

## 3M Graphic Converter Markets

3M™ Cushion-Mount™ Plus Flexographic Plate Mounting Tapes



Maximise your  
print quality



# 3M™ Cushion-Mount™ Plus Flexographic Plate Mounting Tapes

## Mounting Tape Selection Guide for 'E' Series and 'EH' Series Tapes

|  | Process Printing   |   |  | Combination Printing  |  |  |  | Solids Printing  |   |
|--|--|---|--|---|--|--|--|--|---|
| 10% Highlight  |  |   |  |   |  |  |  |  |   |
| 40% Mid-tone   |  |   |  |   |  |  |  |  |   |
| Positive   |  |   |  |   |  |  |  |  |   |
| Reverse  |  |   |  |   |  |  |  |  |   |
| 100% Solid   |  |   |  |   |  |  |  |  |   |
|  | <b>11 Series</b><br>Soft Density Foam  | <b>12 Series</b><br>Low Density Foam  | <b>19 Series</b><br>Medium/Low Density Foam  | <b>13 Series</b><br>Medium/Soft Density Foam  | <b>10 Series</b><br>Medium Density Foam  | <b>15 Series</b><br>Medium/Firm Density Foam   | <b>17 Series</b><br>Medium/High Density Foam   | <b>18 Series</b><br>High Density Foam  |   |
| Printed samples above show the typical impact of mounting tapes on print quality   |  |   | Magnification: 40x on spots, 20x on positive/reverse type and solid ink<br>Ink: Process Magenta                              |   |  | Substrate: Polyethylene Film<br>Impression: 1 thou   |  | Plate: Digital Plate<br>Line Speed: 1000 fpm   | Line Screen 150<br>Anilox: 800 line 2.3 bcm |
|  | <ul style="list-style-type: none"> <li>• Sharpest process image</li> <li>• Finest dots</li> <li>• Controlled ink transfer</li> </ul> | <ul style="list-style-type: none"> <li>• Sharp process image</li> <li>• Fine dots</li> <li>• Controlled ink transfer</li> </ul> | <ul style="list-style-type: none"> <li>• Fine process image combined with fine lines</li> <li>• Small solid areas</li> </ul> | <ul style="list-style-type: none"> <li>• Excellent combination printing at high speed</li> <li>• Clean fine print reverses</li> <li>• Rich half tones</li> <li>• Runs at higher press speeds with an expanded colour gamut</li> </ul> | <ul style="list-style-type: none"> <li>• Excellent combination printing</li> <li>• Good Lines</li> <li>• Good Solids</li> <li>• Good half tones</li> </ul> | <ul style="list-style-type: none"> <li>• Excellent combination printing at high speed</li> <li>• Rich half tones</li> <li>• Runs at higher press speeds with an expanded colour gamut</li> </ul> | <ul style="list-style-type: none"> <li>• Superior solids and opaque backgrounds</li> <li>• Outstanding lines</li> <li>• Rich half tones</li> </ul> | <ul style="list-style-type: none"> <li>• Superb solids and opaque background colour</li> <li>• Exceptional lines</li> <li>• High ink transfer with almost no pin-holing</li> </ul> |   |
|  | Tape Colour  | Tape Colour   | Tape Colour  | Tape Colour   | Tape Colour  | Tape Colour  | Tape Colour  | Tape Colour  |   |
| <b>E Series Product Selection Guide (Air release medium plate-side adhesion)</b> Easier plate removal, use with larger diameter print cylinder, use with thinner plates. |  |   |  |   |  |  |  |  |   |
|  | 0.50mm thick: E1120  | 0.50mm thick: E1220   | 0.50mm thick: E1920  | 0.50mm thick: E1320   | 0.50mm thick: E1020  | 0.50mm thick: E1520  | 0.50mm thick: E1720  | 0.50mm thick: E1820  |   |
|  | 0.38mm thick: E1115  | 0.38mm thick: E1215   | 0.38mm thick: E1915  | 0.38mm thick: E1315   | 0.38mm thick: E1015  | 0.38mm thick: E1515  | 0.38mm thick: E1715  | 0.38mm thick: E1815  |   |
|  |  |   |  |   | 1.00mm thick: E1040  |  |  |  |   |
|  |  |   |  |   | 0.50mm thick: E1060  |  |  |  |   |
| <b>EH Series Product Selection Guide (Air Release high plate side adhesion)</b> Use with smaller diameter print cylinder, use with thicker plates.                       |  |   |  |   |  |  |  |  |   |
|  | 0.50mm thick: E1220H   | 0.50mm thick: E1220H  | 0.50mm thick: E1920H   | 0.50mm thick: E1320H  | 0.50mm thick: E1020H   | 0.50mm thick: E1520H   | 0.50mm thick: E1720H   | 0.50mm thick: E1820H   |   |
|  | 0.38mm thick: E1115H   | 0.38mm thick: E1215H  | 0.38mm thick: E1915H   | 0.38mm thick: E1315H  | 0.38mm thick: E1015H   | 0.38mm thick: E1515H   | 0.38mm thick: E1715H   | 0.38mm thick: E1815H   |   |

Additional product constructions are available for specialised needs.

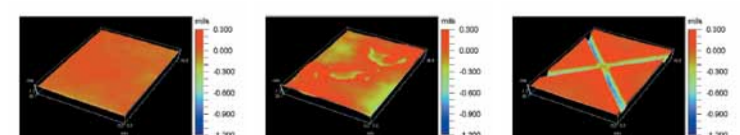
### E Series Liner

- Prevents air entrapment by forming micro-channels in the adhesive.
- Proprietary 3M technology
- Cross-hatched pattern creates a continuous and permanent network of micro-channels in the adhesive, allowing air to flow on both sides of the tape

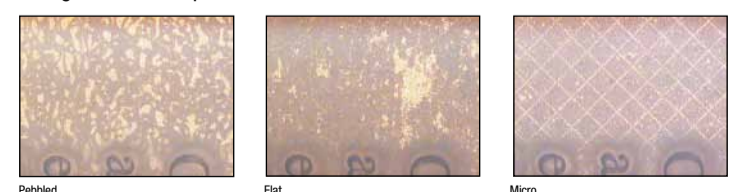
### Advantages and benefits:

- Allows air to escape from between tape and sleeve/cylinder and tape and plate for easier mounting
- Improves consistency of print quality due to reduction in air bubbles that can cause blemishes in screen and process jobs
- Increases productivity with less time spent on plate mounting

Microscopic view of adhesive surface measured with interferometer



Enlarged view under plate floor



## Cleaning, Mounting, Removal and Storage Techniques

### Cleaning and Mounting:

For optimum results, cylinders, sleeves (if used) and plates should be clean and dry. Grease, oil or ink should be removed using a mild solvent; then all surfaces should be cleaned with a 50:50 mixture of Isopropanol and water. (Note: when using solvents, be sure to follow the manufacturer's directions and precautions for handling and using such materials). Do not use ink thinners or mixed solvents for cleaning purposes.

Surface uniformity is important for consistent adhesion; scratches, nicks and dents can cause variations in adhesion, leading to removability problems, or flagging.

Where small diameter cylinders are used, and there is time between plate mounting and use, then wrapping the plate with polyethylene after mounting will enable to bond to build to full strength and prevent plate lift at the edge. If the job is for immediate use, then a higher density mounting tape (with a stronger adhesive) may be required.

Occasionally, edge sealants may be required to prevent ink or solvents from causing plate lift, particularly on long runs, where plates are cleaned on the run. 3M can supply low temperature hot melt adhesives for plate edge sealing, suitable single-sided tapes or a photopolymer plate edge primer.

Contact us for a copy of our Technical Bulletin '3M™Cushion-Mount™ Plus Plate Mounting Techniques'.

### Removal:

If the plate is to be removed from the cylinder or sleeve after the run, the normal order is to take the plate off the adhesive first and then strip the adhesive from the cylinder or sleeve. Lifting should start at the top or bottom edge and the plate kept at a low angle (less than 45 degrees) to the cylinder. Pulling at a slow pace will cause clean removal without plate damage.

With 'E' Series tapes, pulling at a normal faster pace will help with easier, faster plate removal.

The tape will remove cleanly from the cylinder or sleeve using the same technique.

### Storage:

All 3M plate mounting tapes are batch numbered and should be used in order of purchase. Rolls should be kept in their original cartons and internal packaging until they are ready for use. Part-used rolls should be returned to their original internal packaging and cartons until next required.

Rolls that have end-supporting blocks should be kept with the blocks in place, to protect against edge damage and subsequent waste.

### Important Notice to Purchasers

The statements and technical information contained herein are based on tests and data which 3M believe to be reliable, but the accuracy of completeness of such statements and technical information is not guaranteed. 3M will, at its option replace or refund the price of such quality of 3M products as are defective in material or manufacture. This is your exclusive remedy. In no case will 3M be responsible for any other damage or loss. The user is responsible for determining that the 3M product is suitable for the user's particular application.

These products are manufactured under a 3M quality system registered to ISO 9002 standards.



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