years | 2.5 years |
| Non-vertical outdoor exposure | Zone 1 | Zone 2 | Zone 3 |
| white/black | 4 years | 2.5 years | 2 years |
| colors | 3 years | 1.5 years | 12 months |
| metallics | 3 years | 1.5 years | 12 months |
| Horizontal outdoor exposure | Zone 1 | Zone 2 | Zone 3 |
| white/black | 3 years | 2 years | 12 months |
| colors | 2 years | 12 months | 6 months |
| metallics | 2 years | 12 months | 6 months |
| Interior application | Zone 1 | Zone 2 | Zone 3 |
| interior | 10 years | 10 years | 10 years |

Notice! Durability statements for colors and metallics include brushed metal and carbon fibre finishes.

3M™ Performance Guarantee and MCS™ Warranty

In addition, 3M provides a guarantee/warranty on a finished applied graphic within the framework of 3M™ Performance Guarantee and/or 3M™ MCS™ warranty programs.

For detailed graphic construction and application options along with specific Warranty periods, please see the Warranty matrices and Warranty information on [3M Graphic Solutions/Warranties](#).

Visit www.3mgraphics.com for getting more details about 3M's comprehensive graphic solutions.

Limitations of End Uses

3M specifically does not recommend or warrant the following uses, but please contact us to discuss your needs to recommend other products.

- | | |
|-----------------------|---|
| Graphics applied to | <ul style="list-style-type: none"> - low surface energy substrates or substrates with low surface energy coating. - stainless steel. - surfaces that are not clean and more than moderate textured. - surfaces with poor paint to substrate adhesion. - other than flat or simply curved surfaces. <p style="margin-left: 20px;">Note: When used on more difficult surfaces stress relief cuts are recommended.</p> <ul style="list-style-type: none"> - watercraft when the graphic is applied below the static water line. - watercraft graphics that are not edge sealed. - non-OEM painted substrates on most vehicles. |
| Graphic removal from | <ul style="list-style-type: none"> - signs or existing graphics that must remain intact. - vehicles which do not have the original OEM paint applied. |
| Graphics subjected to | <ul style="list-style-type: none"> - regular exposure to gasoline vapors or spills at gas pumps, automobile fuel-tank ports. - cut and weed applications where the application tape must adhere to the exposed liner. |
| Important Notice | <ul style="list-style-type: none"> - 3M Commercial Solutions products are not tested against automotive manufacturer specifications! - To avoid color variations all pieces of applied film of one colored area should be processed out of one lot of material. |

Graphics Manufacturing

Flat, or rolled film side out on 130 mm (5 inch) or larger core. These methods help to prevent the liner from wrinkling or application tape, if used, from popping off.

Application

See product bulletin ATR 'application tape recommendations' for information about selection and use of suitable application tapes for this product, please.

[> Product Bulletin Application Tape Recommendations <](#)

Refer to Instruction Bulletin 5.1 'select and prepare substrates for graphic application', for general application information.

[>Instruction Bulletin 5.1 'select and prepare substrates for graphic application'<](#)

Important Notice 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 (e.g. microfibre) 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.

Controltac™ Films

Refer to Instruction Bulletin 1080 '3M™ Wrap Film Series 1080' for detailed application information.

[>Instruction Bulletin 1080 '3M™ Wrap Film Series 1080'<](#)

Important Notice Post-heating of edges is required at temperatures of at least +85°C.

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.

Stretching of film at the edges should be avoided in order to avoid shrinkage and color fading.

Excessive heat and stretch of light colors might result in change of gloss and colors. Stretching of textured films (e.g. 1080-MX Matrix Black) may lead to distortion of the pattern.

Inlays and relief cuts in deep recesses are recommended.

Surfaces with high surface tension as e.g. car glass should be covered by masking or application tape in order to prevent adhesive residuals when removing the film from the substrate. Removal with slow speed and peel angle < 90° is preferred.

Color Appearance Color appearance of 1080 metallic films applied on the car might slightly change when applied on differently colored car paints.

To avoid color variations all pieces of applied film of one colored area should be processed out of the same roll of material. If more than one roll is needed for the application, material should be taken from the same lot.

Check material on color consistency before application. Color deviations of different lots or from different manufacturing sites cannot be excluded.

It is recommended to apply 1080 metallic films and 1080 satin pearl films in same direction on visually adjacent car parts as e.g. doors and fenders of car body sides.

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).

Refer to Instruction Bulletin 6.5 'storage, handling, maintenance and removal of films and sheetings', for general maintenance and cleaning information.

[>Instruction Bulletin 6.5 'Storage, Handling, Maintenance and Removal of Films and Sheetings'<](#)

If available in fully automated car washes, polishing rollers should be disabled to avoid high pressure contact and potential damage of the film. The use of wax is not recommended.

Matte colors might become glossy if brushed and waxed in car washes.

1080-M10 Matte White and 1080-CFS Carbon Fiber White require frequent cleaning. The use of 3M™ Cleaner for Matte Wrap Films is recommended.

[>Instruction Bulletin '3M™ Cleaner for Matte Wrap Films'<](#)

Important Safety Remark

Application to glass

The application of colored or printed film onto glass with sunlight exposure can lead to glass breakage through thermal expansion of the glass. The local conditions must be examined for the danger of glass break by uneven heat absorption through sun exposure. Type of glass (insulation glass, float glass, LSG, toughened safety glass, semi-tempered glass, etc.), glass dimension, joint condition, flexibility of the sealant, quality of the edge finishing, geographical orientation and partial shadow during sun exposure are the determining factors. Light color designs and application on the outside of the window are to be preferred. A free non-applied framework of 4 mm around the entire window front can help to dissipate the absorbed warmth. According to common knowledge a thermal crack can occur at temperature differences of approx. 130°C (toughened safety glass), approx. 40°C (float glass) or approx. 110°C (semi-tempered glass). Coldest place is usually under the framework in the embedded joined window part, the warmest place is typically on the darkest place in the format. Because of the many above mentioned factors, glass breakage cannot be fully predicted, therefore 3M does not accept liability for glass breakage when using this film for window graphics.

Remarks

Important notice This bulletin provides technical information only.

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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