



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 & use of Schedule 7 poisons Location: _Chemistry

Identified by: _G. Papadopoulos_____ Date: __20/6/07_____

Identified Hazard / Aspect: High risk of death or non-lethal irreversible effects from a single dose, cumulative effects from chronic exposure, possible carcinogens

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 S7 poisons: High risk of death or non-lethal irreversible effects (acute), cumulative effects (chronic), possible carcinogens	2	0.3	15	10	M

Definitions					
Exposure E	Likelihood L	Consequence C	Risk Score	Hierarchy of Risk Controls	
Continuously 10	Almost Certain 1.0	Catastrophic 20	E >20	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	H >10		
Occasionally 3	Possible 0.3	Moderate 5	M 3-10		
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

Supervision: Reactions using S7 poisons must only be undertaken by experienced handlers. Postgraduate students using them for the first time must only do so under the complete supervision of their academic supervisor. Procedures using these materials must never be attempted by an untrained person or by someone working alone, and must never be attempted out of normal working hours or over the lunch period when trained First Aiders may not be available.

Elimination/Substitution: The first route of protection is to avoid exposure totally by using a safer alternative. If such an alternative is available and its use is "reasonably practicable" then this must be done.

Storage & transport: S7s must be stored in closed containers that are clearly labelled. All such substance containers should be stored in locked, metal cupboards bolted to the floor or wall, fitted with trays to contain spillage. S7s that are normally stored in glass containers may be transported only within robust, secondary containers large enough and capable of containing any spills arising from breakage.

Use: If use of a safer alternative is not reasonably practicable, then adequate control of exposure must be ensured.



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- Users of S7s must be fully aware of the hazards associated with using the substances and of the route(s) by which they can enter the body, be it by inhalation, ingestion or by penetration of the skin, mucosal surfaces or eyes. This will require a thorough reading of MSDSs and other sources of information.
- The preferred method of controlling exposure is by total containment of the substance or process. This is unlikely to be possible in a research environment but must be employed if reasonably practicable.
- The number of people likely to be exposed to S7s and the duration of their exposure must be kept to a minimum.
- Only the minimum amount of the S7 substances necessary may be used. This applies also to stored material which should be kept to a minimum.
- S7s may be used only within a fume-hood of good quality and effectiveness.
- Great care must be taken to avoid spreading contamination from the site of use. This will involve the following precautions:
 - Material may be weighed only within an adequate fume-hood or other well ventilated enclosure,
 - Care must be taken to avoid contaminating the exterior of containers. Any such contamination must be cleaned off within the fume-hood before returning to store and the cleaning material disposed of as chemical waste,
 - Care must be taken to avoid the formation of airborne dust or processes that may give rise to aerosols,
 - Apparatus must be cleaned within the fume-hood and any washings, including solvent, carefully stored as waste. Alternatively, any very toxic residues may be chemically destroyed- if so, the procedure for destruction must be written down as part of a separate Risk Assessment,
 - Spill etc. within the fume-hood must be cleared up carefully and any materials used disposed of as chemical waste,
 - Gloves must be disposed of as chemical waste. Users must never touch door handles, light switches or telephones with (assumed contaminated) gloves or wear such gloves outside of the laboratory. Gloves should be removed using the proper "surgical" procedure to avoid skin contamination,
 - Users must practice careful hygiene and wash and dry hands thoroughly before leaving the laboratory.
- The use of "sharps" in procedures should be avoided because of the additional danger of self- injection. Disposable "sharps", including broken glass must be decontaminated before disposal and the washings treated as chemical waste.
- Waste material must be securely stored and clearly labelled prior to disposal. S7 materials must never be disposed off by the waste solvent route, except Carbon tetrachloride (Chlorinated waste) and Benzene (Benzene/Ether/THF waste)

PPE: The appropriate protective clothing must be worn including lab coat, glasses, closed shoes and gloves of material that provide real protection against accidental skin contact. (See MSDS or Ansell Glove Chart)

Person assessing the risk: ___ G. Papadopoulos

Date: 20/6/07

Authorised by: ___ G. Papadopoulos ___

Planned completion date: ___

Risk Control Measures Completed

Actions by: ___ G. Papadopoulos ___ Completed (Initials & date): ___