**The CFR List of Incompatible Waste (40 CFR 264 Appendix V)**

Many hazardous wastes, when mixed with other waste or materials at a hazardous waste facility, can produce effects which are harmful to human health and the environment, such as (1) heat or pressure, (2) fire or explosion, (3) violent reaction, (4) toxic dusts, mists, fumes, or gases, or (5) flammable fumes or gases.

Below are examples of potentially incompatible wastes, waste components, and materials, along with the harmful consequences which result from mixing materials in one group with materials in another group. The list is intended as a guide to owners or operators of treatment, storage, and disposal facilities, and to enforcement and permit granting officials, to indicate the need for special precautions when managing these potentially incompatible waste materials or components.

This list is not intended to be exhaustive. An owner or operator must, as the regulations require, adequately analyze his wastes so that he can avoid creating uncontrolled substances or reactions of the type listed below, whether they are listed below or not.

It is possible for potentially incompatible wastes to be mixed in a way that precludes a reaction (e.g., adding acid to water rather than water to acid) or that neutralizes them (e.g., a strong acid mixed with a strong base), or that controls substances produced (e.g., by generating flammable gases in a closed tank equipped so that ignition cannot occur, and burning the gases in an incinerator).

In the lists below, the mixing of a Group A material with a Group B material may have the potential consequence as noted.

**Group 1–A**

Acetylene sludge
Alkaline caustic liquids
Alkaline cleaner
Alkaline corrosive liquids
Alkaline corrosive battery fluid
Caustic wastewater
Lime sludge and other corrosive alkalies
Lime wastewater
Lime and water
Spent caustic

**Group 1–B**

Acid sludge
Acid and water
Battery acid
Chemical cleaners
Electrolyte, acid

Etching acid liquid or solvent
Pickling liquor and other corrosive acids
Spent acid
Spent mixed acid
Spent sulfuric acid

*Potential consequences: Heat generation; violent reaction.*

**Group 2–A**

Aluminum
Beryllium
Calcium
Lithium
Magnesium
Potassium
Sodium
Zinc powder
Other reactive metals and metal hydrides

**Group 2–B**

Any waste in Group 1–A or 1–B

*Potential consequences: Fire or explosion; generation of flammable hydrogen gas.*

**Group 3–A**

Alcohols
Water

**Group 3–B**

Any concentrated waste in Groups 1–A or 1–B
Calcium
Lithium
Metal hydrides
Potassium
$SO_2$ $Cl_2$, $SOCl_2$, $PCl_3$, $CH_3$ $SiCl_3$
Other water-reactive waste

*Potential consequences: Fire, explosion, or heat generation; generation of flammable or toxic gases.*

**Group 4–A**

Alcohols
Aldehydes
Halogenated hydrocarbons
Nitrated hydrocarbons
Unsaturated hydrocarbons
Other reactive organic compounds and solvents

**Group 4–B**

Concentrated Group 1–A or 1–B wastes
Group 2–A wastes

*Potential consequences: Fire, explosion, or violent reaction.*

**Group 5–A**

Spent cyanide and sulfide solutions

**Group 5–B**

Group 1–B wastes

*Potential consequences: Generation of toxic hydrogen cyanide or hydrogen sulfide gas.*

**Group 6–A**

Chlorates
Chlorine
Chlorites
Chromic acid
Hypochlorites
Nitrates
Nitric acid, fuming
Perchlorates
Permanganates
Peroxides
Other strong oxidizers

**Group 6–B**

Acetic acid and other organic acids
Concentrated mineral acids
Group 2–A wastes
Group 4–A wastes

Other flammable and combustible wastes

*Potential consequences: Fire, explosion, or violent reaction.*

Source: “Law, Regulations, and Guidelines for Handling of Hazardous Waste.” California Department of Health, February 1975.

[1]

These include counties, city-county consolidations, and independent cities. In the case of Alaska, the political jurisdictions are election districts, and, in the case of Hawaii, the political jurisdiction listed is the island of Hawaii.

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