



Release H. Effective October 2009 See Bulletin Change Summary and end of Bulletin

Scotchcal [™] **Graphic Film**

3662

Product Description

Application Ideas

Recommended Types of Graphics and End Uses

Unsuitable End Uses for This Product

Limitations of End Uses

For Screen Printing Only

This is a 2-mil, durable, opaque film designed for making short term graphics that are applied to unsealed, outdoor, pedestrian traffic surfaces or selected smooth-to-rough wall surfaces. This film has excellent hiding power and can be screen printed.

Sidewalk signs provide a unique way to reach consumers at the retail point-of-customer contact. Almost anywhere you have pedestrian traffic, sidewalk signs can present your message effectively to customers, clients, visitors and employees. Here are just some of the many locations and ways a sidewalk sign may be used whether it is needed for just a day or for months.

- Use outside at fairs, trade shows, retail outlets, entertainment and sports venues, convention centers, private businesses, schools, public buildings and special events such as parades and marathons
- Build brand equity and support for sales promotions at the retail level
- Use for market test promotions
- Advertise product brands, sales, and upcoming events
- Create directional and informational signs
- Promote internal company events such as celebrations, employee recognition, etc.

When constructed and used as described in this Bulletin, these types of graphics and end uses may be warranted by the 3MTM MCSTM Warranty. Please read the entire Bulletin for details.

- Sidewalk sign graphics applied to *unsealed*, *outdoor*, *pedestrian* traffic surfaces
- Graphics applied to indoor and outdoor concrete block and brick-type wall surfaces

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

- Application to playing surfaces such as basketball courts.
- Exposure to frequent vehicle traffic, snowplows, snow shovels, heavy equipment traffic; minor edge chipping is unavoidable
- Graphics made of individually laminated cut numbers, letters and characters.
- Indoor floor applications
- Walls that may be exposed to high moisture from rain, sprinklers, etc.



Loose, damaged or wet sidewalk signs may cause a pedestrian to slip or trip and fall.

To reduce the risk of slipping or tripping on sidewalk signs:

- Use only 3M™ Scotchcal™ Matte Overlaminate 3647, which has a slip-resistant surface.
- Properly apply only to unsealed outdoor surfaces (unsealed asphalt, unsealed concrete, paving bricks).
- Immediately remove or replace loose or damaged sidewalk signs. Do not attempt to repair or re-adhere.
- Upon completion of a pedestrian event on a roadway, remove the sidewalk sign before normal traffic resumes.

Failure to heed this Caution may result in personal injury.

Wall Graphics

This film can be used for wall graphics; however, the user must determine the product's suitability and whether it has the necessary adhesion for their application. The user is solely responsible for the graphic adhesion to the substrate. For guidelines, see Instruction Bulletin 5.37.

Compatible Products

Screen Printing Inks

- 3M™ Screen Printing Ink Series 1900
- 3M[™] Screen Printing UV Ink Series 9800

Cut Graphic Decoration
Overlaminate for Sidewalk Signs

Graphic Protection for Walls

- 3MTM ScotchcalTM ElectroCutTM Film Series 7725 (See Film Decorating, page 3.)
- 3MTM ScotchcalTM Matte Overlaminate 3647 (required for sidewalk signs)
- 3M[™] Scotchcal[™] Luster Overlaminate 8519
- 3M[™] Scotchcal[™] Matte Overlaminate 8520
- 3M[™] Screen Print Gloss Clear 1920DR
- 3M[™] Screen Print Matte Clear 1930
- 3M™ Screen Print Gloss Clear 9720UV
- 3M[™] Screen Print Gloss Clear 9720i
- 3M[™] Screen Print Matte Clear 9730UV
- 3M™ Screen Print Gloss UV Clear 9800CL

Characteristics

These are typical values for unprocessed product; processing may change the values. Contact your 3M representative for a custom specification.

Physical Characteristics

Characteristic	Value		
Film	Cast vinyl		
Film color	White, opaque		
Thickness	Without adhesive: 2 mils (0.04 mm) With adhesive: 6-7 mil (0.15-0.17 mm)		
Adhesive	Pressure sensitive		
Adhesive color	Gray		
Liner	Polyethylene-coated layflat paper		
Tensile strength	13 pound/inch at 73°F (2.3kg/cm at 23°C) minimum		
Chemical resistance	Resists mild alkalis, mild acids, and salt Excellent resistance to water (but not immersion)		

Application Characteristics

Characteristic	Value		
Finished graphic application recommendation	Surface type: Flat		
	Substrate type for sidewalk signs: Unsealed, outdoor pedestrian traffic including asphalt, concrete, paving bricks		
	Note: Some outdoor surfaces are highly dimensional and the film's adhesive may not have enough contact area to adhere properly to the surface. Contact 3M Commercial Graphics Technical Service at 1-800-328-3908 if you have a question about the suitability of any surface.		
	Substrate type for walls: Unsealed concrete block or brick-type wall surfaces		
	Application temperature: 70° to 90°F (21° to 32°C) air, film and surface		

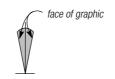
continued on the next page

Characteristic	Value
Applied shrinkage	0.032 inch (0.8 mm)
Removal	Sidewalk signs: Removal without heat, little or no adhesive residue, for up to 3 months
	Wall graphics: Removal is not warranted: user must test and approve, and accept responsibility

Definitions

Exposure

U.S. Vertical Exposure



The face of the graphic is \pm 10° from vertical.

U.S. Horizontal Exposure face of graphic

The face of the graphic is \pm /- 5° from horizontal.

Graphic Construction

The products used to make a graphic, which may include film and/or flexible substrate, graphic protection, ink, printer and application tape.

Graphic Protection

Overlaminate films or clear coats used to protect the graphic and/or change gloss.

Warranty Information

Sidewalk Signs

This warranty is made in lieu of any and all other express or implied warranties, including any implied warranty of merchantability: 3M warrants that sidewalk signs, which are constructed using only the recommended 3M film, inks and overlaminate, and are produced and installed in accordance with 3M's written instructions, will for the warranted durability period maintain original brightness, color and image quality, except for ordinary and expected wear and tear, and adhere to 3M-recommended unsealed, outdoor, pedestrian surfaces and be removable without damage to the surface. 3M will replace or refund the cost of materials for such quantity of sidewalk signs found not to meet this warranty.

This warranty is exclusive. In no case shall 3M be liable for any other direct or indirect damages or loss, including without limitation any incidental, special, or consequential damages, or any labor charges incident to the removal or replacement of sidewalk signs.

Wall Graphics

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 or implied warranty arising out of a course of dealing, custom or usage of trade: all 3M products are 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. These remedies are exclusive. **In no case shall 3M be liable for any direct, indirect, or consequential damages, including any labor or non-3M materials charges.**

See the *3M Graphics Market Center Warranty Brochure* at 3Mgraphics.com, which gives the terms, additional limitations of the warranty, if any, and limitations of liability.

Warranty Coverage Overview

Both the warranty coverage and the durability for each graphic is based on the user(s) reading and following all applicable and current 3M Product and Instruction Bulletins. 3M will honor the Warranted Durability stated in the Warranted Durability Table in the base film or substrate Product Bulletin that is current when the film was purchased. Warranted durabilities may be reduced and stipulations may apply for certain constructions and applications, as covered in this Bulletin.

3M™ MCS™ Warranty

Warranted Durability Table for Finished Graphics

Finished graphics constructed as shown in the tables below are eligible for the MCS Warranty

Ink Series	Graphic Protection		Sidewalk Signs Horizontal Exposure	Wall Graphics Vertical Exposure
	3647		3 months	none
1900 9800	8519 8520 1920DR 1930	9720UV 9730UV 9800CL	none	3 months

General Warranty Stipulations

These stipulations apply to graphics covered by the 3M[™] MCS[™] Warranty. Specific provisions of these stipulations are found in the *3M Graphics Market Center Warranty Brochure* at 3Mgraphics.com.

Abrasion and Loss of Gloss

Abrasion damage and loss of gloss are not covered by any 3M warranty. This is considered normal wear and tear.

Application to Glass

3M accepts no liability for glass breakage when using this film for window graphics. See Instruction Bulletin 5.1 for details.

Application Outside the U.S.

Contact the 3M organization for that country.

Graphics Made with Components Not Sold or Recommended by 3M The 3M [™] MCS [™] Warranty does not cover finished graphics made with inks, film, graphic protection and/or application tapes that are not sold or recommended by 3M. The user is solely responsible for the graphic appearance, performance and durability of graphic constructions that include any other products.

Factors that Affect Graphic Performance Life

The actual performance life of a graphic is affected by all of the following.

- · The combination of graphics materials used
- Ink formulation
- Adequate ink drying and/or UV curing
- Selection, condition and preparation of the substrate
- Surface texture
- Application methods
- Angle and direction of sun exposure
- Environmental conditions
- Cleaning or maintenance methods

Screen Printing

Formulations and processing conditions can affect ink durability. Refer to the Product and Instruction Bulletins for your ink for limitations and proper usage.

Film Decorating

Film 3662-10 may be decorated with film series 7725.

Graphic Protection

For sidewalk signs, use ONLY overlaminate 3647; no other option is approved or warranted.

The *Graphic Protection for Walls* options listed on page 2 ARE NOT intended for sidewalk signs.

Cutting

We recommend cutting radiuses on any sharp corners after lamination. This helps prevent premature lifting of the graphic after application.

The following are common cutting methods for this film: die cut, hand cut, guillotine. See Instruction Bulletin 4.1 for details.

Application and Maintenance

Sidewalk Signs

Sidewalk sign should be cleaned periodically for optimum skid resistance and appearance. See Instruction Bulletin 5.33 for detailed application, cleaning and maintenance instructions.

Wall Graphics

When two or more panels are applied to a vertical wall surface, the adjoining panels should have a 1 inch (25 mm) overlap seam

Refer to Instruction Bulletin 5.37 for the unique characteristics of applying graphics to walls.

Removal

Sidewalk Signs

This product is removable without heat or chemicals for up to 3 months when used for sidewalk signs. See Instruction Bulletin 5.33 for details on removing from a sidewalk surface.

Wall Graphics

See Instruction Bulletin 5.37 regarding removability from a wall.

Shelf Life, Storage and Shipping

Shelf Life

Total shelf life: 3 years from the date of manufacture on the original box Up to 3 years unprocessed, *OR* process within 2 years *and* apply within 1 year of processing

Storage Conditions

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

Shipping Finished Graphics

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

3M Related Literature

Before starting any job, be sure you have the most current Product and Instruction Bulletins.

The information in 3M Product and Instruction Bulletins is subject to change. Current Bulletins are available at 3Mgraphics.com. The following applicable Bulletins provide information and processes you need to properly make the graphics described in this Bulletin. Additional Bulletins may be needed as indicated in the 3M Related Literature section of other 3M components you use.

Bulletin types: PB = Product Bulletin; PB-IB = Product & Instruction Bulletin; IB = Instruction Bulletin

Subject	Туре	Bulletin No.	
3M™ Screen Printing Ink Series 1900 and Overprint Clear VI0402 - Screen printing with ink series 1900 - line color - Screen printing with ink series 1900 - 4-color	PB IB IB	1900 3.12 3.11	
3M™ Screen Printing UV Ink Series 9800 - Screen printing with UV ink series 9800 - line color - Screen printing with UV ink series 9800 4-color	PB IB IB	9800 3.20 3.21	
3M™ Screen Print UV Clears 9720i, 9720UV, 9730UV	PB	Clears 9720	
3M Graphic Protection Products <i>overview of all graphic protection products</i> - Cold roll lamination	PB IB	GP-1 4.20	
3M™ Screen Print Clears 1920DR, 1930 - Applying screen printing clear 1920DR	PB IB	1900 3.12	
Design of graphics	IB	2.1	
Scoring and cutting	IB	4.1	
Application, substrate selection, preparation and substrate-specific application techniques	IB	5.1	
Application, general procedures for indoor and outdoor dry applications	IB	5.5	
Application, wet method for translucent screen printed, thermal mass transfer and cut graphics	IB	5.7	
Storage, handling, maintenance, removal	IB	6.5	
Application and maintenance of sidewalk signs	IB	5.33	
A guide to understanding and applying graphics to common indoor and out-door wall surfaces	IB	5.37	
3M Graphics Center Warranty Brochure go to www.3Mgraphics.com, Warranties			

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Bulletin Change Summary

Updated layout and improved Caution statement on safe usage of sidewalk signs. Added 3MTM Screen Print Gloss Clear 9720i as a compatible product for wall graphics. Corrected substrate type for walls to read: unsealed concrete block or brick-type wall surfaces. Please note that for maximum success, an application temperature of 70° to 90°F (21° to 32°C) is recommended.



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