

# nontoxicprint art & science

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## Health-conscious and eco-friendly offset and industrial printing

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FK: Friction  
Installation of digital offset prints  
9 sequential modules, 6ft x 6ft ea.  
Eye Tricks, Walsh Gallery, NJ  
2007

© picture courtesy of Walsh Gallery



Newspaper Printing. Industrial presses can be operated either with potentially harmful inks and solvents or with safer and eco-friendly alternatives. Safer products have gained a considerable share of the market, and initial quality issues have been overcome.

**We are currently developing this section:  
please contact us  
if you are from within the graphics and printing  
industry wishing to contribute an up-to-date article,  
or your thoughts, developments,  
or other writing on this important subject.**

Health | Soy-based Inks | Mixed Inks | Linseed Oil-based Inks | Dryers | Solvents | Plate Systems | Developers

### **Nontoxic Offset Printing - Why?**

#### **Abstract.**

*'Journal of Neurology, Neurosurgery, and Psychiatry, 1993*

*In an offset printing factory with 56 workers, 20 (36%)*

*developed symptomatic peripheral neuropathy*

*due to exposure to n-hexane.*

*Another 26 workers (46%) were found to have subclinical neuropathy.'*

*'Peripheral neuropathy refers to damage to nerves of the peripheral nervous system, which may be caused either by diseases of or trauma to the nerve or the side-effects of systemic illness. (Wikipedia)'*

#### **Some Research Notes**

- 'N-hexane neuropathy in offset printers'  
<http://jnnp.bmj.com/content/56/5/538>
- 'Going green with your marketing materials', Jennifer Proia  
[www.graphic-design.com/DTG/Business/greenprint](http://www.graphic-design.com/DTG/Business/greenprint)

#### **Safer Offset Chemistry, some examples**

- 'Böttcher 260' Newspaper Roller and Blanket Wash Böttcher 260 wash is a very safe, low odor, non-hazardous wash formulated for the newspaper industry. It is very mild on the rollers and blankets and it offers a much lower safety and health risk than traditional washes on the market. It is a clear solvent with a pleasant odor. Flashpoint 203°F <http://www.bottcher.com>
- 'Varn Safety UV Cleaner' is one of the only effective cleaners for UV inks that does not rely upon harsh solvents.

*Most UV washes contain large amounts of solvent EB. This is also known as 2-butoxyethanol or butyl cellosolve®. Varn Safety UV Cleaner does not contain solvent EB, which is a hazardous air pollutant under the Clean Air Act. Varn Safety UV Cleaner appeals to the UV ink and coating user who also requires a strong and safe cleaner.*

*- 'Varn® VWM Wash' is a water miscible, one step wash formulated to meet ecological requirements for safety in roller and blanket washes.*

- 'ANALYSIS AND TESTING OF THE ALTERNATIVE CLEANING AGENTS'  
[Alternatives\\_Litho\\_Tech\\_Assess.pdf](#)

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-  [Polyester Plate Litho](#)
-  [Litho Toner Wash](#)
-  [Waterless Lithography](#)
-  [Stone Lithography](#)