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Protecting yourself from plastic hazards

By Tom Watson
Special to The Seattle Times

"Better living through chemistry!"

That chemical-company slogan from 50 years ago has largely come true. Chemicals and plastics have contributed to numerous health advances and helped create inexpensive, abundant products. But "better living" can have hidden costs, and a prime example lurks in hundreds of consumer products: Polyvinyl chloride, also known as PVC or vinyl.

PVC is the only common plastic that contains chlorine. Although the plastics industry likes to point out that chlorine comes from ordinary salt, the federal government lists chlorine as an "extremely hazardous substance." Vinyl chloride, the building block of PVC, can cause cancer in humans, according to the government's National Toxicology Program.

Worldwide risks

Production of PVC and vinyl products around the globe may endanger workers and residents of nearby neighborhoods. In the U.S., most PVC production takes place near low-income communities in Louisiana and Texas. And in China, the acetylene-based process widely used to produce PVC causes more pollution and requires more electricity than the ethylene process primarily used for PVC production in the rest of the world.

Chemicals in some PVC products — lead and other stabilizers added to strengthen PVC, and plasticizers such as phthalates to make it more flexible — may pose health hazards to consumers. PVC products also release toxic fumes if they catch fire.

To its credit, the U.S. vinyl industry has greatly reduced workers' exposure to toxics over the years. And PVC building materials improve living conditions in impoverished countries, the industry says, by providing low-cost piping for water, for example.

But PVC surrounds us, in many of our toys, shower curtains, baby bibs, plastic cling wrap, car floor mats, window blinds, water pipes, hoses, gutters, siding and on and on. "Off-gassing" of phthalates and other chemicals from PVC products — that "new shower-curtain smell" — is a particular health concern for infants and pregnant women.

Toys "R" not PVC

An encouraging shift in priorities has occurred recently, as major retailers including Wal-Mart, Target, Sears, Kmart and Toys "R" Us have required their suppliers to eliminate PVC in many types of products and packaging.

This PVC phaseout reflects a new focus on toy safety resulting from the recalls of millions of imported toys over the past two years. As another example, both the U.S. Congress and Washington Legislature passed laws this year imposing stricter limits on lead and phthalates in some children's products, where they often serve as PVC additives.

Holiday hazards

Consumers need to take special care this holiday season because the federal ban on certain phthalates in toys and child-care products does not take effect until Feb. 10. That means some manufacturers may dump their inventory of phthalate-laden PVC products at low prices, especially at smaller retailers such as "dollar stores."

This doesn't necessarily indicate ill intent, since many plastics-industry experts and even some researchers believe phthalates are harmless. But if enough concern exists for laws to be passed banning phthalates, most parents don't want their kids exposed to them. So this holiday season, avoid cheap "no-name" products and look for toys and other children's items labeled as having no PVC, phthalates or lead.

Recycling mirage

The clear, hard-to-open "clamshell" packaging used for toys and small products is often made from PVC. This packaging may be emblazoned with the recycling arrows around the number three (the code for PVC). But don't be misled: No residential recycling programs in the Seattle area accept PVC packaging. The same goes for PVC food containers that may display the recycling arrows.

PVC is technically recyclable, but it typically gets recycled only when industries generate massive amounts of PVC scrap that can be handled cost-effectively by recyclers.

Building the future

Home construction and remodeling have also become a battleground for PVC. About 75 percent of all PVC manufactured is used in building materials, according to the nonprofit Healthy Building Network.

Most green-building leaders recommend that homeowners and contractors seek alternatives to PVC products whenever possible, and an increasing number of greener choices has become available. However, some green-building advocates defend the use of PVC in certain situations, saying that vinyl windows are more energy-efficient and durable than aluminum or wood windows, for example.

All types of PVC products now face increased scrutiny, which means that consumer concerns about health and the environment are being taken seriously. And that's really better living.

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