

No-Tox[®] WATER SOLUBLE INKS

(LETTERPRESS/ DRY OFFSET)*

NT07
(12/09)

- Printing Method:** Letterpress or Dry Offset (Sheetfed or Web Heatset)
*Note: Silk-Screen can be used with the recommended diluent. Contact our Technical Services Department for proper direction.
- Suggested Uses:** Transfer tattoos, water color paint palettes, childrens' "Paint with Water" books, wash-off games or promotions, and other applications where non-toxicity, water solubility and odorless characteristics are required.
- Stocks:** Transfer characteristics are best on coated stocks, enamels or high quality uncoated papers with high hold-out. Some plastics (styrene) can also be used, but drying must be carefully monitored to prevent offsetting or blocking.
- Light Stability:** Fair. Due to the nature of the colorants used, we do not recommend these inks where light stability is of prime importance.
- Plates and Rollers:** All types of plates, rollers, and blankets are suitable, except those attacked by water or glycol solvents. Standard rubber or photopolymer relief plates are acceptable.
- Color Availability:** Supplied in four standard colors: yellow, red, blue, black. Other colors can be custom blended or achieved by trapping on the press.
- Shelf Life:** Minimum one year in unopened containers.
- Wash-Up:** Water
- Comments:** No-Tox water soluble inks are supplied press ready. However, water, glycerine or propylene glycol may be added to reduce tack and retard drying if necessary.
- FDA Acceptability:**** All components used in No-Tox inks are sanctioned by the FDA and USDA as acceptable for direct food contact.

**Note: FDA acceptability is based on the ink as supplied. Therefore, no materials should be added other than those indicated in this bulletin unless specifically recommended by Colorcon.

HANDLING AND ON-PRESS PROPERTIES

No-Tox[®] SERIES NT07

Advisory

Colorcon strongly recommends full-scale press tests for printers who have never used these inks, prior to committing to production runs. First-time users often encounter problems due to the fact that these inks are generally different than anything they have ever used before. Even customers who have experience running these inks have problems from time-to-time as well. Many of these issues can be traced to variability in some of the naturally occurring raw materials used in these formulations.

Press Set-Up

No-Tox NT07 inks have been printed via dry offset or letterpress methods for over 40 years.

The first step which needs to be taken when preparing for this type of project is to determine whether your selected offset printing press has the tolerances to accommodate relief (dry offset) printing plates. NT07 inks cannot be run via the conventional lithographic printing method as the fountain solution would solubilize them on the plate and prevent you from being able to reproduce any graphic design.

The second step is regarding press preparation prior to introducing ink into the fountains. Press parts (form rollers, blankets, etc.) which become saturated with ink oils during normal printing activity, should be thoroughly cleaned and degreased. The oil in these parts is obviously incompatible with the water phase of NT07 inks. Problems evident from the contact of this oil and ink are mottled print and build-up of dry ink on the rollers due to kick-out of the polymer and colorants. There have been instances where printers completely change their rollers and blankets when a job calls for the use of water soluble inks. Obviously, the production runs would have to be relatively long to render this type of changeover economical.

Ink build-up on form rollers can occur as a result of:

1. excessive heating of ink during printing.
2. pushing the ink to try to deposit a large volume of ink on the substrate.

Graphics

Solids and linework are the graphic schemes most easily reproducible using NT07 inks. Fine screens should be avoided as:

1. during long runs, ink temperature rises and ink viscosities drop. This results in plug-in on the plates and poor print quality.
2. the greater the amount of ink deposited, the more ink available for use to paint/color the picture. Thus, trapping a solid yellow over a solid blue is a better way to create a green paint/color than by screening a yellow over a blue.

Summary

Good results can be achieved using water soluble inks on offset printing equipment when a methodical approach, including on-press print testing, is employed. Rushing into this type of work invariably leads to problems which can scare a printer away from ever considering similar projects again.