



Chemical Segregation and Storage Guide

Chemical Storage

All chemical containers should be:

- Labeled
- Closed
- Free of residue and corrosion
- Not leaking, broken, or swelling

Avoid storing chemicals:

- On the floor
- On bench tops
- Under sinks (except cleaners)
- On high shelves without lips

Safety Contacts

University of Louisville Police Dept.
Non-Life Threatening (502) 852-6111

Environmental Health and Safety
(502) 852-6670






Emergency Manager
(502) 852-2948

Biological Safety Officer
(502) 852-2959

Radiation Safety Officer
(502) 852-6146

Hazardous Waste Coordinator
(502) 852-2956

DIAL 9-1-1
for Fire or Life-Threatening Emergency

Class of Chemicals	Examples	Recommended Storage	Keep Away From
Corrosive INORGANIC Acids 	Hydrochloric acid, hydrofluoric acid, phosphoric acid, sulfuric acid, chromic acid, perchloric acid, nitric acid, hydrobromic acid	Acid storage cabinet or deep corrosion-resistant spill trays. Keep away from water sources. Avoid storage directly on metal shelves.	Flammable liquids, flammable solids, bases, organic acids , oxidizers, poisons.
Corrosive ORGANIC Acids 	Acetic acid, trichloroacetic acid, formic acid	Acid storage cabinet or deep corrosion-resistant spill trays. Keep away from water sources. Avoid storage directly on metal shelves.	Flammable liquids, flammable solids, bases, inorganic acids , oxidizers, poisons.
Corrosive Bases/Caustics 	Ammonium hydroxide, sodium hydroxide solutions	Separate storage cabinet or deep corrosion-resistant spill trays. Keep away from water sources.	Flammable liquids, flammable solids, acids, oxidizers, poisons.
Explosives 	Ammonium nitrate, nitro urea, sodium amide, trinitroaniline, trinitroanisole, trinitrobenzene, picric acid, TNT, trinitrobenzoic acid, azides, perchlorates	Separate storage area from all other chemicals. Secure from falling.	All other chemicals. Heat, open flames, direct sunlight, spark sources, and ignition sources.
Flammable Liquids 	Acetone, benzene, diethyl ether, methanol, ethanol, toluene, hexanes	Flammables storage cabinet (except small working quantities) or approved flammable storage refrigerator.	Acids, bases, oxidizers, poisons. Heat, open flames, direct sunlight, spark sources, and ignition sources.



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Class of Chemicals	Examples	Recommended Storage	Keep Away From
Flammable Solids 	Phosphorous, magnesium, carbon	Separate storage area from oxidizers and corrosives.	Acids, bases, oxidizers, poisons. Heat, open flames, direct sunlight, spark sources, and ignition sources
Oxidizers 	Sodium hypochlorite, benzoyl peroxide, potassium permanganate, potassium dichromate, peroxides, perchlorates, chlorates, nitrates, bromates, superoxides	Deep spill containment trays inside non-combustible cabinet separate from flammables, combustible materials, and reducing agents. Separate inorganic oxidizers and organic peroxides via trays.	Reducing agents, flammables, combustibles, organic materials, corrosives. Very strong: glass or inert containers. No cork or rubber stoppers.
Reducing Agents	Lithium aluminum hydride, sodium amalgam, sodium borohydride, diisobutyl aluminum hydride, formic acid, oxalic acid	Deep spill containment trays inside non-combustible cabinet separate oxidizers.	Oxidizers, arsenic, selenides.
Water Reactive Materials	Sodium metal, potassium metal, lithium metal, lithium aluminum hydride, sodium hydride, borohydrides	Keep away from water sources. Store in desiccators or glove boxes filled with dry gases. Label location of storage area. If flammable solid, store are such. Otherwise, store alone.	Aqueous solutions, oxidizers.
Poisons 	Cyanides, heavy metal compounds, acrylamide, DMSO	Vented, cool dry area in unbreakable chemically resistant secondary container.	Flammable liquids, acids, bases, oxidizers.



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Class of Chemicals	Examples	Recommended Storage	Keep Away From
Flammable Compressed Gases 	Methane, acetylene, propane	Away from oxidizing gases. Securely chain cylinders. Do not store lecture-size gas cylinders in cabinets with hazardous liquids.	Oxidizing and toxic compressed gases, oxidizing solids.
Oxidizing Compressed Gases 	Oxygen, chlorine, bromine	Away from flammable gases. Securely chain cylinders. Do not store lecture-size gas cylinders in cabinets with hazardous liquids.	Flammable gases.
Poisonous Compressed Gases 	Carbon monoxide, hydrogen sulfide	Away from flammable and oxidizing gases. Securely chain cylinders. Do not store lecture-size gas cylinders in cabinets with hazardous liquids.	Flammable gases, oxidizing gases.
Inert Compressed Gases 	Nitrogen, helium, argon	Securely chain cylinders. Do not store lecture-size gas cylinders in cabinets with hazardous liquids.	Refer to SDS.

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