



A Higher Standard

# No-Tox Products

## Technical Data

### No-Tox<sup>®</sup> INK COST COMPARISON

No-Tox Ink vs. Conventional Ink vs. Overwrapping

NS10

(5/07)

When printing coupons that will come in direct contact with food products, several production options are available to fully comply with current FDA regulations. One option is to print the coupon with conventional inks and then overwrap the finished coupon with FDA acceptable material to prevent ink contact with the food product. The second, and far more economical method, is to utilize No-Tox printing inks. Since No-Tox inks are formulated for direct food contact applications, the necessity of an overwrap is eliminated providing the inks do not visibly bleed onto the food product, in which case a No-Tox overprint varnish would be required.

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To document the overall cost effectiveness of No-Tox inks versus conventional inks in combination with a protective plastic overwrap, the following data was developed

#### INK COST STUDY

##### ASSUMPTIONS:

Number of coupons printed = 5 million  
Coupon size = 2.25" x 5.75" or 12.9375 in.<sup>2</sup>  
Heatset Web Press with 4-color process  
Printing both sides @ 50% ink coverage

##### CALCULATIONS:

5 million x 12.9375 in.<sup>2</sup> = 64,687,500 in.<sup>2</sup>  
64,687,500 in.<sup>2</sup> x 2 sides = 129,375,000 in.<sup>2</sup>  
129,375,000 in.<sup>2</sup> x 50% coverage = 64,687,500 total square in.  
Sheet size = 25 in. x 38 in. (50 lb. Weight)  
Coupon size = 2¼ in. x 5¾ in.  
Coupons per sheet = 60 up  
5 million coupons ÷ 60 up = 83,334 sheets  
83,334 ÷ 500 sheets per 100 wt = 166.67 (100 wt)  
Total sheets = 175/100wt (includes make-ready)

##### UNCOATED LITHO (food contact)

175 x \$52.00 (100wt) = \$9,100 ÷ 5,000,000 =  
.0018 x 1,000 coupons = \$1.800 per 1,000

##### UNCOATED LITHO (not food contact stock)

175 x \$45.00 (100wt) = \$7,875 ÷ 5,000,000 =  
.0016 x 1,000 coupons = \$1.600 per 1,000

#### Cost of Ink Needed & Cost per 1000 coupons

<u>No-Tox Ink</u>		<u>Conventional</u>
64,687,500	square inches	64,687,500
÷ 275,000	coverage (in. <sup>2</sup> /lb.)	÷ 300,000
<b>235.23 lbs.</b>	pounds of ink	<b>215.63 lbs.</b>
x \$29.21/lb	avg. ink cost/lb.	x \$4.00/lb.
<b>\$6,871.07</b>	total ink cost	<b>\$862.52</b>
÷ 5,000,000	number of coupons	÷ 5,000,000
.0014¢	ink cost/coupon	.0002¢
x 1,000	per 1,000 coupons	x 1,000
<b>\$1.40</b>	Ink Cost/1,000	<b>20¢</b>

#### Total Cost per 1,000 Coupons

<u>No-Tox</u>	<u>Comparison</u>	<u>Conventional</u>
\$1.80	Paper cost	\$1.60
\$1.40	Ink cost	\$0.20
N/A	Plastic overwrap	\$10.50
\$3.20	Total cost	\$12.30

#### PAPER COST STUDY

##### FOUNDATION

As the preceding information indicates, the use of No-Tox inks on food approved stock is substantially more economical than overwrapping conventional inks. This economy is also accompanied by excellent print quality and color selection. The bottom line is No-Tox inks give you high quality printing at a substantially reduced cost. You will fully comply with all current FDA regulations regarding direct food contact.

\* Using \$16.24 as the cost per pound of heatset overprint, and assuming full coverage on both sides, it would cost \$6,009 additional for overprint.

(129,375,000 in.<sup>2</sup> ÷ 350,000 in.<sup>2</sup> per pound of varnish = 370 lbs. x \$16.24/lb.)

Adding this to the cost of the process colors and paper would result in an additional cost of \$1.20 per 1,000 coupons or a Total Cost of \$4.40 per 1,000 coupons - still significantly less than overwrapping.