



Identifying Universal Waste Generators

This fact sheet describes the types of universal wastes that are common hazardous wastes generated by households and businesses. Once a household or business determines that they are universal waste generators, they need to evaluate whether they are eligible for the temporary or conditional universal waste exemptions as addressed at the end of this fact sheet.

What is universal waste?

Universal waste is hazardous because it is toxic, ignitable, corrosive, and/or reactive. Some universal wastes are even listed as hazardous wastes. However, universal waste is more common and poses presumably a lower risk to people and the environment than other hazardous waste. State laws and regulations identify universal wastes and provide less stringent rules for handling, recycling and disposal. Universal waste regulations are in the California Code of Regulations, Title 22, Division 4.5, Chapter 23. Without the new *Universal Waste Rule*, all universal waste would have to be managed under the same stringent standards as other hazardous waste.

Types of Universal Waste

The types of universal wastes specified in California laws and regulations include, but are not limited to, the following:

Batteries: Universal waste batteries include rechargeable nickel-cadmium batteries, silver “button” batteries, mercury batteries, small sealed lead-acid batteries (burglar alarm and emergency light batteries), most alkaline batteries, and carbon-zinc batteries. Automobile batteries and other similar lead-acid batteries do not qualify as universal waste.

Lamps: Universal waste lamps include fluorescent tubes, high-intensity discharge lamps, sodium vapor lamps, and any other lamps that exhibit a characteristic of hazardous waste. All lamps that contain any quantity of intentionally added mercury (no matter how small) will be considered a state listed universal waste (i.e. M003 listed waste) and must be managed as such.

Non-Empty Aerosol Cans: In 2002, California Health and Safety Code (HSC Sec. 25201.16) added non-empty aerosol cans to the list of universal waste. “Empty” means that all the contents are used or that could be used when the delivery mechanism functions. “Non-empty” means that there are still contents in the can that cannot be dispensed through normal use of the can (e.g., a damaged nozzle). Universal waste non-empty aerosol cans contain materials and propellants that are ignitable, toxic, corrosive, and/or reactive. Households and businesses **CANNOT** dispose of non-empty aerosol cans in the trash.

Consumer Electronic Devices: Consumer Electronic Devices (CEDs) or any of their components (that exhibit a hazardous characteristic) must be managed as universal waste. CEDs include, but are not limited to: cell phones, telephones, fax machines, game consoles, computer processing units, radios, VCRs, CD players, calculators, stereo equipment, and many other electronic products. Cathode ray tubes are not considered as CEDs in the universal waste regulations and are managed under separate universal waste regulations.

Cathode Ray Tubes: Cathode Ray Tubes (CRTs) containing lead must be managed as universal waste. CRTs are vacuum or picture tubes contained in computer monitors, televisions, some camcorders, and many other

electronic devices. A typical CRT contains between two and five pounds of lead; many television CRTs contain as much as eight pounds of lead. CRTs and CRT glass have specific regulations in the California Code of Regulations, Title 22, Division 4.5, Chapter 23, Article 7. Households and businesses *CANNOT* dispose of CRTs in the trash.

Mercury Thermostats: All mercury-containing thermostats, including fever thermometers, must be managed as universal waste. Households and businesses *CANNOT* dispose of mercury thermometers in the trash.

Mercury Switches: Universal waste mercury switches are comprised of two types of switches, which include motor vehicle light switches and non-automotive mercury switches. Households and businesses *CANNOT* dispose of mercury switches in the trash.

Motor vehicle light switches (i.e., automatic hood and trunk light switches), once removed from vehicles, are designated as universal waste by the Health and Safety Code, Section 25214.6.

Non-automotive light switches (i.e., thermostats and tip switches in portable heaters, washing machines' out-of-balance switches, silent wall switches, and other mercury containing switches), once removed from products, are universal waste. Non-automotive mercury switches and the products that contain them are considered listed universal waste (i.e., M002 listed waste) and must be managed as such until the mercury switches are removed.

Mercury Gauges: Mercury-containing pressure and vacuum gauges are now managed as universal wastes. These gauges include, but are not limited to: U-tube manometers, barometers and blood pressure meters. Households and businesses *CANNOT* dispose of mercury gauges in the trash.

Dental Amalgam: Dental amalgam tooth filling materials including waste amalgam – bits and pieces from chairside traps and spent wastewater filters – must be managed as universal waste because amalgam usually contains mercury and other heavy metals. Households and businesses *CANNOT* dispose of dental amalgam in the trash or discharge it to the sewers.

Mercury Novelties: Universal waste mercury novelties contain mercury or mercury batteries such as some singing greeting cards, flashing athletic shoes, jewelry, and other items. These items *CANNOT* be disposed of in the trash.

Other Mercury-Containing Materials: Other mercury-containing universal wastes include: *Medical Dilators and Weighted Tubing*; *Rubber Flooring* (e.g., older gymnasium floors and indoor tracks); *Counterweights and Dampers* (e.g., pouches of high density mercury to dampen shaking on hunting bows and snow skis or to absorb recoil on shotguns); and, *Mercury Gas Flow Regulators* (e.g., older gas flow regulators that are managed exclusively by natural gas utilities). Households and businesses *CANNOT* dispose of these “other” mercury-containing materials in the trash.

Temporary and Conditional Exemptions

Household Exemption: Universal wastes are common types of hazardous waste generated by almost everybody, especially *households*. A *household* is a private residence; it is not a hotel, motel, bunkhouse, ranger station, fire station, crew quarters, campground, picnic ground, or a day use recreation area. Universal waste batteries, lamps, non-mercury thermostats, and consumer electronic devices generated by people maintaining their private household are exempt unless forbidden by the local solid waste authorities (i.e., the trash collectors). Households are prohibited from disposing of non-empty aerosol cans, cathode ray tubes, and most mercury-containing materials in the trash.

Business Exemption: Only businesses that are conditionally exempt small quantity universal waste generators (CESQUWGs) are eligible for the temporary and conditional universal waste exemption. A CESQUWG is a generator of universal waste who:

- Generates no more than 100 kilograms (220 pounds) of RCRA hazardous wastes and no more than one kilogram (2.2 pounds) of acutely hazardous waste in any calendar month (when making this quantity determination, the generator must include all universal waste except CRT materials);
- Generates a total of five or less CRT devices in a calendar year; and,
- Remains in compliance with the federal EPA's special requirements for hazardous waste generated by conditionally exempt small quantity generators (40 CFR 261.5).

A business that qualifies as a CESQUWG is exempt from most universal waste management requirements (e.g., labeling and training). However, CESQUWGs are prohibited from disposing of non-empty aerosol cans, cathode ray tubes and most mercury-containing materials in the trash.

Note: This fact sheet is intended for informational purposes only and may not encompass all the laws and regulations to this topic. More details may be found at Cal/EPA Department of Toxic Substance Control: www.dtsc.ca.gov. If further information is needed, call the County of Los Angeles CUPA at (323) 890-4045, or your local district office.

References

- [Title 22 California Code of Regulations, Division 4.5, Chapter 23](#)
- [Health and Safety Code \(HSC\), Sections 25201.16 and 25214.6](#)