



3M™ Premium Protective Overlay Film 1160 and Recommended Cleaning System

Product Bulletin

January 2004

Health and Safety Information

Read all health hazard, precautionary, and first aid statements found in the Material Safety Data Sheet and/or product label of chemicals prior to handling or use. For 3M products, if necessary, you may contact our Toxicology Product Responsibility Department on 01344 858000

Description

3M™ Premium Protective Overlay Film Series 1160 is designed as a high performance protective transparent overlay for use on signs made from 3M sheetings, films, and images. Series 1160 Film has been specifically developed for use over signs made from 3M™ Diamond Grade™ VIP, High Intensity Grade, Engineer Grade Sheetings and the 3M™ MCS™ (Matched Component Systems) recommended for use with these sheetings. Most common types of defacement from vandalism can be cleaned from this film to substantially restore performance and appearances of the overlaid sign. Series 1160 Film is a durable, solvent resistant, transparent, fluoropolymer film coated with a transparent pressure-sensitive adhesive. The adhesive is protected by an easy removable, white paper liner. The film is provided with a paper premask tape lightly adhered to the film to aid in application.

Properties

A. Colour and Transparency

Series 1160 Protective Overlay Film (POF) is a clear, colourless film. Application of 1160 POF over a sign face fabricated using the 3M™ MCS™ (Matched Component Systems) sheetings, process colors, 3M™ ElectroCut™ Films and other recommended films and images will preserve the initial and retained minimum retroreflectance specified for that sign.

B. Film

Series 1160 POF is a high performance fluoropolymer film that provides a barrier to permanent staining from common graffiti including paints, permanent marker ink and lipstick. Promotional stickers used to deface signs can also be removed from this film.

C. Adhesive

The adhesive is clear, transparent, and pressure sensitive.

D. Premask Tape

To aid film handling, Series 1160 POF is provided with a white paper premask tape which is easily peeled away from the film after application. After removing the premask tape, reroll the sign through the laminator to ensure good adhesion.

Application

A. Use Conditions Before Overlaying Film

1. Air and surface temperatures should be above 60°F (16°C).
2. Signs must be clean and inks completely dry.
3. Inks do NOT require clear coating if 1160 film is used.
4. Used signs should be cleaned prior to application with a mild detergent and water, thoroughly rinsed, and completely dried.
5. Use within one year of receipt.

B. Equipment

1. Mechanical squeeze roll applicator – See Information Folder 1.4.
2. Hand squeeze roll applicator – See Information Folder 1.6.
3. Hand application - See Information Folder 1.5

C. Premasked Film (1160)

1. Remove premask from film AFTER application to sign by lifting edge of tape with fingernail or knife and pulling tape back over itself at a vary sharp angle using a steady, even tension.

Note: Edge trimming will be easier if done BEFORE removing premask.

WARNING: Do not allow premask to be exposed to moisture. Remove premask before storage or shipment.

D. Trimming

1. Use sharp cutting blades to trim film along edges. It may be helpful to grasp the edge of the unsupported overhang film to create tension on that portion of the film while trimming.

2. The overhang portion of the film on the TOP EDGE of the sign should be folded over smoothly and adhered to the back edge of the sign to minimize any water or dirt intrusion along the top edge of the sign. The backside of the sign must be properly cleaned where film is applied.

E. Additional Processing

1. DO NOT apply any additional inks, films, or sheetings in the form of copy or images over 1160 film since this film is designed to repel adhesion of such markings.

F. Splices

1. Creating film splices to overlay a sign is not recommended.

Packaging and Storage

A. Store film in a cool, dry area, preferably 18-24°C (65-75°F) and 30-50 percent relative humidity.

B. Although faces and signs covered with overlay film do not require slipsheeting, follow other recommendations given for the sheetings and signs regarding proper storage, packaging, handling, shipping, and installation. See Information Folder 1.11 for details of packaging and storage.

Cleaning

A. Materials

1. To remove normal dirt accumulation from signs, use a soft cloth and mild detergent and water solution followed by thorough water rinse.

2. To remove other contaminations such as graffiti defacement, use commercially available cleaning systems recommended for this purpose.

Important: Before using any cleaning materials, read and carefully follow product label use and safety instructions. Test the cleaner on a small area of the sign to determine its suitability and to

be sure it does not cause any unwanted results or damage to the performance of the sign. Avoid the use of formulations containing strong polar solvents such as ketones (acetone, methyl ethyl ketone) or methylene chloride (dichloro methane) and other chlorinated solvents.

Although the 1160 POF is resistant to these strong solvents, these solvents can penetrate the underlying sign if allowed to contact sign edges.

3. A cleaner such as 3M™ Industrial Cleaner can be effective for removal of common types of defacement such as from permanent marking pens, eggs, and stickers. A solvent such as isopropyl alcohol (IPA), or a 50/50 blend of IPA and xylene can be effective in removing paints and lacquers. Commercially available cleaners which are readily available can also be highly effective. See item 2 above.

4. A pressure sensitive tape such as SCPM-3 from 3M also may be effective in removing certain paints and stickers. Simply roll or squeegee the tape firmly over the defaced area and carefully lift away the tape with the defacement from the overlay. Small amounts of residual defacement may require cleaning solutions as stated above to remove small areas that the tape method did not remove adequately. The sign needs to be completely dry for this method to be used effectively.

5. Always use soft cloths. Do NOT use abrasive brushes or scouring pads or implements to scrape defacement from sign as these will likely damage the sign permanently.

General Performance Considerations

Protective Overlay Film series 1160 when used according to the recommendation of 3M can be expected to provide the same effective field performance as the sheeting on which it is applied. Series 1160 film is designed to enable signs to be cleaned from most common types of defacement caused by vandalism. The film does not prevent defacement but allows the sign to be cleaned in most situations using recommended and conventional cleaners such that the performance and appearance of the original sign is substantially restored. This would include the occasional removal of such markings as common household spray paints, lipstick, permanent pen, eggs, and promotional stickers.

Use of sharp implements or abrasive devices or certain types of strong and or corrosive chemicals to either deface the sign or used against recommendations to attempt to clean the sign could result in permanent damage to the overlay film and underlying sign which could severely reduce the performance expectation of the original sign. This overlay film is not intended to provide sign protection from severe impact, cutting, gouging, or pulling of the overlay film from the sign or from the use of strong chemicals that may penetrate the film causing damage to the film and or the underlying sign. Use of a flame or other high heat source and other such extreme abuse of overlaid signs would very likely severely reduce or destroy the sign's effectiveness permanently.

Literature References

IF 1.4 Application Instructions for Squeeze Roll Application
IF 1.5 Hand Applications Instructions
IF 1.6 Instructions for Hand Squeeze Roll Application
IF 1.11 Storage, Maintenance & Removal Instructions

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Technical Assistance

For help on specific questions relating to 3M Traffic Safety Systems Division Products, contact your local Technical Service Representative.

Traffic Safety Systems Division

3M United Kingdom PLC
3M Centre
Cain Road
Bracknell
Berks
RG12 8HT

Tel: 01344 857950
Fax: 01344 857970