



3M™ ElectroCut™ Film (E.C. Film) Series 1170

Health and Safety

Refer to the package label and the Material Safety Data Sheet for health, safety, and handling information on the products referenced in this bulletin. For 3M products, if necessary, you may contact our Toxicology/Product Responsibility Department on 01344 858000.

Intended Use

Series 1170 is available in both pre-punched and non-punched roll goods for use on electronic cutting machines. Series 1170 film has been specifically developed for optimal cutting, weeding, lifting and transfer features when used with electronic cutting machines. Series 1170 film is durable and dimensionally stable.

Series 1170 is intended for use over the following Reflective Sheatings:

- 3M™ Engineer Grade Reflective Sheeting Series 3290
- 3M™ High Intensity Grade Reflective Sheeting Series 3870
- 3M™ Diamond Grade™ LDP Reflective Sheeting Series 3970
- 3M™ Diamond Grade™ VIP Reflective Sheeting Series 3990

Series 1170 may be used for street name signs and other traffic control signs that are single panel signs and can be cut from the available product widths and colours.

NOTE: Splicing or overlapping of Series 1170 films is not recommended.

Description

Series 1170 is a durable, transparent, coloured film coated with a transparent, pressure-sensitive adhesive that is protected by a removable liner available in the following colours.

Yellow	1171
Red	1172
Orange	1174
Blue	1175
Standard (Worboys) Green	1176
Interstate Green	1177
Brown	1179

Roll Sizes

Series 1170 film is available in the following roll sizes: 380mm (sprocketed), 610mm (unsprocketed), 760mm (sprocketed), 915mm (unsprocketed) & 1220mm (unsprocketed).

Film Liner

Series 1170 films have a clear liner designed to aid the cutting process and the removal of the film weed after cutting. The rolls of film come edge-weeded.

Storage

Store in a cool, dry area 18-28°C and 30-60% relative humidity. Use within one year from date of receipt.

Fabrication, Cutting and Application Procedures

Important Note: It is recommended that inside radius corner fonts be used when cutting series 1170 film. Read and follow the manufacturer's operating manual carefully for proper use of cutting equipment.

1. Adjust knife pressure to cut cleanly through the film without cutting into the liner. A 30 degree blade works best. Spacing between letters or numbers should be adjusted to the aesthetic preference of the user. Consult the operating manual for instructions on how to regulate spacing. **Note:** do not cut at high speed on variable speed machines.
2. Avoid sharp bends when cutting and handling film as this may cause film to release from the liner.
3. After cutting is completed, lay sheets flat, face to face, back to back. Always store sheets in this manner until the sheeting has been weeded and transfer tape has been applied to sheeting.
4. Use a stripping tool designed for weeding films that has a blunt (not a sharp) edge.
5. After weeding is completed, store sheets flat, face to face and back to back, until transfer tape is applied.

6. TPM-5 Clear Transfer Tape is recommended for best results. 3M™ Scotchcal™ Prespacing Tape Series SCPS-2 is also satisfactory for use on small signs. Other transfer tapes are not recommended.
7. Transfer tape can be applied by hand on very small sheets using a plastic squeegee, however, use of a hand squeeze roll laminator is recommended. See Information Folders 24, 30, and 50 for details.
8. Series 1170 film may be applied to the sheeting either before or after the sheeting has been applied to the substrate

A hand squeeze roll laminator must be used to ensure satisfactory results. Use the "split liner method" - start in the middle of the sheet and remove half the liner to ensure proper alignment. See Information Folder 30.
9. After series 1170 film and the sheeting have been applied, remove the transfer tape by carefully removing the tape at as low an angle as possible.
10. **IMPORTANT!** When the transfer tape has been removed, re-roll the sign through the laminator to insure good adhesion.

11. A clean cutting blade is required. To remove adhesive build-up use a soft cloth dampened with mineral spirits, isopropyl alcohol or 3M Industrial (Citrus Based) Cleaner.

Expected Performance Life

All existing field performance warranties for the reflective sheetings remain in effect when series 1170 film is applied over any 3M reflective sheetings.

The 3M reflective sheeting with series 1170 film applied will give equivalent performance as the 3M reflective sheeting to which normal recommended clears or process colours have been applied.

3M assumes no responsibility for any injury, loss or damage arising out of the use of a product that is not of our manufacture. Where reference is made in literature to a commercially available product, made by another manufacturer, it shall be the user's responsibility to ascertain the precautionary measures for its use outlined by the manufacturer.

Important Notice to Purchaser

Technical information provided by 3M is based on experience and/or tests believed to be reliable but its accuracy is not guaranteed and the results may not be relevant to every user's application. 3M does not accept responsibility or liability, direct or consequential, arising from reliance upon any information provided and the user should determine the suitability of the products for their intended use.

Nothing in this statement will be deemed to exclude or restrict 3M's liability for death or personal injury arising from its negligence.

All questions of liability relating to 3M products are governed by the seller's terms of sale subject where applicable to the prevailing law.

If any goods supplied or processed by or on behalf of 3M prove on inspection to be defective in material or workmanship 3M will (at its option) replace the same or refund to the Buyer the price of the goods or services.

Except as set out above, all warranties and conditions, whether expressed or implied, statutory or otherwise are excluded to the fullest extent permissible at law.

Technical Assistance

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

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