



## GENERAL RULES FOR CHEMICAL STORAGE:

1. Do not store liquid chemicals above shoulder height. Lips or restraints on storage shelves are recommended to prevent bottles from falling off.
2. Label storage areas and cabinets to identify hazard classification.
3. Ensure products are properly labeled before storage.
4. Flammable chemicals must be stored in flammable storage cabinets or storage rooms with only small quantities available for immediate use.
5. Storage of chemicals on the floor should be avoided. If bottles are stored on the floor they are to be contained in a form of secondary containment.
6. Excessive chemical storage in hoods is not acceptable; this practice interferes with the airflow in the hood.
7. Stored chemicals shall be in cool and dry areas.
8. Chemical waste shall be placed in the appropriate waste containers and segregated.
9. Chemicals should be dated when received and any old chemicals should be disposed of through the hazardous waste system.

Hazard Classification	Incompatibility
Acids	Organic acids should be kept separate from inorganic (mineral) acids; store away from bases, metals, flammables and oxidizing materials
Bases	May react violently with acids, oxidizers or flammables
Oxidizers	Keep away from acids, bases, organics, metals; keep cool and away from flammable materials
Flammable liquids	Keep separate from acids, bases, and oxidizers; away from ignition sources

**SPECIFIC CHEMICAL COMPATIBILITY GUIDELINES:**

The following list is to be used only as a general guideline. Please refer to your Material Safety Data Sheets (MSDS) for specific incompatibilities.

Chemical	Incompatible With
Acetic Acid	Chromic acid, nitric acid, hydroxyl compounds, ethylene glycol, perchloric acid, peroxides, permanganates
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, nitrites, sulfur, finely divided organic combustible materials
Aniline	Nitric acid, hydrogen peroxide
Arsenic materials	Any reducing agent
Azides	Acids
Bromine	See chlorine
Calcium oxide	Water
Carbon (activated)	Calcium hypochlorite, all oxidizing agents
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 peroxides
Cumene hydroperoxide	Acids (organic or inorganic)
Cyanides	Acids
Flammable liquids	Ammonium nitrate, chromic acid, hydrogen peroxide, nitric acid, sodium peroxide, halogens
Fluorine	All other chemicals
Hydrocarbons (such as butane, propane, benzene)	Fluorine, chlorine, bromine, carbonic acid, sodium peroxide
Hydrocyanic acid	Nitric acid, alkali
Hydrofluoric acid (anhydrous)	Ammonia (aqueous or anhydrous)
Hydrogen sulfide	Fuming nitric acid, oxidizing gases
Hypochlorites	Acids, activated carbon
Iodine	Acetylene, ammonia (aqueous or anhydrous), hydrogen
Mercury	Acetylene, fulminic acid, ammonia
Nitrates	Acids
Nitric acid (concentrated)	Acetic acid, aniline, chromic acid, hydrocyanic acid, hydrogen sulfide, flammable liquids and gases, copper, brass, any heavy metals
Nitrites	Acids
Nitroparaffins	Inorganic bases, amines
Oxalic acid	Silver, mercury
Oxygen	Oils, grease, hydrogen, flammable liquids, solids and grease

Perchloric acid	Acetic anhydride, bismuth and its alloys, alcohol, paper, wood, grease, oil
Peroxides, organic	Acids (organic or mineral), avoid friction, store cold
Phosphorous (white)	Air, oxygen, alkalies, reducing agents
Potassium	Carbon tetrachloride, carbon dioxide, water
Potassium chlorate	Sulfuric and other acids
Potassium perchlorate (also see chlorates)	Sulfuric and other acids
Potassium permanganate	Glycerol, ethylene glycol, benzaldehyde, sulfuric acid
Selenides	Reducing agents
Silver	Acetylene, oxalic acid tartaric acid, ammonium compounds, fulminic acid
Sodium	Carbon tetrachloride, carbon dioxide, water
Sodium nitrite	Ammonium nitrate and other ammonium salts
Sodium peroxide	Ethyl or methyl alcohol, glacial acetic acid, acetic anhydride, benzaldehyde, carbon disulfide, glycerin, ethylene glycol, ethylacetate, methyl acetate, furfural
Sulfides	Acids
Sulfuric acid	Potassium chlorate, potassium perchlorate, potassium permanganate (similar compounds or light metals such as sodium, lithium)
Tellurides	Reducing agents