

TABLE 8.2

Chemical incompatibility chart

Chemical	Incompatible with these chemicals
Acetic acid	Chromic acid, nitric acid, hydroxyl-containing compounds, ethylene glycol, perchloric acid, peroxides, and permanganates
Acetone	Concentrated sulfuric mixtures and nitric acid mixtures
Acetylene	Copper (tubing), fluorine, bromine, chlorine, iodine, silver, mercury, and their compounds
Alkali metals: calcium, potassium and sodium, cesium, lithium	Water, carbon dioxide, carbon tetrachloride, and other chlorinated hydrocarbons
Ammonia, anhydrous	Mercury, halogens, calcium hypochlorite, hydrogen fluoride
Ammonium nitrate	Acids, metal powders, flammable liquids, chlorates, nitrates, sulfur, and finely divided organics or combustibles
Aniline	Nitric acid and hydrogen peroxide
Bromine	Ammonia, acetylene, butadiene, butane, hydrogen, sodium carbide, turpentine, and finely divided metals
Carbon activated with calcium hypochlorite	All oxidizing agents
Chlorates	Ammonium salts, acids, metal powders, sulfur, finely divided organics or combustibles, and carbon
Chromic acid	Acetic acid, naphthalene, camphor, alcohol, glycerol, turpentine, and other flammable liquids
Chlorine dioxide	Ammonia, methane, phosphine, and hydrogen sulfide
Chlorine	Ammonia, acetylene, butadiene, benzene, and other petroleum fractions, hydrogen, sodium carbide, turpentine, and finely divided powdered metals
Copper	Acetylene and hydrogen peroxide
Cyanides	Acids and alkalis
Flammable liquids	Ammonium nitrate, chromic acid, hydrogen peroxide, nitric acid, sodium peroxide, halogens, or oxidizing agents

TABLE 8.2

Chemical incompatibility chart (cont.)

Chemical	Incompatible with these chemicals
Halogens: Fl, Cl Br, I	Ammonium, acetylene, and hydrocarbons
Hydrogen Peroxide	Copper, chromium, iron, most metals or their respective salts, flammable fluids and other combustible materials, aniline, and nitromethane
Hydrogen Sulfide	Fuming nitric acid and oxidizing gases
Hydrocarbons, general	Fluorine, chlorine, formine, chromic acid, sodium peroxide, and oxidizing agents
Iodine	Acetylene and ammonia
Mercury	Acetylene, fulminic acid, and hydrogen
Nitric acid	Acetic, chromic, and hydrocyanic acids; aniline, carbon, hydrogen sulfide; fluids or gases; substances that are readily nitrated
Oxygen	Oils; grease; hydrogen; flammable liquids, solids, and gases
Oxalic acid	Silver and mercury
Perchloric acid	Acetic anhydride, bismuth and its alloys, alcohol, paper, and wood and other organic materials
Phosphorus pentoxide	Water
Potassium permanganate	Glycerol, ethylene glycol, benzaldehyde, and sulfuric acid
Silver	Acetylene, oxalic acid, tartaric acid, and ammonium compounds
Sodium azide	Preservative that forms unstable explosive compounds when exposed to lead, copper, and other metals. If disposed of by flushing into sinks, the trap can explode when worked on by a plumber.
Sodium peroxide	Any oxidizable substance (i.e., methanol, glacial acetic acid, acetic anhydride, benzaldehyde, carbon disulfide, glycerol, ethylene glycol, ethyl acetate, and furfural)
Sodium	Carbon tetrachloride, carbon dioxide, and water
Sulfuric acid	Chlorates, perchlorates, permanganates, oxidizing agents, and water