

## PRODUCT LINE SUMMARY

All components of No-Tox® printing inks and coatings are sanctioned by the Food & Drug Administration (FDA) and the United States Department of Agriculture (USDA) as acceptable for direct food contact. Ink systems are available for all commonly used printing methods in the industry today. We manufacture in dedicated facilities to avoid cross-contamination. No-Tox products are guaranteed in writing for applications where the dried ink film will contact food, medical devices, or pharmaceutical products.

### **No-Tox® Sheetfed Inks (NT01)**

Modified oleoresinous oxidation drying inks for letterpress and offset lithography.

#### *Advantages*

- Will eliminate the need for costly overwraps.
- Compatible with all conventional nontoxic fountain solutions.
- Will print on all types of FDA acceptable uncoated and coated paper stocks including water-oil-grease resistant (WOGR) and vegetable parchment, as well as some plastic stocks.

### **No-Tox® Heatset Web Inks (NT02)**

Modified heatset resin/low emission solvent inks for all standard heatset web offset and letterpress processes.

#### *Advantages*

- Should only be used with dry foods and will eliminate the need for costly overwraps.
- Provides low odor characteristics, but is not suitable for use in an oily environment.
- Suitable with all types of FDA acceptable uncoated and coated paper stocks.
- Compatible with all conventional nontoxic fountain solutions.

### **No-Tox® Web/No Heat Inks (NT03)**

Modified 'Quickset' inks for all standard web letterpress and web offset, non-heat presses.

#### *Advantages*

- Will eliminate the need for costly overwraps.
- Allows stock to be rewound, cut or folded immediately from web-fed equipment.
- Specifically designed for porous or absorbent, uncoated stocks.
- Compatible with all conventional nontoxic fountain solutions.

### **No-Tox® Flexographic/Gravure Inks (NT04, NT15, NT20, NT33)**

NT04 are modified cellulosic, alcohol-based inks for flexographic or gravure processes. NT15 and NT20 are specially modified co-solvent polyamide systems. NT33 is a specially modified, alcohol-soluble, food-grade polymer system.

#### *Advantages*

- NT04, NT15 and NT20 will print on a variety of FDA acceptable: papers; surgical kraft; WOGR or vegetable parchment; glassine; most cellophane (when modified); shellac-coated foils; and other specific plastic films.
- NT33 is for meat casings, labels, coupons, promotions and other in-package printing. NT33 will print on all types of FDA and USDA accepted coated/uncoated paper stocks, vegetable parchment and glassine.
- NT15 and NT20 will print on treated polyolefins, polyester, nylon, PVDC, cellophane and most paper.
- NT20, compared to NT15, is designed to provide improved heat resistance at nominal heat-seal temperatures and pressures used to seal polyolefin films.
- All are formulated to allow flexibility at press-side for diluent/drying rate adjustment.

### **No-Tox® Styrene / PVDC Inks (NT05, NT25, NT27, NT29)**

NT05 is a modified acrylic ink specifically designed for flexographic/gravure printing on styrene film, PVDC and acrylic coated polypropylene. NT25 ink is a cellulosic modified acrylic used on the same substrates. NT27 is a specially modified acrylic polymer for all standard lithographic printing. NT29 is a modified vinyl/acrylic copolymer system for either pad or screen printing. These inks are used for labels, coupons and other in-package inserts.

#### ***Advantages***

- NT05 & NT25 are ideally suited for inside printing of confectionery/food wrappers and similar applications, as well as for styrene films used for meat/poultry labels and inserts. Note: The NT25 version will provide heat and product (chocolate) resistance superior to NT05, but at the expense of good tape-pull.
- The NT27 lithographic system is compatible with all conventional nontoxic fountain solutions and designed for lithographic printing on styrene, acrylic, polycarbonate or vinyl plastic sheets, PVDC, styrene and acrylic or vinyl-coated paper.
- The NT29 system can be used on sheets or films of PVC, polystyrene, ABS, polyurethane, acrylic, polycarbonate and stainless steel.

### **No-Tox® Water-based Inks (NT21, NT23, NT23BR, NT23A)**

These are water reducible, nontoxic ink systems for all paper stocks. NT23 also exhibits excellent adhesion and abrasion resistance when used on treated polyethylene, treated polypropylene, acrylic and PVDC coated polypropylene, spun-bonded polyolefin, foil, polyester and some cellophane.

#### ***Advantages***

- NT23 will comply with federal, state and local VOC emission standards.
- NT21 and NT23 are suitable for labels, coupons, promotions and other inserts.
- NT23A coatings are aqueous products providing high-gloss, excellent abrasion resistance, and superior grease resistance properties to litho printed products.
- NT23A can be applied in-line or off-line via: tower coaters affixed to sheetfed or web offset litho presses; normal roller train of sheetfed or web offset litho presses; flexographic units; or rotogravure coaters.
- NT23A coatings can be wet-trapped over litho inks and will not interfere with oxygen transmission to aid in the curing of sheetfed inks.

### **No-Tox® Water Soluble Inks (NT07, NT08)**

These are water-soluble systems for use in flexographic, rotogravure, and letterpress/dry offset printing processes. The inks are formulated for printing unique promotional items for user involvement or are used on the skin.

#### ***Advantages***

- NT07 and NT08 are suitable for temporary tattoos, water color paint palettes, children's "paint-with-water" books, and water wash-off games or promotions.
- NT07 and NT08 inks, after curing, result in an edible ink film for consumer safety and are supplied in 4 standard colors which can be wet trapped for color variations.
- Coated or other high hold-out papers which are acceptable for skin contact should be used.
- Water solubility will remain in the printed ink film for a year, or longer, after initial printing.

### **No-Tox® Medical Device Inks (NT12, NT13, NT14, NT16, NT32)**

FDA compliant inks recommended for direct printing on medical and surgical disposable items which are in direct contact with the skin or mucous membranes or are inserted into the body. NT12, NT16 and NT32 are inks for pad-print or silk-screen applications. The NT13 and NT14 systems are for offset-gravure, gravure, and pad-printing processes.

#### ***Advantages***

- NT12, NT14, NT16 and NT32 inks are one-part, air-dry/heat-assisted cure systems exhibiting good pot life.
- NT12, NT13 and NT32 inks offer excellent printability and adhesion to corona treated materials.
- NT14 and NT16 inks are specially designed for marking catheters, tubing, pipettes, solution bags and other items made from PVC, polystyrene, ABS, polyurethane, acrylic and polycarbonate.
- These inks are extremely low in lead and other heavy metals.
- Will meet rub and scuff requirements; can be formulated to withstand all standard sterilization processes.
- All formulations can be accessed by the FDA via our Drug Master File #17155

### **No-Tox® Pad/Screen Print Inks (NT24, NT28, NT30)**

One-part, air-dry or heat-assisted cure systems exhibiting good adhesion to corona treated polyolefins. NT28 inks are designed only for paper-board and all types of coated and uncoated paper substrates.

#### ***Advantages***

- NT24 exhibits excellent alcohol resistance.
- NT28 inks can be formulated to print temporary tattoos.
- NT30 offers superior adhesion to all types of polyolefin films, but at the expense of good alcohol resistance.

### **No-Tox® Stamp Pad Inks (NT19)**

Nontoxic ink systems for all types of code/dating and similar applications. They can also be used for fingerprint sets and other creative applications.

#### ***Advantages***

- Suitable for all types of uncoated and coated paper stocks as well as a wide variety of non-porous plastic films and sheets. Some formulas will adhere to various metals such as aluminum, steel or tinplate. Typically are custom-formulated for a given application.

### **No-Tox® Sheetfed Inks/Duplicator Presses (NT34)**

Specially formulated nontoxic inks designed for use on printing presses with integrated dampening systems.

#### ***Advantages***

- Suitable for all types of FDA acceptable coated and uncoated papers, greaseproof stocks including WOGP and vegetable parchment.
- Compatible with all fountain solutions normally used in integrated duplicator presses.
- Limited color range available



All components of Flexicraft® printing inks are sanctioned by the Food & Drug Administration (FDA) and the United States Department of Agriculture (USDA) as acceptable for minimal food contact applications. They are water-based, EPA-compliant, flexographic and gravure printing inks for wide-web flexible packaging and narrow-web tag and label applications, including in-line printing via form-fill-seal packaging equipment. Flexicraft is manufactured in dedicated facilities to avoid cross-contamination and meets all current CONEG and ASTM/ANSI requirements for heavy metal content. All Flexicraft inks are guaranteed in writing for applications where the dried ink film will have minimal or indirect contact with food, pharmaceutical, or medical products.

### **Flexicraft® AT (FT02 Wide-Web, FT03 Narrow-Web)**

Our highest quality, high gloss, water reducible ink system suitable for a wide variety of packaging films including coated, treated or metallized: polyethylene, polypropylene, cellophane, polyester, foil, glassine, and paper.

#### ***Advantages***

- System versatility allows one system to be used for both surface and laminating applications - with simply the addition of a scuff additive for surface printing.
- With the use of in-line treaters, these inks will offer acceptable results on polyethylene and polypropylene.

### **Flexicraft® VT (FT04)**

This is a glossy, high-solids, water reducible narrow-web ink system with running properties similar to conventional water based inks. Suitable for paper and nonporous substrates including top-coated vinyl, and treated plastic films.

#### ***Advantages***

- Provides excellent drying, little or no foaming and non-blocking properties.
- Supplied in either a base system or matched colors for greater printing efficiency.
- Provide good heat and scuff resistance.

**Flexicraft® TF (FT05)**

A high gloss, water reducible narrow-web ink system with running properties similar to conventional water based inks. This system is suitable for coated and uncoated paper substrates and Tyvek®.

**Advantages**

- Can be used on presses with or without powered ink rollers when press is idle.
- VOC emissions are below the 2.5 lbs per gallon allowed by many air quality management districts.
- Provides good heat and scuff resistance.
- Supplied in either a base system or matched colors for greater printing efficiency.

**Flexicraft® MED Series (FT07)**

A waterbased line of low viscosity, press ready flexographic inks designed specifically for use on flexographic printing units integrated with form-fill-seal equipment.

**Advantages**

- Offers excellent print quality and stability in the fountain minimizing the need for constant ink monitoring.
- Ideally suited for in-line printing of heat sealable lidding stocks.
- Exhibits excellent adhesion and abrasion resistance when used on Tyvek, kraft and other medical grade papers. Special formulations are available for printing onto packaging films.
- Ease of clean-up will minimize machine down-time.

**Flexicraft® RX Series (FT08)**

A waterbased line of low viscosity flexographic inks for the in-line printing of paper-backed foil and other blister packaging stocks, for pharmaceutical filling and packaging applications.

**Advantages**

- Can be used on in-line blister package printers such as Hapa, Uhlmann, and Gottscho.
- Will produce strong printed color improving the overall appearance of the blister package.
- Lower fire hazard risks allowing for safer, more convenient ink storage than with solvent based inks.
- Complies with most current federal, state and local EPA regulations.
- Provides lower levels of organic vapors and liquids in the work area resulting in a healthier workplace.

**Flexicraft® NPS Series (FT09)**

A waterbased line of low viscosity, press ready flexographic inks for use on flexographic printing units integrated with form-fill-seal equipment designed specifically for printing Non-Porous Substrates.

**Advantages**

- Exhibits excellent adhesion, gloss and abrasion resistance when used on treated polyolefin films, polyesters, Tyvek®, surgical kraft and other medical grade papers.
- Fast drying inks which exhibit good resolubility, printability and water resistance.
- Offers good print quality and stability in the fountain using ink pan and pump covers to reduce evaporation.
- Ideally suited for in-line printing of heat sealable non-porous lidding stocks.

**Flexicraft® NpH Series (FT10)**

A Neutral pH aqueous line of low viscosity, press ready flexographic inks designed specifically for use on flexographic printing units integrated with form-fill-seal equipment.

**Advantages**

- Exhibits excellent adhesion, gloss and abrasion resistance when used on treated polyolefin films, polyesters, Tyvek®, surgical kraft and other medical grade papers.
- High gloss, fast drying, low odor inks which exhibit good resolubility, printability and water resistance.
- Offers excellent print quality and stability in the fountain minimizing the need for constant ink monitoring.
- Ideally suited for in-line printing of heat sealable lidding stocks.



All components of our Lithosafe® Products are sanctioned by the Food & Drug Administration (FDA) as acceptable for minimal food contact. These products are manufactured in dedicated facilities to avoid cross-contamination. All specialty products are guaranteed in writing for applications where the dried ink film will be in minimal or indirect contact with food, pharmaceutical, or medical products.

**Lithosafe® Sheetfed (IT08) and Lithosafe® Heatset Web Inks (IT13)**

IT08 modified oleoresinous oxidation-drying ink system and IT13 modified heatset resin system utilizing low emission solvents formulated for: cartons or other external food, pharmaceutical, medical device, or toy packaging; baseball cards; or any application that requires regulated ink.

***Advantages***

- Utilizes the same vehicles used in our No-Tox NT01 Sheetfed and NT02 Heatset Web ink Systems.
- Acceptable for most uncoated and coated paper and board stocks, including SBS, enamels, bond, and parchment as well as some plastic stocks.