

No-Tox WEB/NO-HEAT INKS

(LETTERPRESS AND OFFSET LITHOGRAPHY)

NT03
(09/14)

Product Type:	Modified "Quickset" type
Printing Method:	All standard Web Letterpress and Web Offset non-heat (cold-set) presses.
Suggested Uses:	Labels, coupons, promotions, placemats, napkins and other applications where the printed ink will be in direct contact with food, pharmaceutical or medical products.
Stocks:	Specifically designed for porous or absorbent, uncoated paper stocks.
Specific Characteristics:	Fast setting with no heat allows stock to be rewound, cut or folded immediately from web-fed equipment.
Plates and Rollers:	All types of standard letterpress and lithographic plates and rollers are suitable.
Fountain Solutions:	Compatible with all conventional non-toxic fountain solutions including alcohol-modified or alcohol-substitute types.
Additives and Solutions*:	Normally supplied press ready at optimum rheology for most printing conditions. High boiling hydrotreated petroleum middle distillates (such as Magiesol 47 or Magiesol 52(Calumet Specialty Products, USA) may be added to reduce tack or body as necessary.
Wash-Up:	Standard press washes are acceptable provided rollers, plates, and other press parts are thoroughly dried after cleaning.
Color Availability:	14 standard colors including process color.
Shelf Life:	Minimum two years 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[®] SERIES NT03

Press Set-Up

No-Tox NT03 web offset litho inks have been successfully used for direct food contact printing applications for over 45 years. They have been run with standard fountain solutions, as well as with alcohol-modified and alcohol-substitute-modified systems. The overall running properties of these offset inks are optimized when the pH range of the dampening solution blend is kept toward the 3.0-4.0 acid end.

To prepare for a press run, we recommend that all printing decks be thoroughly cleaned and dried to avoid contamination from conventional inks or press wash solvents. Conventional press wash may be used for cleaning provided all rollers, blankets or plates which will be in contact with the inks are completely dried prior to use.

Ink Handling

No-Tox web offset inks are chemically and physically similar to the conventional cold-set web inks used by most printers on a daily basis. However, they are formulated with high purity ingredients, low-emission/low-residual solvents and special FDA compliant pigments. Because of these differences, a few simple guidelines are recommended to be followed in order to achieve satisfactory results with these inks.

1. Carry as little fountain solution to the plate as possible. This minimizes water take-up and emulsification of the inks, promoting transfer from the blanket to the stock, 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 could lead to:
 - a. Ink buildup on the rollers, plate, and blanket.
 - b. Poor transfer from plate, to blanket, to stock.
 - c. Drying problems on the stock due to too heavy an ink film (potential for residual odor).
 - d. Tinting and scumming problems.

3. While No-Tox inks are provided "press-ready" for most applications, there may be instances when an ink may need to be "loosened" or "bodied". Experience has shown that the inks perform best at tack sequences between 8 to 16, and these should not be adjusted unless absolutely necessary. If a slight reduction in tack is needed, only hydrotreated ink oils such as Magiesol 47 or Magiesol 52 (Calumet Specialty Products, USA), or equivalent should be used.

4. In those rare instances where the ink must be stiffened or "bodied", corn starch or food grade Oxy-Dry, (Oxy-Dry Corporation, USA) can be used in an emergency. Otherwise, our Technical Services group should be contacted for recommendations

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. As mentioned earlier, this should be understood by all parties involved in a project.

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 ink. 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](http://www.colorcon.com/notox)

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