BEST PRACTICE ON PRESS

Underbase White (if necessary)

- Use your preferred screen mesh and print parameters
- Flash with lower power and just enough time to get the film surface dry to the touch
- A tacky surface could be a sign of over-flashing

Colors

- 230–305 mesh
- 60-90-60 squeegee to start, may drop to a lower durometer on subsequent screens
- Lessen squeegee pressure on subsequent screens
- Make sure the screen is peeling away from the print as the squeegee passes
- Monitor the platen temperatures

wilflex™

WET-ON-WET VS. BUILD-UP

TIPS & TECHNIQUES

PolyOne™

When printing wet-on-wet ink will always transfer to the back of the screen, a good ink on the other hand will remain wet on the screen. This small amount of wet build is actually beneficial for ink coverage and color intensity on simulated process printing. These tips are designed to help create a controlled ink build and help with successful wet-on-wet printing.

ARTWORK

Choke the underbase—Creating a choke of 0.5 pts will allow the printer to use less pressure on the over-print colors, minimizing ink splitting and modeling

Butt-to-butt separations—This keeps the ink from blurring on sharp line color transitions to avoid the urge of flashing during the rotation. Avoid trapping colors in the artwork.

Minimal to no white—Underbase behind dark colors

Plan the rotation—Two general rules to follow when deciding on print rotation

a. Smallest image area to largest image area or less important colors before more important colors.

b. Light colors to dark colors on light fabrics, dark colors to light colors when under-basing on dark fabrics. Plan the color overlays based on this information.
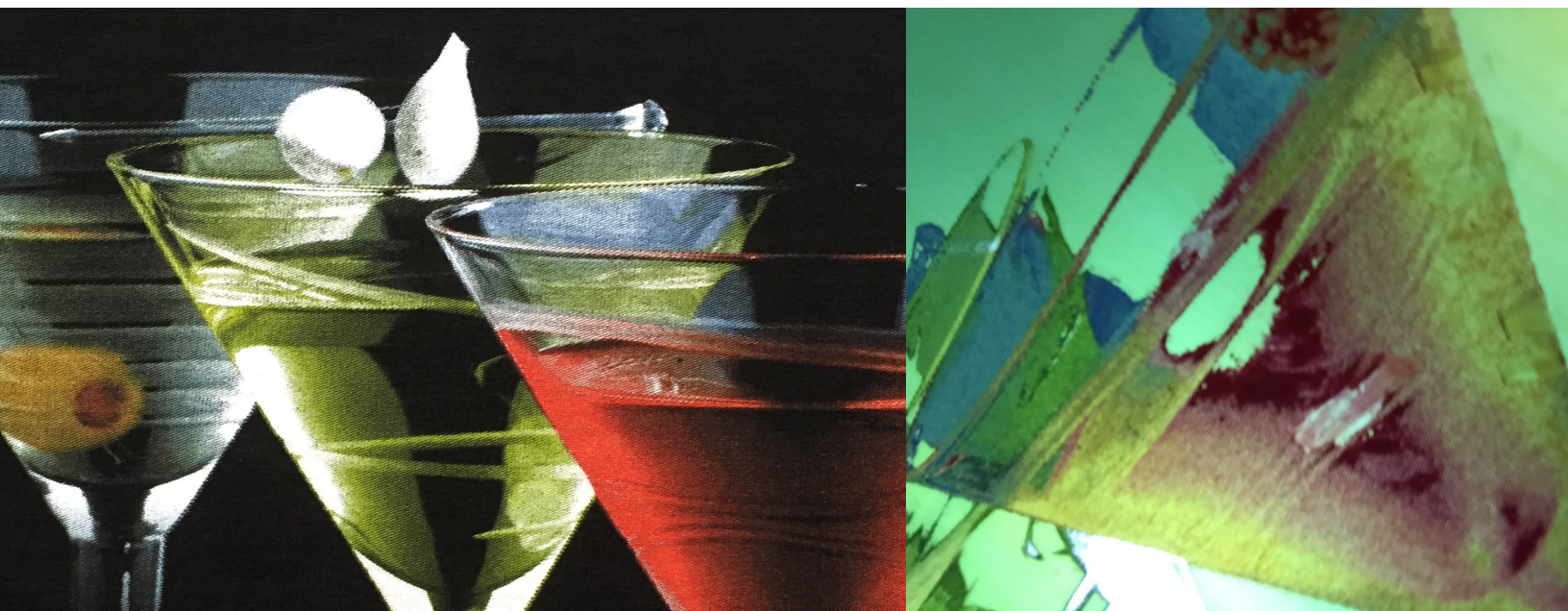
SCREENS

Tight screens—Require less pressure and peel easier, both essential in creating great wet-on-wet color blending and minimizing build up

Higher mesh counts—Create a thin ink film which requires more energy to split, leaving minimal film on the subsequent screen. Low mesh (or mesh with more open area) will put down too much ink, which makes it easier to split and build.

Thick stencil—Will put down too much ink

Fully exposed emulsion—Produces a smoother screen surface, less texture for the ink to hold on to and build on. Post exposure of screens is recommended.

INK

• Unless specifically designed to print wet-on-wet, high viscosity or high opacity ink tends to build quicker and drier than translucent ink

• An ink film on the back of a screen is ok, as long as it remains wet during the print process

• On light garments, it's ok to base back the ink for better penetration into the garment

• A thixotropic ink tends to create better color on a wet-on-wet simulated process print

PRINT PARAMETERS

Squeegee selection for direct to fabric printing—In some cases, harder squeegees can be used. This is especially true with colors that are not backed with an underbase. Wet-on-wet direct print onto light garments, or on dark colors early in a rotation or following a flash (before colors printing on the underbase).

Squeegee selection on an under-base white—A hard squeegee may be used on the first color; however, subsequent squeegees should be softer. This will inhibit the ink from being lifted off of the shirt and onto the back of the screen. Using increasingly softer squeegees can be beneficial on vector images.

Squeegee pressure—In the same line of thought, using less pressure on subsequent screens will lessen the amount of ink that is lifted off of the print. A good practice is to lighten the pressure from screen to screen. (45#, 40#, 35#, 30# etc.)

Squeegee angle—Angles of 15°–20° will deposit a thinner ink film on the garment, thus minimizing ink split. Angles in excess of 20° will deposit a heavier ink film and promote build up.

Squeegee speed—Once the ink is sheared, using a faster squeegee stroke will make it more difficult for the ink to split from the previous color.

Color rotation—A color rotation plan is essential to success. Work with the art department for rotation rules (see Artwork). Rules that can possibly help:

• Move traditionally weak or translucent colors toward the end of the rotation or before a flash in the rotation

• Move high florescent colors toward the end of a rotation or before a flash in the rotation

Controlling under-base flash temps— Monitoring the flash temperature for the under-base white will help with the wet-on-wet printing. If the flash unit approaches cure temps, the platens can become too hot, which can thicken the inks and build/dry on the back of the screen. Ideal pallet temperature range should be 120-150. Ink gel surface temperature should be 180-210 range.

Off contact/peel—The screen must lift away from the shirt as it is being printed. If the screen lifts while still attached to the print, more ink will split. A tight screen will need less off-contact and peel. The only contact between screen and shirt should be at the point where the squeegee is printing.

Length of stroke—In cases where no peel feature is available on press or screen tensions are less than 20 Newtons, the print stroke can be lengthened. If the print stroke is lengthened past the image area by 2″–3″, it will allow the screen to peel naturally off of the print before the screen lifts away.