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NATIONAL ASSOCIATION OF PRINTING INK MANUFACTURERS
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Cheryl A. Niemi
Hazardous Waste and Toxics Reduction Program
Department of Ecology
P.O. Box 47600
Olympia, WA 98504

Ref: Safer Products for Washington program – Printing Inks

Dear Cheryl,

Following is relevant information which may be helpful to your team in reaching an accurate, reliable assessment of typical inadvertent PCB (iPCB) concentrations in printing inks. Overall, the apparent simplicity of ink on substrate belies its complexity. An enormous amount of research, development, technology and customization is required to produce these specialty chemical products to meet exacting and specific requirements.

- There are multiple, major Ink types: lithographic, letterpress, flexographic and gravure. Within each of these categories there are subcategories including conventional, energy curable, water based and solvent based. Each one of these categories and sub-categories represent substantial formulation/composition differences.
- Formulation differences: (differences in pigment types and loading, solvent, vehicles, binders, additives based on print process, substrate, color specifications, costs, etc.). The formulation differences are required to provide specific end use properties (e.g. lightfastness, heat resistance, abrasion resistance, product resistance, weathering, etc.)
- Differences between ink manufacturers: (There are approximately 240 US ink companies. Small companies can have thousands of significantly different formulations, larger companies 10 times that number or more)
- Printing ink input raw materials are sourced from multiple suppliers who themselves have multiple suppliers for input raw materials. Input raw material suppliers are changed routinely based on costs, quality and other factors.
- The ink industry conducts commonly accepted, routine quality testing of input raw materials. Testing of each ink formulation is not possible or practical.
- Printing Applications (e.g. lithographic, flexographic, gravure, etc.): Application rates and coverage differ among print jobs based on color. performance requirements and other factors.
- Color specification: Color reproduction is critically important. Print jobs are spectrophotometrically measured; print jobs that do not meet predetermined color specification requirements are rejected.
- Small one-off products (5 gallons or less), custom formulated products are common within the industry.

In our view, consideration (and incorporation) of the factors noted above is essential in developing and conducting any testing program designed to establish and accurate assessment of iPCB concentrations in printing inks.

Please feel free to contact us if you have any questions.

Best Regards,

George R. Fuchs

Director – Regulatory Affairs and Technology