Priority Chemicals

Note: EPA no longer updates this information, but it may be useful as a reference or resource.

The National Waste Minimization Program focuses efforts on reducing 31 Priority Chemicals (PCs) found in our nation's products and wastes by finding ways to eliminate or substantially reduce their use in production. If these chemicals cannot easily be eliminated or reduced at the source, we focus on recovering or recycling them.

These 31 PCs, discussed below, are listed in the following table. A fact sheet including a summary of the potential health effects of each chemical can be accessed by clicking on the chemical name. Next to each chemical name is its Chemical Abstract Services Registry Number (CASRN).
EXIT Disclaimer

Some of the documents on this Web page are in PDF format. For information about PDFs, please see the About PDF page.

Priority Chemicals

Chemical Name & Summary Fact Sheet	CASRN
Organic Chemicals and Chemical Compounds	
1,2,4-Trichlorobenzene (PDF) (2 pp, 9K)	120-82-1
1,2,4,5-Tetrachlorobenzene (PDF) (2 pp, 9K)	95-94-3
2,4,5-Trichlorophenol (PDF) (2 pp, 8K)	95-95-4
4-Bromophenyl phenyl ether (PDF) (2 pp, 6xK)	101-55-3
Acenaphthene (PDF) (2 pp, 11K)	83-32-9
Acenaphthylene (PDF) (2 pp, 10K)	208-96-8
Anthracene (PDF) (2 pp, 11K)	120-12-7
Benzo(g,h,i)perylene (PDF) (2 pp, 11K)	191-24-2
Dibenzofuran (PDF) (2 pp, 8K)	132-64-9
Dioxins/Furans (PDF) (2 pp, 10K) (considered one chemical on this list)	1746-01-6
Endosulfan, alpha (PDF) (2 pp, 11K) & Endosulfan, beta (PDF) (2 pp, 10K) (considered one chemical on this list)	959-98-8 33213-65-9
Fluorene (PDF) (2 pp, 12K)	86-73-7

Heptachlor (PDF) (2 pp, 11K) & Heptachlor epoxide (PDF) (2x pp, 11K) (considered one chemical on this list)	76-44-8 1024-57-3
Hexachlorobenzene (PDF) (2 pp, 10K)	118-74-1
Hexachlorobutadiene (PDF) (2 pp, 9K)	87-68-3
Hexachlorocyclohexane, gamma- (PDF) (Lindane) (2 pp, 11K)	58-89-9
Hexachloroethane (PDF) (2 pp, 10K)	67-72-1
Methoxychlor (PDF) (2x pp, 10K)	72-43-5
Naphthalene (PDF) (2 pp, 10K)	91-20-3
Pendimethalin (PDF) (2 pp, 9K)	40487-42-1
Pentachlorobenzene (PDF) (2 pp, 9K)	608-93-5
Pentachloronitrobenzene (PDF) (Quintozene) (2 pp, 9K)	82-68-8
Pentachlorophenol (PDF) (2 pp, 10K)	87-86-5
Phenanthrene (PDF) (2 pp, 10K)	85-01-8
Polycyclic Aromatic Compounds (PACs) / PAH Group (PDF) (2 pp, 12K) (as defined in TRI)	
Polychlorinated Biphenyls (PCBs) (PDF) (4 pp, 105K)	1336-36-3
Pyrene (PDF) (2 pp, 10K)	129-00-0
Trifluralin (PDF) (2 pp, 9K)	1582-09-8
Metals and Metal Compunds	
Cadmium (PDF) (2 pp, 11K)	7440-43-9
Lead	7439-92-1
Mercury	7439-97-6

Top of page

More on Priority Chemicals. This list of 31 Priority Chemicals replaces the list of 53 chemicals EPA identified in its 1998 Federal Register "Notice of Availability: Draft RCRA Waste Minimization Persistent, Bioaccumulative and Toxic (PBT) Chemical List" [Federal Register: November 9, 1998. Volume 63, Number 216. Page 60332-60343]. Twenty-six of the chemicals in the current list were part of the draft list and four chemicals were added in response to comments and new information EPA received from the public regarding EPA's methodology for selecting the chemicals in the draft list. Polychlorinated biphenyls (PCBs) were added in 2004 because of their chemical properties. The list of PCs includes twenty-eight organic chemicals and three metals and their compounds. Organic chemicals and metals are two of the 14 commonly used chemical categories recognized by the CAS. EXIT Disclaimer

Top of page

Twenty-eight organic chemicals are included in the list . The organic chemicals included in the list of Priority Chemicals were selected following an Agency-wide expert review of scientific information available on them. EPA experts reviewed scientific information made available to the public in 1998 and scientific information received from commenters in response to the 1998 Notice of Availability.

Based on its review, EPA concluded that 27 organic chemicals are persistent, bioaccumulative, and toxic (PBT). They are currently being generated in industrial waste and are found in soil, sediment, ground water, surface water, air, and plant, animal, and human tissue as a result of past and present releases. Even when released in very small amounts, they accumulate and can cause environmental problems. Many of these organics are difficult to clean up once they get into the environment, resulting in costly clean up efforts. Polychlorinated biphenyls (PCBs) were added in 2004 because of their chemical properties.

Top of page

Three metals are included in the list. The PC list includes cadmium, lead, and mercury. These metals and their compounds are known to occur frequently in RCRA regulated industrial wastes and often trigger RCRA's Toxicity Characteristic criteria, meaning the wastestreams they are found in must be managed under RCRA hazardous waste regulations. These metals are also a high priority in international waste minimization efforts to which the United States has commitments.

In its 1998 Notice, EPA identified these metals as Priority Chemicals using the same PBT analysis framework that it used for organic chemicals. EPA subsequently decided to defer the use of that framework and is working with its Science Advisory Board to develop a consistent, Agency-wide approach for the evaluation of metals. Nevertheless, EPA believes other information clearly demonstrates that these three metals should be included in the list of 31 Priority Chemicals. EPA's 2001 Biennial Report System (BR) data show that lead is the hazardous constituent found most frequently in RCRA wastestreams. Cadmium is frequently found in wastes containing lead and both of these metals are frequently recoverable. Mercury is also frequently found in hazardous waste and there is a high level of national and international concern over mercury risks.

- Assessing the Management of Lead in Scrap Metal and Electric Arc Furnace Dust (K061 Waste) (PDF) (91 pp, 1.2MB)

Top of page

Sources and quantities of hazardous waste containing Priority Chemicals. EPA's Priority Chemicals Trends Report describes changes in the quantities of PCs contained in wastes generated by certain industrial sectors between 2000 and 2004. In 2004, facilities reported approximately 84.7 million pounds of PCs, representing a decrease of almost 15 million pounds or approximately 15 percent compared to the total quantity of PCs reported in 2000. Nonetheless, the quantity reported in 2004 was significantly larger than the quantity reported in 2003. We believe much of this increase resulted from quantities of several PCs reported by a few large facilities. For example, new equipment installed at a Louisiana facility substantially improved its ability to detect PCs in wastestreams compared to previous measurements, which may mean that there was no actual increase. In addition, the cleanout of process tanks and piping at several facilities that were undergoing process or plant shutdowns also contributed to this increased quantity.

In 2004, EPA established a goal of a 10 percent reduction of PCs by 2008, using a 2001 baseline. Although 24 of the 31 PCs are reported to the Toxics Release Inventory (TRI) , only 23 PCs are tracked for the 2008 goal. Polychlorinated Biphenyls (PCBs) are also reported to TRI, but were being tracked separately at the time the 2008 goal was developed. Therefore, PCBs are not tracked for the 2008 goal. As of 2004, there was an overall reduction of approximately 1 million pounds or 2.6 percent in the total quantity of PCs contained in wastes, compared to the quantities generated in 2001. More information on tracking PCs.

Top of page

EPA and International Interest. EPA's Persistent, Bioaccumulative and Toxic (PBT) Program (a cross-Agency environmental program effort) is developing National Action Plans for several of the chemicals included on the Priority Chemical list. These include dioxins/furans, hexachlorobenzene, mercury, benzo(a)pyrene, and six additional polycyclic aromatic hydrocarbons (PAHs). Several PCs are a focus of international efforts. The United States is committed to working with the international community to address chemicals of international concern. EPA is involved in the Canada-United States Binational Toxics Strategy, the United Nations Environment Programme's Persistent Organic Pollutants (POPs) effort, and the United Nations Economic Commission for Europe's Long Range Transport Air Pollutants (LRTAP) Persistent Organic Pollutants effort.

Top of page

Please note that the waste minimization efforts discussed on this website are voluntary. The information contained in this website does not replace EPA's statutes or regulations, nor does information on the website serve as a regulation. Information on this website cannot impose legally

binding requirements on EPA, states, or the regulated community. Rather, it acknowledges that EPA is focusing its waste minimization efforts on the 31 PCs identified here. In addition, EPA remains receptive to any waste minimization efforts, including efforts to address chemicals other than, or in addition to, these PCs. We hope the information presented here helps government, the regulated community, and the public to effectively allocate waste minimization resources.

Top of page