

Fact Sheet
May 2002

SB 633: California's Mercury Reduction Act of 2001



DTSC is one of six Boards and Departments within the California Environmental Protection Agency. DTSC's mission is to restore, protect and enhance the environment, to ensure public health, environmental quality and economic vitality, by regulating hazardous waste, conducting and overseeing cleanups, and developing and promoting pollution prevention.

State of California



California
Environmental
Protection Agency



This fact sheet addresses California's Mercury Reduction Act of 2001 (SB 633), and is intended to provide information to the general public about mercury in K-12 schools, vehicles, thermometers, and novelty items. It introduces the risks associated with mercury exposure, suggests ways to avoid mercury, and identifies sources of additional information. It also provides guidance regarding the industries affected by this legislation, such as manufacturers, distributors and retailers of school laboratory equipment, thermometers, novelty items, and vehicles, as well as auto dismantlers and shredders.

WHAT IS MERCURY AND WHERE IS IT FOUND?

Mercury (also known as quicksilver because it is a silver-colored liquid metal at room temperature) is an element that does not break down in the environment. It occurs naturally and is found in oceans, rocks and soils. It becomes airborne as gas or dust when rocks erode, volcanoes erupt and soil decomposes, or when people burn coal, oil or natural gas as fuel or incinerate garbage containing mercury. Once in the air, mercury can fall to the ground with rain and snow, landing on soils or water bodies.

Lakes and rivers can also become contaminated when companies or individuals release mercury-laden industrial waste onto the ground or in waterways. Once present in these bodies of water, mercury accumulates in fish and may ultimately reach the dinner table.

Mercury is used in household and commercial products, as well as industrial processes, because it is liquid at room temperature, combines easily with other metals, and expands and contracts evenly with temperature changes. Incinerators, some manufacturing plants, hospitals, dental offices, schools, and homes all release mercury. In the home, mercury is present in fluorescent lights, thermostats, thermometers, old alkaline batteries, mercurochrome, chemistry sets, and even some children's toys. At school, mercury may be in science and chemistry classrooms, the nurse's office and electrical systems.

WHY REDUCE MERCURY USE?

Two different forms of mercury are of human health concern: elemental mercury and organic mercury.

Elemental mercury slowly vaporizes at room temperature and even more quickly when heated. Children playing with or near elemental mercury can be seriously poisoned by breathing the invisible vapor from mercury spilled in carpeting, furniture or other surfaces.

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our web site at www.dtsc.ca.gov.

Although people can take in organic mercury through the lungs, mouth or skin, the most likely source of organic mercury in humans is eating contaminated fish. Human exposure to organic mercury can result in long-lasting health effects, especially if it occurs during fetal development. In addition, scientists have linked mercury poisoning to nervous system, kidney and liver damage, and impaired childhood development. Nervous system disorders can include impaired vision, speech, hearing and coordination.

Although mercury has been a very useful element due to its unique properties, it poses a very real health risk from exposure. We can reduce this risk by reducing our use of products containing mercury and properly disposing of waste containing mercury.

Governor Gray Davis signed SB 633 into law on October 9, 2001. Introduced by Senator Byron Sher, the bill addresses several approaches to reducing mercury in California. See effective dates below.

What are the Alternatives?

School Uses: Teachers and students can use other chemicals in classroom experiments to illustrate chemistry or physics principles. Alcohol and electronic thermometers are readily available and sufficiently accurate.

Vehicles: Vehicle manufacturers can use alternatives to mercury switches for trunk and hood convenience lights. It is also possible to replace the mercury in an existing light switch with a ball bearing-type switch. Consumers are encouraged to request the replacement and recycling of mercury light switches during normal vehicle servicing.

Thermometers: Alternatives to mercury fever thermometers include digital thermometers and glass thermometers (with either alcohol or a mix of gallium, indium, and tin). The standards for accuracy are the same for mercury and non-mercury thermometers. In practice, numerous patient and user factors can affect the accuracy of all fever thermometers.

REQUIREMENTS OF CALIFORNIA'S MERCURY REDUCTION ACT OF 2001

Mercury Source	Requirement	Effective Date
Schools K-12	Prohibits any school from purchasing devices and materials containing mercury for use in classrooms and labs, except measuring devices when no adequate alternative exists.	January 1, 2002
Vehicles	Encourages removal and recovery of switches containing mercury, i.e., convenience lights under the hood or in the trunk, from vehicles before disposal or recycling of the vehicle.	January 1, 2002
Thermometers	Bans the sale or distribution of fever thermometers containing mercury without a prescription from a doctor, dentist, veterinarian or podiatrist.	July 1, 2002
Novelty Items	Prohibits the manufacture, sale, or distribution of mercury-added novelty items in California. Mercury-added novelties are products intended for personal or household enjoyment or adornment, such as jewelry, games, maze toys, or toys that light up or make noise. Manufacturers of novelties must notify retailers of this requirement and explain how to dispose of remaining inventory.	January 1, 2003
Vehicles	Bans the sale of vehicles manufactured on or after January 1, 2005, if they have light switches containing mercury.	January 1, 2005

Novelty Items: Some novelty items contain intentionally-added mercury. For instance, light-up tennis shoes once contained mercury, but according to footwear manufacturers, they changed the light-up mechanisms in 1997 to eliminate the mercury. Consumers should check to ensure that items that light-up or make noise are free of mercury. To help determine whether an item contains mercury, call the Consumer Products Safety Commission's hotline at (800) 638-2772.

How to Dispose of Products Containing Mercury

For mercury-containing products found in the home, local governments in California operate an extensive system of household hazardous waste collection programs. Many of these programs also accept hazardous waste from small businesses. For information about the household hazardous waste program in your community:

- Call your local environmental health or public works department
- Call 1-800-CLEANUP (1-800-253-2687)
- Visit 1-800-CLEANUP's web site at www.earth911.org
- Call DTSC's Public and Business Liaisons at 1-800-72TOXIC (1-800-728-6942)
- Visit DTSC's web site at www.dtsc.ca.gov

Businesses seeking information on management or disposal options for wastes containing mercury should contact the Department of Toxic Substances Control's Public and Business Liaisons at 1-800-72TOXIC (1-800-728-6942).

Disclaimer

This Fact Sheet was prepared in March 2002 and is based on the statutes and regulations in effect at that time. Interested parties should always review the most current statutes and regulations.

The clarifications provided in this Fact Sheet do not change existing statutes or regulations under CCR Titles 22 or 27.

For more information about regulatory requirements, please contact the DTSC office nearest you, or call the regional Public and Business Liaisons at (800) 72TOXIC (1-800-728-6942) or visit www.dtsc.ca.gov

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For More Information:

SB 633 text: www.leginfo.ca.gov/bilinfo/html
(SB 633 chaptered pdf version)

Other ordinances and legislation:
www.noharm.org and
www.mercury-k12.org/legisbystate.htm

Vehicle switches:
www.ecocenter.org/ecmercury.html

Equipment containing mercury:
www.epa.gov/grtlakes/p2.mercpam.html

Mercury in schools:
www.mercury-k12.org

Mercury in consumer products: contact the Consumer Products Safety Commission at (800) 638-2772 or www.cpsc.gov/consumer.html