

# COLUMBIA UNIVERSITY

## CHEMICAL SEGREGATION and STORAGE CHART

CLASS OF CHEMICALS	RECOMMENDED STORAGE METHOD	CHEMICAL EXAMPLES	INCOMPATIBLES SEE MSDS IN ALL CASES
<b>Compressed Gases - Flammable</b>	Store in a cool, dry area, away from oxidizing gases. Securely strap or chain cylinders to a wall or bench top.	Methane, Acetylene, Propane	Oxidizing and toxic compressed gases, oxidizing solids. <i>*Lecture-sized gas cylinders are not to be stored in cabinets with hazardous liquids*</i>
<b>Compressed Gases - Oxidizing</b>	Store in a cool, dry area, away from flammable gases and liquids. Securely strap or chain cylinders to a wall or bench top.	Oxygen, Chlorine, Bromine	Flammable gases. <i>*Lecture-sized gas cylinders are not to be stored in cabinets with hazardous liquids*</i>
<b>Compressed Gases - Poisonous</b>	Store in a cool, dry area, away from flammable gases and liquids. Securely strap or chain cylinders to a wall or bench top.	Carbon monoxide, Hydrogen sulfide	Flammable and/or oxidizing gases. <i>*Lecture-sized gas cylinders are not to be stored in cabinets with hazardous liquids*</i>
<b>Corrosives – Acids INORGANIC</b>	Store in a separate, lined/protected acid storage cabinet, or in deep corrosion-resistant spill trays. <i>*DO NOT store acids directly on metal shelves*</i>	<b>Inorganic (mineral) acids</b> - Hydrochloric acid, Hydrofluoric acid, Phosphoric acid, Sulfuric acid, Chromic acid, Nitric acid	Flammable liquids, flammable solids, bases, and oxidizers. <b>Organic acids</b>
<b>Corrosives – Acids ORGANIC</b>	Store in a separate, lined/protected acid storage cabinet, or in deep corrosion-resistant spill trays. <i>*DO NOT store acids directly on metal shelves*</i>	<b>Organic acids</b> - Acetic acid, Trichloroacetic acid, Lactic acid, Oxalic acid	Flammable liquids, flammable solids, bases, and oxidizers. <b>Inorganic acids</b>
<b>Corrosives - Bases</b>	Store in a separate storage cabinet or segregate with a deep, corrosion-resistant spill tray.	Ammonium hydroxide, Potassium hydroxide, Sodium hydroxide	Flammable liquids, oxidizers, poisons, and acids.
<b>Explosives</b>	Store in a secure location away from all other chemicals. Do not store in an area where they can fall.	Ammonium Nitrate, Nitro Urea, Sodium amide, Trinitroaniline, Trinitroanisole, Trinitrobenzene, Trinitrophenol/Picric acid, Trinitrotoluene (TNT)	All other chemicals. <i>*Keep away from sources of ignition*</i>
<b>Flammable Liquids</b>	Store in a flammable storage cabinet. <i>*Peroxide forming chemicals must be dated upon opening; e.g. Ether, Tetrahydrofuran, Dioxane*</i>	Acetone, Benzene, Diethyl ether, Methanol, Ethanol, Hexanes, Toluene	Acids, bases, oxidizers, and poisons. <i>*Keep away from sources of ignition*</i>
<b>Flammable Solids</b>	Store in a separate dry cool area away from oxidizers, corrosives.	Phosphorus, Carbon, Charcoal	Acids, bases, oxidizers, and poisons. <i>*Keep away from sources of ignition*</i>
<b>Water Reactive Chemicals</b>	Store in a dry, cool location. Protect from water and the fire sprinkler system, if applicable. Label location - WATER REACTIVE CHEMICALS-	Sodium metal, Potassium metal, Lithium metal, Lithium Aluminium hydride, Sodium Hydride	Separate from all aqueous solutions, and oxidizers.
<b>Oxidizers</b>	Store in a deep spill containment tray inside a non-combustible cabinet, separate from flammable or combustible materials and reducing agents.	Sodium hypochlorite, Benzoyl peroxide, Potassium permanganate, Potassium chlorate, Potassium dichromate. The following are generally considered oxidizing substances: Peroxides, Perchlorates, Chlorates, Nitrates, Bromates, Superoxides	Separate from reducing agents, flammables, and combustibles and organic materials.
<b>Reducing Agents</b>	Store in a deep spill containment tray inside a non-combustible cabinet, separate from oxidizers.	Lithium Aluminum Hydride, Sodium amalgam, Sodium Borohydride, Diisobutyl Aluminum Hydride, Formic Acid, Oxalic Acid	Oxidizers, Arsenic, Selenides
<b>Poisons/Toxic</b>	Store separately in a vented, cool, dry, area in chemically resistant secondary containers.	Cyanides, heavy metal compounds, i.e. Cadmium, Mercury, Osmium	Flammable liquids, acids, bases, and oxidizers.
<b>General Chemicals -Non-Reactive</b>	Store on general laboratory benches or shelving.	Agar, Sodium chloride, Sodium bicarbonate, and most non-reactive salts	See MSDS

Questions: Please contact the EH&S office at 4-8749 (MS) or 5-6780 (CUMC) and ask for a Lab Safety Officer  
 This form is available at: <http://www.ehs.columbia.edu/chemSegChart.pdf> updated: 10/13/09