


HS621	
List of Common Unstable Chemicals	

The following list of Unstable Chemicals has been put together based on information from AS2243.2 Safety in Laboratories – Chemicals

Substance	Main Hazard
Acetylene and Acetylides	Acetylides are touch sensitive detonators. Acetylene can form Acetylides if it reacts with salts of silver and copper
Azides and Silvering Solutions	Sodium Azide is the only common stable azide. Use of it in chemical procedures may lead to formation of an explosive oxide or explosive hydrazoic acid. Silver azide is touch sensitive.
Azo and Diazo compounds	Dangerously unstable
Chlorates and Perchlorates	Dangerously unstable
Chlorides of Aluminium, Silicon and Titanium	Readily hydrolysed. Any water vapour that comes into contact with them can form hydrogen chloride gas. Resealed bottles or ampules may develop high pressures. Face shields must be worn.
Ethers, Dioxane, Tetrahydrofuran	Prone to aerial oxidation to peroxides. They must not be kept for long periods in part used bottles. Check their expiry date.
Nitro-compounds, Picric acid, Trinitrobenzene	Potentially explosive. Need to be kept wetted.
Nitrogen Halides (eg. chlorine, bromine, iodine)	Reaction between Ammonia and halides produces highly explosive compounds (e.g. touch sensitive nitrogen tri-iodide)
Organic Salts of Per-Acids	Reaction between an organic base (e.g. pyridine) and an inorganic oxidizing agent (perchromic acid) produces a salt which can be explosive
Peroxides, Benzoyl Peroxide	Concentrated hydrogen peroxide must be handled with care. Excess must be chemically destroyed. Organic peroxides may spontaneously explode violently. Any rise in temperature from room temperature increases the risk of explosion.