Non-Vinyl Banners & Labels

BUY SMART, CHOOSE NON-TOXIC

Tips for Reducing Toxic Chemical Use at the City of Seattle — Fall 2009

VINYL IN THE WORKPLACE

The City of Seattle is taking steps to reduce hazardous chemicals in the workplace. The goal of this effort is to help employees identify and use safer alternatives.

Many ordinary products release toxics to the environment that pose risk to human health through manufacture, use, and disposal. These products can be found in many city work sites, training events, public events, offices, and warehouses. Vinyl banners and labels are just a few of thousands of products made out of vinyl.

This fact sheet will help you find alternatives to vinyl.

WHAT IS VINYL?

Vinyl, or polyvinyl chloride (PVC), is a very common plastic material because of its useful properties. PVC is versatile and appears in thousands of different formulations and configurations.

HOW IS VINYL TOXIC?

The production of vinyl requires the input of raw chemicals which are toxic, including highly polluting chlorine, and cancer-causing vinyl chloride monomer (VCM), ethylene dichloride (EDC), and mercury.

Production of vinyl also releases highly carcinogenic chlorinated dioxins which bio-accumulate through the food chain. Chlorinated dioxins and chlorinated furans can be produced if a vinyl product is involved in a fire or is incinerated.

Communities surrounding vinyl chloride chemical facilities may suffer from serious toxic chemical pollution of their groundwater supplies, surface waters and air due to compounds such as chlorinated dioxin or mercury released during manufacturing.

HOW DOES VINYL AFFECT MY HEALTH?

PVC formulations have varying amounts of additives, which are released during the use and disposal of the product. These additives are used to plasticize, soften and stabilize the PVC. Some of these chemicals are harmful to your health. Studies have found an increase in adult asthma, skin irritation, or eye irritation when exposed to PVC additives released during use either as dust or vapors.

Source: Center for Health, Environment and Justice (2004)

In Brief

Though some vinyl products can pose direct health risks to consumers, most of the hazards associated with vinyl occur during production and disposal.

Chlorine

Due to the chemical properties of chlorine, the by-products tend to be far more toxic, more persistent in the environment, and more likely to build up in the food supply and the bodies of people than otherwise similar chemicals that do not contain chlorine.

EDC and VCM

The chemicals used in the production of polyvinyl chloride (ethylene dichloride and vinyl chloride monomer) are also extremely hazardous. Vinyl chloride is a known human carcinogen that affects the central nervous system and damages the liver (Kielhorn 2000). Ethylene dichloride is a suspected human carcinogen that also affects the central nervous system and damages the liver (USEPA 2003a).

Other Additives

Other by-products which are released during the lifecycle of vinyl are phthalates, lead, cadmium, tin and other chemicals.

Example of a vinyl banner

Example of a vinyl label

CHOOSE SAFER BANNER OPTIONS

Island Dog Sign Company, Seattle, WA
www.islanddogsigns.com
- Non-vinyl banner options, such as canvas
- Low VOC inks and paints*

The Big Green Print, Seattle, WA
www.thebiggreenprint.com
- Reuses or recycles vinyl banners at no additional cost to client
- Fully recyclable polyethylene choice for banner material
- No VOC or solvent-based ink*

Triumph Display Group, New York, NY
www.triumphgraphicsllc.com
- Uses BioFlex product, a PVC banner which is engineered to break down under landfill conditions
- Contains no toxic additives
- Last 3 to 5 years in indoor or outdoor

Green Banners, Forestville, CA
www.greenbanners.com
- Water-resistant 100% recycled / recyclable polypropylene
- Water-resistant satin fabric
- 100% cotton canvas

CHOOSE THE RIGHT PRODUCT FOR THE JOB

Indoor use vs. Outdoor use

Some banner material is better suited for indoor use. 100% cotton or water resistant satin fabric is one material that works well indoors but not outside.

Building banners vs. Booth banners

When printing on polypropylene banners, the ink tends to bleed and does not produce as sharp of an image. That is not noticeable for billboards and banners farther away, on a building for example, but printing on polypropylene may not work as well for a booth banner.

Do I need a banner?

Often something as simple as cardboard or fiber board will do the same job. Lamination can make a product un-recyclable, so it is best to avoid this if possible.

RECYCLING AND DISPOSAL

Vinyl is difficult to recycle due to its varying formulas.

When vinyl is burned, acidic hydrogen chloride gas is released. This impacts firefighters and workers when vinyl burns in structural fires or landfill fires.

In addition, certain chemicals which make up PVC can leach into groundwater over time.

Source: Center for Health, Environment and Justice (2004)

CHOOSE SAFER LABEL OPTIONS

Vinyl labels are often chosen for their durable properties. Consider your use before ordering; is the label going to be used outdoors? Does the label need to be tear-proof and water resistant?

You can specify labels made out of different materials when ordering.
- Polypropylene
- Polyester

Used vinyl banners can be:
- Reprinted on the other side.
- Ground into smaller pieces and used as a material for things such as speed bumps and packing material. One company that does this is:

  The Big Green Print, Seattle, WA
  1-877-246-4739
  www.thebiggreenprint.com

- Donated to a business that turns the material into consumer products, for instance:

  Alchemy Goods, Seattle, WA
  206-484-9469
  recycling@alchemygoods.com

FOR MORE INFORMATION CONTACT

Shirli Axelrod 4-7804
Shab Zand 3-5712