

Table of Incompatible Chemicals

Chemical Compound	Incompatible With
Acetic Acid	Chromic Acid, Nitric Acid, Hydroxyl Compounds, Ethylene Glycol, Perchloric Acid, Peroxides, Permangantes
Acetylene	Chlorine, Bromine, Copper, Fluorine, Silver, Mercury
Acetone	Concentrated Nitric And Sulfuric Acid Mixtures
Alkali and Alkaline Earth (e.g. Powdered Aluminum or Magnesium, Calcium, Lithium, Sodium, Potassium)	Water, Carbon Tetrachloride or other Chlorinated Metals Hydrocarbons, Carbon Dioxide, Halogens
Ammonia (Anhydrous)	Mercury (e.g. in Manometers), Chlorine, Calcium Hypochlorite, Iodine, Bromine, Hydrofluoric Acid (Anhydrous)
Ammonium Nitrate	Acids, Powdered Metals, Flammable Liquids, Chlorates, Nitrates, Sulfur, Finely Divided Organic or Cumbustible Materials
Aniline	Nitric Acid, Hydrogen Peroxide
Arsenical Materials	Any Reducing Agent
Azides	Acids
Bromine	See Chlorine
Calcium Oxide	Water
Carbon (Activated)	Calcium Hyperchlorite, All Oxidizing Agents
Carbon Tetrachloride	Sodium
Chlorates	Ammonium Salts, Acids, Powdered Metals, Sulfur, Finely Divided Organic or Combustible Materials
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 or Inorganic)
Cyanides	Acids
Flammable Liquids	Ammonium Nitrate, Chromatic Acid, Hydrogen Peroxide, Nitric Acid, Sodium Peroxide,

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	Halogens
Fluorine	Isolate From Everything
Hydrocarbons (e.g. Butane, Benzene)	Flourine, Chlorine, Bromine, Chromic Acid, Sodium Peroxide
Hydrocyanic Acid	Nitric Acid, Alkali
Hydrofluoric Acid (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
Nitroparaffins	Inorganic Bases, Amines
Oxalic Acid	Silver, Mercury
Oxygen	Oils, Grease, Hydrogen, Flammable Liquids, Solids
Perchloric Acid	Acetic Anhydride, Bismuth and its Alloys, Alcohol, Paper, Wood, Grease, Oils
Peroxides, Organic	Acids (Organic or Mineral), Avoid Friction, Store Cold
Phosphorus (White)	Air, Oxygen, Alkalis, Reducing Agents
Phosphorus Pentoxide	Water
Potassium	Carbon Tetrachloride, Carbon Dioxide, Water
Potassium Chlorate	Sulfuric and Other Acids
Potassium Perchlorate (See Also Chlorates)	Sulfuric and Other Acids
Potassium Permanganate	Glycerol, Ethylene Glycol, Benzaldehyde, Sulfuric Acid
Selenides	Reducing Agents
Sodium	Carbon Tetrachloride, Carbon Dioxide, Water
Sodium Nitrate	Ammonium Nitrate and Other Ammonium Salts

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Sodium Peroxide	Ethyl or Methyl Alcohol, Glacial Acetic Acid, Acetic Anahydride, Benzaldehyde, Carbon Disulfide, Glycerin, Ethylene Glycol, Ethyl Acetate, Methyl Acetate, Furfural
Sulfides	Acids
Sulfuric Acid	Potassium Chlorate, Potassium perchlorate, Potassium Permanganate (Similar Compounds of Light Metals, Such as Sodium, Lithium)
Tellurides	Reducing Agents

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b. Source: *Prudent Practices for Handling Chemicals in Laboratories*,
National Research Council, Washington, D.C., 1995.