

Chemical storage by Hazard Category and Incompatibilities

Always check section 2 of the Safety Data Sheet for the hazards and section 7 for storage requirements.

Further guidance can be found in Brethericks and Armour. The NIOSH pocket guides also reference compatibility.

Below is a simple guide for reference.

Principle Container symbol		Flammable liquids	Halogenated Solvents	Acids – Mineral (inorganic)	Acids - Organic	Acids - Oxidising	Alkalis (bases)	Oxidisers	Highly toxic - inorganic	Organic bases	Water / Air reactive
	Flammable liquids	Methanol Toluene THF, Acetone									
	Halogenated Solvents		Chloroform Dichloromethane								
	Acids – Mineral (inorganic)			Hydrochloric acid Phosphoric acid Sulphuric acid							
	Acids - organic				Acetic acid Benzoic acid Formic acid						
	Acids - oxidising					Nitric acid ¹ Sulphuric acid Perchloric acid					
	Alkalis (bases)						Sodium hydroxide Sodium carbonate				
	Oxidisers							Permanganates Perchlorates Selenium dioxide			
	Highly toxic - inorganic								Fluorine Chlorine		
	Organic Bases ²									Triethylamine Diethylamine triethanolamine	
	Water / Air reactive										Alkyl lithium LiAlH ₄

Key

	Can be store together in same cabinet		May be able to be stored together. May require to be stored on different shelves within the cabinet or a secondary container may be satisfactory. Consult the safety data sheet (SDS).		Items that must not be stored together. However, there may be occasions where volumes are low (less than 100 ml) and there is adequate separation and secondary containment to allow storage within the same cabinet. Check the safety data sheet.
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1 Must always be stored in a 'safe pack' type secondary container

2 Usually also highly toxic

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The following chemicals are incompatible with all other hazard groups and hence it is recommended that they are stored separately in suitable containers/ cabinets. There may be other materials that fall into this category, consult safety data sheet and appropriate research reports. These materials may also be subject to other statutory requirements which must be considered prior to purchase in a pre-use risk assessment.

- Picric Acid moist
- Phosphorous
- Benzyl Azide

Basic principles of Chemical Storage

Store like with like. Segregate incompatible liquids to prevent interactions, some powders may also have special storage requirements. Keep stocks to a minimum and dispose of materials no longer needed. Use the cabinet storage guide to determine whether a cabinet is required and store in accordance with the hazard and information provided on the safety data sheet. All other materials can be stored together in a manner which allows them to be readily found when needed.