

FSTE Chemical Risk Assessment Process: Revised November 2008

The following procedure uses risk classifications (or **risk phrases**) determined by the manufacturer of a chemical, to distinguish between chemicals for which the associated risks can be adequately controlled by the application of **generic risk controls**; and those that may require individual assessment to ensure safe use.

Where the generic risk controls set out below are understood and applied routinely by all chemical users, the vast majority of chemicals will require no special action to reduce risks to an acceptable level. Sometimes the chemical in use may not require the use of safety glasses; or be used in such dilute amounts that risks are negligible; however, by adopting the mandatory use of safety glasses and lab coat etc, these decisions no longer need to be made on a case by case basis which was required under the previous risk assessment procedure. It is expected that laboratory supervisors* may vary the level of adherence to generic controls where there is a justifiable and documented reason for doing so eg relaxation of rule on safety glasses in laboratory sessions where there are no substances or processes in use that could reasonably be expected to cause eye damage. Conversely it is expected that where the circumstances of use of a chemical could reasonably be expected to increase risk of injury beyond normal expectation, the supervisor will adopt more stringent safety controls and or seek advice of a safety professional **

Adherence to the generic risk controls will be monitored through annual laboratory inspections and randomly throughout the year. If the generic risk controls are not being achieved in your work area; contact your safety officer for advice and assistance. If systematic and ongoing non compliance with generic risk controls is identified, the work area will be required to maintain a system of individual chemical risk assessments as an alternate means of complying with regulations.

Special Conditions:

Where chemicals are mixed to create new compounds, the supervisor of the experiment must be aware of all products formed and ensure safety information of products is also available and acted upon as for the ingredient chemicals.

Where novel products of unknown properties are synthesised, all products should be treated as if the highest level of safety consideration is required.

Chemicals with safety or security considerations other than dangerous goods will be identified at the point of ordering by the chemical store manager and appropriate controls applied at this point eg

- Hazardous substances
- Scheduled poisons
- Carcinogens
- Chemical weapons precursor
- Drugs of dependence & precursors

* The 'supervisor' is understood to be the person next in line management for staff, the subject coordinator for undergraduate classes and the Principal academic supervisor for research staff and students.

** A safety professional is a person employed by the University, whose position description expressly includes the giving of (expert) advice on safety matters .

Generic risk controls A-E

A All Dangerous goods are stored in accordance with the principles set out in the Dangerous Goods Storage and Handling regulations 2004. If unsure check with your safety officer. Of particular note is the need to segregate chemicals by class code and use of specialised storage cabinets where quantities warrant this.

It is recommended that the following useful references for storage advice are displayed in all areas where chemicals are used or stored.

- Table 1 p19 AS/NZS 2243.10: 2004. Titled... "QUANTITIES OF CHEMICALS PERMITTED TO BE STORED IN A LABORATORY OTHER THAN IN A CHEMICAL CABINET"
- Work cover's Dangerous good identification chart "Recognising dangerous goods" available in colour at <http://www.worksafe.vic.gov.au/wps/wcm/connect/WorkSafe/Home/Forms+and+Publications/Publications/import>

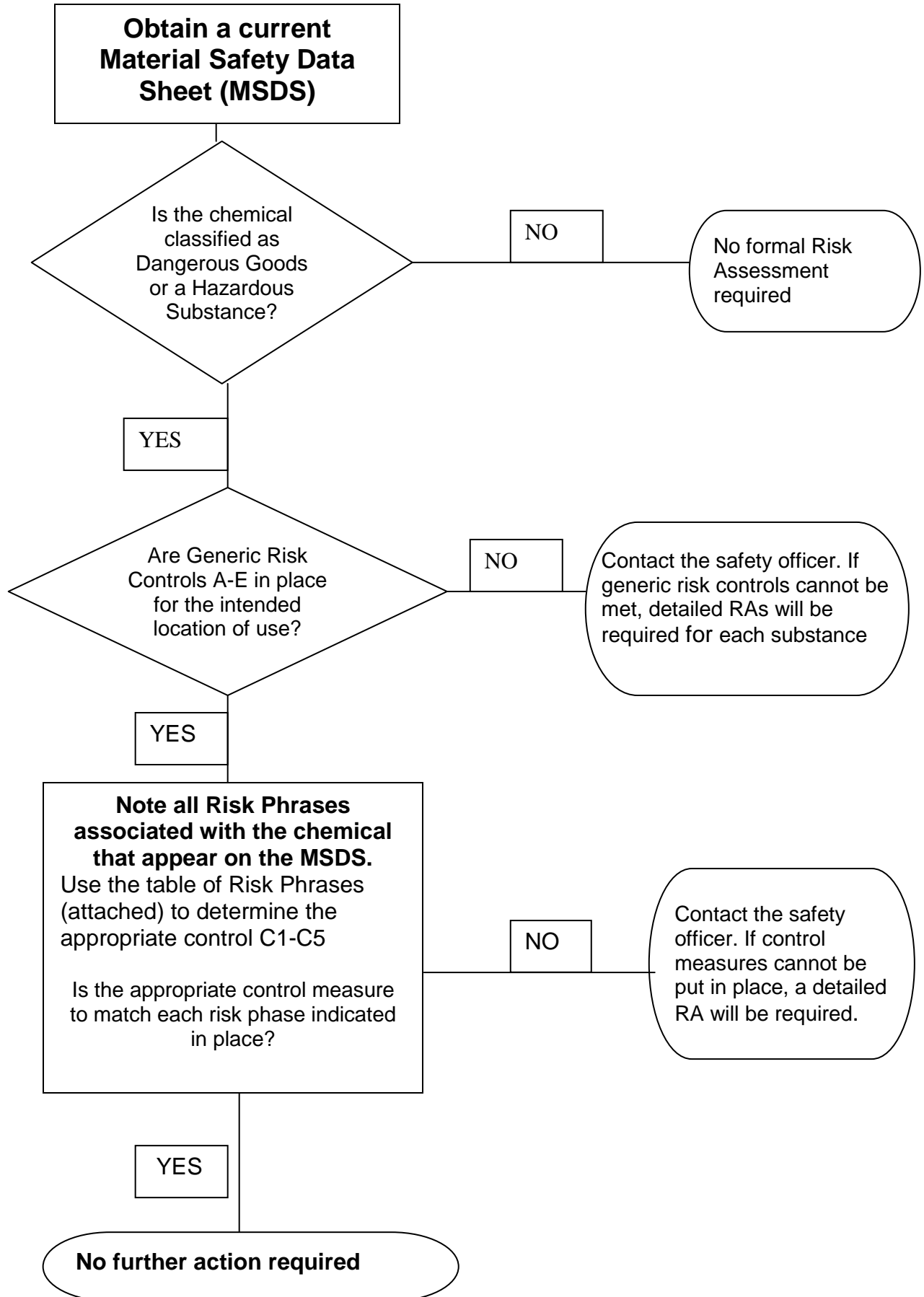
B A laboratory coat, safety glasses, protective gloves (as per MSDS) and enclosed footwear will be worn by all persons at all times when handling chemicals at concentrations capable of causing skin or eye damage; in or outside a laboratory. Ensure accidental transfer from gloves and lab coat does not cause cross contamination eg to door handles, telephones etc

C Fire protection equipment, safety showers, eye wash stations and spill kits are installed and maintained close to location chemicals are stored and handled.

D No food or drink is stored or consumed in locations where chemicals are stored or handled.

E Ensure appropriate waste disposal methods are in place and understood. See LaTrobe Safety manual for details.

Preliminary Chemical Risk Assessment Process



	Risk phrase (from MSDS)	Control recommended
R01	Explosive when dry.	C1,
R02	Risk of explosion by shock, friction, fire or other sources of ignition.	C1
R03	Extreme risk of explosion by shock, friction, fire or other sources of ignition.	C5
R04	Forms very sensitive explosive metallic compounds.	C1
R05	Heating may cause an explosion.	C1
R06	Explosive with or without contact with air.	C1
R07	May cause fire.	C1
R08	Contact with combustible material may cause fire.	Gen
R09	Explosive when mixed with combustible material.	C1
R10	Flammable.	C1
R11	Highly Flammable.	C1
R12	Extremely Flammable.	C5
R14	Reacts violently with water.	C5
R15	Contact with water liberates extremely flammable gases.	C5
R16	Explosive when mixed with oxidising substances.	C1
R17	Spontaneously flammable in air.	C5
R18	In use may form flammable/explosive vapour air mixture.	C5
R19	May form explosive peroxides.	C1,C2
R20	Harmful by inhalation.	C3
R21	Harmful in contact with skin	Gen
R22	Harmful if swallowed.	Gen
R23	Toxic by inhalation..	C3
R24	Toxic in contact with skin.	Gen
R25	Toxic if swallowed.	Gen
R26	Very toxic by inhalation.	C5
R27	Very toxic in contact with skin.	C5
R28	Very toxic if swallowed.	C5
R29	Contact with water liberates toxic gas.	C5
R31	Contact with acids liberates toxic gas.	C5
R32	Contact with acids liberates very toxic gas.	C5
R33	Danger of cumulative effects.	C3,C4
R34	Causes burns.	Gen
R35	Causes severe burns.	C5
R36	Irritating to eyes	Gen
R37	Irritating to respiratory system.	C3
R38	Irritating to skin.	Gen
R39	Danger of very serious irreversible effects.	C5
R40	Limited evidence of a carcinogenic effect .	C5
R41	Risk of serious damage to eyes.	Gen
R42	May cause sensitisation by inhalation. .	C3
R43	May cause sensitisation by skin contact.	Gen
R45	May cause cancer.	C5
R46	May cause heritable genetic damage.	C5
R48	Danger of serious damage to health by prolonged exposure.	C5
R49	May cause cancer by inhalation.	C5
R50	Very toxic to aquatic organisms.	C4
R51	Toxic to aquatic organisms.	C4
R52	Harmful to aquatic organisms.	C4
R53	May cause long term adverse effects in the aquatic environment.	C4
R54	Toxic to flora.	C4
R55	Toxic to fauna.	C4
R56	Toxic to soil organisms.	C4
R57	Toxic to bees.	C4

R58	May cause long term adverse effects in the environment.	C4
R59	Dangerous for the ozone layer.	C4
R60	May impair fertility	C5
R61	May cause harm to the unborn child.	C5
R62	Possible risk of impaired fertility.	C5
R63	Possible risk of harm to the unborn child.	C5
R64	May cause harm to breastfed babies.	C5
R65	Harmful: May cause lung damage if swallowed.	Gen
R66	Repeated exposure may cause skin dryness and cracking	Gen
R67	Vapours may cause drowsiness and dizziness	C3
R68	Possible risk or irreversible effects	C5

Ref: *Approved Criteria for Classifying Hazardous Substances [NOHSC:1008(2004)] 3rd ed.*

Control no.	Control description
Gen	Generic risk control measures only required
C1	Special Storage or reactivity hazard exists. Store and handle as specified in MSDS. Consider completing a detailed Risk Assessment (eg if large quantities involved).
C2	Chemical requires periodic testing for stability. Refer to LaTrobe OHS manual.
C3	Use a fume cupboard/ dust mask or respirator as specified in MSDS
C4	May cause environmental damage. Check MSDS and ensure an appropriate method of waste disposed is in place for product and container
C5	Detailed risk assessment and or Safe Operating Procedure required

Laboratory Group Training Record

The persons named below have read this procedure and understand their obligation to comply with Generic Risk Controls (GRCs) in order to maintain approval to implement this procedure. Continued non compliance with GRCs will result in the research group being required to complete individual risk assessments on all dangerous goods used by the group.

Name	Signature	Date