

EPA & DOT Identification and Listing of Hazardous Waste Codes  
40 CFR §261 & 49 CFR §172  
EPA & DOT Codes on Chemical Management System Spreadsheet

Chemical waste management and disposal is the final component of a safe management plan. Congress granted EPA the authority to regulate hazardous waste under RCRA, 1976 (Resource Conservation and Recovery Act) and the Hazardous and Solid Waste Amendments of 1984. The primary objective of RCRA is to protect human health and the environment. Secondly, the intention is to also encourage conservation and recovery of valuable materials. Authorized state environmental agencies will also have regulations equal to or more stringent than EPA. Additionally, there are local (county and city) regulations regarding disposal of hazardous waste. State and local jurisdiction regulations take precedence over federal regulations.

Schools must follow the Laboratory Standard and Hazard Communication Standard to protect employees from chemical exposure. Massachusetts Department of Labor, Division of Occupational Safety states “There is a common misconception that inherent risks associated with the use of hazardous chemicals are higher in an industrial setting versus an academic one. The risk is actually greater in schools due to budget constraints, which inadvertently encourage practices such as over-ordering and over-stocking. Budget constraints often result in zero funding for proper disposal of unused or unwanted materials. Schools tend to be less diligent about complying with local, state and federal laws governing the use and disposal of hazardous materials, and there is a prevailing perception that they are exempt from such regulations. Schools should be held to the same standards as industry regarding responsible purchasing, safe use, secure and proper storage, and proper disposal of hazardous chemicals.” *Visit [www.mass.gov](http://www.mass.gov)*

RCRA regulations require a material to first be classified as a solid waste prior to its classification as a hazardous waste. It is the generator of the waste that determines if the waste is hazardous. The regulatory definition of a hazardous material / waste is defined as a solid (liquids, semi-solids, contained gases or sludges – definition is not dependent on “physical state.” 40 CFR §261 defines a solid wastes encompasses the following:

- Abandoned materials
- Recycled materials
- Inherently waste-like materials
- Waste military munitions.

A RCRA hazardous waste is a solid waste that:

- appears on one of EPA’s Hazardous Waste Lists:
  - F-non-specific sources,
  - K-specific sources,
  - U-unused, discarded commercial reagents
  - P-acutely toxic and / or

- exhibits any of the hazardous characteristics:
  - Ignitability-I,
  - Corrosivity-C,
  - Reactivity-R or
  - Toxicity-T.
- is a mixture of nonhazardous solid wastes and a listed hazardous waste or
- is a waste derived from treatment, storage or disposal of a listed hazardous waste.

Chemicals on the “Lists” can also possess the characteristics of I, C, R or T. Listed and characteristic hazardous wastes are identified by codes consisting of one letter followed by three digits. See EPA & DOT Codes on the Chemical Management Excel Database for the Lists and Codes.

EPA & DOT Codes: Identification and Listing of Hazardous Waste

Location	EPA Hazardous Waste Lists and Codes
Columns A-C	P-Listed Chemicals (Acute Hazardous Waste) – P001->P200
Columns D-F	U-Listed Chemicals (Toxic, unused, discarded commercial chemical products with a sole-active ingredient on one of the two lists. P-Listed chemicals are of this nature also but acutely hazardous. U001 –>U400
Columns G-H	F-Listed Chemicals (Non-specific sources) – F001 –> F037. Include common spent solvents: acetone, methanol, toluene, xylene
Columns I-K	K-Listed (Industrial process waste) – K001 –>K180
Columns L-O	EPA Hazardous Waste Characteristics and Codes
Rows 12 – 17	Ignitable – (Liquids with flashpoint <140°F) – D001 (can also be on F-List)
Rows 18 – 21	Corrosive – (aqueous solutions with pH ≤2 or ≥12.5) – D002
Rows 23 – 32	Reactive – (Unstable, explosive, water-reactive, or can generate toxic cyanide or sulfide fumes) – D003
Rows 33 - 38	Toxic – (Contain toxic constituents, herbicides, heavy metals, or toxic organic compounds that are likely to leach out in hazardous concentrations when subjected to the TCLP-toxicity characteristic leaching procedure) - D004 –> D043

Congress mandated EPA to create regulations to manage hazardous waste through RCRA from “cradle to grave” – from the time of procurement to its ultimate disposal. EPA developed strict requirements for all aspects of hazardous waste management – treatment, storage, and disposal of chemicals.

Treatment is any process that changes the physical, chemical or biological character of a waste to make it less harmful to the environment. Source reduction is the preferred

method of waste reduction – prevent pollution by reducing or generating hazardous waste at the source. When source reduction is not possible, waste must be recycled or treated to reduce volume and toxicity of the hazardous waste. As a rule, hazardous waste must be treated before it can be disposed. Treatments rendering the waste less hazardous to store, transport or dispose are:

- Neutralization of waste
- Recovery of energy and materials from the waste and
- Incineration of waste are treatments.

Under some circumstances, some chemicals as well as the products of neutralization can be disposed down the drain. Before any chemical is disposed down the drain, check with local and state agencies that regulate waste disposal. Also, if the drain empties into a septic tank or enters the ground water or river system, drain disposal is not recommended. EPA requires permits to treat waste with the exception of neutralization. Teachers / school personnel must be very careful about “treatment.” EPA and many states allow generators to treat hazardous waste on-site without a permit. Permitted on-site treatments are:

- Elementary on-site neutralization (pH adjustment) of D002 (corrosive) waste
- Recycling if waste is used, reused or reclaimed
- Treatment in accumulation containers provided the containers are managed in compliance with EPA’s container standards (e.g. precipitation of heavy metals from solution, oxidation / reduction reactions)
- “Small quantity on-site burner exemption” allows generator to burn small quantities of hazardous waste.

Most K-12 schools and community colleges do not have access to on-site incinerator; therefore, on-site incineration is not an option for these entities. Generally, most of the hazardous waste on school sites requires off-site treatment. Using landfills is an option allowed by some states. S&SCS does not recommend landfill disposal as an option for hazardous waste disposal. On-site treatment of hazardous waste by methods other than EPA regulated exclusions subject generators to excessive fines (up \$50,000 / day) and possible criminal punishment. Likewise, disposal of hazardous waste by unregulated methods can result in extremely high fines and criminal punishment. Different states have different regulations from EPA, from each other in addition to changes occurring in regulatory status of hazardous waste annually. Generators are responsible for checking with state and local regulatory agencies as well as EPA to determine regulatory status on hazardous waste.

When hazardous chemicals are transported on public roads, a DOT permit is required. Placarding is required for transportation of chemicals on public roads. (See the EPA & DOT Codes sheet for DOT Hazardous Materials Hazard Classes (49 CFR §172) On the Chemical Inventory Database, Column R, DOT Hazard Classes are listed as well as EPA Hazardous Waste Codes for chemicals. Refer to Column Q for recommendations on chemical disposal. The generator is responsible for proper disposal of all hazardous waste.

To ship hazardous waste off-site for disposal, the school (generator) will need a generator ID number from EPA or your state environmental agency. If you have a reliable private waste contractor, the contractor will usually procure this ID for you. This company also secures the DOT permit and required placards. The company packages the hazardous waste also. The generator retains virtually all the liability from “cradle to grave” for the hazardous waste disposal – from the time of generation, packaging, transport and ultimate destruction of the hazardous waste. The contractor does not assume much liability. CERCLA, Comprehensive Environmental Response, Compensation and Liability Act (1980) (also known as the Superfund, can also hold generators liable for clean-up costs associated with inadequate disposal of hazardous waste. In effect, the generator can pay twice for disposal of hazardous waste.

Hazard generator status is determined by EPA based on the amount of waste that is produced by the generator per month.

- Large quantity generators (LQGs) generate >1000 kg / month and /or >1 kg acutely hazardous waste (P-listed) per month. LQGs require an EPA generator ID number, comply with numerous requirements and accumulate waste up to 90 days.
- Small quantity generators (SQGs) generate >100 kg and <1000 kg / month. SQGs require an EPA generator ID number, compliance with numerous requirements and accumulate waste up to 180 days or 270 days if transport is more than 200 miles for disposal.
- Conditionally exempt small quantity generators (CESQGs) generate <100 kg hazardous waste / month and minimal compliance regulations.

Any generator that generates >1 kg acutely hazardous waste (P-listed) becomes a LQG. Emergency action plans are required and waste management personnel must receive RCRA training annually for LQGs and SQGs. K-12 schools generally are CESQGs.

EPA. *Little Known But Allowable Ways to Deal With Hazardous Waste*. Small Business Division, May 2000. [www.epa.gov](http://www.epa.gov)

See S&SCS’s Second Edition Science Laboratory Safety Manual for a more thorough discussion on Chemical Waste Management.

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