



This form is to be used in conjunction with the Environment Health and Safety Manual Procedure 3.2 Hazard Identification, Assessment and Control - Application.

Information of Activity

Activity: Storage and use of Class 4 chemicals Location: Chemistry

Identified by: G. Papadopoulos Date: 31/1/06

Identified Hazard / Aspect: Fire/explosion hazard, exposure to worker (toxic/corrosive sub risk)

Risk Analysis matrix – level of risk

Identified Hazards	Risk Assessment			Risk Score	Risk Level
	Exposure (E)	Likelihood (L)	Consequence (C)	E x L x C	
Fire/explosion hazard	3	0.3	10	9	M
Exposure to worker (Class 6 or 8 sub risk)	3	0.3	2	1.8	L

Definitions

Exposure	E	Likelihood	L	Consequence	C	Risk Score	Hierarchy of Risk Controls
Continuously	10	Almost Certain	1.0	Catastrophic	20	E >20 H >10 M 3-10	Elimination is a permanent solution and should be attempted in the first instance. Substitution involves replacing the hazard or environmental aspect by one of lower risk. Engineering controls involve physical barriers or structural changes to the environment or process. Administrative controls reduce hazard by altering procedures and providing instructions. Personal protective equipment last resort or temporary control.
Frequently	6	Likely	0.6	Major	10		
Occasionally	3	Possible	0.3	Moderate	5		
Infrequently	2	Unlikely	0.1	Minor	2	L < 3	
Rarely	1	Rare	0.05	Insignificant	1		

LEGEND

E: extreme/significant risk; immediate action required; must be managed by senior management with a detailed plan, notify RMO immediately.

H: high risk, senior management attention needed, detailed research and management planning at senior levels

M: moderate risk, management responsibility must be specified; manage by specific monitoring or response procedures

L: low risk, manage by routine procedures; unlikely to need specific allocation of resources

Details of Risk Controls to be Taken

Risk Controls: (These should be determined by both the person(s) identifying the risk and the responsible manager and HSR or Environmental Representative). When determining risk controls refer to Hierarchy of Risk Control. Some examples are operating manuals, safe work procedures, licenses, permits to work, training and instruction etc

Storage: Flammable solids must be stored separately in a designated cupboard, or on open shelves segregated from Classes 3, 5.1 and 5.2. (Segregation=reasonable space or physical barrier separating incompatibles, vertically and horizontally). Particular attention should be paid to chemicals that need specific storage requirements, such as the need to be wetted with stabilisers. Eg Sodium, Lithium and Potassium metals (Class 4.3) need to be kept in oil to avoid contact with water or moisture from the air. Picric acid and Phosphorous (Class 4.1) need to be kept in water to prevent them drying out, as dry materials are touch sensitive high explosives. These products should be checked regularly as part of the regular Laboratory Inspection to ensure integrity of packaging and content of stabilizer. The packages should also be inverted gently on a regular basis to prevent the risk of drying out in the upper section of the package. These products must be stored in spill trays to prevent the escape of stabilizer if a breakage occurs.

Use: Flammable solids should be used with constant regard to the danger they pose to property and health, particularly the ones with a sub risk of class 6.1 or 8, and their reactivity with other compounds. Personnel should avoid contact of Class 4s with the eyes or skin, and should avoid inhalation of their vapours or dusts.



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Class 4.3s react with moisture on the skin and other tissues to form highly corrosive hydroxides. The MSDS must be consulted before use. In case of spills, contact the Safety Officer in the first instance. Class 4.1s should be sprayed with water to prevent them drying out.

PPE: Lab coat, glasses, appropriate gloves and closed shoes to be worn at all times. Consult with the MSDS for appropriate gloves to use.

Person assessing the risk: G. Papadopoulos Date: 31/1/06

Authorised by: G. Papadopoulos Planned completion date: 31/1/06

Risk Control Measures Completed

Actions by: G. Papadopoulos Completed (Initials & date): 31/1/06