The following list is a quick reference of incompatibilities of many chemicals commonly encountered in the laboratory. It is not a comprehensive list of all possible combinations and chemicals. For details on any chemical, check the MSDS, and follow the segregation guidelines in **5. Storage of Chemicals**.

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| Chemical | Incompatibilities for Chemical Storage |
| Acetic Acid | Aldehydes, bases, carbonates, chromic acid, ethylene glycol, hydroxides, metals, oxidizers, perchloric acid, peroxides, permanganates, phosphates, xylene |
| Acetic Anhydride | Acids, alcohols, bases, finely divided metals, oxidizers, reducing agents |
| Acetone | Inorganic acids, amines, hydrogen peroxide, oxidizers, plastics |
| Acetylene | Copper metal, halogens, mercury, potassium, silver, oxidizers |
| Alkalis | Acids, carbon dioxide, chlorinated hydrocarbons, chromium, flammable liquids, mercury, oxidizers, salt, sulphur, water |
| Ammonium Nitrate | Acids, alkalis, chlorates, fine organic powders, metals, nitrates, oxidizers, sulfur |
| Aniline | Inorganic acids, dibenzoyl peroxide, hydrogen peroxide, oxidizers |
| Azides | Acids, heavy metals, oxidizers |
| Bromine | Acetaldehyde, acetylene, alcohols, alkalis, amines, benzene, butadiene, butane and other petroleum gases, ethylene, fluorine, hydrogen, ketones, finely divided metals, sodium carbide, sulfur, turpentine |
| Calcium Oxide | Acids, ethanol, fluorine |
| Carbon (activated) | Alkalis, oxidizers, calcium hypochlorite, halogens |
| Carbon Tetrachloride | Benzoyl peroxides, ethylene, fluorine, oxygen, silanes |
| Chlorates | Acids, ammonium salts, carbon, metal powders, sulfur, finely divided combustibles and organics |
| Chromic Acid | Acetic acid, acetone, alcohols, alkalis, ammonia, bases, camphor, flammable liquids, glycerine, turpentine |
| Chlorine | Acetylene, ammonia, benzene, butadiene, ethylene and other petroleum gases, hydrazine, hydrogen, hydrogen peroxide, iodine, sodium hydroxide, turpentine, other petroleum components, finely divided metals |
| Chlorine Dioxide | Ammonia, hydrogen, hydrogen sulfide, mercury, methane, phosphine, phosphorous, potassium hydroxide |
| Copper | Acetylene, calcium, hydrogen peroxide, oxidizers |
| Cyanides | Acids, alkalis, strong bases |
| Flammable Liquids | Ammonium nitrate, chromic acid, hydrogen peroxide, nitric acid, sodium peroxide, halogens |
| Fluorine | Ammonia, halocarbons, halogens, ketones, metals, organic acids, hydrocarbons, other combustible material |
| Hydrazine | Inorganic acids, hydrogen peroxides, oxidizers |
| Hydrocarbons | Acids, bases, oxidizers |
| Hydrochloric Acid | Alkali metals, amines, bases, copper, copper alloys, aluminium, moisture |
| Hydrofluoric Acid | Ammonia, glass, organics, sodium |
| Hydrogen Peroxide | Acetylaldehyde, acetic acid, acetone, alcohols, aniline, carboxylic acids, flammable liquids and combustible material, metals and their salts, nitric acid, nitromethane, organics, phosphorous, sodium, sulfuric acid |
| Hydrogen Sulfide | Acetylaldehyde, oxidizers, sodium |
| Hypochlorites | Acids, activated carbon |
| Iodine | Acetylaldehyde, acetylene, ammonia, hydrogen, sodium |
| Mercury | Acetylene, aluminium, amines, ammonia, calcium, fulminic acid, lithium, oxidizers |
| Nitrates | Sulfuric acid, other acids, nitrites |
| Nitric Acid (Conc.) | Acetic acid, acetonitrile, amines, ammonia, aniline, bases, benzene, brass, chromic acid, copper, cumene, flammable liquids and gases, formic acid, heavy metals, hydrogen sulfide, ketones, organic substances, sodium, toluene |
| Nitrites | Acids, nitrates |
| Nitroparaffins | Amines, inorganic bases |
| Oxalic Acid | Mercury, oxidizers, silver, sodium chlorite |
| Oxygen | Acetylaldehyde, alkalis, ammonia, carbon monoxide, ethers, flammable gases, liquids & solids, hydrocarbons, phosphorous |
| Perchloric Acid | Acetic acid, acetic anhydride, alcohols, aniline, bismuth and bismuth alloys, combustible materials, dehydrating agents, ethyl benzene, hydroiodic acid, hydrochloic acid, grease, iodides, ketones, other organic materials, oxidizers, pyridine |
| Peroxides, Organic | Acids (inorganic, organic) |
| Phosphorous | Air, alkalis, oxygen, reducing agents |
| Potassium | Acetylene, acids, alcohols, carbon dioxide, carbon tetrachloride, halogens, hydrazine, mercury, oxidizers, selenium, sulfur |
| Potassium Chlorate | Acids, ammonia, combustible materials, fluorine, hydrocarbons, metals, organic substances, sugars |
| Potassium Perchlorate | Acids, alcohols, combustible material, fluorine, hydrazine, metals, organic materials, reducing agents |
| Potassium Permanganate | Benzaldehyde, ethylene glycol, glycerol, sulfuric acid |
| Selenides | Reducing agents |
| Silver | Acetylene, ammonia, ammonium compounds, fulminic acid, oxalic acid, oxidizers, ozonides, peroxyformic acid |
| Sodium | Acids, carbon tetrachloride, carbon monoxide, hydrazines, metals, oxidizers, water |
| Sodium Nitrate | Acetc anhydride, acids, metals, organic matter, peroxyformic acid, reducing agents |
| Sodium Nitrite | Ammonium nitrate and ammonium salts |
| Sodium peroxide | Acetic acid, acetic anhydride, benzene, benzaldehyde, carbon disulfide, ethyl acetate, furfural, gylcerin, hydrogen sulfide, metals, methyl acetate, peroxyformic acid, phosphorous |
| Sulfides | Acids |
| Sulfuric Acid | Flammable and combustible liquids, potassium chlorate, potassium perchlorate, potassium permanganate, like compounds of sodium and lithium |
| Tellurides | Reducing agents |