

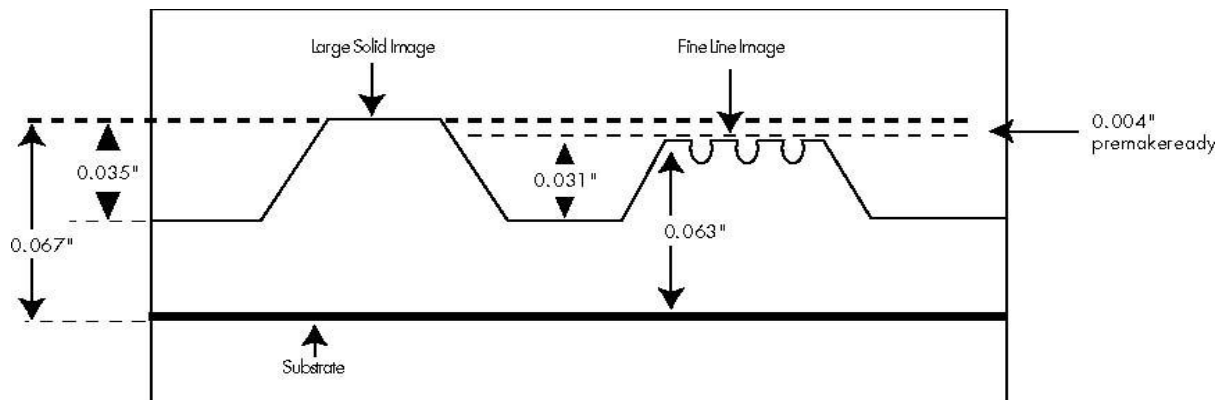
Tech Tip 113

Plate Premakeready Technique

Plate premakeready is a platemaking technique for selectively changing (lowering) the height of a printing image on a MacDermid liquid photopolymer printing plate. This technique is possible only with liquid photopolymer platemaking technology.

The premakeready technique reduces the plate caliper of specific fine print images, e.g., fine positive type/linework; halftone/tint screen; and fine reverses. This is done by placing shim material (clear-base polyester film or tape) on the non-emulsion (back) side of the negative. The shim increases the thickness of the negative in the specific image area and creates a corresponding decrease in plate caliper, which results in a decrease in print impression at that area, which yields finer print results. Figure 1 shows an example of a plate where 4-mil premakeready has been used in the fine line image area.

Figure 1: Premakeready of Fine Linework



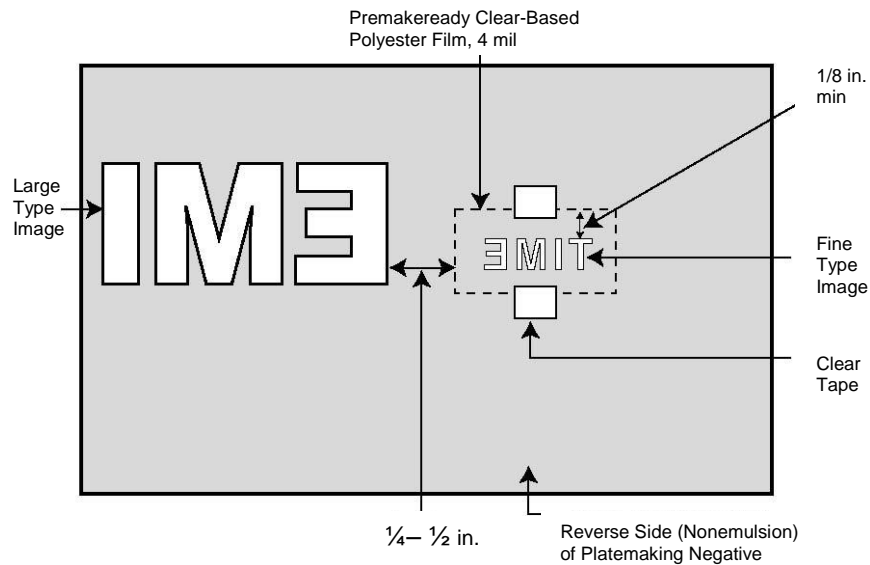
MATERIALS NEEDED

- 1) Clear-base polyester film in thicknesses from 2 - 7 mils
- 2) Clear or litho tape from 2.0 - 2.5 mils thick
- 3) Razor knife/scissors
- 4) Light table (optional)

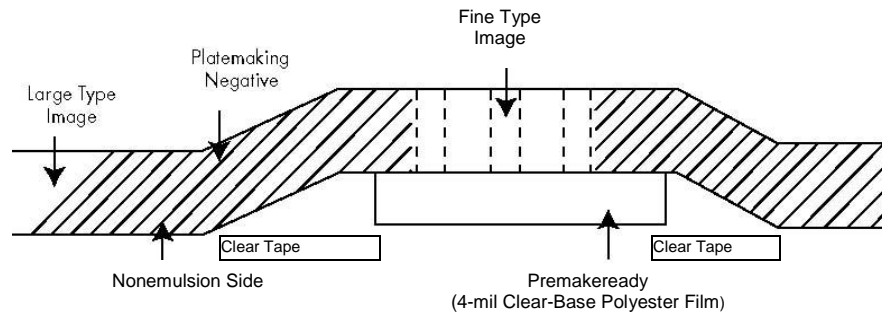
METHOD

See page 3 of this bulletin for premakeready considerations and guidelines. After determining which image areas to premakeready, place the negative on the light table and select the desired shim material (clear-base polyester film or tape) and caliper to be used for each image area. Cut the shim to the dimensions and shape of the image area. To ensure that other image areas are not affected, maintain a minimum of 1/8 inch extra shim material around the work area and a minimum of 1/4 inch between adjoining images. See Figure 2.

Figure 2: Premakeready Method



Place the premakeready shim material on the back of the negative (non-emulsion side) and position the shim with the required spacing around the image and between adjoining images. Tape the shim material in position with clear or litho tape. Use the minimum amount of tape required to hold the shim in place, and a minimum of 1/8 inch from the image area. See Figures 2 and 3.

Figure 3: Premakeready Method

To check the quality, place the premade negative on the MacDermid liquid platemaking exposure unit lower glass (right reading, emulsion side up) under cover film and vacuum. After the cover film is tight, make certain the premakeready images are correctly positioned and not affecting other (non-premakeready) image areas. The premakeready becomes a permanent part of the platemaking negative unless removed or altered. After making a plate, check against the corresponding premakeready image areas to ensure that the desired results and quality are obtained.

PREMAKEREADY CONSIDERATIONS AND GUIDELINES

The selection of the image area and the amount of premakeready is subjective and will depend upon such factors as press conditions, ink/substrate characteristics, copy on the same plate, and the relative position of the images to each other. The following considerations and guidelines are to assist you in applying the premakeready technique.

- 1) Select the minimum shim material thickness that will be effective in improving print quality results. Too much height difference between solid and fine images will require excessive impression pressure that may cause halos or leading edge chipping around solids, or press bounce.
- 2) The maximum shim material thickness for premakeready applications is 7 mils (except in thick, 250 mil, corrugated platemaking applications where it can be up to 12 mils).
- 3) The clear-base polyester film and tape add a small amount of density (0.03 - 0.06) to the film negative. This may affect the ultraviolet (UV) transmission and plate imaging of fine-line and halftone work. Exposure time (T2) may need to be increased for equivalent exposure and proper imaging.
- 4) It is more effective to premakeready 4-mil film negatives than 7-mil film negatives. The 4-mil film negatives are more flexible and conform more readily to premakeready materials.

NOTE: The cap thickness will be thinner in the areas where using premakeready.

Contact your MacDermid Technical Representative for additional information or assistance.