

Building Construction and Maintenance

Products Containing Persistent, Bioaccumulative Toxic Chemicals (PBTs)

INFORM, a nonprofit environmental research organization founded in 1974, is working directly with government agencies, schools, and health care facilities to minimize the purchase of products that contain mercury, lead, dioxin, and other persistent, bioaccumulative toxic chemicals (PBTs). Many products used by construction and maintenance departments contain PBTs, or can generate or release PBTs into the environment when they are manufactured, used, discarded, incinerated, or recycled. Fortunately, environmentally preferable alternatives are often available (see table below).

Product	PBT(s)	PBT-free Alternative
Air fresheners, carpet deodorizers	Naphthalene	Air fresheners and carpet deodorizers without naphthalene are available, as are management strategies that reduce odors in the first place.
Architectural paints and finishes, including varnishes, floor polish, wood stains	Cadmium, Dibutyl phthalate	Cadmium- and phthalate-free paints and finishes are available for most architectural applications.
Caulks, sealants	Dibutyl phthalate, Lead	Effective caulking products and sealants are available without these PBTs.
Electrical switches, thermostats	Mercury	Reliable, mercury-free electronic thermostats and switches for electrical equipment are available for most applications. Old thermostats and switches should be recycled.
Exit signs with fluorescent bulbs	Mercury	Light-emitting diode (LED) exit signs typically contain no mercury and are energy-efficient. Old exit signs with fluorescent lights should be recycled.
Fluorescent and compact fluorescent lamps (bulbs), high-intensity discharge (HID) lamps	Mercury	Low-mercury fluorescent tubes are available for many applications. All fluorescent tubes and HID lamps (including mercury vapor, metal halide, and high-pressure sodium lamps) should be recycled.
Institutional cleaners, chlorine bleach	Mercury	Mercury can be present as a contaminant (rather than being intentionally added) in these products. Some chlorine bleach is made using mercury in processing, causing mercury to remain in the product. Other cleaning products can also be contaminated. Massachusetts has created a database of test results indicating which products contain mercury (http://www.masco.org/mercury). A few manufacturers have tested their own products, found them to be mercury-free, and made this known in their product literature. Chlorine bleach made without the mercury-cell process is also available.
Liquid hand soaps	Dibutyl phthalate	Phthalate-free substitutes are available.
Solders	Lead	Lead-free solders are available for many applications and are widely used in Europe.
Vinyl	Di(2-ethylhexyl) phthalate (DEHP), Dioxins	Most vinyl items sold in the US contain DEHP softening agents. When incinerated, vinyl may create dioxins and release them into the air. PVC-free products are available for a wide variety of applications (such as nylon shower curtains, carpet with polyolefin backing, and durable upholstery and flooring products).

This information was collected from Material Safety Data Sheets (MSDSs) and from documents and databases developed by health and environmental regulatory agencies, independent analytical laboratories, and various industry and environmental groups. Purchasers should review product MSDSs and ask vendors to supply less toxic alternatives.

Where can purchasers go for more information about INFORM's Purchasing for Pollution Prevention Project? Contact INFORM staff:

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INFORM is a national nonprofit organization that identifies practical ways of living and doing business that are environmentally sustainable.

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