

## Common Chemical Compatibility Chart

Chemical	Incompatible with
acetic acid	chromic acid, nitric acid, perchloric acid, peroxides, permanganates
acetic anhydride	Hydroxyl-containing compounds such as ethylene glycol and perchloric acid
acetylene	chlorine, bromine, copper, fluorine, silver, mercury
acetone	concentrated nitric and sulfuric acid mixtures
alkali and alkaline earth metals	water, carbon tetrachloride or other chlorinated hydrocarbons, carbon dioxide, halogens
ammonia (anhydrous)	mercury, chlorine, calcium hypochlorite, iodine, bromine, hydrofluoric acid (anhydrous)
ammonium nitrate	acids, powdered metals, flammable liquids, chlorates, nitrates, sulfur, finely divided organic or combustible materials
aniline	nitric acid, hydrogen peroxide
arsenical materials	any reducing agent
azides	acids
bromine	see chlorine
calcium oxide	water
carbon (activated)	calcium hypochlorite, all oxidizing agents
carbon tetrachloride	sodium
chlorates	ammonium salts, acids, powdered metals, sulfur, finely divided organic or combustible materials
chromic acid and chromium trioxide	acetic acid, naphthalene, camphor, glycerol, alcohol, flammable liquids in general
chlorine	ammonia, acetylene, butadiene, butane, methane, propane or other petroleum gases, hydrogen, sodium carbide, benzene, finely divided metals, turpentine
chlorine dioxide	ammonia, methane, phosphine, hydrogen sulfide
copper	acetylene, hydrogen peroxide
cumene hydroperoxide	acids (organic and inorganic)
cyanides	acids
flammable liquids	ammonium nitrate, chromic acid, hydrogen peroxide, nitric acid, sodium peroxide, halogens
fluorine	everything
hydrazine	hydrogen peroxide, nitric acid, any other oxidant
hydrocarbons (e.g., propane, butane, benzene)	fluorine, chlorine, bromine, chromic acid, sodium peroxide
hydrocyanic acid	nitric acid, alkali
hydrofluoric acid (aqueous or anhydrous)	ammonia (aqueous or anhydrous)
hydrogen peroxide	copper, chromium, iron, most metals or their salts, alcohols, acetone, organic materials, aniline, nitromethane, combustible materials
hydrogen sulfide	fuming nitric acid, oxidizing gases
hypochlorites	acids, activated carbon
iodine	acetylene, ammonia (aqueous or anhydrous), hydrogen
mercury	acetylene, fulminic acid, ammonia
nitrates	sulfuric acid
nitric acid (concentrated)	acetic acid, aniline, chromic acid, hydrocyanic acid, hydrogen sulfide, flammable liquids, flammable gases, copper, brass, any heavy metals
nitrites	acids
nitroparaffins	inorganic bases, amines
oxalic acid	silver, mercury
oxygen	oils, grease, hydrogen, flammable liquids, solids, or gases
perchloric acid	acetic anhydride, bismuth and its alloys, alcohol, paper, wood, grease, oils

## Common Chemical Compatibility Chart

Chemical	Incompatible with
<b>peroxides, organic</b>	acids (organic or mineral), avoid friction, store cold
<b>phosphorus (white)</b>	air, oxygen, alkalis, reducing agents
<b>phosphorus pentoxide</b>	alcohols, strong bases, water
<b>potassium</b>	carbon tetrachloride, carbon dioxide, water
<b>potassium chlorate</b>	sulfuric and other acids
<b>potassium perchlorate (also see chlorates)</b>	sulfuric and other acids
<b>potassium permanganate</b>	glycerol, ethylene glycol, benzaldehyde, sulfuric acid
<b>selenides</b>	reducing agents
<b>silver and silver salts</b>	acetylene, oxalic acid, tartaric acid, ammonium compounds, fulminic acid
<b>sodium</b>	carbon tetrachloride, carbon dioxide, water
<b>sodium nitrite</b>	ammonium nitrate and other ammonium salts
<b>sodium peroxide</b>	ethanol and methanol, glacial acetic acid, acetic anhydride, benzaldehyde, carbon disulfide, glycerin, ethylene glycol, ethyl acetate, methyl acetate, furfural
<b>sulfides</b>	acids
<b>sulfuric acid</b>	potassium chlorate, potassium perchlorate, potassium permanganate (and similar compounds of light metals such as sodium, lithium)
<b>tellurides</b>	reducing agents