

Public Works and Vehicle 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, dioxins, and other persistent, bioaccumulative toxic chemicals (PBTs). Many products used by public works departments and fleet managers 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
Car waxes	Dibutyl phthalate	A wide variety of car waxes without phthalates are available.
Diesel fuel used to power buses, generators, traffic signs, and other equipment	Antimony, Arsenic, Beryllium, Cadmium, Cyanide, Dibutyl phthalate, Di(2-ethylhexyl) phthalate (DEHP), Dioxins, Lead, Mercury, Naphthalene, Nickel, Phenol, Polychlorinated dibenzofurans (PCDFs), Polycyclic aromatic hydrocarbons (PAHs), Selenium	Diesel exhaust contains all of the PBTs listed plus other cancer-causing substances. Institutions that buy or lease buses should specify that they run on compressed natural gas (CNG). For more information on the advantages of CNG, see INFORM's <i>Bus Futures</i> report (2000). For existing diesel buses, consider adding biodiesel fuel. Solar- and hydrogen fuel cell-powered traffic signs are now being used. (These were commercialized by the New Jersey Dept. of Transportation in 1998. For more information, see http://www.hpower.com/NEWS-DOTannounces.html .)
Motor oil	Naphthalene, Polycyclic aromatic hydrocarbons (PAHs)	Purchasing re-refined (recycled) motor oil and recycling used oil can reduce the amount of PBTs entering the environment.
Petroleum-based lubricating oils, greases, hydraulic fluids	Naphthalene, Polycyclic aromatic hydrocarbons (PAHs)	Vegetable-based oils, greases, and hydraulic fluids are available for many uses in vehicles and equipment with hydraulic lifts and other features. Background information about "biobased" hydraulic fluids and a list of suppliers can be found at http://www.metrokc.gov/procure/green/bul59.htm#4 .
Pressure-treated wood, wood preservatives (e.g., creosote)	Naphthalene, Pentachlorophenol (PCP), Polycyclic aromatic hydrocarbons (PAHs)	Recycled plastic lumber is now replacing pressure-treated and preserved wood in many applications, such as retaining walls, piers, and park benches.
Switches in motor vehicles	Mercury	Several auto manufacturers have eliminated the use of mercury switches. Vehicles sent to recyclers can be stripped of their mercury switches so the mercury can be reclaimed for essential uses. For more information, see http://www.cleancarcampaign.org/pdfs/CCCMercProposal.pdf .
Traffic marking paints	Chromium, Lead	Traffic-marking (striping) paint without lead chromate is now being used in many jurisdictions, such as the City of Cincinnati.

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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