

Tech Tip 119

Recommended Post-Exposure Conditions for Tack-Free Printing Plates

The post-exposure step is critical for producing tack-free MacDermid liquid photopolymer printing plates. The quantity of post-exposure chemistry used, lamp intensity, exposure time, and frequency of bath changes all have an impact on the quality of the finished plate. Below are recommended procedures and instructions for post-exposure that will assist you in making the highest quality printing plate.

CONCENTRATION

The following table gives the quantity of M Clean PX post-exposure chemistry that should be added to each specific size of MacDermid liquid platemaking equipment.

	<u>3040/3048</u>	<u>4080</u>	<u>5280</u>
Quantity M Clean PX/Bath	2.0 lbs.	5.5 lbs.	7.0 lbs.

BATH CHANGE

The bath must be changed daily.

MIXING PROCEDURE

Pre-dissolve M Clean PX in two (2) gallons of warm water, then add to the bath. The bath should be filled with water to the minimum level required to consistently and fully submerge the plate.

LAMP INTENSITY

New bulbs may read as high as 20 mW/cm² when measured with a light meter. After a short burn-in period their intensity will level off into the 12-14 mW/cm² range. Bulbs should be replaced when they fall below an output of 7 mW/cm².

EXPOSURE TIME

The correct exposure time depends on the lamp intensity. Adjust exposure times according to the chart below:

UV Intensity Post-Exposure Unit Average Lamp Output	Thick Plate (>0.125") Post-Exposure Time	Thin Plate (<0.125") Post-Exposure Time
9.0 mW/cm ² or greater	15 min.	5 min.
8.0 - 9.0 mW/cm ²	20 min.	10 min.
7.0 - 8.0 mW/cm ²	25 min.	15 min.