

Appendix D

Chemical Compatibility Chart

Below is a chart adapted from the CRC Laboratory Handbook which groups various chemicals into 23 groups with examples and incompatible chemical groups. This chart is by no means complete but it will aid in making decisions about storage. For more complete information please refer to the [MSDS](#) for the specific chemical.

Group	Name	Example	Incompatible Groups
Group 1:	Inorganic Acids	Hydrochloric acid Hydrofluoric acid Nitric acid Sulfuric acid	2,3,4,5,6,7,8,10,13,14,16,17,18,19,21,22,23
Group 2:	Organic acids	Acetic acid Butyric acid Formic acid Propionic acid	1,3,4,7,14,16,17,18,19,22
Group 3:	Caustics	Sodium hydroxide Ammonium hydroxide solution	1,2,6,7,8,13,14,15,16,17,18,20,23
Group 4:	Amines and Alkanolamines	Aminoethylethanolamine Aniline Diethanolamine Diethylamine Ethylenediamine Monoethanolamine Triethanolamine Triethylamine Triethylenetetramine	1,2,5,7,8,13,14,15,16,17,18,23
Group 5:	Halogenated Compounds	Carbon tetrachloride Chlorobenzene Chloroform Methylene chloride Carbon Tetrachloride 1,2,4-Trichlorobenzene 1,1,1-Trichloroethane Trichloroethylene Trichlorofluoromethane	1,3,4,11,14,17
Group 6:	Alcohols Glycols Glycol Ether	1,4-Butanediol Butanol (iso, n, sec, tert) Diethylene glycol Ethyl alcohol Ethyl butanol Ethylene glycol Furfuryl alcohol Isoamyl alcohol Methyl alcohol Propylene glycol	1,7,14,16,20,23
Group 7:	Aldehydes Acetaldehyde	Acrolein Butyraldehyde Formaldehyde Paraformaldehyde Propionaldehyde	1,2,3,4,6,8,15,16,17,19,20,23

Group 8:	Ketones	Acetone Acetophenone Diisobutyl ketone Methyl ethyl ketone	1,3,4,7,19,20
Group 9:	Saturated Hydrocarbons	Cyclohexane Heptane Paraffins Pentane Petroleum ether	20
Group 10:	Aromatic Hydrocarbons	Benzene Ethyl benzene Naphtha Toluene Xylene	1,20
Group 11:	Olefins	Butylene 1-Decene 1-Dodecene Ethylene Turpentine	1,5,20
Group 12:	Petroleum Oils	Asphalt Gasolines Mineral Oil	20
Group 13:	Esters	Amyl acetate Butyl acetates Ethyl acetate	1,3,4,19,20
Group 14:	Monomers Polymerizable Esters	Acrylic acid Acrylonitrile Butadiene Acrylates	1,2,3,4,5,6,15,16,19,20,21,23
Group 15:	Phenols	Cresote Cresols Phenol	3,4,7,14,16,19,20
Group 16:	Alkylene Oxides	Ethylene oxide Propylene oxide	1,2,3,4,6,7,14,15,17,18,19,23
Group 17:	Cyanohydrins	Acetone cyanohydrin Ethylene cyanohydrin	1,2,3,4,5,7,16,19,23
Group 18:	Nitriles	Acetonitrile Adiponitrile	1,2,3,4,16,23
Group 19:	Ammonia	Ammonia gas Ammonium Hydroxide	1,2,7,8,13,14,15,16,17,20,23
Group 20:	Halogens	Chlorine Fluorine	3,6,7,8,9,10,11,12,13,14,15,19,21,22
Group 21:	Ethers	Diethyl Ether THF	1,14,20
Group 22:	Phosphorus	Phosphorus, Elemental	1,2,3,20
Group 23:	Acid Anhydrides	Acetic anhydride Propionic anhydride	1,3,4,6,7,14,16,17,18,19