



## Guidelines for Incompatible Chemicals

Following is a list of common chemicals followed by substances from which they should be kept separated:

<u>Chemicals</u>	<u>Avoid</u>
Acetic Acid	Chromic acid, nitric acid, hydroxyl containing compounds, ethylene glycol, perchloric acid, peroxides and permanganates.
Acetone	Concentrated nitric and sulfuric mixtures
Acetylene	Chlorine, bromine, copper, silver, fluorine and mercury
Alkali and Alkaline Earth Metals, such as Sodium Potassium, Cesium, Lithium, Magnesium, Calcium also Aluminum	Carbon dioxide, carbon tetrachloride and other chlorinated hydrocarbons. (Also prohibit water, foam and dry chemical on fires involving these metals.
Ammonia (Anhydrous)	Mercury, chlorine, calcium hypochlorite, Iodine, bromine and hydrogen fluoride, any mineral acids.
Ammonium Nitrate	Acids, metal powders, flammable liquids, chlorates, nitrates, sulfur, finely divided organics or combustibles
Aniline	Nitric acid, hydrogen peroxide
Antimony Pentasulfide (Golden Antimony Sulfide)	Chlorates, nitrates, other oxidizing agents, acids
Bromine	Ammonia, acetylene, butadiene, butane and other petroleum gases, hydrogen, sodium carbide, turpentine, benzene and finely divided metals
Bronze Dust	Aluminum
Calcium Carbide (See also Acetylene)	Water

*Our Mission... Protect and enhance the safety and well being of residents, businesses, customers and partners.  
We will accomplish this by...Delivering exceptional service and compassionate solutions as a  
cohesive team with dedication, pride and vigilance*

## Chemicals

Calcium Hypochlorite

Carbon, Activated

Chlorates (see also Potassium chlorate)

Chlorine

Chlorine Dioxide  
(Chlorine Peroxide)

Chlorosulfonic Acid

Chromic Acid  
(Chromium Trioxide)

Copper

Cumene Hydroperoxide

Fluorine

Hydrocarbons (Benzene, Butane, Propane,  
Gasoline, Turpentine, etc.)

Hydrochloric Acid  
(Muriatic Acid)

Hydrocyanic Acid  
(Prussic Acid) (see also Cyanide)

Hydrofluoric Acid, Anhydrous  
(Hydrogen Fluoride)

Hydrogen Peroxide

Hydrogen Sulfide

Iodine

Mercury

Nitric Acid (concentrated)

## Avoid

Acids, moisture

Calcium hypochlorite

Ammonium salts, acids, metal powders, sulfur,  
finely divided organics or combustibles.

Ammonia, acetylene, butadiene, butane and  
other petroleum gases, hydrogen,  
hydrocarbons, sodium carbide, turpentine,  
benzene and finely divided metals

Carbon monoxide, mercury, ammonia,  
methane, phosphine and hydrogen sulfide

Water, metals

Acetic acid, naphthalene, camphor, glycerin,  
turpentine, alcohol and other flammable liquids.

Acetylene, hydrogen peroxide

Acids (organic or mineral)

Isolate from everything

Fluorine, chlorine, bromine, chromic acid,  
sodium peroxide

Nitric acid, chlorates, other oxidizing common  
metals

Nitric acid, alkalis

Ammonia, aqueous or anhydrous

Copper, chromium, iron, most metals or their  
salts, any flammable liquid, combustible  
materials, aniline, nitro methane

Fuming nitric acid, oxidizing gases, other  
oxidizing materials

Acetylene, ammonia (anhydrous or aqueous),  
hydrogen

Acetylene, fulminic acid, ammonia

Hydrocyanic acid and fulminates, picrates,  
chlorates, turpentine, carbides, metallic  
powders, acetic acid, aniline, chromic acid,  
hydrogen sulfide, flammable liquids, flammable  
gases and nitritable substances

## Chemicals

## Avoid

Oleum (Fuming Sulfuric Acid) (See also Sulfuric Acid)	Water
Oxalic Acid	Silver, mercury
Oxygen (Compressed or Liquid)	Oils, grease, hydrogen, flammable liquids - solids or gases
Perchloric Acid	Acetic Anhydride, bismuth and its alloys, alcohols, paper, wood, any dehydrating agents
Phosphorus (White)	Air, oxygen
Picric Acid	Metals
Potassium Chlorate	Acids, sulfur, phosphorus, sulfites, hypophosphites, finely divided organics or combustibles
Potassium Permanganate (See also Chlorates)	Acids, finely divided organics or combustibles
Silver	Acetylene, oxalic acid, tartaric acid, fulminic acid, ammonium compounds, picric acid
Sodium (See Alkali Metals)	
Sodium Chlorite	Combustible materials, sulfur, acids
Sodium Nitrate	Ammonium nitrate and other ammonium salts
Sodium Peroxide	Any oxidizable substance such as ethanol, methanol, glacial acetic acid, acetic anhydride, benzaldehyde, carbon disulfide, glycerin, ethylene glycol, ethyl acetate, methyl acetate, and furfural
Sulfur	Chlorates, nitrates, other oxidizing materials
Sulfuric Acid	Sulfides, nitrates, nitrites, fluorides, bromides, iodides, fulminates, saltpeter, metallic powders, carbides, picrates, chlorates, perchlorates, permanganates and other combustible materials.
Titanium	Don't use water, carbon tetrachloride, foam or dry chemical on titanium fires
Zinc Powder or Dust	Acids, sodium hydroxide, potassium hydroxide, moisture