Super EXposing Photopolymer Emulsion

INSTRUCTIONS FOR USE

Performance Screen Supply Super EXposing Photopolymer Emulsion is especially formulated for Plastisol & Solvent based inks.

ADVANTAGES:

- Presensitized- Fast Exposure Time
- High Solid Content-49%
- Extended Shelf Life 1 Year Plus
- Solvent Resistant
- High Resolution & Definition
- No Diazo Haze
- Environmentally Safe

APPLICATION:

Preparing screen:

New screens should be abraded and degreased using “Bob’s Mesh Abrader” . Previusly reclaimed screens should be degreased with “Bob’s Haze Reducer & Degreaser” or “Bob’s Mesh Degreaser”. Dry screens in a clean dust free enviroment prior to coating.

Handling Emulsion:

Handle under yellow safe lights. White light prematurely exposes (fogs) the screen. It is possible to coat screens quickly under low levels of flourescent or incadescent bulbs. However, the coated screens should be immediately moved to a yellow safe light or completely dark area to dry.

Sensitizing and Mixing:

The emulsion is presensitized during manufacture and required no mixing.

Coating: 40-3555 tpi

a. Apply one coat of S.E.X. emulsion to the print side
b. Apply one coats of S.E.X. emulsion to the squeegee side

A hard thin coat of emulsion works best. Multiple coats on the same side are not required with this emulsion. If the scoop coater has a soft rubber edge, remove it before coating. The rubber edge is only ther to protect the coater during storage.

Drying:

Dry under safe light conditions, with the screen in a horizontal position and the print side down. The ideal temperature is between 75 to 85^{O}F (40 to 100 ^{O}F is acceptable) and good indirect air circulation will accelerate the drying process. A dehumidifier is the best and fasted way to dry a screen. A dehumidifier sucks the moisture out of the air and the emulsion. A fan just blows around moist air. Avoid fans (especially direct blowing on a screen) as they will stir up dust and pinholes.

Exposure:

Clean the glass on your exposure unit every time you use it to reduce pinholes. Exposure with metal halide provides best results. Since light sources vary considerably in their general spectral output, **optimum exposure needs to be determined through individual testing.** Our recommendation is to check exposure with an exposure calculator. This procedure should be done whenever you are switching brands of emulsion or experiencing exposure problems.

If the image washes out of the screen too easily and/or the emulsion is falling off the screen (where it shouldn’t) **increase exposure time**. A properly exposed and developed screen should not exhibit scumming or feel slimy on the squegee side.

If the image is too hard to wash out and fine lines are not coming out **decrease exposure time**.

Washout:

Washout must be done indoors (sunlight will fully expose screen).
After proper exposure, wet both sides of screen with cold water. Keep screen wet for 2-3 minutes until image starts to soften. Then use a low water pressure hose to wash the image area from the print side until completely opened. Rinse the screen thoroughly on the squeegee side. When no more bubbles wash off the screen, it can be removed from sink to dry. A box fan, placed in front of the screen will dry the screen in 15 minutes or so.

Stencil Removal:

Remove all of the ink with Screen cleaner such as Performance Screen Wash.
Apply Emulsion Remover such as Performance Screen Reclaimer with a brush to both sides of screen. Let the screen stand for 2 to 4 minutes. Wash the screen with the high pressure water spray.

Problem Solving:

Screen is hard to reclaim.

A. You are not using an electric pressure washer. A minimum of 1000 psi is required to easily reclaim screens. More pressure (up to 3000 psi) is better.
B. Reclaimer liquid has been sprayed on emulsion and accidentally allowed to dry. The emulsion will be totally locked on and probably unreclaimable. You can try soaking the problem screen in a tray of reclaimer liquid for 30 –60 minutes and then use an electric pressure washer to reclaim.
C. Screen has been cleaned with a solvent based screen wash. Mineral spirits, paint thinner, MEK, acetone, etc will cross-link with the emulsion and permanently lock it on to the screen. Some screen openers and aerosols will cause the same problem. Use a biodegradable screen wash such as “Bob’s Screen Wash” or “Bob’s Soybean Screen Wash” which are compatible with photopolymer emulsions.
D. Screen has been exposed to excessive heat. Too much heat can melt the emulsion onto the screen and make it unreclaimable. A major cause of this has been people using a hair dryer on or running screens through the t-shirt conveyor dryer to dry screens quicker. Also, excessive flash curing (when the pallets get burning hot) can lock emulsion to lock on.
E. Exposure time is too short. The partially hardened emulsion is subject to increased sensitivity to solvents, inks and heat.
F. You are using a solvent based ink (not plastisol) to print plastics, metals, wood, rubber, etc. Use a solvent resistant emulsion.
G. Reclaimer liquid is bad. If the reclaimer liquid freezes it will not work properly. If you use reclaimer powder, maybe you forgot to add it to the water when mixing.

Screen is difficult to washout (develop after exposure)

1. The exposure time is too long.
2. You are trying to wash out screens outside. Washout must be done indoors (sunlight will fully expose screen).
3. Film positive is not dense (black) enough. Hold the positive up to a strong light. You should not be able to see any light (grey) in the black areas of the positive. Try spraying a toner darkening spray like “Toner Aide” to darken the positives. It may be necessary to “double up” (tape them back to back) on the positives to make them darker. Ink jet printers almost never print dark enough. The best laser printer for really dark positive is the XANTE Screenwriter3 (sold by Performance Screen Supply 800-659-8337)
4. Screens have been unintentionally exposed (fogged) to white light during coating, drying, washing out, etc.
5. Screens have been stored at a high temperature. Temperatures over 100 degrees can make the sensitizer go bad in the emulsion. Buy an air conditioner for you screen room and start with a new container of emulsion.

Poor detail and edge definition

1. Poor contact between glass,film positive and screen will cause undercutting of light. Ensure a minimum vacuum of 15 lbs/sq in.

2. You are using too much water pressure to develop image. Keep screen wet for 2-3 minutes until image starts to soften. Then use a low water pressure hose to wash the image area from the print side until completely opened.
3. Use exposure calculator to determine correct exposure time.

Excessive Pinholes

1. Screen not properly degreased. Use New screens should be abraded and degreased using “Bob’s Mesh Abrader” . Previusly reclaimed screens should be degreased with “Bob’s Haze Reducer & Degreaser” or “Bob’s Mesh Degreaser”. Dry screens in a clean dust free enviroment prior to coating.
2. Clean the exposure unit glass with glass cleaner. Any imperfections on the glass will show up on the screen.
3. Do not use a fan in your screen room. Fans only blow around dust and wet air. Invest in a dehumidifier to suck the air and emulsion dry.
4. Scoop coat slowly! When a screen is coated too quickly, little air bubbles are folded into the emulsion (like waves at the beach). When the bubble dry, they pop and cause pinholes.

Scumming and Clogged Screens

1. Screen is underexposed. The squeegee side of the stencil (especially) is soft and the underexposed emulsion is slimy. This slimy stuff combines with water that drips down the screen after washout. The water deposits and dries in open areas of the image, creating clogs. Scum is hard to see because it looks clear when wet and also when it’s dry.
2. Screen was not washed out thouroughly enough. Give a final rinse with a volume of cold water before removing the screen from the washoutsink.
3. Other ways to reduce scumming problems include: Drying screens horizontally so the water doesn't drip down them, sticking them in front of a box fan so the dry really fast, blotting off the excess water with clean newspaper, Blow the exposed screen dry with compressed air.