



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 handling of oxidising agents Location: Chemistry

Identified by: G. Papadopoulos Date: 4/12/06

Identified Hazard / Aspect: Exposure to workers, mixing with flammables to intensify fires.

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	
Exposure to worker (toxic subrisk)	2	0.3	5	3	M
Reacting with flammables to cause explosion or intensify fire	2	0.3	10	6	M

Definitions						
Exposure	E	Likelihood	L	Consequence	C	Risk Score
Continuously	10	Almost Certain	1.0	Catastrophic	20	E >20 H >10 M 3-10
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	

Hierarchy of Risk Controls
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.

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 & Transport: Oxidising agents must never be packed for transport with flammables and other chemicals they may react with (Classes 3, 4, 5.2, 6.1 and 8). They must be stored separately in a designated cupboard or on open shelves, segregated from Classes 3, 4, 5.2, 6.1 and 8. (Segregation=reasonable space or physical barrier separating incompatibles, vertically and horizontally). Some Class 5.1 substances are incompatible with other Class 5.1 substances, e.g. sodium nitrite and ammonium nitrate, so the MSDS should be consulted.

Use: Oxidising agents should be used with constant regard to the danger they pose to 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 oxidising agents with the eyes or skin, and should avoid inhalation of the vapours or dusts from oxidizing agents. Small chemical spills must be immediately cleaned up. Vermiculite spill kits are present in all labs and mobile spill stations for liquid spills. Solid spills can be collected with a brush and pan, and transferred to a clean, sealable plastic container for disposal. For major spills, contact the Safety Officer.



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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: 4/12/06

Authorised by: Prof. K. Ghigino Planned completion date:

Risk Control Measures Completed

Actions by: G. Papadopoulos Completed (Initials & date): 4/12/06