

RELATED AND COMPATIBLE STORAGE GROUPS

Inorganic Family

Metals, hydrides
 Halides, sulfates, sulfites, thiosulfates, phosphates, halogens
 Amides, nitrates (except ammonium nitrate), nitrites, azides;
 Hydroxides, oxides, silicates, carbonates, carbon
 Sulfides, selenides, phosphides, carbides, nitrides
 Chlorates, perchlorates, perchloric acid, chlorites, hypochlorites,
 peroxides, hydrogen peroxide
 Arsenates, cyanides, cyanates
 Borates, chromates, manganates, permanganates
 Nitric acid, other inorganic acids
 Sulfur, phosphorus, arsenic, phosphorus pentoxide

Organic Family

Acids, anhydrides, peracids
 Alcohols, glycols, amines, amides, imines, imides
 Hydrocarbons, esters, aldehydes
 Ethers, ketones, ketenes, halogenated hydrocarbons, ethylene oxide
 Epoxy compounds, isocyanates;
 Peroxides, hydroperoxides, azides
 Sulfides, polysulfides, sulfoxides, nitrites
 Phenols, cresols

NOTE: Store flammables in a storage cabinet for flammable liquids or in safety cans. Separate chemicals into their organic and inorganic families and then related and compatible groups, as shown. Separation of chemical groups *can be by different shelves within the same cabinet*. Do NOT store chemicals alphabetically as a general group. This may result in incompatibles appearing together on a shelf. Rather, store alphabetically within compatible groups. This listing is only a suggested method of arranging chemical materials for storage and is not intended to be complete.

CLASSES OF INCOMPATIBLE CHEMICALS

A incompatible with	B	A incompatible with	B	A incompatible with	B
Alkali and alkaline earth Carbides Hydrides Hydroxides Metals Oxides Peroxides	Water Acids Halogenated organic compounds Halogenating agents Oxidizing agents ¹	Nitrates, inorganic	Acids Oxidizing agents ¹	Organic nitro compounds	Strong bases
Azides, inorganic	Acids Heavy metals and their salts Oxidizing agents ¹	Organic acyl halides	Oxidizing agents ¹ Bases Organic hydroxy and amino compounds	Oxidizing agents ¹ Chlorates Chromates Chromium trioxide Dichromates Halogens Halogenating agents Hydrogen peroxide Nitric acid Nitrates Perchlorates Peroxides Permanganates Persulfates	Reducing agents ¹ Ammonia, anhydrous and aqueous Carbon Metals Metal hydrides Nitrites Organic compounds Phosphorus Silicon Sulfur
Cyanides, inorganic	Acids Strong bases	Organic anhydrides	Bases Organic hydroxy and amino compounds	Reducing agents ¹	Oxidizing agents ¹ Arsenates Arsenites Phosphorus Selenites Selenates Tellurium salts and oxides
Nitrates, inorganic	Acids Reducing agents ¹	Organic halogen compounds	Group IA and IIA metals Aluminum	Sulfides, inorganic	Acids

¹ The examples of oxidizing and reducing agents are illustrative of common laboratory chemicals; they are not intended to be exhaustive.