



Controltac™ Plus

Graphic Film with Comply™ Performance Series 180C

Description

Advantages

- Same as our standard 3M™ Controltac™ Plus Graphic Film 180, except 180C has the new Comply™ Performance feature for easier, high quality installations
- Screen printable
- Wide color selection
- Lifetime warranty for trailers; up to 7 years for other applications
- Suitable for large exterior and interior graphics
- Easy to temporarily position during application
- For flat and corrugated surfaces with and without rivets
- Removable adhesive, with heat or a chemical system
- Wide application and removal temperature range

Application and End Uses

3M™ Controltac™ Plus Graphic Film with Comply™ Performance Series 180C is intended for making removable, durable graphics when used with the listed Compatible Products in the following applications. These applications are warranted by the 3M™ MCS™ Warranty.

- Interior and exterior graphics and signs
- Commercial vehicle and fleet graphics, emblems or striping
- Bus graphics

Limitations of End Uses

We do not normally warrant other applications, but please contact us to discuss your needs or let us suggest other 3M products.

Specifically, we do not warrant this film for the following:

- Graphics applied to:
 - Stainless steel.
 - Non-3M films (also see Removal on page 8).
 - Substrates that do not have a clean, smooth surface.
- Graphic removal from:
 - Applications with poor paint-to-substrate adhesion.
 - Existing graphics that must remain intact. Damage may occur during removal of film series 180C.

- Graphics subjected to:
 - Gasoline vapors or spills at gas pumps, automobile fuel-tank ports, or top-feeding, petroleum tankers.
- Graphics made for automotive Original Equipment Manufacturers (OEM); contact 3M Automotive Division at 1-800-328-1684, Ext. 444, for alternatives.

Compatible Products

- 3M™ Scotchcal™ Screen Printing Ink Series 3900
- 3M™ Scotchcal™ Screen Printing Ink Series 7000LS
- 3M™ Scotchcal™ Screen Printing Ink Series 9700 UV
- 3M™ Scotchcal™ Four Color Screen Printing Ink Series 9700 UV
- 3M™ Scotchcal™ Edge Sealer 3950
- Selected 3M application tapes

Characteristics

This information is subject to change. Refer to the Fax-on-Demand Index to make sure this is the most current Product Bulletin. See 3M Related Literature for Fax-on-Demand information.

Property	Description
Color	See the Color Chart on next page. Not all colors are immediately available with Comply performance. Contact your sales representative.
Film	2 mil (0.05 mm) opaque vinyl
Thickness (film plus adhesive)	3 to 4 mil (0.08 to 0.10 mm)
Adhesive type	Positionable, pressure activated with Comply performance feature
Adhesive color	Films with * in color chart: Clear All other films: Gray-pigmented
Liner	94 pound, polyethylene-coated paper
Application surface	Flat, with and without rivets, corrugated, simple curves, moderate compound curves
Application substrates	ABS resins, aluminum, chrome, glass, fiberglass reinforced plastics, paint (check adhesion to powder-coated or water-based paints)

Characteristics continued on the next page.

Characteristics continued from the previous page.

Property	Description
Application temperature range	Flat surfaces with and without rivets: 40° to 100°F (4° to 38°C) Corrugated surfaces with rivets: 50° to 100°F (10° to 38°C)
Removal	Removable with heat or chemicals within 7 years
Removal temperature	50° F (10°C) minimum (air and substrate)

Color Chart for 3M™ Controltac™ Plus Graphic Film with Comply™ Performance Series 180C

Solid Colors						Metallic Colors	
180C-10 White	180C-37 Sapphire Blue	180C-88	Violet*	180C-201	Slate*		
180C-12 Black	180C-38 Royal Purple*	180C-96	Teal*	180C-203	Red*		
180C-13 Tomato Red	180C-39 Tan	180C-98	Dark Violet*	180C-211	Charcoal*		
180C-14 Bright Orange	180C-41 Dark Gray*	180C-103	Magenta*	180C-216	Sage Green*		
180C-15 Bright Yellow*	180C-46 Kelly Green	180C-120	Satin Aluminum	180C-217	Dark Blue*		
180C-17 Vivid Blue	180C-47 Intense Blue	180C-131 Satin Gold*		180C-220	Light Silver*		
180C-19 Deep Mahogany Brown	180C-49 Beige	180C-173	Salmon Pink*	180C-221	Grey*		
180C-22 Matte Black*	180C-53 Cardinal Red	180C-176	Aqua*	180C-227	Bright Blue*		
180C-23 Deep Red	180C-54 Light Orange	180C-186	Bright Green*	180C-228	Dark Burgundy*		
180C-25 Sunflower*	180C-56 Dark Green	180C-193	Mauve	180C-229	Copper*		
180C-27 Indigo (Navy)	180C-57 Olympic Blue	180C-196	Apple Green*	180C-237	Silver Blue*		
180C-29 Russet Brown	180C-58 Burgundy*	180C-307	Dark Aqua*	180C-239	Chocolate Brown*		
180C-31 Medium Grey*	180C-63 Geranium*			180C-241	Gold*		
	180C-77 Peacock Blue						
*Indicates clear adhesive; all other adhesive is gray-pigmented.						Transparent Film	
Bold type products are immediately available. Others will be available in year 2000.						180C-114 Transparent*	

Effective Performance Life

The effective performance life is based on field experience and exposure tests conducted throughout the United States. When the graphics are processed and used according to the 3M recommendations, they should have the performance life shown in the table in the next column. The actual performance depends on the:

- Use of 3M compatible products.



- Correct combination of film, ink, and overprint clear.
- Ink formulation.
- Ink drying methods.
- Selection and preparation of the substrate.
- Application methods.
- Cleaning and maintenance methods.
- Exposure conditions.

Warranted Durability



Vehicle Graphics - Unprinted 3M™ Controltac™ Plus Graphic Film with Comply™ Performance 180C										
Film	Vertical Exposure <i>face of graphic is vertical ± 10°</i>				Non-Vertical Exposure <i>face of graphic is > 10° from vertical</i>				Horizontal Exposure <i>for legibility only</i>	
	U.S. ¹ years		S.W. ² years		U.S. ¹ years		S.W. ² years		U.S. ¹ years	S.W. ² years
	Trailers	Other Vehicles	Trailers	Other Vehicles	Trailers	Other Vehicles	Trailers	Other Vehicles		
180C-10 180C-12 180C-13 180C-14 180C-15 180C-54	Lifetime ³	7	Lifetime ³	5	4	4	3	3	5	3
180C-53	Lifetime ³	6	Lifetime ³	5	4	4	3	2	5	3

^{1,2,3} Refer to notes 1, 2, and 3 following the chart on page 3.

Vehicle Graphics (continued) - Unprinted 3M™ Controltac™ Plus Graphic Film with Comply™ Performance 180C

Film	Vertical Exposure face of graphic is vertical ± 10° 				Non-Vertical Exposure face of graphic is > 10° from vertical 				Horizontal Exposure for legibility only	
	U.S. ¹ years		S.W. ² years		U.S. ¹ years		S.W. ² years		U.S. ¹ years	S.W. ² years
	Trailers	Other Vehicles	Trailers	Other Vehicles	Trailers	Other Vehicles	Trailers	Other Vehicles		
180C-37 180C-46 180C-47 180C-56 180C-57 180C-77	Lifetime ³	6	Lifetime ³	5	4	4	2	2	-	-
180C-25	Lifetime ³	6	Lifetime ³	4	4	4	2	2	5	3
180C-17	Lifetime ³	6	Lifetime ³	4	4	4	2	2	-	-
180C-120 180C-131	6	5	4	4	4	4	2	2	-	-
180C-114 or Metallic 180C colors	5	5	3	3	3	3	2	2	-	-
All other colors not listed in this column	Lifetime ³	7	Lifetime ³	4	4	4	2	3	-	-

Sign Graphics - Unprinted 3M™ Controltac™ Plus Graphic Film with Comply™ Performance 180C

Film	Vertical Exposure face of graphic is vertical ± 10° 		Non-Vertical Exposure face of graphic is > 10° from vertical 	
	U.S. ¹ years	S.W. ² years	U.S. ¹ years	S.W. ² years
180C-10 180C-12 180C-22	7	4	4	2
180C-114 180C-120 180C-131 Metallic 180C colors	5	3	3	2
All other colors not listed in this column	6	4	4	2

¹ For warranty periods outside the United States, contact the 3M sales organization for that country.



² The U.S. Desert Southwest includes Arizona, New Mexico, and the desert areas of California, Nevada, Utah, and Texas. A detailed map is available by request. The warranty for this area is reduced because there is more solar energy. This warranty applies to graphics exposed to solar energy in the U.S. Desert Southwest more than 50% of the time.

³ For vehicle graphics only, refer to the Lifetime Warranty information, page 6.

Vehicle or Sign Graphics - Printed 3M™ Controltac™ Plus Graphic Film with Comply™ Performance 180C							
Film / Ink	Overprint Clear	Vertical Exposure <i>face of graphic is vertical ± 10°</i>		Non-Vertical Exposure <i>face of graphic is > 10° from vertical</i>		Horizontal Exposure <i>for legibility only</i>	
		U.S. ¹ years	S.W. ² years	U.S. ¹ years	S.W. ² years	U.S. ¹ years	S.W. ² years
3M™ Scotchcal™ Screen Printing Ink Series 3900							
180C-10 180C-12 180C-13 180C-14 180C-15	3920 Air dry 3920 Oven dry 3930	5 6 2, may haze	3 4 1, may haze	4 4 1, may haze	2 2 1, may haze	- 5 -	- 3 -
180C-25 180C-53 180C-54	9720 UV 9730 UV	6 3	4 2	4 2	2 1	5 -	3 -
180C-114 or metallic 180C colors	3920 Air dry 3920 Oven dry 3930	5 5 2, may haze	3 3 1, may haze	3 3 1, may haze	2 2 1, may haze	- - -	- - -
	9720 UV 9730 UV	5 3	3 2	3 2	2 1	- -	- -
All other 180C colors not listed for this ink	3920 Air dry 3920 Oven dry 3930	5 6 2, may haze	4 4 1, may haze	3 4 1, may haze	2 2 1, may haze	- - -	- - -
	9720 UV 9730 UV	6 3	3 2	4 2	2 1	- -	- -
3M™ Scotchcal™ Screen Printing Ink Series 7000LS							
180C-10	7089LS	6	4	4	2	-	-
3M™ Scotchcal™ Screen Printing Ink Series 9700 UV							
180C-10 180C-12 180C-13 180C-14 180C-15 180C-25 180C-53 180C-54	None 9720 UV 9730 UV	2 7 3	1 4 2	1 4 2	1 2 1	- 5 -	- 3 -
All other 180C colors not listed for this ink	None 9720 UV 9730 UV	2 6 3	1 4 2	1 4 2	1 2 1	- - -	- - -
180C-114 or metallic 180C colors	None 9720 UV 9730 UV	2 5 3	1 3 2	1 3 2	1 2 1	- - -	- - -
3M™ Scotchcal™ Screen Printing Ink Series 9700 UV (metallic inks)							
180C-10 180C-12 180C-13 180C-14 180C-15 180C-25 180C-53 180C-54	9720 UV	5	3	3	2	5	3
All other 180C colors	9720 UV	5	3	3	2	-	-
3M™ Scotchcal™ Four Color Screen Printing Ink Series 9700 UV							
180C-10	9720 UV 9730 UV	7 3	4 2	4 2	2 1	5 -	3 -

¹ For warranty periods outside the United States, contact the 3M sales organization for that country.

² The U.S. Desert Southwest includes Arizona, New Mexico, and the desert areas of California, Nevada, Utah, and Texas. A detailed map is available by request. The warranty for this area is reduced because there is more solar energy. This warranty applies to graphics exposed to solar energy in the U.S. Desert Southwest more than 50% of the time.

Railroad - Printed and unprinted 3M™ Controltac™ Plus Graphic Film with Comply™ Performance 180C					
Film / Ink	Overprint Clear	Vertical Exposure <i>face of graphic is vertical $\pm 10^\circ$</i> 		Non-Vertical Exposure <i>face of graphic is $> 10^\circ$ from vertical</i> 	
		U.S.¹ <i>years</i>	S.W.² <i>years</i>	U.S.¹ <i>years</i>	S.W.² <i>years</i>
Unprinted film					
180C-10 180C-12	None	8 <i>plus 2 more, legibility only</i>	6	5	4
180C-14 180C-15 180C-23	None	8	5	5	3
180C-37	None	7	4	4	2
180C-25	None	6	4	4	2
180C-114	None	5	3	3	2
3M™ Scotchcal™ Screen Printing Ink Series 3900					
180C-114	3920 Air dry 3920 Oven dry 3930	5 5 <i>2, may haze</i>	3 3 <i>1, may haze</i>	3 3 <i>1, may haze</i>	2 2 1
	9720 UV 9730 UV	5 3	3 2	3 2	2 1
All other 180C films listed in Unprinted film , above	3920 Air dry 3920 Oven dry 3930	5 6 <i>2, may haze</i>	3 4 <i>1, may haze</i>	3 4 <i>1, may haze</i>	2 2 1
	9720 UV 9730 UV	6 3	4 2	4 2	2 1
3M™ Scotchcal™ Screen Printing Ink Series 9700 UV (does not include metallic or 4-color)					
180C-10 180C-12	None 9720 UV 9730 UV	2 7 3	1 4 2	1 4 2	1 2 1
180C-14 180C-15 180C-23 180C-25 180C-37	None 9720 UV 9730 UV	2 6 3	1 4 2	1 4 2	1 2 1
180C-114	None 9720 UV 9730 UV	2 5 3	1 3 2	1 3 2	1 2 1

¹ For warranty periods outside the United States, contact the 3M sales organization for that country.

² The U.S. Desert Southwest includes Arizona, New Mexico, and the desert areas of California, Nevada, Utah, and Texas. A detailed map is available by request. The warranty for this area is reduced because there is more solar energy. This warranty applies to graphics exposed to solar energy in the U.S. Desert Southwest more than 50% of the time.

³ For vehicle graphics only, refer to the Lifetime Warranty information, below.

The following 3M products are referenced on this page:

- 3M™ Controltac™ Plus Graphic Film with Comply™ Performance Series 180C
- 3M™ Scotchcal™ Screen Printing Ink Series 3900
- 3M™ Scotchcal™ Screen Printing Ink Series 7000LS
- 3M™ Scotchcal™ Screen Printing Ink Series 9700 UV
- 3M™ Scotchcal™ Four Color Screen Printing Ink Series 9700 UV

3M™ MCS™ Warranty

3M warrants the performance of the Product from the date of installation for the number of years stated in the **Warranted Durability** chart. In the event that the Product does not perform as stated within the warranted time, and the graphics are fabricated as specified by the 3M MCS Warranty, then 3M shall at 3M's option either (a) refund the entire purchase price of the material, or (b) replace all 3M materials consumed in the manufacture of the graphics. In addition, *for fleet applications only*, 3M will reimburse 100% of the labor costs associated with the removal, remanufacture, and reapplication of the graphic to the extent that 3M determines such amount is reasonable and necessary in the circumstances. This labor cost reimbursement will be determined by 3M on a case-by-case basis taking into account the expected amount of labor needed to make such repairs and other considerations.

Lifetime Warranty

For the colors of film series 180C listed on pages 2 and 3 as having a Lifetime Warranty, 3M warrants the performance for as long as the original graphics purchaser owns the vehicle. If the film fails, the following reimbursement schedule applies.

U.S. Failure occurs during year:	Desert Southwest Failure occurs during year:	Replace Material: %	Labor %
8	5	100	100
9	6	80	50
10	7	60	25
11	8	40	10
12	9	20	0
13	10	10	0
14	-	10	0
15	-	10	0
16 plus	-	10	0

Warranty Exceptions

- Graphics printed with ink 3919 (gold metallic) and overprinted with overprint clear 3920 have 3 years durability.
- Unprinted film series 180C has a tendency to chalk in exterior applications. Film that cannot be cleaned must be printed with overprint clear 3920, overprint clear 9720 UV or 9730 UV. The warranty is the same as for the ink series being used.

Horizontal Exposure Warranty for Vehicle Graphics Requiring Legibility Only

Horizontal applications can be used on the rooftops of commercially owned vehicles where identification from the air is needed. Horizontal applications are subjected to the maximum sunlight and environmental conditions. The graphic will change color, lose gloss, and chalk. The following ink restrictions apply.

Ink Series 3900

- Use ink series 3900 and overprint clear 3920 or 9720 UV.
- Do not use these inks or formulations containing these inks: 3915, 3917, 3919, 3972.
- Oven dry the last color and overprint clear 3920 for 2 hours at 150°F (65°).

Ink Series 9700 UV

- Use overprint clear 9720 UV.

Screen Printing

Note: All Product and Instruction Bulletins mentioned in this bulletin can be ordered through our Fax-on-Demand system. See **3M Related Literature** on page 9 for details.

To get the durability given in the **Effective Performance Life** section for film series 180C, use the correct combination of ink and overprint clear. Check the appropriate Product Bulletins and Instruction Bulletins for the limitations of each particular ink.

The compatible screen printing inks are listed in the Compatible Products section on page 1.

If ink series 3900 is used and the graphic is being applied to a corrugated surface, then the last color and the overprint clear must be oven dried.

The following 3M products are referenced on this page:

- 3M™ Controltac™ Plus Graphic Film with Comply™ Performance Series 180C
- 3M™ Scotchcal™ Prespace Tape SCPS-55
- 3M™ Scotchcal™ Premask Tape SCPM-3, SCPM-44X
- 3M™ Scotchcal™ Edge Sealer 3950
- 3M™ Controltac™ Plus Film Remover R-221
- 3M™ Controltac™ Plus Adhesive Remover R-231

Cutting

The following are common cutting methods for this film. See Instruction Bulletin 4.1 for details.

- Bandsawing
- Hot kiss cutting
- Drum-type electronic cutting
- Flat-bed electronic cutting
- Guillotine
- Hand cut
- Cold and hot steel-rule die cutting

The following minimum values for electronic cutting text from film series 180C are based on upper case Helvetica medium type. Weeding can be more difficult with smaller text.

- Minimum stroke width: 0.25 inch (6.35 mm)
- Minimum radius for end of stripe: 0.125 inch (3.18 mm)
- Minimum height:
 - Flat bed cutter with dual edge blade 3.0 inch (76.2 mm)
 - Standard friction feed plotter 6.0 inch (152 mm)

Note: Weeding must be done carefully. Cut graphics are difficult to re-adhere to the liner if mistakenly pulled off.

Premasking and Prespacing

The type of prespace tape or premask tape to use depends on the type of graphic produced and the ink or overprint clear that was applied last. See Instruction Bulletin 4.3 for details.

- Use a prespace tape if the graphic has large amounts of the liner exposed.
- Use a premask tape if very little of the liner is exposed.

Overprint Clear	Prespace Tape	Premask Tape
Unprinted	SCPS-55	SCPM-3
3920 3930	SCPS-55	SCPM-3
7089LS	SCPS-55	SCPM-44X
9720 UV 9730 UV 9700 UV (no overprint clear)	SCPS-55	SCPM-44X

Application

Refer to the Instruction Bulletins listed in the **3M Related Literature** section, located at the end of this Bulletin, for more complete information.

The following application details are for film series 180C.

Temperature

The application temperature range is:

- Flat surfaces with and without rivets is 40° to 100°F (4° to 38°C).
- Corrugated surfaces with rivets is 50° to 100°F (10° to 38°C).

Positioning

This film has a positionable adhesive. Application pressure bonds the adhesive to the substrate and destroys the positionability feature. The film loses its positionability feature at application temperatures above 100°F (38°C).

Do not use detergent and water or a commercial application liquid to position the graphic on a vehicle.

Method

Film series 180C has the Comply performance feature. This 3M technology is a mechanical feature, not an adhesive property. This feature allows air to travel through the adhesive. The film can be applied with time saving techniques such as larger squeegees. In addition, applications usually have fewer air bubbles. Refer to Instruction Bulletin 5.31 for additional information on the application of Comply performance products.

Finishing

This film does not require edge sealing. However, certain applications, such as cut graphics, may benefit from using edge sealer. If needed, use edge sealer 3950.

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.)

Removability

Film series 180C is warranted to be removable using heat, accessories, and/or chemicals. Removing film 180C from a pre-existing graphic will damage that graphic. Refer to the Instruction Bulletin 6.5 for removal details.

A chemical remover system is available for graphics printed with solvent-based ink. Follow the procedures in Instruction Bulletin 6.5 for using film remover R-221 and adhesive remover R-231.

Removal Warranty

The ease and rate of removal depends on a number of factors. See Instruction Bulletin 6.5 for details.

- Substrate type and condition
- Screen printing ink, amount and type
- Graphic age and weathering conditions
- Pull-off angle, which should be less than 90 degrees

The removal warranty for standard vehicle and sign substrates is:

- **Vertical:** 7 years or the **Warranted Durability**, whichever comes first.
- **Non-vertical:** 50% of the vertical **Warranted Durability**, not to exceed 3-1/2 years.

Removability Exceptions

- A signed Pre-installation Review is required as a condition for warranty on buses. See *3M Bus Graphics Policy and Warranty Statement* in the **Related 3M Literature** section on page 9.


Note: This film is not designed for short-term graphics and may cause damage upon removal from painted surfaces.

- Exterior, horizontal applications.
- Aged paint and metals must be tested to ensure removability. Surface oxidation or chalking may result in adhesive residue upon removal.
- Paint that is not firmly bonded to the substrate may be damaged when removing the film.
- Paint that is not properly cured may prevent the film from being removed.

Shelf Life, Shipping, and Storage

- Unprocessed 3M™ Controltac™ Plus Graphic Film with Comply™ Performance Series 180C has a shelf life of 2 years after receipt. Processed film has a shelf life of 1 year. However, the total shelf life of a graphic before and after processing cannot exceed 2 years.
- Store the film in a clean, dry area in the original container.
- Store the film out of the direct sunlight and at less than 100°F (38°C).
- Ship the finished graphic lying flat or in a roll. To roll the graphic, roll it film side out onto a core that is 5 inches (13 cm) or larger in diameter. These methods help prevent the film and premasking from wrinkling or popping off the liner.
- See Instruction Bulletin 6.5 for details.

Health and Safety

 Caution
<p>When handling any chemical products, read the manufacturers' container labels and the Material Safety Data Sheets (MSDS) for important health, safety and environmental information.</p> <p>To obtain MSDS sheets for 3M products:</p> <ul style="list-style-type: none"> • 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, then select MSDS search. • By mail, or in case of an emergency, call 1-800-364-3577 or 1-651-737-6501. <p>When using any equipment, always follow the manufacturers' instructions for safe operation.</p>

Product Data

Values given are typical for film series 180C and are not for use in specifications. For a custom specification, submit a request to your 3M sales representative. The data given below are for unprinted film.

Physical Characteristics

Property	English Units	Metric Units
Tensile strength (minimum)	5 pounds/inch at 73°F	0.9 kg/cm at 23°C
Applied shrinkage	0.015 inch	0.4 mm
Service temperature range	-65° to +225°F	-60° to +107°C
Impact resistance	No cracking at -20°F	No cracking at -29°C
Reverse impact resistance	No cracking at 73°F	No cracking at 23°C

Adhesion Characteristics

These adhesion values are 24 hours after application.

Substrate	English Units pounds/inch	Metric Units kg/cm
ABS	4.2	0.75
Acrylic enamel	3.5	0.63
Aluminum, anodized	7.9	1.42
Aluminum, etched	5.2	0.93
Chrome	4.8	0.87

Chemical Resistance Characteristics

- Resists mild alkalis, mild acids, and salt.
- Excellent resistance to water.

Warranty and Limited Warranty

The following is made in lieu of all other express or implied warranties, including any implied warranty of merchantability or fitness for a particular purpose: Film 180C is warranted to be free of defects in materials and manufacture at the time of shipment and to meet the specifications stated in this Product Bulletin. 3M will replace or refund the price of any 3M materials that do not meet this warranty within the specified time periods. See the worldwide 3M™ MCS™ Warranty bulletin, which gives the terms and limitations of the warranty.

These remedies are exclusive. In no case shall 3M be liable for any direct, indirect or consequential damages, including any labor or non-3M material charges.

3M Related Literature

Listed below is related 3M technical literature that may be of interest. You may view and print these Bulletins from our website at www.3M.com/US/graphicarts, 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: 1-650-556-8417

Subject	Bulletin No.	FOD No.
Product Bulletins		
3M™ Scotchcal™ 3M™ Screen Printing Ink Series 3900	3900	2509
3M™ Scotchcal™ Four Color System Screen Printing Ink Series 7000LS	7000 LS	2504
3M™ Scotchcal™ Screen Printing Ink Series 9700 UV	9700	2507
Instruction Bulletins		
Design of graphics	2.1	5501
Screen printing with ink 3900	3.1	6001
Screen printing with 4-color ink 7000 LS	3.10	6010
Screen printing with ink 9700 UV - line color - 4-color	3.4 3.13	6004 6013
Scoring and cutting	4.1	6501
Premasking/prespacing	4.3	6503
Surface preparation-Non vehicular -Vehicular	5.1 5.2	7001 7002
Applying markings with positionable pressure activated adhesives to corrugated surfaces	5.4	7004
Application to flat and curved surfaces, positionable, pressure activated adhesive	5.6	7006
Applying 3M™ Graphic Films with Comply™ Performance	5.31	7031
Storage, maintenance, removal	6.5	8505
Warranties		
Worldwide 3M™ MCS™ Warranty Packet <i>(includes all Commercial Graphics MCS Warranties)</i>		9503
Worldwide 3M™ MCS™ Warranty Overview-Folder		9504
3M™ MCS™ Graphics Warranty for Fleet Vehicle Applications <i>(includes overview)</i>		9506
3M Bus Graphics Policy and Warranty Statement	75-5100-1315-6	




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