

**No-Tox<sup>®</sup> STYRENE/ACRYLIC SHEETFED INKS**

(LETTERPRESS AND OFFSET LITHOGRAPHY)

NT27  
(12/14)

- Product Type:** Specially modified acrylic polymers.
- Printing Method:** All standard letterpress and offset lithographic presses with conventional dampening systems. Not recommended for small duplicator presses having integrated dampening systems.
- Suggested Uses:** Labels, coupons and other in-package inserts and premiums where the ink will be in contact with food, pharmaceutical or medical products.
- Stocks:** Designed specifically for use on styrene, acrylic, polycarbonate and some vinyl plastic sheets, or Saran (Dow Chemical, USA) (PVDC); styrene, acrylic or vinyl coated papers.
- Plates and Rollers:** All types of standard letterpress and lithographic plates and rollers are suitable. Not suited for use with waterless i.e., Toray (Toray Industries, Inc., USA) plates and systems.
- Fountain Solutions:** Compatible with all conventional non-toxic fountain solutions including alcohol- modified or alcohol-free types.
- Additives and Diluents\*:** Normally supplied press ready at optimum rheology for most printing conditions. Small amounts of diglycol ethers or ether esters (Butyl Carbitol, Carbitol acetate, or Butyl Carbitol acetate, (Dow Chemical, USA) may be used to reduce tack or body, as necessary.
- Wash-Up:** Standard press washes are acceptable. Plates, rollers and other press parts should be thoroughly dried after cleaning.
- Color Availability:** 14 standard colors including process colors.
- Shelf Life:** Minimum one year in unopened containers.
- 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<sup>®</sup> SERIES NT27

### Press Set-Up

No-Tox NT27 inks have been printed on sheetfed lithographic presses with conventional dampening systems for over 40 years. They have been run with alcohol-modified fountain solutions, alcohol-substitute-modified fountain solutions, and with fountain solutions not containing either of the above referenced products. The overall running properties of these offset inks are optimized when the pH of the fountain-solution blend is kept well toward the acid end (3.0-4.0 is the ideal pH range).

To prepare for a press run, we recommend that the decks which are to be used to print the No-Tox inks be thoroughly cleaned. This can be likened to the type of cleaning which is done when, with conventional inks, a job requirement calls for a given deck to print a pastel color when a much darker color has been printed on the same deck during the preceding press run. Please refer to our Press Cleaning Guidelines, available upon request.

### Ink Handling

No-Tox 27 series sheetfed offset inks are modified oxidation/evaporation drying products. There are a few guidelines which will allow for the optimum transfer of these direct food-contact inks:

1. Carry as little of the fountain solution/water blend to the plate as possible. This minimizes water take-up and emulsification of the inks, promoting transfer from the blanket to the paper while reducing the opportunity for tinting or scumming issues.
2. Certain shades of No-Tox inks (reds in particular) may be weaker than their conventional counterparts. This should be understood by both the printer and the ultimate customer prior to beginning production runs. Many people try to compensate for this inherent weakness by trying to carry more ink to the plate. While this can be done, extreme care should be taken as this practice can lead to:
  - a. Ink build-up on the rollers, plate, and blanket
  - b. Poor transfer from plate, to blanket, to stock.
  - c. Drying problems on the stock after printing due to too heavy an ink film.
  - d. Tinting and scumming problems.

3. While No-Tox inks are provided "press-ready" for most applications, there may be instances where a given ink may need to be "loosened" or "bodied". Butyl Carbitol, Carbitol acetate or Butyl Carbitol acetate, (Dow Chemical, USA) may be used as tack reducers. To body or stiffen an ink, standard corn starch (or Oxy-Dry, (Oxy-Dry Corporation, USA)) can be used to accomplish this need.

4. Liquid cobalt or manganese drying solutions may be added to the inks to accelerate drying. Care should be taken as too much of these driers may lead to premature drying on form rollers, especially during extended runs or at decks where print coverage is very light. Each of these materials can be obtained from Colorcon.

### Ink Color/Intensity

Due to the severe restrictions placed by the FDA on pigments and colorants used for direct food contact applications, not all conventional ink shades are able to be exactly reproduced in No-Tox systems. This should, as was mentioned earlier, be understood by all parties involved in a project up-front.

With respect to process printing, black and cyan inks can be provided which will be equivalent to standard process inks. Regarding magenta, while we can provide the basic shade of conventional process magenta, it may print slightly on the weak side. The biggest difference between our process set and conventional "equivalents" rests with our process yellow. It is considerably warmer and is actually close to Pantone 108 in shade. However, this is as close to the true process yellow shade as we can achieve using the yellow pigments currently sanctioned by the FDA for direct-contact use.

We do provide a process color separation guide which will assist in the close reproduction of original artwork. Many separators have found this guide to be an invaluable aid, especially the first two or three times they have occasion to work with our products.

Gloss is another factor to be considered when comparing our products to conventional inks. Many direct-contact inks will appear flatter than standard inks. Overprint varnish can be used to improve the gloss of these inks should this be a requirement of the job in question.



For more information, contact your Colorcon representative or call 1-800-724-0624  
You can also visit our website at <http://www.colorcon.com/notox>

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