



THE UNIVERSITY OF
MELBOURNE



Chemical Management Guidelines

The *Chemical management guidelines* have been developed to support the [Health & Safety: Chemical requirements](#).

TABLE OF CONTENTS

PART A – QUICK REFERENCE GUIDES	1
INTRODUCTION	1
Quick Reference Guide: Chemical Management in an Office Environment	3
Quick Reference Guide: Chemical Management in a Workshop Environment	5
Quick Reference Guide: Chemical Management in a Laboratory Environment	9
Quick Reference Guide: Chemical Management in a Farm Environment	14
Quick Reference Guide: Chemical Management in a Commercial Kitchen Environment	18
Quick Reference Guide: Chemical Management in an Art Studio Environment	21
PART B – DETAILED INFORMATION AND GUIDANCE	25
INTRODUCTION	25
GENERAL REQUIREMENTS	25
2.1. Scope	25
2.2. Legislation	26
2.2.1. Acts and Regulations	26
2.2.2. Supporting Standards, Codes and Guidance Material	27
2.3. Permits and Licensing	28
2.4. Safety Data Sheet (SDS)	28
2.4.1. Access to SDS	29
2.5. Chemical Inventory	30
2.5.1. University of Melbourne Chemical Inventory and Database	30
2.5.1.1. Description	30
2.5.1.2. GoldFFX User Support	31
2.5.1.3. Adding SDS to Gold FFX	31
2.6. Purchasing and Acquisition	31
2.6.1. General Requirements	31
2.6.2. Contractors	32
2.6.3. Personal Acquisition or Supply	33
2.7. Importation	33
2.8. Manufacture or Supply	33
2.9. Chemical Risk Assessment	34
2.9.1. Introduction	34
2.9.2. Pregnancy	35
2.9.3. Type of Chemical Risk Assessment	35
2.9.4. Identify Who Shall Complete the Risk Assessment	36
2.9.5. Identify Hazards and Risks	36
2.9.5.1. What to do if an SDS for a chemical is unavailable	36
2.9.5.2. Determine the Chemical Classification	37
2.9.5.3. Review the Information	37
2.9.6. Analyse the Risks	38

2.9.6.1.	Current Risk Rating	38
2.9.6.2.	Residual Risk Rating	38
2.9.7.	Control the Risks	38
2.9.8.	Review the Risk Assessment	40
2.10.	Standard Operating Procedures	40
2.11.	Personal Hygiene	41
2.12.	Labelling	41
2.12.1.	Decanted Chemical Labelling	41
2.12.2.	When the container cannot be labelled	42
2.12.4.	Research Chemical Labelling	42
2.12.5.	Obtaining Labels	42
2.12.6.	Unlabeled Containers	43
2.12.7.	Transfer Systems Labelling	43
2.13.	Storage and Handling	43
2.13.1.	Storage Requirements	43
2.13.1.1.	Laboratory Refrigerators	44
2.13.2.	Decanting	44
2.13.3.	Transporting and Transferring	44
2.13.3.1.	Relocation of Laboratory and Workshop Chemicals	44
2.13.3.2.	Chemicals Purchased Internally	45
2.13.3.3.	Chemicals Transferred by Staff and Students	45
2.14.	Signage	45
2.15.	Monitoring	45
2.16.	Health Surveillance	46
2.17.	Training	46
2.17.1.	Local Area Induction	47
2.18.	Waste Management	47
2.18.1.	Waste	47
2.18.2.	Site Compliance Agreements	48
2.18.3.	Labelling Chemical Waste	48
2.18.4.	Storage of Chemical Waste	48
2.18.5.	Process for Disposal	48
2.18.5.1.	Empty Chemical Containers	49
2.19.	Access Arrangements	49
2.20.	Incident Reporting and Recording	49
2.21.	Emergency Procedures	50
HAZARDOUS SUBSTANCES		51
3.1.	Scope	51
3.2.	Introduction	51
3.3.	Legislation	52
3.3.1.	Acts and Regulations	52
3.3.2.	Supporting Standards, Codes and Guidance Materials	52
3.4.	Register of Hazardous Substances	52
3.5.	Labelling	52

3.5.1.	Manufacturer's/Supplier's Chemical Labelling	52
3.5.2.	Descriptors, Symbols and Statements	53
3.5.2.1.	Hazard Pictogram.....	53
3.5.2.2.	Hazard Statement	53
3.5.2.3.	Precautionary Statement.....	54
3.5.2.4.	Signal Word.....	54
3.6.	Prohibited Hazardous Substances.....	54
3.7.	Health Surveillance.....	54
ENGINEERED NANOPARTICLES		55
4.1.	Scope	55
4.2.	Introduction.....	55
4.3.	Legislation.....	55
4.3.1.	Acts and Regulations.....	55
4.3.2.	Supporting Standards, Codes and Guidance Material.....	56
4.4.	Labelling	56
SCHEDULED CARCINOGENIC SUBSTANCES.....		57
5.1.	Scope	57
5.2.	Introduction.....	57
5.3.	Legislation.....	57
5.3.1.	Acts and Regulations.....	57
5.3.2.	Supporting Standards, Codes and Guidance Materials	57
5.4.	Permits/Licences	57
5.4.1.	Schedule 10 Carcinogenic Substance.....	58
5.4.2.	Schedule 11 Carcinogen.....	58
5.4.3.	License Application	58
5.5.	Risk Control Measures.....	58
5.6.	Labelling	59
5.7.	Access Arrangements	59
5.8.	Maintain Records	59
5.9.	Health Surveillance.....	60
DANGEROUS GOODS		61
6.1.	Scope	61
6.2.	Introduction.....	61
6.2.1.	Class	61
6.2.2.	Subsidiary Risk Class	61
6.2.3.	Packaging Group	62
6.3.	Legislation.....	62
6.3.1.	Acts and Regulations.....	62
6.3.2.	Supporting Standards, Codes and Guidance Materials	62
6.4.	Dangerous Goods Manifest.....	63
6.5.	Labelling	63

6.6.	Storage and Handling	63
6.6.1.	Minor Quantities	64
6.6.2.	Placarding Quantities	64
6.7.	Gas Regulators and Manifolds	64
6.7.1	Selection.....	64
6.7.2	Maintenance	64
6.8.	Transport	65
6.9.	Placarding.....	66
6.9.1.	Placards at Storage Locations	66

DRUGS, POISONS AND CONTROLLED SUBSTANCES.....67

7.1.	Scope	67
7.2.	Introduction.....	67
7.2.1.	Scheduling.....	67
7.3.	Legislation.....	67
7.3.1.	Acts and Regulations.....	67
7.3.2.	Supporting Standards, Codes and Guidance Material.....	67
7.4.	Poisons Licence or Permit	68
7.5.	Labelling	68
7.6.	Access Arrangements	68
7.7.	Records.....	68
7.7.1	Review Records.....	69
7.8.	Incident Reporting and Recording	69

CHEMICALS OF SECURITY CONCERN.....70

8.1.	Weapons of Mass Destruction	70
8.1.1.	Scope.....	70
8.1.2.	Introduction	70
8.1.3.	Legislation	70
8.1.3.1.	Acts and Regulations.....	70
8.1.3.2.	Supporting Standards, Codes and Guidance Materials.....	70
8.1.4.	Importation	70
8.1.5.	Access Arrangements.....	71

HIGH CONSEQUENCE DANGEROUS GOODS (HCDG) – AMMONIUM NITRATE71

9.1.	Scope	71
9.2.	Introduction.....	71
9.3.	Legislation.....	71
9.3.1.	Acts and Regulations.....	71
9.3.2.	Supporting Standards, Codes and Guidance Materials	71
9.4.	License	71
9.5.	Access Arrangements	72

PRECURSOR CHEMICALS72

10.1. Scope	72
10.2. Introduction.....	72
10.3. Legislation.....	72
10.3.1. Acts and Regulations.....	72
10.3.2. Supporting Standards, Codes and Guidance Materials	73
10.4. End User Declaration.....	73
10.5. Access Arrangements.....	73

AGRICULTURAL AND VETERINARY CHEMICALS AND FERTILISERS.....74

11.1. Scope	74
11.2. Introduction.....	74
11.2.1. Agricultural Chemicals	74
11.2.2. Veterinary Chemicals	74
11.2.3. Fertilisers.....	75
11.3. Legislation.....	75
11.3.1. Acts and Regulations.....	75
11.3.2. Supporting Standards, Codes and Guidance Materials	75
11.4. Permits and Licensing.....	75
11.4.1. Agricultural Chemicals	75
11.4.1.1. Restricted use chemicals.....	75
11.4.1.2. Agricultural Chemical User Permit (ACUP).....	76
11.4.1.3. Application for a Permit.....	76
11.4.2. Veterinary Chemicals	76
11.5. Importation	76
11.5.1. Fertilisers.....	76
11.6. Labelling	76
11.6.1. Agricultural Chemicals	76
11.6.1.1. Decanted Agricultural Chemicals	77
11.6.2. Veterinary Chemicals	77
11.6.2.1. Decanted Veterinary Chemicals.....	78
11.6.3. Fertilisers.....	78
11.7. Health Surveillance.....	78
11.8. Access Arrangements.....	78
11.9. Records.....	79
11.9.1. Agricultural Chemicals	79
11.9.2. Veterinary Chemicals	79

RADIOACTIVE CHEMICALS81

12.1. Scope	81
12.2. Introduction.....	81
12.3. Legislation.....	81
12.3.1. Acts and Regulations.....	81
12.3.2. Supporting Standards, Codes and Guidance Materials	81
12.4. Licensing	81
12.5. Radioactive Chemicals Risk Assessment	81

12.6. Labelling	82
12.7. Waste Management.....	82
12.8. Access Arrangements.....	82
12.9 Incident Reporting and Recording	83
PART C – APPENDICES.....	84
APPENDIX 1 – GLOSSARY OF TERMS.....	84
APPENDIX 2 – LABELLING DECANTED CHEMICALS	88
APPENDIX 3 – SCHEDULE 2 OF THE DANGEROUS GOODS (STORAGE AND HANDLING) REGULATIONS 2012 (VIC) 90	
APPENDIX 4 – DRUGS, POISONS AND CONTROLLED SUBSTANCES SCHEDULES	92

PART A – QUICK REFERENCE GUIDES

INTRODUCTION

Part A of this guidance material can be used by staff and students who require an overview of the steps required to meet both University of Melbourne and regulatory requirements for the management of chemicals. More detailed information is contained in Part B. Appendices including a Glossary of Terms are provided in Part C.

The following tables have been organised to represent various common work environments within the University, and the documentation and actions required to meet University of Melbourne and regulatory requirements:

- Chemical Management in an Office Environment
- Chemical Management in a Workshop Environment
- Chemical Management in a Laboratory Environment
- Chemical Management in a Farm Environment
- Chemical Management in a Commercial Kitchen Environment
- Chemical management in an Art Studio Environment

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Quick Reference Guide: Chemical Management in an Office Environment

STEPS	ACTIONS/REQUIREMENTS	DOCUMENTS/GUIDANCE	PART B
Permits & Licensing	Nil		Section 2.3.
SDS	<p>Ensure the following:</p> <ol style="list-style-type: none"> 1. Purchase office chemicals/supplies from the University of Melbourne's preferred provider. An SDS is populated on the University of Melbourne's SDS database. 2. If using a chemical that is not supplied by the preferred supplier refer to the SDS database. If the SDS is not on the SDS database contact the manufacturer/supplier for a copy and add to the SDS database (see Section 2.5.1.3.). 3. There are arrangements so that all staff and students can access the SDS. 4. The SDS is current. 	<ul style="list-style-type: none"> • GoldFFX SDS Database quick help: Finding material safety data sheets • GoldFFX SDS Database quick help: Printing chemical labels • GoldFFX SDS Database quick help: Accessing chemical emergency response instructions • GoldFFX user manual available within system - refer to GoldFFX [University network login required]. • Troubleshooting for GoldFFX Web Applications (web page) 	<p>Section 2.4.</p> <p>Section 2.5.1.</p>
Chemical Inventory	<p>Ensure <i>one</i> of the following:</p> <ol style="list-style-type: none"> 1. The chemicals are in the Chemical inventory section of the SDS database; or 2. If the SDS database is not used list chemicals on a Chemical inventory form. 	<ul style="list-style-type: none"> • Chemical inventory form 	Section 2.5.
Purchasing & Acquisition	<p>Ensure <i>one</i> the following:</p> <ol style="list-style-type: none"> 1. Purchase office chemical supplies from the University of Melbourne's preferred supplier; or 2. If using a chemical that is not supplied by the University of Melbourne's preferred supplier complete a Health & Safety: Pre-purchase risk assessment checklist. 	<ul style="list-style-type: none"> • Health & Safety: Pre-purchase risk assessment checklist • Safety Bulletin 19/03 – Pre-purchase risk assessment 	Section 2.6.
Importation	Nil		Section 2.7.
Manufacture/Supply	Nil		Section 2.8.
Chemical Risk Assessment	<p>Ensure <i>one</i> of the following:</p> <ol style="list-style-type: none"> 1. Purchase chemicals supplied by the University of Melbourne's preferred supplier and keep copies of the relevant office chemical risk assessments; or 2. If using a chemical that is not supplied by the University of Melbourne's preferred supplier and an office risk assessment is not suitable complete an individual chemical risk assessment. 	<ul style="list-style-type: none"> • Group Chemical risk assessments for the office • Chemical risk assessment form 	<p>Section 2.9.</p> <p>Section 2.9.3.</p>
Standard Operating Procedures	Adhere to standard operating procedures and/or manufacturer's instructions when using chemicals	<ul style="list-style-type: none"> • Standard operating procedure form 	Section 2.10.
Personal Hygiene	As per section		Section 2.11.
Labelling	<p>Ensure the following:</p> <ol style="list-style-type: none"> 1. Retain office chemical supplies in their original containers. 2. If decanting is required then store in a suitable container and label accurately. 	<ul style="list-style-type: none"> • GoldFFX SDS Database quick help: Printing chemical labels • Appendix 2 – Labelling Decanted Chemicals 	<p>Section 2.12.</p> <p>Section 2.12.5.</p>

STEPS	ACTIONS/REQUIREMENTS	DOCUMENTS/GUIDANCE	PART B
Storage & Handling	Store as per directions on the container/packaging.		Section 2.13.
Signage (& Placarding)	Nil Note: Placarding refers to dangerous goods only		Section 2.14. Section 6.8.
Monitoring	Nil		Section 2.15.
Health Surveillance	Nil		Section 2.16.
Training	Ensure the following: 1. There is an allocated member of staff to manage and maintain the documentation. 2. The allocated person has completed the Chemical Management (or other appropriate) training. 3. Local area induction		Section 2.17. Section 12.17.1.
Waste Management	Use the University of Melbourne's current preferred recycling arrangements or waste disposal arrangements.		Section 2.18.
Access Arrangements	Nil		Section 2.19.
Incident Reporting and Recording	Ensure the following: 1. Report incidents and injuries to the supervisor/manager 2. Record incidents and injuries in ERMS 3. Report all notifiable incidents to the Local Health and Safety Business partner and/or Parkville security	<ul style="list-style-type: none"> Safety Bulletin 17/02: Serious injury and incident notification 	Section 2.20.
Emergency Procedures	Ensure there is a basic first aid kit and trained first aider available.	<ul style="list-style-type: none"> First aid assessment – Office (see Health & Safety: First aid assessment samples) 	Section 2.21.

Quick Reference Guide: Chemical Management in a Workshop Environment

STEPS	ACTIONS/REQUIREMENTS	DOCUMENTS/GUIDANCE	PART B
Permits & Licensing	<p>For the following classifications of chemicals licences/permits are required prior to purchase.</p> <p>Concessional spirits</p> <ul style="list-style-type: none"> Undenatured ethanol <p>Note: The above represents chemicals likely to be found in a workshop that require permits/licensing. Refer to other relevant categories of chemicals where required.</p>	<ul style="list-style-type: none"> Application/renewal for a permit to receive concessional spirits 	<p>Section 2.3.</p> <p>Section 2.3.1.</p>
SDS	<p>Ensure the following:</p> <ol style="list-style-type: none"> There is a current SDS on the SDS database for every chemical in the workshop. If there isn't a current SDS in the SDS database obtain the SDS from the manufacturer or supplier and add to the database (see Section 2.5.1.3.). There are arrangements so that all staff and students can access the SDS. 	<ul style="list-style-type: none"> GoldFFX SDS Database quick help: Finding material safety data sheets GoldFFX SDS Database quick help: Printing chemical labels GoldFFX SDS Database quick help: Accessing chemical emergency response instructions GoldFFX user manual available within system - refer to GoldFFX [University network login required]. Troubleshooting for GoldFFX Web Applications (web page) 	<p>Section 2.4.</p> <p>Section 2.5.1.</p>
Chemical Inventory	<p>Ensure <i>one</i> of the following:</p> <ol style="list-style-type: none"> The chemicals are in the Chemical inventory section of the SDS database; or If the SDS database is not used list chemicals on a Chemical inventory form. 	<ul style="list-style-type: none"> Chemical inventory form 	Section 2.5.
Purchasing & Acquisition	<p>Ensure the following:</p> <ol style="list-style-type: none"> Purchase chemicals that have a risk assessment and are on the SDS database. When purchasing a new chemical or a chemical that does not have a risk assessment complete a Health & Safety: Pre-purchase risk assessment checklist. 	<ul style="list-style-type: none"> Health & Safety: Pre-purchase risk assessment checklist Safety Bulletin 19/03 –Pre-purchase risk assessment 	Section 2.6.
Importation	See Section 2.7. for requirements where chemicals are imported.		Section 2.7.
Manufacture/Supply	See Section 2.8. for requirements where chemicals are manufactured or supplied.		Section 2.8.
Chemical Risk Assessment	<p>The type of chemical risk assessment will be determined by the complexity and nature of the chemical(s) and the task/environment in which they will be used.</p> <p>The types of chemical risk assessment include:</p> <ul style="list-style-type: none"> Chemical risk assessment Process chemical risk assessment (normally only in laboratories) <p>Chemical risk assessments can also be incorporated activities where there are a number of hazard categories.</p> <p>In these cases the type of risk assessments could include:</p> <ul style="list-style-type: none"> General risk assessment 	<ul style="list-style-type: none"> Chemical risk assessment form (Sample) Laboratory notebook General risk assessment form Task risk assessment form 	<p>Section 2.9.</p> <p>Section 2.9.3.</p>

STEPS	ACTIONS/REQUIREMENTS	DOCUMENTS/GUIDANCE	PART B
	<ul style="list-style-type: none"> Task risk assessment <p>Ensure the following:</p> <ol style="list-style-type: none"> A chemical risk assessment (or equivalent) is completed for all chemicals. The chemical can be included in a group risk assessment or as an individual risk assessment and must include: <ul style="list-style-type: none"> identifying the hazards and risks associated with the chemical and the activities; implementing controls for the identified risks, using the Hierarchy of control <ul style="list-style-type: none"> elimination substitution isolation engineering administrative personal protective equipment; and reviewing the effectiveness of the chemical risk assessment. Ensure there are arrangements so that all staff and students are familiar with and can access the chemical risk assessments. Personal hygiene arrangements are available, including wash room facilities, workshop guidelines, standard operating procedures and PPE. 	<ul style="list-style-type: none"> Health & Safety: Risk assessment methodology Group Chemical risk assessments for the laboratory/workshop Individual Chemical risk assessments for laboratory/workshop 	
Standard Operating Procedures	Adhere to standard operating procedures and/or manufacturer's instructions when using chemicals	<ul style="list-style-type: none"> Standard operating procedure form 	Section 2.10
Personal Hygiene	As per section		Section 2.11
Labelling	<p>Ensure the following:</p> <ol style="list-style-type: none"> Where reasonably practicable retain chemicals in original packaging. Where chemicals are decanted or stored in new containers attach a label that is written in English and includes the product name (identifier). For: <p>Hazardous substances</p> <p>Dangerous goods</p> <p>The Class label and subsidiary risk label</p> Labels can be printed using the SDS database (GoldFFX) labelling facility which meets the requirements in the above points. Labels/stickers can be ordered from the Chemistry Store. Pipes and transfer systems should be labelled. <p>Note: Where the container is so small that it is not practical to provide above information, another means of identification can be used.</p>	<ul style="list-style-type: none"> Appendix 2 – Labelling Decanted Chemicals GoldFFX SDS Database quick help: Printing chemical labels Labelling the contents of pipes, conduits and ducts 	<p>Section 2.12.</p> <p>Section 2.12.2.</p> <p>Section 3.5. Section 6.5.</p> <p>Section 2.12.5</p> <p>Section 2.12.7.</p>

STEPS	ACTIONS/REQUIREMENTS	DOCUMENTS/GUIDANCE	PART B
Storage & Handling	<p>Ensure the following:</p> <ol style="list-style-type: none"> 1. Store as per requirements specified by the manufacturer/supplier on the container/SDS. 2. Depending on the quantity of chemical(s) store in local bunded areas and/or trays to contain spills/leakage. 3. Dangerous goods <ul style="list-style-type: none"> o the chemicals must be separated and segregated according to quantities and incompatibility of Classes; and o chemical lockers and storage arrangements for Classes must meet relevant Australian Standards. 4. Secure cylinders. 	<ul style="list-style-type: none"> • Guidance for storing flammable solvents in refrigerators • Chemical storage and handling for minor quantities in laboratories • Procurement and maintenance of dangerous goods storage cabinets 	<p>Section 2.13. Section 2.13.1.1. Section 6.6.1.</p> <p>Section 6.6.1.</p>
Signage (& Placarding)	<p>Ensure the following:</p> <ol style="list-style-type: none"> 1. Cupboards, lockers and refrigerators used for storing chemicals are signed to indicate the type of chemicals (eg Class) being stored. 2. Additional signs where required, such as “do not use to store food”, are displayed. 3. Where manifest quantities of dangerous goods are stored placarding is displayed as appropriate. 	<ul style="list-style-type: none"> • Guidance for storing flammable solvents in refrigerators • Dangerous goods segregation and storage requirements 	<p>Section 2.14. Section 2.13.1.1. Section 6.6.2</p> <p>Section 6.8.</p>
Monitoring	Refer to the SDS and determine monitoring requirements during the chemical risk assessment phase.	<ul style="list-style-type: none"> • Safety Bulletin 18/02 – Calibration requirements for health & safety monitoring equipment 	Section 2.15.
Health Surveillance	<p>Ensure the following:</p> <ol style="list-style-type: none"> 1. Refer to the SDS and determine the health surveillance requirements during the chemical risk assessment phase. 2. For further advice contact ohs-enquiries@unimelb.edu.au 		<p>Section 2.16. Section 2.4.</p>
Training	<p>Ensure the following:</p> <ol style="list-style-type: none"> 1. Refer to the SDS and determine the training requirements during the chemical risk assessment phase. 2. All staff and students receive the relevant training as determined in the above point. 3. Local area induction that takes into account the chemicals and associated systems for use 		<p>Section 2.17.</p> <p>Section 2.17.1.</p>
Waste Management	Use the University of Melbourne’s current preferred recycle arrangements or waste disposal arrangements.	<ul style="list-style-type: none"> • Chemical storage and handling for minor quantities in laboratories 	<p>Section 2.18. Section 6.6.1.</p>
Access Arrangements	Access arrangements are relevant to the risks associated with the chemical and the chemical classification.		Section 2.19.
Incident Reporting and Recording	<p>Ensure the following:</p> <ol style="list-style-type: none"> 1. Report incidents and injuries to the manager/supervisor 2. Record incidents and injuries in ERMS 3. Report all notifiable incidents to the Local Health and Safety Business partner and/or Parkville security 	<ul style="list-style-type: none"> • Safety Bulletin 17/02: Serious injury and incident notification 	Section 2.20

STEPS	ACTIONS/REQUIREMENTS	DOCUMENTS/GUIDANCE	PART B
Emergency Procedures	<p>Ensure the following:</p> <ol style="list-style-type: none"> 1. Refer to the SDS to determine the emergency procedures and requirements during the chemical risk assessment phase 2. First aid requirements, including supplies and training, are suitable for the chemicals used 3. Spill kits are available and suitable for the chemicals used. 4. Additional emergency resources and training are provided where relevant (eg emergency showers and eye wash facilities). 	<ul style="list-style-type: none"> • First aid assessment – Workshop (see Health & Safety: First aid assessment samples) • Health & Safety: Managing spills 	Section 2.21.

Quick Reference Guide: Chemical Management in a Laboratory Environment

STEPS	ACTIONS/REQUIREMENTS	DOCUMENTS/GUIDANCE	PART B
Permits & Licensing	<p>For the following classifications of chemicals licences/permits are required prior to purchase.</p> <p>Concessional spirits</p> <ul style="list-style-type: none"> Undenatured ethanol <p>Scheduled carcinogenic substances</p> <ul style="list-style-type: none"> Schedule 10 carcinogenic substances Schedule 11 Carcinogenic Substances <p>Drugs, poisons and controlled substances</p> <ul style="list-style-type: none"> Scheduled Poisons – S2, S3, S4, S8, S9 and Listed Regulated S7 <p>Chemicals of security concern</p> <ul style="list-style-type: none"> Weapons of mass destruction High consequence dangerous goods <p>Precursor chemicals</p> <p>Agricultural and veterinary chemicals and fertilisers</p> <ul style="list-style-type: none"> Restricted use chemicals (agricultural) Veterinary chemicals <p>Radioactive chemicals</p>	<ul style="list-style-type: none"> Application/renewal for a permit to receive concessional spirits Schedule 10 and Schedule 11 carcinogenic substance license application Industrial and Educational Poisons Permit Poisons control plan – Part one: <ul style="list-style-type: none"> S2, S3, S4, S8, S9 and Listed Regulated S7 Poisons control plan – Part two: <ul style="list-style-type: none"> S8 and S9 Poison control plan – Part three <ul style="list-style-type: none"> multiple locations End User Declaration Agricultural Chemical User Permit (ACUP) Registered veterinary practitioner University of Melbourne Radiation management licence 	<p>Section 2.3.</p> <p>Section 2.3.1.</p> <p>Section 5.4.</p> <p>Section 7.4.</p> <p>Section 8.1.4.</p> <p>Section 8.2.4.</p> <p>Section 9.4.</p> <p>Section 10.4.1.</p> <p>Section 10.4.2.</p> <p>Section 11.4.</p>
SDS	<p>Ensure the following:</p> <ol style="list-style-type: none"> There is a current SDS on the SDS database for every chemical in the workshop. If there isn't a current SDS in the SDS database obtain the SDS from the manufacturer or supplier and add to the database (see Section 2.5.1.3.). There are arrangements so that all staff and students can access the SDS. 	<ul style="list-style-type: none"> GoldFFX SDS Database quick help: Finding material safety data sheets GoldFFX SDS Database quick help: Printing chemical labels GoldFFX SDS Database quick help: Accessing chemical emergency response instructions GoldFFX user manual available within system - refer to GoldFFX [University network login required]. Troubleshooting for GoldFFX Web Applications (web page) 	<p>Section 2.4.</p> <p>Section 2.5.1.</p>
Chemical Inventory	<p>Ensure <i>one</i> of the following:</p> <ol style="list-style-type: none"> The chemicals are in the Chemical inventory section of the SDS database; or If the SDS database is not used list the chemicals on Chemical inventory form. 	<ul style="list-style-type: none"> Chemical inventory form 	<p>Section 2.5.</p>

STEPS	ACTIONS/REQUIREMENTS	DOCUMENTS/GUIDANCE	PART B
Purchasing & Acquisition	<p>Ensure the following:</p> <ol style="list-style-type: none"> 1. Purchase chemicals that have a risk assessment and are on the SDS database. 2. When purchasing a new chemical or a chemical that does not have a risk assessment complete a Health & Safety: Pre-purchase risk assessment checklist. 	<ul style="list-style-type: none"> • Health & Safety: Pre-purchase risk assessment checklist • Safety Bulletin 19/03 –Pre-purchase risk assessment 	Section 2.6.
Importation	See Section 2.7. for requirements where chemicals are imported.		Section 2.7.
Manufacture/Supply	See Section 2.8. for requirements where chemicals are manufactured or supplied.		Section 2.8.
Chemical Risk Assessment	<p>The type of chemical risk assessment will be determined by the complexity and nature of the chemical(s) and the task/environment in which they will be used.</p> <p>The types of chemical risk assessment include:</p> <ul style="list-style-type: none"> • Chemical risk assessment • Process chemical risk assessment <p>Chemical risk assessments can also be incorporated activities where there are several hazard categories.</p> <p>In these cases the type of risk assessments could include:</p> <ul style="list-style-type: none"> • General risk assessment • Task risk assessment <p>Ensure the following:</p> <ol style="list-style-type: none"> 1. A chemical risk assessment (or equivalent) is completed for all chemicals. The chemical can be included in a group risk assessment or as an individual risk assessment and must include: <ul style="list-style-type: none"> ○ identifying the hazards and risks associated with the chemical and the activities; ○ implementing controls for the identified risks, using the Hierarchy of control <ul style="list-style-type: none"> – elimination – substitution – isolation – engineering – administrative – personal protective equipment; and ○ reviewing the effectiveness of the chemical risk assessment. 2. Ensure there are arrangements so that all staff and students are familiar with and can access the chemical risk assessments. 3. Personal hygiene arrangements are available, including wash room facilities, workshop guidelines, standard operating procedures and PPE. 	<ul style="list-style-type: none"> • Chemical risk assessment form • (Sample) Laboratory notebook • General risk assessment form • Task risk assessment form • Health & Safety: Risk assessment methodology • Group Chemical risk assessments for the laboratory/workshop • Individual Chemical risk assessments for laboratory/workshop 	<p>Section 2.9.</p> <p>Section 2.9.3.</p>

STEPS	ACTIONS/REQUIREMENTS	DOCUMENTS/GUIDANCE	PART B
Standard Operating Procedures	Adhere to standard operating procedures and/or manufacturer's instructions when using chemicals	<ul style="list-style-type: none"> Standard operating procedure form 	Section 2.10
Personal Hygiene	As per section		Section 2.11
Labelling	<p>Ensure the following:</p> <ol style="list-style-type: none"> Where reasonably practicable retain chemicals in original packaging. Where chemicals are decanted or stored in new containers attach a label that is written in English and includes the product name (identifier). For: <ul style="list-style-type: none"> Hazardous substances Dangerous goods <p>The Class label and subsidiary risk label</p> Labels can be printed using the SDS database (GoldFFX) labelling facility which meets the requirements in the above points. Labels/stickers can be ordered from the Chemistry Store. Pipes and transfer systems should be labelled. <p>Note: Where the container is so small that it is not practical to provide such information another means of identification can be used.</p> <ul style="list-style-type: none"> Hazardous substances Engineered nanoparticles Scheduled carcinogenic substances Dangerous goods Drugs, poisons and controlled substances Agricultural and veterinary chemicals and fertilisers Radioactive chemicals 	<ul style="list-style-type: none"> Appendix 2 – Labelling Decanted Chemicals GoldFFX SDS Database quick help: Printing chemical labels Labelling the contents of pipes, conduits and ducts 	<p>Section 2.12.</p> <p>Section 2.12.2.</p> <p>Section 3.5. Section 6.5.</p> <p>Section 2.12.5.</p> <p>Section 2.12.7.</p> <p>Section 3.5. Section 4.5. Section 5.5. Section 6.5 Section 7.5. Section 10.6. Section 11.6.</p>
Storage & Handling	<p>Ensure the following:</p> <ol style="list-style-type: none"> Store as per requirements specified by the manufacturer/supplier on the container/SDS. Depending on the quantity of chemical(s) store in local bunded areas and/or trays to contain spills/leaks Local storage arrangements that ensure chemicals are not stored in fume cupboards Where relevant special arrangements are adopted for: <ul style="list-style-type: none"> hazardous work zones (intrinsically safe refrigerators and other electrical equipment) shock sensitive chemicals time sensitive chemicals temperature sensitive chemicals Dangerous goods <ul style="list-style-type: none"> the chemicals must be separated and segregated according to quantities and incompatibility of Classes; 	<ul style="list-style-type: none"> Guidance for storing flammable solvents in refrigerators Chemical storage and handling for minor quantities in laboratories 	<p>Section 2.13.</p> <p>Section 2.13.1.1. Section 6.6.1.</p>

STEPS	ACTIONS/REQUIREMENTS	DOCUMENTS/GUIDANCE	PART B
	<ul style="list-style-type: none"> chemical lockers and storage arrangements for Classes must meet relevant Australian Standards; and secure cylinders. 	<ul style="list-style-type: none"> Procurement and maintenance of dangerous goods storage cabinets 	Section 6.6.1.
Signage (& Placarding)	<p>Ensure the following:</p> <ol style="list-style-type: none"> Cupboards, lockers and refrigerators used for storing chemicals are signed to indicate the type of chemicals (eg Class) being stored. Additional signs where required, such as “do not use to store food”, are displayed. Where manifest quantities of dangerous goods are stored placarding is displayed as appropriate. 	<ul style="list-style-type: none"> Guidance for storing flammable solvents in refrigerators Dangerous goods segregation and storage requirements 	<p>Section 2.14.</p> <p>Section 2.13.1.1.</p> <p>Section 6.6.2.</p> <p>Section 6.8.</p>
Monitoring	Refer to the SDS and determine monitoring requirements during the chemical risk assessment phase.	<ul style="list-style-type: none"> Safety Bulletin 18/02 – Calibration requirements for health & safety monitoring equipment 	Section 2.15.
Health Surveillance	<p>Ensure the following:</p> <ol style="list-style-type: none"> Refer to the SDS and determine the health surveillance requirements during the chemical risk assessment phase. Scheduled carcinogenic substances: <ul style="list-style-type: none"> refer to the SDS; and keep a record of each person who works with a scheduled carcinogenic substance. For further advice contact ohs-enquiries@unimelb.edu.au 		<p>Section 2.16.</p> <p>Section 2.4.</p> <p>Section 5.7.</p>
Training	<p>Ensure the following:</p> <ol style="list-style-type: none"> Refer to the SDS and determine the training requirements during the chemical risk assessment phase. All staff and students receive the relevant training as determined in the above point. 		Section 2.17.
Waste Management	<p>Use the University of Melbourne’s current preferred recycle arrangements or waste disposal arrangements.</p> <p>Radioactive Chemicals</p>	<ul style="list-style-type: none"> Chemical storage and handling for minor quantities in laboratories 	<p>Section 2.18.</p> <p>Section 6.6.1.</p> <p>Section 11.7.</p>
Access Arrangements	<p>Access arrangements are relevant to the risks associated with the chemical and the chemical classification.</p> <p>Scheduled carcinogenic substances</p> <ul style="list-style-type: none"> Only staff/students, which work directly with the scheduled carcinogenic substance, have received chemical training and are fully conversant with the chemical risk assessment can access scheduled carcinogenic substances. <p>Drugs, poisons and controlled substances</p> <ul style="list-style-type: none"> Drugs, Poisons and Controlled Substances that require an Industrial and 		<p>Section 2.19.</p> <p>Section 5.6.</p> <p>Section 7.6.</p>

STEPS	ACTIONS/REQUIREMENTS	DOCUMENTS/GUIDANCE	PART B
	<p>Educational Permit: only staff named on the poisons permit or staff/students directly under their control can access the scheduled poison.</p> <p>Chemicals of security concern</p> <ul style="list-style-type: none"> Only staff/students, which work directly with the chemical of security concern, have received chemical training and are fully conversant with the chemical risk assessment can access chemicals of security concern. <p>Precursor chemicals</p> <ul style="list-style-type: none"> Only staff/students, which work directly with the precursor chemical, have received chemical training and are fully conversant with the chemical risk assessment can access precursor chemicals. <p>Agricultural and veterinary chemicals and fertilisers</p> <ul style="list-style-type: none"> Veterinary chemicals that are scheduled drugs, poisons and controlled substances: only a registered veterinary practitioner or staff directly under their control. <p>Radioactive chemicals</p> <ul style="list-style-type: none"> Only staff/students, which work directly with the radioactive chemical, have received Safe Radiation Practices – Ionising training and are fully conversant with the chemical risk assessment can access radioactive chemicals. 		<p>Section 8.1.5. Section 8.2.5</p> <p>Section 9.5.</p> <p>Section 10.8.</p> <p>Section 11.8.</p>
Incident Reporting and Recording	<p>Ensure the following:</p> <ol style="list-style-type: none"> Report incidents and injuries to the manager/supervisor Record incidents and injuries in ERMS Report all notifiable incidents to the Local Health and Safety Business partner and/or Parkville security <p>Drugs, poisons and controlled substances</p> <ul style="list-style-type: none"> Report theft of unexplainable discrepancy of Schedule 8 or 9 to: <ul style="list-style-type: none"> Parkville Security Department of Health and Human Services <p>Radioactive chemicals</p> <ul style="list-style-type: none"> Report radiation incidents to the University Radiation Safety Advisor 	<ul style="list-style-type: none"> Safety Bulletin 17/02: Serious injury and incident notification Department of health and Human Services “Lost scheduled item form” 	<p>Section 2.20</p> <p>Section 7.8. Section 7.7.1.</p> <p>Section 11.9.</p>
Emergency Procedures	<p>Ensure the following:</p> <ol style="list-style-type: none"> Refer to the SDS to determine the emergency procedures and requirements during the chemical risk assessment phase First aid requirements, including supplies and training, are suitable for the chemicals used Spill kits are available and suitable for the chemicals used. Additional emergency resources and training are provided where relevant (eg. emergency showers and eye wash facilities). 	<ul style="list-style-type: none"> First aid assessment – Laboratory (see Health & Safety: First aid assessment samples) Health & Safety: Managing spills 	<p>Section 2.21.</p>

Quick Reference Guide: Chemical Management in a Farm Environment

STEPS	ACTIONS/REQUIREMENTS	DOCUMENTS/GUIDANCE	PART B
Permits & Licensing	<p>For the following classifications of chemicals licences/permits are required prior to purchase.</p> <p>Agricultural and veterinary chemicals and fertilisers</p> <ul style="list-style-type: none"> Restricted use chemicals (agricultural) Veterinary chemicals <p>Note: The above represents chemicals likely to be found on a farm that require permits/licensing. Refer to other relevant categories of chemicals where required.</p>	<ul style="list-style-type: none"> Agricultural Chemical User Permit (ACUP) Registered Veterinary Practitioner certification 	<p>Section 2.3</p> <p>Section 10.4.1. Section 10.4.2.</p>
SDS	<p>Ensure the following:</p> <ol style="list-style-type: none"> There is a current SDS on the SDS database for every chemical in the workshop. If there isn't a current SDS in the SDS database obtain the SDS from the manufacturer or supplier and add to the database (see Section 2.5.1.3.). There are arrangements so that all staff and students can access the SDS. 	<ul style="list-style-type: none"> GoldFFX SDS Database quick help: Finding material safety data sheets GoldFFX SDS Database quick help: Printing chemical labels GoldFFX SDS Database quick help: Accessing chemical emergency response instructions GoldFFX user manual available within system - refer to GoldFFX [University network login required]. Troubleshooting for GoldFFX Web Applications (web page) 	<p>Section 2.4. Section 2.5.1.</p>
Chemical Inventory	<p>Ensure <i>one</i> of the following:</p> <ol style="list-style-type: none"> The chemicals are in the Chemical inventory section of the SDS database; or If the SDS database is not used list chemicals on a Chemical inventory form. 	<ul style="list-style-type: none"> Chemical inventory form 	<p>Section 2.5.</p>
Purchasing & Acquisition	<p>Ensure the following:</p> <ol style="list-style-type: none"> Purchase chemicals that have a risk assessment and are on the SDS database. When purchasing a new chemical or a chemical that does not have a risk assessment complete a Health & Safety: Pre-purchase risk assessment checklist. 	<ul style="list-style-type: none"> Health & Safety: Pre-purchase risk assessment checklist Safety Bulletin 19/03 –Pre-purchase risk assessment 	<p>Section 2.6.</p>
Importation	<p>See Section 2.7. for requirements where chemicals are imported.</p> <p>Fertilisers</p> <ul style="list-style-type: none"> There are importation requirements for Chemical Weapons Convention (CWC) Schedule Chemicals 		<p>Section 2.7.</p> <p>Section 10.5.</p>
Manufacture/Supply	<p>See Section 2.8. for requirements where chemicals are manufactured or supplied.</p>		<p>Section 2.8.</p>

STEPS	ACTIONS/REQUIREMENTS	DOCUMENTS/GUIDANCE	PART B
Chemical Risk Assessment	<p>The type of chemical risk assessment will be determined by the complexity and nature of the chemical(s) and the task/environment in which they will be used.</p> <p>The types of chemical risk assessment include:</p> <ul style="list-style-type: none"> • Chemical risk assessment • Process chemical risk assessment (normally only in laboratories) <p>Chemical risk assessments can also be incorporated activities where there are a number of hazard categories.</p> <p>In these cases the type of risk assessments could include:</p> <ul style="list-style-type: none"> • General risk assessment • Task risk assessment <p>Ensure the following:</p> <ol style="list-style-type: none"> 1. A chemical risk assessment (or equivalent) is completed for all chemicals. The chemical can be included in a group risk assessment or as an individual risk assessment and must include: <ul style="list-style-type: none"> ○ identifying the hazards and risks associated with the chemical and the activities; ○ implementing controls for the identified risks, using the Hierarchy of control <ul style="list-style-type: none"> – elimination – substitution – isolation – engineering – administrative – personal protective equipment; and ○ reviewing the effectiveness of the chemical risk assessment. 2. Ensure there are arrangements so that all staff and students are familiar with and can access the chemical risk assessments. 3. Personal hygiene arrangements are available, including wash room facilities, workshop guidelines, standard operating procedures and PPE. 	<ul style="list-style-type: none"> • Chemical risk assessment form • (Sample) Laboratory notebook • General risk assessment form • Task risk assessment form • Health & Safety: Risk assessment methodology • Group Chemical risk assessments for the laboratory/workshop • Individual Chemical risk assessments for laboratory/workshop 	<p>Section 2.9.</p> <p>Section 2.9.3.</p>
Standard Operating Procedures	Adhere to standard operating procedures and/or manufacturer's instructions when using chemicals	<ul style="list-style-type: none"> • Standard operating procedure form 	Section 2.10
Personal Hygiene	As per section		Section 2.11

STEPS	ACTIONS/REQUIREMENTS	DOCUMENTS/GUIDANCE	PART B
Labelling	<p>Ensure the following:</p> <ol style="list-style-type: none"> Where reasonably practicable retain chemicals in original packaging. Where chemicals are decanted or stored in new containers attach a label that is written in English and includes the product name (identifier). For: Hazardous substances Dangerous goods The Class label and subsidiary risk label Labels can be printed using the SDS database (GoldFFX) labelling facility which meets the requirements in the above points. Labels/stickers can be ordered from the Chemistry Store. Pipes and transfer systems should be labelled. <p>Note: Where the container is so small that it is not practical to provide such information another means of identification can be used.</p> <p>Agricultural and Veterinary Chemicals and Fertilisers</p>	<ul style="list-style-type: none"> Appendix 2 – Labelling Decanted Chemicals GoldFFX SDS Database quick help: Printing chemical labels Labelling the contents of pipes, conduits and ducts 	<p>Section 2.12.</p> <p>Section 2.12.2.</p> <p>Section 3.5. Section 6.5. Section 2.12.5</p> <p>Section 2.12.7.</p> <p>Section 10.6.</p>
Storage & Handling	<p>Ensure the following:</p> <ol style="list-style-type: none"> Store as per requirements specified by the manufacturer/supplier on the container/SDS. Depending on the quantity of chemical(s) store in local bunded areas and/or trays to contain spills/leakage. Dangerous goods <ul style="list-style-type: none"> the chemicals must be separated and segregated according to quantities and incompatibility of Classes; and chemical lockers and storage arrangements for Classes must meet relevant Australian Standards. Secure cylinders. 	<ul style="list-style-type: none"> Guidance for storing flammable solvents in refrigerators Chemical storage and handling for minor quantities in laboratories Procurement and maintenance of dangerous goods storage cabinets 	<p>Section 2.13. Section 2.13.1.1. Section 6.6.1.</p> <p>Section 6.6.1.</p>
Signage (& Placarding)	<p>Ensure the following:</p> <ol style="list-style-type: none"> Cupboards, lockers and refrigerators used for storing chemicals are signed to indicate the type of chemicals (eg Class) being stored. Additional signs where required, such as “do not use to store food”, are displayed. Where manifest quantities of dangerous goods are stored placarding is displayed as appropriate. 	<ul style="list-style-type: none"> Guidance for storing flammable solvents in refrigerators Dangerous goods segregation and storage requirements 	<p>Section 2.14. Section 2.13.1.1. Section 6.6.2.</p> <p>Section 6.8.</p>
Monitoring	Refer to the SDS and determine monitoring requirements during the chemical risk assessment phase.	<ul style="list-style-type: none"> Safety Bulletin 18/02 – Calibration requirements for health & safety monitoring equipment 	Section 2.15.
Health Surveillance	<p>Ensure the following:</p> <ol style="list-style-type: none"> Refer to the SDS and determine the health surveillance requirements during the chemical risk assessment phase. Agricultural chemicals and fertilisers that require health surveillance refer to the SDS. 		<p>Section 2.16. Section 2.4.</p> <p>Section 10.7.</p>

STEPS	ACTIONS/REQUIREMENTS	DOCUMENTS/GUIDANCE	PART B
	3. For further advice contact ohs-enquiries@unimelb.edu.au		
Training	Ensure the following: 1. Refer to the SDS and determine the training requirements during the chemical risk assessment phase. 2. All staff and students receive the relevant training as determined in the above point.		Section 2.17.
Waste Management	Use the University of Melbourne's current preferred recycle arrangements or waste disposal arrangements.	<ul style="list-style-type: none"> Chemical storage and handling for minor quantities in laboratories 	Section 2.18. Section 6.6.1.
Access Arrangements	Access arrangements are relevant to the risks associated with the chemical and the chemical classification. Veterinary Chemicals <ul style="list-style-type: none"> Scheduled veterinary chemicals (drugs, poisons and controlled substances): only registered veterinary practitioners or staff/students directly under their control can access the scheduled poison. Note: The above chemical group represents chemicals likely to be found on a farm with specific access arrangements. Refer to other relevant categories of chemicals where required.		Section 2.19. Section 10.7.
Incident Reporting and Recording	Ensure the following: 1. Report incidents and injuries to the manager/supervisor 2. Record incidents and injuries in ERMS 3. Report all notifiable incidents to the Local Health and Safety Business partner and/or Parkville security	<ul style="list-style-type: none"> Safety Bulletin 17/02: Serious injury and incident notification 	Section 2.20.
Emergency Procedures	Ensure the following: 1. Refer to the SDS to determine the emergency procedures and requirements during the chemical risk assessment phase 2. First aid requirements, including supplies and training, are suitable for the chemicals used 3. Spill kits are available and suitable for the chemicals used. 4. Additional emergency resources and training are provided where relevant (eg snakebite kit).	<ul style="list-style-type: none"> First aid assessment – Farm (see Health & Safety: First aid assessment samples) Health & Safety: Managing spills 	Section 2.21.

Quick Reference Guide: Chemical Management in a Commercial Kitchen Environment

STEPS	ACTIONS/REQUIREMENTS	DOCUMENTS/GUIDANCE	PART B
Permits & Licensing	Nil		Section 2.3.
SDS	<p>Ensure the following:</p> <ol style="list-style-type: none"> 1. There is a current SDS on the SDS database for every chemical in the workshop. 2. If there isn't a current SDS in the SDS database obtain the SDS from the manufacturer or supplier and add to the database (see Section 2.5.1.3.). 3. There are arrangements so that all staff and students can access the SDS. 	<ul style="list-style-type: none"> • GoldFFX SDS Database quick help: Finding material safety data sheets • GoldFFX SDS Database quick help: Printing chemical labels • GoldFFX SDS Database quick help: Accessing chemical emergency response instructions • GoldFFX user manual available within system - refer to GoldFFX [University network login required]. • Troubleshooting for GoldFFX Web Applications (web page) 	<p>Section 2.4.</p> <p>Section 2.5.1.</p>
Chemical Inventory	<p>Ensure <i>one</i> of the following:</p> <ol style="list-style-type: none"> 1. The chemicals are in the Chemical inventory section of the SDS database; or 2. If the SDS database is not used list chemicals on a Chemical inventory form. 	<ul style="list-style-type: none"> • Chemical inventory form 	Section 2.5.
Purchasing & Acquisition	<p>Ensure the following:</p> <ol style="list-style-type: none"> 1. Purchase chemicals that have a risk assessment and are on the SDS database. 2. When purchasing a new chemical or a chemical that does not have a risk assessment complete a Health & Safety: Pre-purchase risk assessment checklist. 	<ul style="list-style-type: none"> • Health & Safety: Pre-purchase risk assessment checklist • Safety Bulletin 19/03 –Pre-purchase risk assessment 	Section 2.6.
Importation	See Section 2.7. for requirements where chemicals are imported.		Section 2.7.
Manufacture/Supply	See Section 2.8. for requirements where chemicals are manufactured or supplied.		Section 2.8.
Chemical Risk Assessment	<p>The type of chemical risk assessment will be determined by the complexity and nature of the chemical(s) and the task/environment in which they will be used.</p> <p>The types of chemical risk assessment include:</p> <ul style="list-style-type: none"> • Chemical risk assessment • Process chemical risk assessment (normally only in laboratories) <p>Chemical risk assessments can also be incorporated activities where there are a number of hazard categories. In these cases the type of risk assessments could include:</p> <ul style="list-style-type: none"> • General risk assessment • Task risk assessment 	<ul style="list-style-type: none"> • Chemical risk assessment form • (Sample) Laboratory notebook • General risk assessment form • Task risk assessment form • Health & Safety: Risk assessment methodology • Group Chemical risk assessments for the laboratory/workshop • Individual Chemical risk assessments for laboratory/workshop 	<p>Section 2.9.</p> <p>Section 2.9.3.</p>

STEPS	ACTIONS/REQUIREMENTS	DOCUMENTS/GUIDANCE	PART B
	<p>Ensure the following:</p> <ol style="list-style-type: none"> 1. A chemical risk assessment (or equivalent) is completed for all chemicals. The chemical can be included in a group risk assessment or as an individual risk assessment and must include: <ul style="list-style-type: none"> o identifying the hazards and risks associated with the chemical and the activities; o implementing controls for the identified risks, using the Hierarchy of control <ul style="list-style-type: none"> – elimination – substitution – isolation – engineering – administrative – personal protective equipment; and o reviewing the effectiveness of the chemical risk assessment. 2. Ensure there are arrangements so that all staff and students are familiar with and can access the chemical risk assessments. 3. Personal hygiene arrangements are available, including wash room facilities, workshop guidelines, standard operating procedures and PPE. 		
Standard Operating Procedures	Adhere to standard operating procedures and/or manufacturer's instructions when using chemicals	<ul style="list-style-type: none"> • Standard operating procedure form 	Section 2.10
Personal Hygiene	As per section		Section 2.11
Labelling	<p>Ensure the following:</p> <ol style="list-style-type: none"> 1. Where reasonably practicable retain chemicals in original packaging. 2. Where chemicals are decanted or stored in new containers attach a label that is written in English and includes the product name (identifier). For: <ul style="list-style-type: none"> o Hazardous substances o Dangerous goods <p>The Class label and subsidiary risk label</p> 3. Labels can be printed using the SDS database (GoldFFX) labelling facility which meets the requirements in the above points. 4. Labels/stickers can be ordered from the Chemistry Store. 5. Pipes and transfer systems should be labelled. <p>Note: Where the container is so small that it is not practical to provide such information, another means of identification can be used.</p>	<ul style="list-style-type: none"> • Appendix 2 – Labelling Decanted Chemicals • GoldFFX SDS Database quick help: Printing chemical labels • Labelling the contents of pipes, conduits and ducts 	<p>Section 2.12.</p> <p>Section 2.12.2.</p> <p>Section 3.5. Section 6.5.</p> <p>Section 2.12.5</p> <p>Section 2.12.7.</p>
Storage & Handling	Store as per requirements specified by the manufacturer/supplier on the container/SDS.		Section 2.13.

STEPS	ACTIONS/REQUIREMENTS	DOCUMENTS/GUIDANCE	PART B
Signage (& Placarding)	Nil Note: Placarding refers to dangerous goods only		Section 2.14. Section 6.8
Monitoring	Nil		Section 2.15.
Health Surveillance	Nil		Section 2.16.
Training	Ensure the following: 1. Refer to the SDS and determine the training requirements during the chemical risk assessment phase. 2. All staff and students receive the relevant training as determined in the above point.		Section 2.17.
Waste Management	Use the University of Melbourne's current preferred recycle arrangements or waste disposal arrangements.	<ul style="list-style-type: none"> Chemical storage and handling for minor quantities in laboratories 	Section 2.18. Section 6.6.1.
Access Arrangements	Nil		Section 2.19.
Incident Reporting and Recording	Ensure the following: 1. Report incidents and injuries to the manager/supervisor 2. Record incidents and injuries in ERMS 3. Report all notifiable incidents to the Local Health and Safety Business partner and/or Parkville security	<ul style="list-style-type: none"> Safety Bulletin 17/02: Serious injury and incident notification 	Section 2.20
Emergency Procedures	Ensure there is a basic first aid kit and trained first aider available.	<ul style="list-style-type: none"> First aid assessment – Commercial kitchen (see Health & Safety: First aid assessment samples) Health & Safety: Managing spills 	Section 2.21.

Quick Reference Guide: Chemical Management in an Art Studio Environment

STEPS	ACTIONS/REQUIREMENTS	DOCUMENTS/GUIDANCE	PART B
Permits & Licensing	Nil		Section 2.3.
SDS	<p>Ensure the following:</p> <ol style="list-style-type: none"> 1. There is a current SDS on the SDS database for every chemical in the workshop. 2. If there isn't a current SDS in the SDS database obtain the SDS from the manufacturer or supplier and add to the database (see Section 2.5.1.3.). 3. There are arrangements so that all staff and students can access the SDS. 	<ul style="list-style-type: none"> • GoldFFX SDS Database quick help: Finding material safety data sheets • GoldFFX SDS Database quick help: Printing chemical labels • GoldFFX SDS Database quick help: Accessing chemical emergency response instructions • GoldFFX user manual available within system - refer to GoldFFX [University network login required]. • Troubleshooting for GoldFFX Web Applications (web page) 	<p>Section 2.4.</p> <p>Section 2.5.1.</p>
Chemical Inventory	<p>Ensure <i>one</i> of the following:</p> <ol style="list-style-type: none"> 1. The chemicals are in the Chemical inventory section of the SDS database; or 2. If the SDS database is not used list chemicals on a Chemical inventory form. 	<ul style="list-style-type: none"> • Chemical inventory form 	Section 2.5.
Purchasing & Acquisition	<p>Ensure the following:</p> <ol style="list-style-type: none"> 1. Purchase chemicals that have a risk assessment and are on the SDS database. 2. When purchasing a new chemical or a chemical that does not have a risk assessment complete a Health & Safety: Pre-purchase risk assessment checklist. 	<ul style="list-style-type: none"> • Health & Safety: Pre-purchase risk assessment checklist • Safety Bulletin 19/03 – Pre-purchase risk assessment 	Section 2.6.
Importation	Nil		Section 2.7.
Manufacture/Supply	Nil		Section 2.8.
Chemical Risk Assessment	<p>The type of chemical risk assessment will be determined by the complexity and nature of the chemical(s) and the task/environment in which they will be used.</p> <p>The types of chemical risk assessment include:</p> <ul style="list-style-type: none"> • Chemical risk assessment • Process chemical risk assessment (normally only in laboratories) <p>Chemical risk assessments can also be incorporated activities where there are a number of hazard categories. In these cases the type of risk assessments could include:</p> <ul style="list-style-type: none"> • General risk assessment • Task risk assessment 	<ul style="list-style-type: none"> • Chemical risk assessment form • (Sample) Laboratory notebook • General risk assessment form • Task risk assessment form • Health & Safety: Risk assessment methodology • Group Chemical risk assessments for the laboratory/workshop • Individual Chemical risk assessments for laboratory/workshop 	<p>Section 2.9.</p> <p>Section 2.9.3.</p>

STEPS	ACTIONS/REQUIREMENTS	DOCUMENTS/GUIDANCE	PART B
	<p>Ensure the following:</p> <ol style="list-style-type: none"> 1. A chemical risk assessment (or equivalent) is completed for all chemicals. The chemical can be included in a group risk assessment or as an individual risk assessment and must include: <ul style="list-style-type: none"> o identifying the hazards and risks associated with the chemical and the activities; o implementing controls for the identified risks, using the Hierarchy of control <ul style="list-style-type: none"> – elimination – substitution – isolation – engineering – administrative – personal protective equipment; and o reviewing the effectiveness of the chemical risk assessment. 2. Ensure there are arrangements so that all staff and students are familiar with and can access the chemical risk assessments. 3. Personal hygiene arrangements are available, including wash room facilities, workshop guidelines, standard operating procedures and PPE. 		
Standard Operating Procedures	Adhere to standard operating procedures and/or manufacturer's instructions when using chemicals	<ul style="list-style-type: none"> • Standard operating procedure form 	Section 2.10
Personal Hygiene	As per section		Section 2.11
Labelling	<p>Ensure the following:</p> <ol style="list-style-type: none"> 1. Where reasonably practicable retain chemicals in original packaging. 2. Where chemicals are decanted or stored in new containers attach a label that is written in English and includes the product name (identifier). For: <ul style="list-style-type: none"> o Hazardous substances o Dangerous goods <p>The Class label and subsidiary risk label</p> 3. Labels can be printed using the SDS database (GoldFFX) labelling facility which meets the requirements in the above points. 4. Labels/stickers can be ordered from the Chemistry Store. 5. Pipes and transfer systems should be labelled. <p>Note: Where the container is so small that it is not practical to provide such information, another means of identification can be used.</p>	<ul style="list-style-type: none"> • Appendix 2 – Labelling Decanted Chemicals • GoldFFX SDS Database quick help: Printing chemical labels • Labelling the contents of pipes, conduits and ducts 	<p>Section 2.12.</p> <p>Section 2.12.2.</p> <p>Section 3.5. Section 6.5.</p> <p>Section 2.12.5</p> <p>Section 2.12.7.</p>

STEPS	ACTIONS/REQUIREMENTS	DOCUMENTS/GUIDANCE	PART B
Storage & Handling	Ensure the following: <ol style="list-style-type: none"> 1. Store as per requirements specified by the manufacturer/supplier on the container/SDS. 2. Depending on the quantity of chemical(s) store in local bunded areas and/or trays to contain spills/leakage. 3. Dangerous goods <ul style="list-style-type: none"> ○ the chemicals must be separated and segregated according to quantities and incompatibility of Classes; and ○ chemical lockers and storage arrangements for Classes must meet relevant Australian Standards. 4. Secure cylinders. 	<ul style="list-style-type: none"> • Guidance for storing flammable solvents in refrigerators • Chemical storage and handling for minor quantities in laboratories • Procurement and maintenance of dangerous goods storage cabinets 	Section 2.13. Section 2.13.1.1. Section 6.6.1. Section 6.6.1.
Signage (& Placarding)	Ensure the following: <ol style="list-style-type: none"> 1. Cupboards, lockers and refrigerators used for storing chemicals are signed to indicate the type of chemicals (eg Class) being stored. 2. Additional signs where required, such as “do not use to store food”, are displayed. 3. Where manifest quantities of dangerous goods are stored placarding is displayed as appropriate. 	<ul style="list-style-type: none"> • Guidance for storing flammable solvents in refrigerators • Dangerous goods segregation and storage requirements 	Section 2.14. Section 2.13.1.1. Section 6.6.2 Section 6.8.
Monitoring	Refer to the SDS and determine monitoring requirements during the chemical risk assessment phase.	<ul style="list-style-type: none"> • Safety Bulletin 18/02 – Calibration requirements for health & safety monitoring equipment 	Section 2.15.
Health Surveillance	Ensure the following: <ol style="list-style-type: none"> 2. Refer to the SDS and determine the health surveillance requirements during the chemical risk assessment phase. 3. For further advice contact ohs-enquiries@unimelb.edu.au 		Section 2.16. Section 2.4.
Training	Ensure the following: <ol style="list-style-type: none"> 1. Refer to the SDS and determine the training requirements during the chemical risk assessment phase. 2. All staff and students receive the relevant training as determined in the above point. 		Section 2.17.
Waste Management	Use the University of Melbourne’s current preferred recycle arrangements or waste disposal arrangements.	<ul style="list-style-type: none"> • Chemical storage and handling for minor quantities in laboratories 	Section 2.18. Section 6.6.1.
Access Arrangements	Nil		Section 2.19.
Incident Reporting and Recording	Ensure the following: <ol style="list-style-type: none"> 1. Report incidents and injuries to the manager/supervisor 2. Record incidents and injuries in ERMS 3. Report all notifiable incidents to the Local Health and Safety Business partner and/or Parkville security 	<ul style="list-style-type: none"> • Safety Bulletin 17/02: Serious injury and incident notification 	Section 2.20

STEPS	ACTIONS/REQUIREMENTS	DOCUMENTS/GUIDANCE	PART B
Emergency Procedures	<p>Ensure the following:</p> <ol style="list-style-type: none"> 1. Refer to the SDS to determine the emergency procedures and requirements during the chemical risk assessment phase 2. First aid requirements, including supplies and training, are suitable for the chemicals used 3. Spill kits are available and suitable for the chemicals used. 4. Additional emergency resources and training are provided where relevant (eg emergency showers and eye wash facilities). 	<ul style="list-style-type: none"> • First aid assessment – Art studio (see Health & Safety: First aid assessment samples) • Health & Safety: Managing spills 	Section 2.21.

PART B – DETAILED INFORMATION AND GUIDANCE

INTRODUCTION

Part B of these guidelines expands on the quick reference tables in Part A. It provides additional chemical management guidance and explanation such as legal compliance, University of Melbourne requirements, specified in the [Health & Safety: Chemical requirements](#), and practical examples for managing the risks associated with chemicals.

Part B has been divided into a number of sections including:

- The *General requirements* that outline the chemical risk management requirements for most chemicals irrespective of their classification; and
- The additional chemical risk management requirements associated with a chemical classification including:
 - hazardous substances;
 - engineered nanoparticles;
 - scheduled carcinogenic substances;
 - dangerous goods;
 - drugs, poisons and controlled substances;
 - chemicals of security concern;
 - precursor chemicals;
 - agricultural and veterinary chemicals and fertilisers; and
 - radioactive chemicals.

GENERAL REQUIREMENTS

2.1. Scope

This section provides guidance on the safe handling, storage, transfer and disposal of chemicals, such as hazardous substances, dangerous goods, scheduled poisons, ionising radiation chemicals¹ and substances with a chemical abstract number. This section does not provide information or guidance on biologicals, asbestos or explosives (Class 1 dangerous good).

Requirements in this section apply to chemicals that are defined as hazardous substances in the *Occupational Health and Safety Regulations 2017* (Vic). Most of these requirements also impact on the broader range of chemical classifications. Therefore, in this section the generic term “chemical” is normally applied to encompass the broad range of chemical classifications. Requirements that only relate to a specific classification are detailed in the relevant section.

¹ Radiation sources such as emitting apparatus and sealed source apparatus are not included in these guidelines.

2.2. Legislation

2.2.1. Acts and Regulations

The legislation that governs chemical management is complex and considerable. The following list represents the majority of Acts and Regulations that may be applicable to the University of Melbourne.

- *Agricultural and Veterinary Chemicals (Control of Use) Act 1992* (Vic)
- *Agricultural and Veterinary Chemicals Code Act 1994* (Cth)
- *Agricultural and Veterinary Chemicals Code Regulations 1995* (Cth)
- *Agricultural and Veterinary Chemicals (Control of Use) (Fertilisers) Regulations 2015* (Vic)
- *Agricultural and Veterinary Chemicals (Control of Use) Regulations 2007* (Vic)
- *Agricultural and Veterinary Chemicals (Victoria) Act 1994* (Vic)
- Approved criteria for classifying hazardous substances (NOHSC:1008) (Cth)
- Australian dangerous goods transport code Edition 7 (Cth)
- *Chemical Weapons (Prohibition) Act 1994* (Cth)
- *Chemical Weapons (Prohibition) Regulations 1997* (Cth)
- *Customs Act 1901* (Cth)
- *Customs (Prohibited Exports) Regulations 1958* (Cth)
- *Customs (Prohibited Imports) Regulations 1956* (Cth)
- *Dangerous Goods Act 1985* (Vic)
- *Dangerous Goods (HCDG) Regulations 2016* (Vic)
- *Dangerous Goods (Storage and Handling) Regulations 2012* (Vic)
- *Dangerous Goods (Transport by Road or Rail) Regulations 2008* (Vic)
- *Drugs Poisons and Controlled Substances Act 1981* (Vic)
- *Drugs, Poisons and Controlled Substances (Drugs of Dependence - Synthetic Cannabinoids) Regulations 2014* (Vic)
- *Drugs Poisons and Controlled Substances (Precursor Chemicals) Regulations 2007* (Vic)
- *Drugs Poisons and Controlled Substances (Precursor Supply) Regulations 2010* (Vic)
- *Drugs Poisons and Controlled Substances Regulations 2017* (Vic)
- *Drugs Poisons and Controlled Substances (Volatile Substances) Regulations 2014* (Vic)
- *Environment Protection Act 1970* (Vic)
- *Environment Protection Act 2017* (Vic)
- *Environment Protection (Industrial Waste Resource) Regulations 2009* (Vic)
- Globally harmonized system of classification and labelling of chemicals (GHS), Third revised edition, Fourth revised edition or Fifth revised edition (UN)

- *Industrial Chemicals (Notification and Assessment) Act 1989* (Cth)
- National Model Regulations for the Control of Workplace Hazardous Substances (NOHSC:1005) (Cth)
- *National Environment Protection Council (Victoria) Act 1995* (Vic)
- *Occupational Health and Safety Act 2004* (Vic)
- *Occupational Health and Safety Regulations 2017* (Vic)
- *Radiation Act 2005* (Vic)
- *Radiation Regulations 2017* (Vic)
- Standard for the uniform scheduling of medicines and poisons (SUSMP) (Cth)
- *Therapeutic Goods Act 2010* (Vic)
- *Water Act 1989* (Vic)
- *Water Industry Act 1994* (Vic)
- *Weapons of Mass Destruction (Prevention of Proliferation) Act 1995* (Cth)
- *Weapons of Mass Destruction Regulations 1995* (Cth)

The legislation listed above has also been included in each of the relevant chemical classification sections.

2.2.2. Supporting Standards, Codes and Guidance Material

The documents listed below refer only to Standards, Codes and Guidance Materials referenced in Section 2. Additional relevant Standards, Codes and Guidance Material have been included in each of the chemical classification sections.

- AS 1216: Class labels for dangerous goods
- AS 1319: Safety signs for the occupational environment
- AS 1345: Identification of contents of pipes, conduits and ducts
- AS/NZS 2243.2: Safety in laboratories. Part 2: Chemical laboratories
- AS/NZS 2243.8 Safety in laboratories. Part 8: Fume cupboards
- [*Globally Harmonised System of Classification and Labelling of Chemicals \(GHS\) information sheet*](#) (Cth)
- [*Hazardous Chemical Information System \(HCIS\)*](#)
- [*Labelling of workplace hazardous chemicals code of practice*](#) (Cth)
- [*Model code of practice. Preparation of safety data sheets for hazardous chemicals*](#) (Cth)
- [*Australian Industrial Chemicals Introduction Scheme \(AICIS\)*](#) (Cth)
- University of Melbourne Design Standards

The “chemical” hazard category in the [*University of Melbourne Health & Safety: Risk register*](#) also contains an extensive list of Standards, codes and guidance materials relevant to the University of Melbourne.

2.3. Permits and Licensing

The procurement and possession of some chemical classifications have permit and licensing requirements. Refer to the relevant sections in this guide for permit and licensing requirements.

- scheduled carcinogenic substances – Section 5.4.
- drugs, poisons and controlled substances – Section 7.4.
- chemicals of security concern – Section 8.2.4.
- precursor chemicals – 9.4.
- agricultural chemicals and veterinary chemicals – 10.4.1. and 10.4.2.
- radioactive chemicals – 11.4.

2.4. Safety Data Sheet (SDS)

The Safe Work Australia publication, [*Model code of practice. Preparation of safety data sheets for hazardous chemicals*](#) has highlighted changes in terminology to the management of chemicals.

Prescribed by the *Occupational Health and Safety Regulations 2017* (Vic), manufacturers and importers are responsible for determining whether a chemical they supply for use in a workplace is hazardous. If the chemical is classified as hazardous, an SDS must be prepared and made available to the purchaser of the chemical.

An SDS should not be confused with a product specification sheet, which provides information on the performance characteristics of the chemical and instructions for application/use.

An SDS provides information about the hazards and risks associated with a chemical. It helps the user identify, assess and control risks associated with the handling, storage, transfer and disposal of a chemical in the workplace.

The *Occupational Health and Safety Regulations 2017* (Vic) require that the employer obtain a current SDS for chemicals that are categorised as hazardous substances². Therefore, local areas must ensure that they have a current copy of an SDS for each hazardous substance in their possession. The manufacturer's/supplier's SDS cannot be altered in any way. Additionally, an SDS must be written in English and contain the following information:

- product identifier³ and chemical identity of the substance;
- name and address and telephone number of:
 - the manufacturer of the chemical in Australia, or
 - the importing supplier in Australia of the chemical;
- an Australian telephone number where information about the chemical can be obtained in an emergency;
- the date of preparation or last review of the safety data sheet;
- the hazard identification for the chemical determined in accordance with the GHS;
- the hazard statement and precautionary statement for the chemical;

² Other classifications of chemicals are often also hazardous substances and will therefore require an SDS. For example, most dangerous goods are also hazardous substances.

³ Product identifier means the name or number used to identify a product – *Occupational Health and Safety Regulations 2017* (Vic)

- g. composition of and information about the ingredients, in accordance with Schedule 8⁴;
- h. first aid measures;
- i. accidental release measures
- j. emergency procedures to apply in the event of incident or exposure;
- k. exposure controls, exposure standards (if any), engineering controls and personal protection information;
- l. information relating to handling and storage, including how the chemical may be safely used;
- m. disposal considerations;
- n. information relating to the physical and chemical properties of the chemical;
- o. stability and reactivity information; and
- p. toxicological information, including health effects.

Manufacturers/importers/suppliers have a legal obligation to supply a current SDS. An employer may expect that the information in the SDS is accurate. Nevertheless, where there are obvious discrepancies or omissions (for example no first aid information) the chemical should not be purchased or used until a complete SDS.

The *Occupational Health and Safety Regulations 2017* (Vic) do not prescribe the format (style or presentation) required for an SDS.

On the other hand the Preparation of safety data sheets for hazardous chemicals code of practice does provide recommended formatting and layout for manufacturers/suppliers.

There is a University of Melbourne checklist to assess that an SDS meets the requirements of the *Occupational Health and Safety Regulations 2017* (Vic). The checklist is also based on the sixteen sections described in the Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice: [Safety data sheet checklist](#).

Whilst an SDS is not required for non-hazardous chemicals, a copy of the SDS provides a method for confirming the chemical's non-hazardous status and physical properties. It is recommended that an SDS for a non-hazardous substance is retained and referenced to determine the safe handling, storage and disposal.

2.4.1. Access to SDS

Staff and students handling and storing chemicals (as discussed in the previous section) must have access to the current SDS. This access should be as close to the work as is reasonably practicable. Access arrangements will depend on the environment and the infrastructure that is already in place. For example where staff and students have ready access to a computer, an SDS database could be used. In contrast where electronic access is not readily available, hardcopies may be required.

NOTE:

The Safe Work Australia publication *Model code of practice. Preparation of safety data sheets for hazardous chemicals* and the *Occupational Health and Safety Regulations 2017* (Vic) essentially have the same requirements for an SDS. Nevertheless, where the requirements differ the *Occupational Health and Safety Regulations 2017* (Vic) take precedence over the Safe Work Australia Code of practice.

⁴ Schedule 8 of the *Occupational Health and Safety Regulations 2017* (Vic)

Irrespective of the access arrangements the SDS should be current and be available for all chemicals – including those in use and those stored.

2.5. Chemical Inventory

A Chemical inventory identifies the nature, quantity and location of chemicals kept at the local area. It must satisfy the regulatory requirements of different Victorian statutes. These include the:

- Hazardous substances register (*Occupational Health and Safety Regulations 2017* [Vic]); and
- Dangerous goods manifest (*Dangerous Goods [Storage and Handling] Regulations 2012* [Vic]).

The University requires most chemicals, including hazardous substances and dangerous goods, be identified and listed on a Chemical inventory with the following information (where applicable):

- Faculty/School/Division name;
- Building name/number;
- Department name/number;
- Supervisor (person responsible);
- CAS number (if available);
- Manufacturer's/Supplier's Product Name;
- Manufacturer's/Supplier's name;
- Total volume of the chemical (quantity);
- Classification of chemical (dangerous goods, hazardous substances, controlled substances [poison schedule]);
- (Where the chemical is a dangerous good) Class label, subsidiary risk label, packaging group and UN number;
- Room number/location of each chemical; and
- SDS available and current.

A [Chemical inventory](#) form has been created, where the University of Melbourne Chemical inventory database is not available (see Section 2.5.1.).

2.5.1. University of Melbourne Chemical Inventory and Database

2.5.1.1. Description

GoldFFX (ChemWatch) is the University of Melbourne's preferred electronic SDS and Chemical inventory management system and meets the University's chemical procedural and regulatory requirements.

The Chemical inventory is referred to as the chemical "Manifest" in GoldFFX. This should not be confused with the manifest requirements for dangerous goods described in Section 6.4.

NOTE:

The *Drugs, Poisons and Controlled Substances Regulations 2017* (Vic) do not require a Poisons inventory; however, an inventory may provide a practical method for recording and tracking scheduled poisons.

Local areas that are using a log book (or similar method) to track Schedule 4, Schedule 8 and Schedule 9 poisons would not be expected to include those poisons on an inventory. (see Section 5.).

GoldFFX has two main sections:

- **SDS data base**, which allows the user to search all GoldFFX and University SDS and print labels; and
- **Chemical inventory (manifest)**, which, in addition to the features above, allows the user to develop and maintain chemical inventories and chemical risk assessments.

GoldFFX is available from: **Chemical management**

The features of Gold FFX Chemical inventory (manifest) include:

- logon to GoldFFX chemical inventory
 - this requires a user name and password provided by a GoldFFX Super User – this will be the local [Health and Safety Business Partner](#))
- inventory of SDS;
- storage of the manufacturer's/supplier's original SDS;
- chemical inventories for Faculties/Schools/Divisions, departments and specified areas;
- generated reports such as chemical inventories including:
 - Hazardous substances inventory,
 - Dangerous goods manifests, and
 - Poisons inventory;
- chemical risk assessments;
- information on chemical labelling and placarding for any given chemical entered into the database;
- determines when placarding is required based on the volume of a dangerous good stored in a given area;
- includes the classification of a chemical (hazardous substance, dangerous good, controlled substance); and
- provides warnings of chemical incompatibilities within a given area, where segregation may be required.

2.5.1.2. GoldFFX User Support

There are several guidance documents available to assist students/staff using the GoldFFX data base including:

- [GoldFFX SDS database quick help: Finding safety data sheets](#)
- [GoldFFX SDS database quick help: Printing chemical labels](#)
- [GoldFFX SDS database quick help: Accessing chemical emergency response instructions](#)

2.5.1.3. Adding SDS to Gold FFX

Additional SDS can be added to GoldFFX. For details refer to: [Chemical Management](#)

2.6. Purchasing and Acquisition

2.6.1. General Requirements

When acquiring/purchasing a chemical for the first time a hazard identification/risk assessment should be completed prior to purchase.

This will include completing a [Health & Safety: Pre-purchase checklist](#) and obtaining the SDS to determine the:

- chemical classification (hazardous substance, dangerous good, scheduled poison);
- subsequent regulatory requirements;
- controls for the safe use, storage and transport;
- waste management requirements; and
- first aid and emergency requirements.

This information enables the proposed user to ensure that:

1. facilities and resources are available to safely handle, store, transfer and dispose of the chemical;
2. regulatory requirements can be met; and
3. controls are put in place prior to purchase.

Where the purchaser has identified that a chemical is hazardous there may also be an opportunity at this stage to acquire a less hazardous chemical.

When purchasing new chemicals, a safe and sustainable disposal method should be identified. Any specialised clean up equipment should also be identified with the purchase of a new chemical.

In summary, remember to:

- (where reasonably practicable) purchase less hazardous chemicals;
- purchase smaller quantities to reduce manual handling issues, storage space and waste;
- ensure the chemical is added to the inventory;
- ensure the SDS is available and can be accessed by everyone; and
- introduce controls that will restrict who can authorise purchasing.

Information on completing a pre-purchase checklist is available from [Safety Bulletin 19/03: Pre-purchase risk assessment](#).

2.6.2. Contractors

From time to time it is anticipated that contractors will bring chemicals into the workplace. Under these circumstances contractor chemicals should be managed under the same principles as University purchased chemicals.

Therefore, the person engaging the contractor must ensure there is:

- a risk assessment for the chemical or a risk assessment for the task that includes the risk assessment of the chemical; and
- a current SDS.

The person engaging the contractor must also ensure that the chemical can be used in accordance with University workplace arrangements including:

- handling;
- storage; and
- disposal.

NOTE:

There have been times where students have brought in paints decanted in unsuitable containers (eg drink bottles).

The manager/supervisor must ensure that all decanted chemical containers are appropriate.

2.6.3. Personal Acquisition or Supply

There may be occasions where privately acquired chemicals are brought into the workplace. Under these circumstances the manager/supervisor should ensure that there is:

- a risk assessment for the chemical or a risk assessment for the task that includes the chemical; and
- a current SDS.

Where an SDS or risk assessment is not available the chemical should be removed from use until the SDS or risk assessment is available.

The manager/supervisor must also ensure that the chemical can be used in accordance with University workplace arrangements including:

- handling;
- storage; and
- disposal.

2.7. Importation

Importation of chemicals into Australia is complex and is governed by a number of Australian Government jurisdictions and legislation. Staff importing chemicals must contact the relevant Australian Government department(s) for their legal requirements/obligations. Various importation jurisdictions and categories include:

- **Industrial Chemicals**

Commonwealth Agency: [Department of Health and Aged Care](#)

- **Agricultural Chemicals (including fertilisers) and Veterinary Chemicals**

Victorian Agency: [Department of Economic Development, Jobs, Transport and Resources](#)

Commonwealth Agency: [Australian Pesticides and Veterinary Medicines Authority](#)

Commonwealth Agency (fertiliser importation requirements): [Department of Agriculture and Water Resources](#)

- **Medicines and Medicinal Products**

Commonwealth Agency: [Department of Health Therapeutic Goods Administration](#)

- **Food Additives, Contaminants and Natural Toxicants**

Independent Statutory Agency: [Food Standards Australia New Zealand](#)

The above list is not complete. Please refer to the relevant chemical classification for more information.

2.8. Manufacture or Supply

Staff that manufacture chemicals for sale or exchange to another workplace (other than the University of Melbourne) have additional responsibilities under the *Occupational Health and Safety Regulations 2017* (Vic).

Staff must determine if the chemical is a hazardous substance (see Section 3.).

In the case of a hazardous substance staff must ensure the following:

- prepare and provide an SDS in accordance with the *Occupational Health and Safety Regulations 2017* (Vic) (see Section 2.4.);
- review the SDS to ensure the information remains current and correct; and
- label any containers in accordance with the *Occupational Health and Safety Regulations 2017* (Vic) (see Section 2.12.).

Manufacture or supply does not apply to a chemical:

- that is produced as waste during the process of manufacturing the chemical; or
- when the chemical is used at the University of Melbourne.

2.9. Chemical Risk Assessment

2.9.1. Introduction

A chemical risk assessment determines whether there is a risk to staff or students' health from using or coming into contact with (such as a chemical waste contractor) a chemical in the workplace. This includes any new chemicals that may be produced during an activity). Therefore, all staff and students who engage in activities associated with chemicals must be aware of the hazards/risks associated with chemicals and the controls that have been put in place to reduce the risks.

For newly purchased/introduced chemicals a preliminary risk assessment should have been completed prior to purchase (see Section 2.6.) The purpose of the pre-purchase checklist is to determine if new risks are being introduced into the workplace and therefore additional controls may be required (for example new storage arrangements). On delivery of the new chemical a risk assessment should then be completed before a chemical is used for the first time.

The chemical risk assessment should be kept in a location where it can be accessed quickly and easily by the users. It should consider:

- safe handling and storage from purchase through until disposal; and
- emergency plans can be implemented in the event of an adverse incident.

A chemical risk assessment consists of the following steps:

1. determine who shall complete the chemical risk assessment;
2. identify hazards
3. assess the risks;
4. control the risks;
5. record the risk assessment; and
6. review the risk assessment.

The complexity of the chemical risk assessment will depend on the chemical(s) in use and their interaction with the activity. The table in Section 2.9.3. describes types of chemical risk assessments and the corresponding forms that can be used.

NOTE:

General guidance material is available on the risk assessment process:

[Health & Safety: Risk assessment methodology](#)

2.9.2. Pregnancy

Additional risks may exist for pregnant staff or students and their unborn child. Refer to the [Health & Safety: Reproductive health requirements](#) for more information.

2.9.3. Type of Chemical Risk Assessment

This section describes the methodology for a hazard-specific chemical risk assessment. For more information on generic risk assessments that incorporate chemicals into an activity refer to the guidance, [Health & Safety: Risk assessment methodology](#).

Risk assessments are entered and stored into the Enterprise Risk Management System (ERMS). A University username and password is required to access ERMS via the Staff Hub or directly from web site: [Enterprise Risk Management System](#).

Hard copy chemical risk assessment forms are available where access to ERMS is not available. These can later be transposed to ERMS.

Chemical risk assessments can be grouped or individual as follows:

- *grouped assessments* are used for chemicals that have similar properties, hazards and uses and therefore require the same methods of control (for example acrylic based paints could be assigned into a common group chemical risk assessment and paints containing isocyanates could be assigned to another); and
- *individual assessments* are used for chemicals that:
 - have unique risks;
 - have unique controls; and/or
 - are used in manner other than the intended purpose of the manufacturer or supplier.

NOTE:

Risk assessments and SDS are available for office supplies (such as toners) that are purchased through the University preferred supplier.

See the [Chemical Management](#) web page.

Chemical risk assessment forms include:

- [\(Sample\) Laboratory notebook](#)
- [Chemical risk assessment form](#)

Table 1 outlines the chemical risk assessment forms in more detail.

From time to time chemicals may be used during activities where it may be more appropriate to use a general or task risk assessment, rather than the hazard specific chemical risk assessment. For more information refer to the [Health & Safety: Risk assessment methodology](#). Task risk assessments are also entered and stored in ERMS.

Hard copy general or task risk assessment forms are available where access to ERMS is not available. These can later be transposed to ERMS. These include:

- [General risk assessment form](#)
- [Task risk assessment form](#)

TYPE OF CHEMICAL RISK ASSESSMENT AND DOCUMENTATION	DESCRIPTION	EXAMPLES
Chemical risk assessment	<p>Chemicals that can be grouped together into like chemicals.</p> <p>Chemicals that are assessed as high risk because they have severe physical or environmental adverse outcomes if there is an incident will require individual assessments. For example:</p> <ul style="list-style-type: none"> • scheduled carcinogenic substances • hydrofluoric acid • cyanide 	<p>These risk assessments are no longer published but are available on request:</p> <p>email: safety-chemical@unimelb.edu.au</p>
Process chemical risk assessment	<p>Activities that include many chemicals where it is not reasonably practicable or valid to complete a separate risk assessment for each chemical.</p> <p>Under these circumstances a risk assessment setting out the process steps of the activity should be completed.</p>	<p>An example of a process chemical risk assessment is provided in:</p> <ul style="list-style-type: none"> • (Sample) Laboratory notebook

Table 1: Chemical risk assessment forms

The chemical risk assessments above are referred to as hazard specific risks assessments because they focus predominately on one hazard category – in this case, chemicals. Alternatively, general or task risk assessments are suited to activities that include several hazard categories, where no hazard appears to predominate.

2.9.4. Identify Who Shall Complete the Risk Assessment

It is important that staff and students completing a chemical risk assessment are competent and familiar with both the:

- risk assessment process; and
- chemical and the interaction of that chemical with the activity.

See Section 2.17. with regards to training needs for staff and students completing a chemical risk assessment.

2.9.5. Identify Hazards and Risks

SDS and labels for all hazardous substances supplied to the workplace should be reviewed to obtain information on the health hazards, precautions for use and safe handling requirements for the substance. Some products – for example, hazardous substances in retail packages – may have sufficient information on the consumer package label to cover most likely situations of exposure, such as the clean-up and proper disposal of spills.

2.9.5.1. What to do if an SDS for a chemical is unavailable

If an SDS is required under the *Occupational Health and Safety Regulations 2017* (Vic), equivalent information on health hazards and precautions for use and safe handling should be obtained. The use of equivalent information will usually be limited to situations where the substance is generated in the workplace because of the use of a hazardous substance.

[Australian Industrial Chemicals Introduction Scheme \(AICIS\)](#) summary reports are a useful source of equivalent information. AICIS summary reports have been produced for every chemical notified and assessed under the *Industrial Chemical (Notification and Assessment) Act 1989* (Cth).

These reports contain the chemical:

- general uses, precautions and restrictions to be observed during manufacture, handling, storage, use and disposal;
- information on emergency procedures; and
- summaries of health and environmental effects data.

2.9.5.2. Determine the Chemical Classification

Under different statutes there may be additional legal requirements with regards to the chemical classification. Refer to the relevant sections in this guidance for additional specific requirements.

Examples of different statute requirements based on classification include:

- Hazardous substances register is required under the *Occupational Health and Safety Regulations 2017* (Vic);
- Dangerous goods manifest and signage may be required under the *Dangerous Goods (Storage and Handling) Regulations 2012* (Vic); and
- Poisons license is required where scheduled poisons (e.g. S4, S8) are kept (*Drugs, Poisons and Controlled Substances Regulations 2017* [Vic]).

2.9.5.3. Review the Information

To assess the risks to health and safety, the staff member or student using the chemical must find out how the chemical and any chemicals generated through its use may be harmful to a person's health or safety.

Therefore, when reviewing the information about a chemical, consider the following factors:

- a. The routes of exposure to chemicals and the health effects associated:
 - inhalation;
 - ingestion;
 - absorption through the skin or via the eyes; and
 - injection.
- b. The form (including concentration) in which the chemical may be present, such as solid, liquid or gas.
- c. The chemical and physical properties of the chemical.
- d. The health effects for each route of entry or contact identified, such as:
 - either immediate or delayed;
 - sensitisation or allergic reactions;
 - cancer;
 - damage to specific target organs;
 - harmful to human reproduction; and
 - synergistic effects.
- e. The effects on the environment taking into account
 - storage and transport; and
 - generated waste.

2.9.6. Analyse the Risks

The University of Melbourne risk assessment methodology provides a two variable matrix to analyse the risk. This analysis rates the level of risk associated with the chemical.

2.9.6.1. Current Risk Rating

The current risk rating (also known as residual risk rating) represents the level of risk associated with an activity *before* additional controls (if required) are implemented to reduce the risk.

2.9.6.2. Residual Risk Rating

The residual risk rating represents the level of risk associated with an activity *after* additional controls have been implemented to reduce the risk.

At the time of the risk assessment, if the current controls are adequate and additional controls are not required, then the current rating and the residual rating will be the same.

2.9.7. Control the Risks

The *hierarchy of control* should be used when determining the most appropriate manner for controlling risks associated with chemical use. Generally, a combination of controls will be required nevertheless the higher the level of control the more effective it will be. For more information refer to: [Guide to chemical risk hierarchy of control](#).

The control measures of most effective to least effective include:

a. Elimination

Where reasonably practical designing or modifying work activities or processes that do not require use of chemicals. An example of elimination includes:

- equipment that can be sterilised through autoclaving and therefore disinfecting chemicals are not required.

b. Substitution

Use a less hazardous chemical or a chemical in a less hazardous form. A substitute chemical should not introduce a new or a higher degree of risk to health. Examples of substitution include:

- detergent in place of a chlorinated solvent for cleaning;
- water-based paint in place of a solvent-based paint; and
- painting with a brush rather than spray-painting, which creates a mist.

c. Isolation

Isolation involves separating people from the chemical by distance or barriers to prevent or reduce exposure. Examples of isolation include:

- closed systems such as those used during the processing and transfer of flammable liquids;
- the use of glove boxes or glove bags;
- placing a process, or a part of it, within an enclosure which may also be fitted with exhaust extraction to remove contaminants; and
- isolating operations in one room with access restricted to adequately protected personnel.

d. Engineering Controls

Engineering controls are physical controls (such as plant) that eliminate or reduce the generation of chemicals, suppress or contain chemicals, or limit the area of contamination in the event of spills and leaks. Engineering controls often entail partial enclosure, exhaust ventilation or automation of processes. Examples of engineering controls include:

- local exhaust ventilation to trap airborne contaminants close to their point of release;
- fume cupboards (ensure fume cupboard is suitable for the chemical used eg scrubbers in ventilation systems where percuric acid is used); and
- enclosed automated machinery to reduce exposure (eg automated spray-painting booth).

Refer to the [Safe use of ducted fume cupboards](#) for more information on fume cupboards. In addition, Australian Standards⁵ provide guidance on the type, use and maintenance requirements for fume cupboards.

e. Administrative Controls

Administrative controls are systems of work or safe work practices which help to reduce employee exposure to chemicals and those chemicals generated by their use.

Examples of administrative controls include:

- standard operating procedures (see Section 2.10) that take into account and incorporate the hazards and risks identified and analysed during the risk assessment;
- reducing the number of employees exposed to the chemical (for example by restricting employee access to certain areas);
- reducing the duration and/or frequency of employees' exposure through specific work procedures;
- good housekeeping, including regular cleaning of work areas;
- changing packaging material to reduce exposure during handling (for example purchasing liquids in ready to use packages instead of decanting from large containers);
- using vacuuming or wet sweeping methods to suppress dust that may be generated during sweeping;
- cleaning up spills immediately; and
- providing suitable washing facilities.

f. Personal Protective Equipment⁶

PPE should not be the only risk control, as this control relies on staff and students following instructions and procedures correctly. Where PPE is used, staff and students should be trained to fit and use properly. In addition, the equipment should be:

- properly selected for the individual and task;
- readily available;
- cleaned and maintained in keeping with relevant standards; and
- correctly used when needed.

⁵ AS/NZS 2243.8 *Safety in laboratories. Part 8: Fume cupboards*

⁶ Personal protective equipment (PPE) includes overalls, aprons, footwear, gloves, chemical resistant glasses, face shields and respirators.

2.9.8. Review the Risk Assessment

At regular scheduled intervals chemical risk assessments, including the effectiveness of the controls, should be reviewed. The frequency of the reviews can be based on the level of risk associated with the use of the chemical. For example, if the chemical has been assessed with a high risk the risk assessment may be reviewed annually. Whereas a chemical assessed as a low risk may be scheduled for review biennially, triennially or five yearly.

Risk assessments should also be reviewed where there are changes to the environment or systems of work that alter the effectiveness of the original controls such as:

- a new chemical is introduced into the work area;
- the process or plant is modified;
- new information on the hazards for the chemical becomes available;
- monitoring (environmental or health surveillance) indicates that controls are not adequate;
- accidents and near misses occur;
- chemicals are moved to new location; and
- improved control measures become available.

2.10. Standard Operating Procedures

With regards to health and safety, a standard operating procedure (SOP) enables staff and students to carry out an activity safely and with a uniform approach. It plays an important part in controlling risks related to an activity and is normally associated with a risk assessment.

Standard operating procedures should be available and consider relevant health and safety considerations followed when activities involve the use of chemicals. The University [Standard operating procedure form](#) has been developed for use.

Standard operating procedures can be generated from any of the following:

- processes or procedures/activities;
- classes of chemicals;
- individual chemicals; or
- other approaches that address health and safety concerns associated with a chemical.

At regular scheduled intervals standard operating procedures should be reviewed. Similarly, to a risk assessment, the frequency of the reviews can be based on the level of risk associated with the use of the chemical (as identified in the risk assessment). An efficient review program would include reviewing both the standard operating procedure and associated risk assessment at the same time.

Standard operating procedures should also be reviewed for the same circumstances listed for risk assessments in Section 2.9.8.

2.11. Personal Hygiene

Irrespective of the chemical and its associated risks, personal hygiene when handling and storing chemicals is an integral part of controlling physical exposure. Personal hygiene requirements include:

- providing readily available wash up facilities;
- washing hands immediately after using chemicals;
- storing food or drink separately from chemicals (do not store chemicals and food together);
- ensuring that laboratories, workshops and other areas where chemicals are used are free from eating and drinking;
- displaying “rules” in laboratories and workshops that include hygiene requirements; and
- wearing suitable PPE, such as eye/face protection, gloves and over garments (overalls, laboratory coats).

2.12. Labelling

The purpose of labelling is to ensure that the contents of a container can be readily identified by product name, and to provide basic information about the contents of the container – its ingredient(s), hazards and precautions for safe use.

Refer to the relevant sections in this guide for labelling requirements associated with the different chemical classifications including

- hazardous substances (Section 3.5.);
- engineered nanoparticles (Section 4.5.);
- scheduled carcinogenic substances (Section 5.5.);
- dangerous goods (Section 6.5.);
- drugs, poisons and controlled substances (Section 7.5.);
- agricultural and veterinary chemicals and fertilisers (Section 10.6.); and
- radioactive chemicals (Section 11.6.).

NOTE:

Appendix 2 has a summary of labelling requirements for decanted chemicals, including the requirements for different chemical classifications.

2.12.1. Decanted Chemical Labelling

A container into which a chemical (or mixtures of chemicals) has been decanted must be labelled if:

- the decanted substance is not immediately used;
- the decanted substance will be left unattended; or
- the container is not cleaned or its contents neutralised, cured or chemically deactivated immediately after use.

The label for a decanted chemical must be written in English and include the product identifier. A product identifier is a name or number used to identify a product on a label or in a SDS⁷.

⁷ Occupational Health and Safety Regulations 2017 (Vic)

2.12.2. When the container cannot be labelled

Where it is not practical to label the container (eg. the container is too small) some other means to identify the chemical should be used. Examples include:

- a label with abbreviations/symbols which are displayed on a chart in the area where the chemical is used;
- a label attached to supporting apparatus; or
- a swing tag.

2.12.4. Research Chemical Labelling

A research chemical is a substance or mixture that has been manufactured in a laboratory for the purpose of genuine research and is not for use or supply to others for a purpose other than genuine research.

The label for a research chemical must be written in English, provide the product identifier and where reasonably practicable include:

- the hazard pictogram or hazard statement;
- the precautionary statements; and
- the signal word.

A product identifier for a research chemical could be:

- the name of the chemical;
- the recognised abbreviation or acronym of the chemical; or
- the chemical formula, structure or reaction components of the chemical.

2.12.5. Obtaining Labels

Decanted chemical labels can be printed using the GoldFFX labelling functionality. In most cases GoldFFX labels will meet legal requirements. Prior to printing ensure the label is written in English and includes:

- the product identifier; and
- where applicable, the additional chemical classification requirements.

Information on printing labels from ChemWatch – GoldFFX is available from the following web link: [GoldFFX SDS Database quick help: Printing chemical labels](#)

Decanted chemical labels/stickers can also be ordered from the Chemistry Store.

Before affixing a label to a decanted chemical ensure:

- the label is durable and will remain legible for the life of the decanted chemical;
- the label contains the correct information; and
- the label describes matches the contents of the container.

2.12.6. Unlabeled Containers

If an unlabelled (or wrongly labelled) container is found in the workplace, the contents should be identified and correctly labelled before the chemical is used.

If the contents of a container cannot be identified, a label such as 'CAUTION DO NOT USE: UNKNOWN SUBSTANCE' should be attached to the container. The container should be removed from use until its contents are identified.

2.12.7. Transfer Systems Labelling

Where reasonably practicable transfer systems, such as pipe work and building infrastructure that holds/transfers chemicals, should be labelled.

Labelling should:

- identify the chemical;
- identify the directional flow; and
- where applicable any necessary precautions.

Labelling should be attached directly to the pipe work/transfer system and meet the requirements of relevant legislation, Standards and University requirements including:

- *Dangerous Goods (Storage and Handling) Regulations 2012* (Vic);
- AS 1216: Class labels for dangerous goods; and
- AS 1319: Safety signs for the occupational environment;
- AS 1345: Identification of contents of pipes, conduits and ducts;
- University of Melbourne Design Standards.

Where it is not practicable to attach the label directly to the pipe work/transfer system it should be immediately adjacent to the pipe work/transfer system.

Additional information is available from the guidance [Labelling the contents of pipes, conduits and ducts](#).

2.13. Storage and Handling

2.13.1. Storage Requirements

Many chemicals have specific storage requirements because of their physical properties. The hazards or risks associated with chemical storage can include one or a combination of the following:

- chemicals that become unstable over time that may result in fire or explosion;
- chemicals that are temperature sensitive;
- chemicals that are shock sensitive;
- chemicals that have particular physical rendering them incompatible with chemicals with another physical property;
- chemical packaging that becomes damaged and leaks;
- chemicals that are decanted into inappropriate or unlabelled containers;

- chemical storage arrangements that introduce additional hazards associated with the chemical; and
- chemical licensing conditions or constraints that affect storage requirements.

Storage arrangements should be identified during the chemical risk assessment and appropriate provisions provided. Storage requirements are specified on the SDS.

Consideration should also be given to the quantities that will be stored, particularly as bulk storage areas may require additional signage and controls. (Refer to Section 6.8. for the placarding requirements of manifest quantities of dangerous goods).

For more information on the storage requirements for specific groups of chemicals refer to the relevant section.

2.13.1.1. Laboratory Refrigerators

Laboratory refrigerators that are used to store flammable solvents or other volatile chemicals may accumulate flammable or explosive atmospheres inside the unit. Under these conditions ignition sources from the refrigerator may cause an explosion.

AS 2243.2 states that:

A refrigerator may be used to store flammable chemicals provided it has been designed and manufactured to eliminate ignition sources.

Additional information is available from [Guidance for storing flammable solvents in refrigerators](#).

2.13.2. Decanting

Where reasonably practicable chemicals should be kept in their original container with the original labelling. Where chemicals are decanted the new containers must be appropriate for the chemical they will hold and be correctly labelled (Section 2.12.2.).

Decanting chemicals in explosive atmospheres or chemicals that may produce explosive atmospheres require special arrangements that will not produce static electricity (eg earthing equipment, non-synthetic protective garments).

Particular attention must be given to decanting chemicals that have unique hazards such as:

- solvents which can create explosive atmospheres; and
- asphyxiates.

2.13.3. Transporting and Transferring

2.13.3.1. Relocation of Laboratory and Workshop Chemicals

The University has a preferred contractor for the temporary and permanent relocation of chemicals. The contractor can be arranged through the local [Health and Safety Business Partner](#). The contractor will segregate the different Classes of dangerous goods, pack, transport and unpack the chemicals at the new location.

2.13.3.2. Chemicals Purchased Internally

Where applicable the internal supplier shall engage a licensed dangerous goods agent for the transport of chemicals to the purchaser. The chemicals must be in the manufacturer's original packaging where possible and all legal requirements met, including paperwork, placarding and labelling. The packages shall contain packing material to reduce the chance of damage to the chemical containers. Where liquids in glass containers are to be shipped, vermiculite or other suitable packing materials shall be used if not in the supplier's original packaging.

NOTE:

Cryogenic liquids and asphyxiates must be transferred in closed dewars or closed vacuum flasks.

When transferred by vehicle the containers must be positioned so that if there is an unplanned release it will vent to the outside of the car (not in the interior of the car, including the boot). For example, in the open tray of a utility.

2.13.3.3. Chemicals Transferred by Staff and Students

Only small quantities of chemicals should be transferred via vehicle. Packaging requirements are the same as "chemicals purchased internally".

For more information on the transfer requirements for specific groups of chemicals refer to the relevant section. Attention should be paid to the transfer/transport of dangerous goods (Section 6.8.).

2.14. Signage

Cupboards, lockers and refrigerators used for storing chemicals should be labelled to indicate the type of chemicals being stored (eg the Class label for a dangerous good). Additional signs may also be required, such as "do not use to store food".

There are specific signage requirements for storing (placarding) dangerous goods. Refer to Section 6.9.

2.15. Monitoring

Atmospheric monitoring measures the level of the chemical contaminate in the air (gases, vapours, fumes, dusts, particles etc). The results of the monitoring can then be compared to Exposure Standards⁸ to determine if the controls are adequate.

Commonly monitoring is undertaken:

- during the risk assessment process to help determine that the controls are adequate; or
- continuously in an area as part of the required controls (eg oxygen monitors in a room that stores oxygen depleting gas cylinders).

Where monitoring is required, it should be completed by a competent person with the appropriate calibrated equipment. The local [Health and Safety Business Partner](#) can provide additional advice. Information on calibration requirements for monitoring equipment is available from [Safety Bulletin 18/02 - Calibration requirements for health & safety monitoring equipment](#).

⁸ Exposure standards represent airborne concentrations of substances in a person's breathing zone, which according to current knowledge, should neither impair health nor cause a person discomfort. Exposure standards are included in an SDS.

Monitoring requirements for fixed monitoring Infrastructure should be determined by a competent person.

2.16. Health Surveillance

The purpose of health surveillance is to ensure that control measures are effective and to provide an opportunity to reinforce specific preventive measures and safe work practices.

Health surveillance is required where personnel are exposed to certain chemicals. Examples include:

- chemicals (particularly some hazardous substances) where there is a reasonable likelihood that adverse health conditions could occur under particular conditions (see Section 3.7.); and
- scheduled carcinogenic substances (see Section 5.8.).

For further health surveillance advice email ohs-enquiries@unimelb.edu.au

Health surveillance information is also available on the Occupational Health web site:

<https://safety.unimelb.edu.au/occupational-health>

2.17. Training

The purpose of information, instruction and training is to ensure that personnel handling chemicals have the skills and knowledge they need to perform their tasks in a manner that is safe and without risks to health and the environment, so far as it reasonably practicable. It should enable them to follow health and safety procedures and use risk controls that are set in place for their protection. It should also provide them with an appreciation of the nature of the chemicals used in the workplace and the risks associated with their use, and the reason why risk controls are used.

The mix of information, instruction and training provided will depend on the severity of the hazards and risks, the level of health and safety responsibility of the person and what the person already knows about the chemicals and their use.

For example, staff that are expected to complete chemical risk assessments and/or supervise other staff or students using chemicals should complete chemical management training. Students who are under constant supervision may only require a review and understanding of the chemical risk assessment.

The topics that could be covered in chemical management training include:

- pre-purchasing requirements;
- legislation requirements;
- classification of chemicals;
- chemical risk assessment;
- standard operating procedure (SOP);
- labelling;
- storage requirements;
- handling, storing and disposing of chemical waste;
- transportation requirements;

- PPE; and
- emergency procedures.

Chemical Management training is available for staff, students and others in TrainME. TrainME requires a University Username and password. A manager/supervisor can enrol direct reports. Staff can also self-enrol.

Chemical management training may be conducted by the Health & Safety team. It can be arranged by contacting the local [Health and Safety Business Partner](#).

Additional information on chemical management training and other health and safety training provided is available from the web link (requires University network login): [Training](#).

12.17.1 Local Area Induction

During an induction (for example laboratory) there is an opportunity to guide new staff and students through the systems for managing chemicals used in the local area.

The induction would incorporate local area familiarisation with:

- location and access to SDS;
- risk assessments for chemicals and/or risk assessments with activities incorporating chemicals;
- standard operating procedures for activities where chemicals are used;
- controls used to minimise exposure to chemicals; and
- emergency procedures.

Other topics included in the chemical management training (such as storage arrangements, PPE, labelling) may also be required in the induction, particularly where the staff and/or students are not required to attend additional chemical training.

2.18. Waste Management

2.18.1. Waste

Chemical waste includes:

- any chemical whether solid, liquid, gaseous or radio-active which is discharged, emitted or deposited in the environment in such volume, constituent or manner as to cause an alteration in the environment;
- any discarded, rejected, unwanted, surplus or abandoned chemical;
- any otherwise discarded, rejected, abandoned, unwanted or surplus chemical intended for:
 - recycling, reprocessing, recovery or purification by a separate operation from that which produced the matter, or
 - sale; and
- any chemical prescribed to be a waste (chemical hazardous waste).

Chemical waste must be stored appropriately (including segregation and bunding) so that the container/receptacle is impervious to rodents and insects, and in such a way that it does not detrimentally affect the surrounding area by odour, visual pollution, air pollution, noise pollution and so on.

2.18.2. Site Compliance Agreements

When discarding chemical waste into the sewer system the University of Melbourne has waste agreements, including trade waste agreements, which all staff, students and contractors must comply with.

General waste agreements include:

- the pH must be between pH 6 to pH 10;
- the sulphide levels must be < 1 mg/L; and
- the discharge of methanol, large quantity of sugars, fats, heavy metals, fungicides, pesticides, phenol or other antibacterial agents are prohibited.

For further guidance contact the department technical manager, the local [Health and Safety Business Partner](#) or Infrastructure Services, Campus Services.

2.18.3. Labelling Chemical Waste

Where waste is collected for disposal it must be stored in container that is fit for the purpose and appropriately labelled as chemical waste. The label must contain the following information:

- chemical name, or mixture ingredients;
- departmental name and number;
- dangerous goods Class label (if applicable);
- packaging group;
- type of waste (organic solvent, inorganic solvent); and
- volume.

2.18.4. Storage of Chemical Waste

Waste chemicals for disposal should be stored in a designated or quarantined area that includes segregation and bunding. Where practicable chemical waste should be reduced to lower the impact on the environment. For example a trained person could neutralise unwanted hydrochloric acid by adding sodium bi-carbonate. This would reduce the impact on the environment as transport of the waste would be eliminated.

2.18.5. Process for Disposal

Arrangements are in place for a University preferred waste contractor to collect and dispose of chemical waste at scheduled intervals at the Parkville and other campuses. The frequency of waste collection may differ at the various campuses/controlled locations. Ad hoc collections are also available. The Health & Safety team can be contacted to determine other locations and frequencies.

To use the University waste contractor service refer to the Health & Safety web site: [Hazardous Waste Collection](#).

Some general requirements include:

- storing the chemical waste at predetermined, secured locations prior to pick up;
- nominating a local area person to be available at the time of pick up if required;
- ensuring the waste chemicals are appropriately packed and labelled for transport; and
- ensuring the waste chemicals are segregated into appropriate dangerous goods Classes and hazardous substances.

NOTE:

The cost for the disposal of excess or out-of-date chemicals is at the cost of the local area.

2.18.5.1. Empty Chemical Containers

Empty chemical containers should be disposed of appropriately.

Containers for disposal to landfill must be rendered free of all contaminants and the label removed/defaced.

Containers that cannot be rendered free of all contaminants must be disposed of through the hazardous waste collection.

2.19. Access Arrangements

Access to chemicals should be restricted to authorised personnel with regards to the following:

1. Legal requirements
 - For example, scheduled poisons, such as Schedule 8, require restricted access to named personnel on the poisons permit and staff or students under their direct supervision.
2. Intended use of the chemical
 - For example, whilst insect surface spray aerosol is usually a dangerous good, Class 2.1, it is intended for general use by staff and students. Therefore, there would be little or no access restriction requirements with regards to safety.
3. Hazards and risks associated with the chemical
 - For example, hydrogen fluoride is a highly corrosive dangerous good, Class 8 (Subsidiary Class 6.1) where known exposures have resulted in permanent injury or death. Therefore, access should be restricted to personnel who work directly with the chemical, have completed chemical training and are conversant with the chemical risk assessment.

2.20. Incident Reporting and Recording

There are a number of mechanisms for reporting and recording incidents involving chemicals at the University. The mechanisms for reporting and recording depend on the type of incident.

In general chemical incidents that involve near misses (dangerous occurrences), health and safety hazards, injuries or illnesses, health and safety system failures or property loss or damage are reported and recorded as per the [Health & Safety: Incident, injury, hazard reporting and investigation requirements](#).

Incidents are reported to the relevant manager/supervisor and entered into the Enterprise Risk Management System (ERMS). A University username and password is required to access ERMS via the Staff Hub or directly from web site: [Enterprise Risk Management System](#).

Hard copy incident report forms are available where access to ERMS is not available. These can later be transposed to ERMS.

[Incident report form](#)

In addition to recording incidents in ERMS, the *Occupational Health and Safety Act 2004* (Vic) mandates that various serious injuries and incidents require notifying the Regulator (WorkSafe).

Examples of chemical incidents or injuries that would require notifying the Regulator include:

- medical treatment within 48 hours of exposure to a substance
 - a staff member inhales fumes from a chemical mixture that triggers an asthma attack resulting in medical treatment
- immediate medical treatment for a serious eye injury
 - a staff member splashes an alkaline in the eyes that results in immediate medical treatment

If a serious incident occurs during business hours contact the [Health and Safety Business Partner](#) of the relevant location/area concerned or the Parkville Campus Security Control Room. During out of business hours contact the Parkville Campus Security Control room on 8344 6666.

For further details see: [Safety Bulletin 17/02: Serious injury and incident notification](#).

Some chemical classifications have additional incident reporting and recording requirements.

Refer to the relevant sections in this guide for additional incident reporting and recording requirements.

- drugs, poisons and controlled substances – Section 7.8.
- radioactive chemicals – 11.9.

2.21. Emergency Procedures

Local emergency procedures must be developed and consider:

- the physical properties of the chemical including, fire and explosion, environmental damage and the likely health effects if exposure occurs (this information will be provided on the SDS); and
- the full life-cycle and intended use of the chemical from delivery/receipt through to waste collection.

The emergency procedure arrangements should be determined during the risk assessment phase and include:

- general first aid requirements and appropriately trained first aiders (including their location and contact details);
- location and access to emergency showers and emergency eyewash stations;
- specific first aid requirements that may be required for some chemicals (eg cyanide requires administration of oxygen);
- spill kits appropriate for the physical properties of the chemical;

- additional equipment to mitigate or reduce environmental impact (spills should be contained wherever possible, and floor drains and sinks should be isolated);
- firefighting medium appropriate for the physical properties of the chemical;
- consideration of the need for self-contained breathing apparatus; and
- consideration of the need for environmental monitoring devices.

Emergency procedures, guidance material and publications are available at web link: [Emergency Management](#).

[Health & Safety: Managing spills](#) provides useful information for developing local area emergency procedures and requirements.

A first aid risk assessment form and first aid risk assessments for different work locations have been developed. Refer to: and include:

- *Health & Safety: First aid assessment form*
- *Health & Safety: First aid assessment samples*

First aid procedures, guidance material, including the above assessment samples and form are available at: [First Aid](#).

HAZARDOUS SUBSTANCES

3.1. Scope

The requirements listed in Section 2. are relevant to the chemical management of hazardous substances. Additional requirements for hazardous substances are identified in this section.

3.2. Introduction

A hazardous substance is a chemical that has the potential to cause harm to a person's health. It is defined by the *Occupational Health and Safety Regulations 2017* (Vic) as a substance that satisfies the criteria for hazard classification set out in [Part 3 \(Health Hazards\) of the GHS](#), but does not include a substance that satisfies the criteria solely for one of the following hazard classes:

- acute toxicity – oral – category 5;
- acute toxicity – dermal – category 5;
- acute toxicity – inhalation – category 5;
- skin corrosion/irritation – category 3;
- serious eye damage/eye irritation – category 2B;
- aspiration hazard – category 2

Hazardous substances may be solids, liquids or gases; they may be pure substances or mixtures. When used in the workplace, these substances often generate vapours, fumes, dusts and mists. A wide range of industrial, laboratory and agricultural chemicals are classified as hazardous.

Hazardous substances may enter the human body in a number of ways, depending on the substance and how it is used (the nature of the work). The major routes of exposure to hazardous substances in the workplace are inhalation and skin contact or absorption. Less frequently, these substances may be ingested, or injected into the body.

Hazardous substances may cause immediate or long-term health effects. Exposure to these substances may result in poisoning, irritation, chemical burns, sensitisation, cancer, birth defects or diseases of certain organs such as the skin, lungs, liver, kidneys and nervous system. The severity of the health effects depends on the chemical and the dose absorbed.

3.3. Legislation

3.3.1. Acts and Regulations

- *Occupational Health and Safety Act 2004* (Vic)
- *Occupational Health and Safety Regulations 2017* (Vic)

3.3.2. Supporting Standards, Codes and Guidance Materials

- [Globally Harmonised System of Classification and Labelling of Chemicals \(GHS\) information sheet](#) (Cth)
- [Hazardous Chemical Information System \(HCIS\)](#)
- [Labelling of workplace hazardous chemicals code of practice](#) (Cth)
- [Model code of practice. Preparation of safety data sheets for hazardous chemicals](#) (Cth)
- [Australian Industrial Chemicals Introduction Scheme \(AICIS\)](#) (Cth)
- [Hazardous Chemical Information System \(HCIS\)](#)
- WorkSafe chemical safety self-assessment tool (Vic)

3.4. Register of Hazardous Substances

The *Occupational Health and Safety Regulations 2017* (Vic) require the employer to keep a Register of hazardous substances that lists all hazardous substances in the workplace. This requirement can be fulfilled by keeping a Chemical inventory as described in Section 2.5.

3.5. Labelling

3.5.1. Manufacturer's/Supplier's Chemical Labelling

The *Occupational Health and Safety Regulations 2017* (Vic) require that chemicals (hazardous substances) are labelled based on the Globally Harmonised System of Classification and Labelling Chemicals (GHS).

Therefore, a manufacturer/supplier must ensure that the chemical container's label is written in English and it should include:

- the product identifier of the hazardous substance;
- the name, address and telephone number of:
 - the manufacturer of the substance in Australia; or
 - the importing supplier of the substance in Australia;

- for each ingredient of the hazardous substance—the identity and proportion which must be disclosed in accordance with Schedule 8⁹;
- any hazard pictogram consistent with the correct classification of the substance;
- any hazard statement, signal word and precautionary statement consistent with the correct classification of the substance.

If a hazardous substance is packed in a container that is too small for a label attached to it to include all the information referred to above, the label must contain the following:

- the product identifier of the hazardous substance;
- the name, address and telephone number of
 - the manufacturer of the substance in Australia; or
 - the importing supplier of the substance in Australia;
- a hazard pictogram or hazard statement consistent with the correct classification of the substance;
- any other information referred to above) that it is reasonably practicable to include.

There may be additional manufacturer/supplier requirements based on the chemical classification of the chemical. For example, during transport, dangerous goods also require additional information including the Class label.

Refer to the Safe Work Australia poster [Work Health and Safety Regulations: Classification and labelling for workplace hazardous chemicals](#).

3.5.2. Descriptors, Symbols and Statements

3.5.2.1. Hazard Pictogram

A hazard pictogram is a graphical composition, including a symbol plus other graphical elements, that is assigned to a hazard class or hazard category. Pictograms have graphical elements including, border and background pattern or colour.

Pictograms are used in the workplace. They are not used for the purposes of dangerous goods transport or dangerous goods storage and segregation requirements.

3.5.2.2. Hazard Statement

A hazard statement is a descriptor assigned to a hazard class or hazard category describing the nature of the hazards of a chemical including and if appropriate, the degree of the hazard. It may include routes of exposure and specific organs that may be damaged.

NOTE:

Due to the dynamic nature and continuing update/review of the GHS a link is provided. To ensure that the most recent information and representation of descriptors, symbols and statements are available.

Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

⁹ Schedule 8 of the *Occupational Health and Safety Regulations 2017* (Vic)

Hazard statements start with the letter "H" and are broken up into the following categories:

- physical hazard statements;
- health hazard statements; and
- environmental hazard statements.

3.5.2.3. Precautionary Statement

A precautionary statement is a phrase (or pictogram) that describes the recommended measures that should be taken to minimise or prevent adverse effects resulting from exposure to, or improper storage or handling of a hazardous chemical.

Precautionary statements start with the letter "P" and are broken up into the following categories:

- general precautionary statements;
- prevention precautionary statements;
- response precautionary statements;
- storage precautionary statements; and
- disposal precautionary statements.

3.5.2.4. Signal Word

If a hazardous chemical has a severe hazard, the label includes the signal word "Danger". In the case of less severe hazards, the signal word is "Warning".

3.6. Prohibited Hazardous Substances

Prohibited hazardous substances are any hazardous substances:

- (a) listed in Schedule 6 of the *Occupational Health and Safety Regulations 2017* (Vic).

These substances cannot be used any purpose specified in the Schedule.

3.7. Health Surveillance

The *Occupational Health and Safety Regulations 2017* (Vic) require health monitoring to be carried for an employee who is exposed to any chemical (hazardous substance) listed in Schedule 9 of the *Occupational Health and Safety Regulations 2017* (Vic).

The costs associated with health screening should be borne by and are the responsibility of the relevant Division.

For further health surveillance advice email ohs-enquiries@unimelb.edu.au

4.1. Scope

The requirements listed in Section 2. are relevant to the chemical management of engineered nanoparticles. Additional requirements for engineered nanoparticles are identified in this section.

4.2. Introduction

Nanoparticles are particles with any external dimension in the nanoscale or having internal structure or surface structure in the nanoscale. The size range is approximately 1 nm¹⁰ to 100 nm. Engineered nanoparticles are nanoparticles manufactured to have specific properties or composition.

There remains uncertainty with regards to the human health effects of nanoparticles. Given the current state of knowledge and based on recent publications, nanoparticles will be managed as a subset of the chemical hazard category. For example, nanoparticles have been included under the chemical hazard category in the University of Melbourne Occupational Health and Safety Risk Register.

Nanoparticles (also referred to as nanomaterials) are grouped into four broad categories:

1. Fibrous nanomaterials
2. Nanomaterials classified as CMAR (carcinogenic, mutagenic, asthmagenic or reproductive toxins)
3. Insoluble nanomaterials
4. Soluble nanomaterials

[Engineered Nanomaterials: Feasibility of Establishing Exposure Standards and Using Control Banding in Australia](#) (Cth) provides definitions and more information on these groupings.

The main potential routes of exposure of entry into the human body are:

- inhalation
- dermal absorption and skin penetration
- ingestion; and
- intraocular.

4.3. Legislation

4.3.1. Acts and Regulations

- *Occupational Health and Safety Act 2004* (Vic)
- *Occupational Health and Safety Regulations 2017* (Vic)¹¹

¹⁰ An nm is a unit of length expressed as a nanometre or 10⁻⁹ (0.000000001).

¹¹ Part 4.1 Hazardous Substances of the Regulations

4.3.2. Supporting Standards, Codes and Guidance Material

- A review of the potential occupational health & safety implications of nanotechnology (Cth)
- Engineered nanomaterials: feasibility of establishing exposure standards and using control banding in Australia (Cth)
- Engineered nanomaterials: investigating substitution and modification options to reduce potential hazards (Cth)
- Labelling of workplace hazardous chemicals, code of practice (Cth)
- Safe handling and use of carbon nanotubes (Cth)

4.4. Labelling

The Labelling of Workplace Hazardous Substances Code of Practice recommends that where the hazards associated with engineered nanoparticles have not been fully characterised the manufacturer/supplier should include a statement such as:

- Contains engineered/manufactured nanomaterials. Caution: Hazards unknown; or
- Contains engineered/manufactured nanomaterials. Caution: Hazards not fully characterised.

Where the hazard(s) have been characterised the labelling requirements for decanted engineered nanoparticles must be written in English, include the product identifier and where reasonably practicable:

- the hazard pictogram or hazard statement;
- the precautionary statements; and
- the signal word.

Where the hazard(s) have not been fully characterised the labelling requirements for decanted engineered nanoparticles must also include a statement:

- contains engineered/manufactured nanomaterials. Caution: Hazards unknown; or
- contains engineered/manufactured nanomaterials. Caution: Hazards not fully characterised.

SCHEDULED CARCINOGENIC SUBSTANCES

5.1. Scope

The requirements listed in Section 2. are relevant to the chemical management of scheduled carcinogenic substances. Additional requirements for scheduled carcinogenic substances are identified in this section.

5.2. Introduction

Scheduled carcinogenic substances are hazardous chemicals that are known to cause cancer. Two groups of scheduled carcinogenic substances have been prescribed in the *Occupational Health and Safety Regulations 2017* (Vic). These are:

- Schedule 10 carcinogen (also called to as a *prohibited carcinogenic substance*); and
- Schedule 11 carcinogen (also called a restricted *carcinogenic substance*).

Legal requirements to possess and use scheduled carcinogenic substances are very prescriptive.

5.3. Legislation

5.3.1. Acts and Regulations

- Approved criteria for classifying hazardous substances (NOHSC:1008) (Cth)
- National model regulations for the control of scheduled carcinogenic substances (NOHSC:1011) (Cth)
- *Occupational Health and Safety Act 2004* (Vic)
- *Occupational Health and Safety Regulations 2017*¹² (Vic)

5.3.2. Supporting Standards, Codes and Guidance Materials

- Guidance on the classification of hazardous chemicals under the WHS regulations (Cth)
- Labelling of workplace hazardous chemicals, code of practice (Cth)
- Managing Risks of Hazardous Chemicals in the Workplace, Code of Practice (Cth)
- Model work health and safety regulations (Cth)
- National code of practice for the control of scheduled carcinogenic substances (NOHSC:2014) (Cth)
- National hazardous substances regulatory package. substances subject to prohibitions on use (Schedule 2) Nov 2001 (Cth)
- Preparation of safety data sheets for hazardous chemicals, code of practice (Cth)

5.4. Permits/Licences

A licence to possess and carry out work/activities using scheduled carcinogenic substances must be obtained prior to the purchase and use.

¹² Part 4.2 Scheduled Carcinogenic Substances of the Regulations

5.4.1. Schedule 10 Carcinogenic Substance

A Schedule 10 carcinogen prescribed by *Occupational Health and Safety Regulations 2017* (Vic) is defined as:

A substance (or any of its salts) listed in Schedule 10 used –

- as a pure substance; or
- in a mixture containing 0.1% or more of that substance (or any of its salts), determined as a weight/weight (w/w) concentration for solids or liquids and a volume/volume (v/v) concentration for gases.

The use of a schedule 10 carcinogenic substance is only permitted in laboratories after a licence is obtained from WorkSafe Victoria. Use of these chemicals is not permitted in any other workplace.

5.4.2. Schedule 11 Carcinogen

A Schedule 11 carcinogen substance prescribed by *Occupational Health and Safety Regulations 2017* (Vic) is defined as:

- (a) benzene as listed in Schedule 11; or
- (b) any other substance (or any of its salts) listed in Schedule 11 used –
 - (i) as a pure substance; or
 - (ii) in a mixture containing 0.1% or more of that substance (or any of its salts), determined as a weight/weight (w/w) concentration for solids or liquids and a volume/volume (v/v) concentration for gases.

The use of a schedule 11 carcinogenic substance is permitted in workplaces, including laboratories, after a licence is obtained from WorkSafe Victoria.

5.4.3. License Application

Contact the local [Health and Safety Business Partner](#) for Schedule 10 and Schedule 11 Carcinogenic licence application details.

A separate application must be made for each scheduled carcinogenic substance and you must provide supporting documentation outlining the control measures to prevent exposure (see Section 5.5). A WorkSafe application fee also applies.

Licence application details are also available from the [WorkSafe](#).

5.5. Risk Control Measures

Risk control measures must be documented and submitted with the *Application for Licence to Use a Scheduled Carcinogen*. The control measures will be ongoing and required for the life of use of the schedule carcinogenic substance(s). For each scheduled carcinogenic substance, a separate risk control document must be completed.

Information provided on control measures should include the following:

- Storage details
- Process description
- Control measures to prevent employee exposure
- Maintenance and testing procedures for control measures

- Atmospheric monitoring
- Biological monitoring
- Health surveillance
- Spill and emergency procedures
- Employee training and information
- Decontamination and waste disposal procedures
- Incident reporting procedures

5.6. Labelling

The labelling requirements for decanted Schedule 10 and Schedule 11 carcinogenic substances must be written in English, include the product identifier and where reasonably practicable:

- the hazard pictogram or hazard statement;
- the precautionary statements; and
- the signal word.

5.7. Access Arrangements

Access to scheduled carcinogenic substances should be restricted to staff who:

- work directly with the scheduled carcinogenic substances;
- have received chemical training; and
- have been fully briefed on the chemical risk assessment.

5.8. Maintain Records

The employer is required to maintain records for scheduled carcinogenic substances.

Records must be maintained and kept for each person who works with a scheduled carcinogenic substance. The records must contain:

- the person's full name;
- the person's date of birth;
- the person's residential address during the period that the person worked with the scheduled carcinogenic substances;
- the name of each scheduled carcinogenic substance that the person worked with; and
- the period of time over which the person worked with each of the scheduled carcinogenic substances.

A copy of these records must be retained by the employer for 30 years.

A written copy outlining the above details must be given to each person who works with a scheduled carcinogenic substance on leaving the University of Melbourne.

5.9. Health Surveillance

Health surveillance, including biological monitoring, is required for scheduled carcinogenic substances. An SDS may provide some initial advice on the types and frequency of health tests required.

For further health surveillance advice email ohs-enquiries@unimelb.edu.au

DANGEROUS GOODS

6.1. Scope

The requirements listed in Section 2. are relevant to the chemical management of dangerous goods. Additional requirements for dangerous goods are identified in this section.

This section does not include information or guidance on Class 1 Explosives or Class 7 Radioactive Substances. For information on radioactive chemicals refer to Section 11.

6.2. Introduction

Dangerous goods are solids, liquids or gases, which have been classified as dangerous goods under the Australian code for the transport of dangerous goods by road or rail (ADG Code) (Cth). Chemicals in this classification must adhere to legislative requirements when being transported and stored. Safety hazards such as flammability, explosiveness and dangerous reactions are of concern with dangerous goods.

Before the dangerous goods are supplied for use, they are:

- assigned a Class, subsidiary risk and packing group; and
- packed in accordance with the ADG Code, with emphasis on the need for packaging to be in sound condition and compatible with the goods.

6.2.1. Class

Victoria (Australia) has adopted a system of classification and labelling for dangerous goods based on the United Nations. This system helps people to quickly recognize dangerous goods, their properties and dangers.

Dangerous goods are divided into nine Classes based on their dangerous properties. Apart from very small packages, all packages and containers, shipping containers, unit loads, tankers, etc. which hold dangerous goods for transport must carry the correct Class label. The Class label shows the nature of the hazard by the colour and symbol, and the Class of the goods by numeral. The responsibility for classification of products lies with the manufacturer or person packaging the products.

6.2.2. Subsidiary Risk Class

Some dangerous goods also have a subsidiary risk of another Class. Dangerous goods can have subsidiary risks of Class 3, 4, 5 or 8, and dangerous goods of Classes 1, 3, 4, 5, and 8 can have a subsidiary risk of Class 6.1.

A limited number have multiple subsidiary risks.

NOTE:

In Victoria Hazardous substances and dangerous goods are regulated under different Acts and Regulations.

Implementation of Workplace Health and Safety (WHS) Regulations in other state jurisdictions has brought hazardous substances and dangerous goods under the one classification system and are jointly referred to as “Hazardous chemicals”. The classification is based on the Globally Harmonised System of Classification and Labelling Chemicals (GHS). See Section 3.5. for more information.

6.2.3. Packaging Group

Dangerous goods must be packed in good quality packaging which is strong enough to withstand the shocks and loadings normally encountered during transport and handling. There are three packaging groups based on the degree of risk associated with the dangerous goods.

The primary purpose of Packaging Groups is for prescribing transport and placarding requirements. Packaging Groups also assist in determining the level of risk associated with dangerous goods, and may be used to assist with conducting risk assessments for storage, handling and use.

There are three packaging groups as follows.

PACKAGING GROUP	DESCRIPTION
Packaging Group I	Dangerous goods that have a high degree of risk and require a high packing intensity.
Packaging Group II	Dangerous goods that have a medium degree of risk and require a medium packing intensity
Packaging Group III	Dangerous goods that have a low degree of risk and require a low packing intensity.

Table 2: Packaging groups

6.3. Legislation

6.3.1. Acts and Regulations

- Code for the transport of dangerous goods by road or rail (ADG Code) Edition 7 (Cth)
- *Dangerous Goods Act 1985* (Vic)
- *Dangerous Goods (Storage and Handling) Regulations 2012* (Vic)
- *Dangerous Goods (Transport by Road or Rail) Regulations 2008* (Vic)
- National code of practice for the labelling of workplace substances (NOHSC:2012) (Cth)

6.3.2. Supporting Standards, Codes and Guidance Materials

- AS/NZS 1020: The control of undesirable static electricity
- AS 1216: Class labels for dangerous goods
- AS/NZS 1596: The storage and handling of LP gas
- AS 1692: Steel tanks for flammable and combustible liquids
- AS 1894: The storage and handling of non-flammable cryogenic and refrigerated liquids
- AS 1940: The storage and handling of flammable and combustible liquids
- AS/NZS 2022: Anhydrous ammonia – storage and handling
- AS 2030 (series): The verification, filling, inspection, testing and maintenance of cylinders for storage and transport of compressed gases
- AS/NZS 2229: Fuel dispensing equipment for explosive atmospheres
- AS/NZS 2243.10: Safety in laboratories. Part 10: Storage of chemicals
- AS2473.2: Valves for compressed gas cylinders – Outlet connections (threaded) and stem (inlet) threads
- AS 2714: The storage and handling of organic peroxides

- AS 3780: The storage and handling of corrosive substances
- AS/NZS 3816: Management of clinical and related wastes
- AS/NZS 3833: The storage and handling of mixed Classes of dangerous goods, in packages and intermediate bulk containers
- AS 4326: The storage and handling of oxidizing agents
- AS 4332: The storage and handling of gas cylinders
- AS/NZS 4452: The storage and handling of toxic substances
- AS/NZS 4681: The storage and handling of Class 9 (miscellaneous) dangerous goods and articles
- AS 4757: Handling and destruction of drugs
- AS/NZS 5026: The storage and handling of Class 4 dangerous goods
- Code of practice for storage and handling of dangerous goods 2013 (Vic)

6.4. Dangerous Goods Manifest

The *Dangerous Goods (Storage and Handling) Regulations 2012* (Vic) requires an employer keep a Dangerous goods manifest that lists all manifest quantities of dangerous goods stored in the workplace.

The local area should keep a Chemical inventory as described in Section 2.5. which includes an accurate record of their dangerous goods. The Chemical inventories are then used to develop a Dangerous goods manifest.

For each building containing manifest quantities of dangerous goods the Chemical and Radiation Specialist will liaise with local area management or nominated delegate[s] to prepare and maintain the Dangerous goods manifest. The Dangerous goods manifest is kept at the fire panel of the building.

6.5. Labelling

The labelling requirements for decanted¹³ dangerous goods must be written in English, include the product identifier; and

- the relevant Class label and subsidiary risk label.

6.6. Storage and Handling

The *Dangerous Goods (Storage and Handling) Regulations 2012* (Vic) refer to Australian Standards that specify how storage areas are to be designed, constructed and located to minimize risks.

Dangerous goods should also be stored in accordance with their dangerous goods Class. If a dangerous good has a subsidiary risk then it should be stored in accordance with primary risk. Some dangerous goods Classes cannot be stored with other dangerous goods Classes. The storage arrangements may also be influenced by quantities of dangerous goods: that is, in small quantities some Classes may be stored together, but in higher quantities they must be segregated.

¹³ These labelling requirements are determined by the *Dangerous Goods (Storage and Handling) Regulations 2012* (Vic) that states “If dangerous goods are transferred into a portable container” – Regulation 58(1)(a) and (b).

6.6.1. Minor Quantities

Locally stored (such as in a laboratory) minor quantities¹⁴ of dangerous goods can be stored in purpose built chemical lockers and cabinets (according to Class) that meet relevant Australian Standards. The [Chemical storage and handling for minor quantities in laboratories](#) poster outlines storage of dangerous goods Classes in minor quantities. It also identifies that in some cases segregation of Classes may not be required.

The guidance [Procurement and maintenance of dangerous goods storage cabinets](#) provides additional information on the purchase and use of various types of dangerous goods storage cabinets.

6.6.2. Placarding Quantities

Larger dangerous goods storage areas that require placarding¹⁵ also need to meet relevant Australian Standards according to the dangerous goods Class. This includes, ventilation requirements, atmospheric monitoring (where applicable) bunding, fire rating of walls, floor and ceiling and so on. Refer to Section 6.3.2. for referenced Standards and documentation.

WorkSafe Victoria has developed a poster [Recognising dangerous goods and segregation](#). This poster highlights Classes that cannot be stored together. It can also be used as a guide for placarding quantities in chemical storage rooms or gas cylinder compounds. A [Dangerous goods segregation and storage requirements poster](#) has also been developed that highlights the equivalent pictograms for each Class diamond.

6.7 Gas Regulators and Manifolds

6.7.1 Selection

Gas cylinder valves and outlet connections (pressure regulators and manifolds) are designed to comply with AS 2473.2. The purpose of the design is to ensure that only the correct regulator can be connected to a gas cylinder. That is different gas cylinders require different regulators. For example, an acetylene regulator fits only an acetylene cylinder.

Regulators are attached directly to a single gas cylinder valve. Manifolds are attached to a group of cylinders, so that each cylinder feeds into single outlet.

When selecting a regulator ensure it is compatible with the gas cylinder. The manufacturer/supplier can assist with this process. A regulator is first screwed to a cylinder valve outlet by hand and then tightened using a regulator spanner (sometimes called a valve key or inlet spigot).

6.7.2 Maintenance

Gas regulators and manifolds should be serviced on a regular basis. The minimum requirement is based on manufacturer's recommendations. In general:

- 12 monthly service for a regulator, and
- 6 monthly service for a manifold.

¹⁴ Minor quantities refer to quantities of dangerous goods that are less than placarding quantities as prescribed in Schedule 2 of the *Dangerous Goods (Storage and Handling) Regulations 2012* (Vic). See Appendix 3.

¹⁵ Placarding quantities refer to quantities of dangerous goods that are equal to or greater than the placarding quantities as prescribed in Schedule 2 of the *Dangerous Goods (Storage and Handling) Regulations 2012* (Vic).

In some cases, the above service frequency may vary. This will be determined by the:

- type of gas used;
- criticality of gas usage;
- the gas flow rate (eg high or low), and
- past service reports highlighting a need for more frequent servicing.

Servicing includes pressure testing, calibration, checks for leakage and replacements parts.

6.8. Transport

The general details for transporting chemicals, including some requirements for dangerous goods, have been outlined in Section 2.13.3.

The *Dangerous Goods (Transport by Road or Rail) Regulations 2008* (Vic) determine the type and quantities of dangerous goods that require transport by a placard vehicle.

Only minor quantities of dangerous goods can be transported via vehicle by University of Melbourne staff. Minor quantities mean that the transported quantity of the dangerous good is less than the transport placarding quantity¹⁶. These quantities may be different from storage requirements prescribed by the *Dangerous Goods (Storage and Handling) Regulations 2012* (Vic).

Specific requirements will apply for transporting minor quantities of dangerous goods outside University of Melbourne property. This includes travel in a vehicle on public roads between buildings on the same University campus.

These requirements include:

- ensuring the quantity of the dangerous good is less than the “Placarding Quantity”;
- ensuring the packaging is safe for transporting;
- ensuring the dangerous good is secured and in an appropriate position on the vehicle;
- ensuring the vehicle is safe for transporting including;
 - equipped with emergency equipment (eg a fire extinguisher where transporting a Class 2.1 flammable gas, appropriate spill kit);
 - equipped with a first aid kit; and
 - equipped with appropriate PPE;
- ensuring there is a risk assessment and standard operating procedure;
- ensuring there is suitable equipment to load the and unload the dangerous good; and
- ensuring any additional items or dangerous goods are compatible and/or do not require segregation.

Contact your local [Health and Safety Business Partner](#) for advice on these requirements.

NOTE:

Only a contractor licensed to transport dangerous goods is authorised to transport placarding quantities of dangerous goods.

¹⁶ Placarding Quantities for dangerous goods are determined in Part 5 Division 2 of the *Dangerous Goods (Transport by Road or Rail) Regulations 2008* (Vic).

6.9. Placarding

HAZCHEM signs are required on all entrances to a building where dangerous goods are stored in quantities that exceed the “Placarding Quantity” outlined in Schedule 2 of the *Dangerous Goods (Storage and Handling) Regulations 2012* (Vic). Schedule 2 is reproduced as Appendix 3 in this document.

6.9.1. Placards at Storage Locations

Building/facility-specific dangerous goods Class labels must be displayed on or near each storage location. Advice for placarding requirements from the Principal Dangerous Goods Advisor WorkSafe¹⁷ includes:

The methodology associated with placarding at premises where dangerous goods are stored and handled as specified in Regulations 429 to 433 of Dangerous Goods (Storage and Handling) Interim Regulations 2011. In brief [the Principal Dangerous Goods Advisor] advised that:-

- a. Outer Warning placard - HAZCHEM, needs to be only placed at all main road entrances to the premises - Please note that regulation 429(a) allows only one placard that can be displayed if the premise is a school, university or other educational institution and I believe that this dispensation is available to you.*
- b. At the premise any storage of dangerous goods that exceed the relevant quantity specified in the column head Placarding Quantity in the table in Schedule 2 of the regulations will need to have a composite placard adjacent to all entrances into that room or building. Specific to your building:*

A placard needs to be displayed at all of the main entrances into the building that details of the Class dangerous goods being stored and that further placards are displayed at each of the floor entry points only. Should a floor have a main area where dangerous goods are being stored, further placard/s should be provided at all entry points into these main area stores.

Please note that past policy and practice has been not to try and placard every room and area where dangerous goods are being kept no matter how small the storage is in some areas at a university or other educational institution as this can cause more confusion for the fire services and reduce safety outcomes.

The “Placarding Quantity” of dangerous goods is established and maintained in the same manner as the Dangerous goods manifest (Section 6.4.).

¹⁷ WorkSafe Entry Report V00007000811L (02/08/2012) written by Peter Vitali, Principal Dangerous Goods Advisor. The entry report refers to the *Dangerous Goods (Storage and Handling) Interim Regulations 2011* (Vic) nevertheless in principle remains unchanged with the introduction of the *Dangerous Goods (Storage and Handling) Regulations 2012* (Vic).

DRUGS, POISONS AND CONTROLLED SUBSTANCES

7.1. Scope

The requirements listed in Section 2. are relevant to the chemical management of drugs, poisons and controlled substances. Additional requirements for drugs, poisons and controlled substances used for research and teaching are identified in this section.

This section does not include the legal requirements and obligations for prescribing and administering drugs/medications to people (including authorised personnel and labelling).

7.2. Introduction

Drugs and poisons controlled under the *Drugs, Poisons and Controlled Substances Act 1981* (Vic) and the *Drugs, Poisons and Controlled Substances Regulations 2017* (Vic) are defined under the Act as being in the Poisons Code (Vic) or in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP – The Poisons Standard), Schedule 2,3,4,5,6,7,8 and 9 Poisons.

Only these defined chemicals are controlled and included in this section. They include:

- prescription medicines;
- pharmacy-only medicines;
- drugs of dependence; and
- other household, industrial and agricultural chemicals.

7.2.1. Scheduling

The chemicals described above are put into schedules (categories) based on their type, use, associated risks and so on. The categories are numbered from Schedule 1 to Schedule 9 with Schedule 1 currently unassigned.

Refer to Appendix 4: Scheduling of Drugs, Poisons and Controlled Substances for more details.

7.3. Legislation

7.3.1. Acts and Regulations

- *Drugs, Poisons and Controlled Substances Act 1981* (Vic)
- *Drugs, Poisons and Controlled Substances Regulations 2017* (Vic)
- *Drugs Poisons and Controlled Substances (Volatile Substances) Regulations 2004* (Vic)
- [*Standard for the Uniform Scheduling of Medicines and Poisons \(SUSMP\)*](#)(Cth)

7.3.2. Supporting Standards, Codes and Guidance Material

- [*Poisons Code*](#) (Vic)
- [*Managing drugs of dependence in a research setting*](#) (DH)

7.4. Poisons Licence or Permit

Faculties/Departments are required to hold an Industrial and educational permit/licence for some drugs, poisons and controlled substances. The permit/licence allows for the purchase and use of these chemicals in an industrial, educational, advisory and research capacity.

Applications to apply for a new licence or make changes to an existing licence are completed on-line from the Department of health and Human Services:

[Licences to possess \(and possibly supply\) scheduled substances](#)

An application for an Industrial and educational permit must be made prior to the purchase of drugs, poisons and controlled substances.

7.5. Labelling

The labelling requirements for decanted drugs, poisons and controlled substances must be written in English and include:

- the product identifier; and
- the relevant poison schedule.

These labelling requirements refer to drugs, poisons and controlled substances that are not intended for prescription (ie prescribed/dispensed to a person for the intention of therapeutic treatment).

7.6. Access Arrangements

Access to drugs, poisons and controlled substances that require an Industrial and educational permit should be restricted to staff who:

- work directly with the scheduled poison;
- have received chemical training;
- have been fully briefed on the chemical risk assessment; and
- are nominated responsible person; or
- staff/students directly under the control of the nominated responsible person.

7.7. Records

Transaction records must be kept for Schedule 4, Schedule 8 and Schedule 9 poisons and include:

- records of supply;
 - date of each transaction;
 - name, form, strength and quantity;
 - name and address or location (eg laboratory room number) of person to whom the scheduled poison is transferred, supplied, used and destroyed;
- records of use;
- records of transfers between different storage locations; and
- records of destruction or disposal.

There are additional requirements for Schedule 8 and Schedule 9 poisons as follows:

- records are able to be readily sorted by poison;
- records show a true and accurate balance of each poison; and
- records show the name of the person carrying out the transaction.

Therefore records can be kept by either hard copy (eg logbook) or computer provided that they meet the above requirements and cannot be altered, obliterated, deleted or removed without detection.

7.7.1 Review Records

At regular scheduled intervals, transaction records should be reviewed to determine if there are discrepancies of any drugs of dependence¹⁸. Local areas should determine the frequency and the person(s) that will undertake this activity.

7.8. Incident Reporting and Recording

When a drug of dependence appears lost or there is a discrepancy in the transactional records it should be investigated without delay. If the investigation determines that the drugs of dependence have been stolen or there is no reasonable explanation for the loss or discrepancy then the local area should complete the following:

- report the incident to Parkville Security; and
- report the incident to the Department of Health and Human Services:
 - immediately where they have been stolen; or
 - within seven days where an investigation cannot determine the reason for the discrepancy in the transactional records.

Refer to the Department of Human Services web site [Drugs and poisons regulation](#) for more information and access to the on-line form Lost scheduled item form.

¹⁸ The Department of Health and Human Services also recommends that transactional records for drug of dependence be reviewed at random intervals. See [Managing drugs of dependence in a research setting](#).

CHEMICALS OF SECURITY CONCERN

8.1. Weapons of Mass Destruction

8.1.1. Scope

The general chemical management requirements listed in Section 2 are relevant to the chemical management of chemicals associated with weapons of mass destruction. Additional requirements for chemicals associated with weapons of mass destruction are identified in this section.

8.1.2. Introduction

Australia is a supporter of international efforts to prevent the proliferation of weapons of mass destruction and is an active member of major international arms control treaties and international export control regimes. Chemicals that have been associated with the proliferation of weapons of mass destruction are highly regulated. These are identified and categorised by the Chemical Weapons Convention (CWC) scheduled chemicals. They are categorised as:

- CWC Schedule 1 chemicals
- CWC Schedule 2 chemicals
- CWC Schedule 3 chemicals

A full listing of the scheduled chemical categories and subsequent requirements is in [Organisation for the Prohibition of Chemical Weapons - Annex on Chemicals](#).

The Chemical Weapons Convention is regulated by [the Department of Foreign Affairs and Trade](#).

8.1.3. Legislation

8.1.3.1. Acts and Regulations

- *Chemical Weapons (Prohibition) Act 1994* (Cth)
- *Chemical Weapons (Prohibition) Regulations 1997* (Cth)
- *Customs Act 1901* (Cth)
- *Customs (Prohibited Exports) Regulations 1958* (Cth)
- *Customs (Prohibited Imports) Regulations 1956* (Cth)
- *Weapons of Mass Destruction (Prevention of Proliferation) Act 1995* (Cth)

8.1.3.2. Supporting Standards, Codes and Guidance Materials

- The Chemical Weapons Convention. A guide for Australian industry using or trading chemicals (Cth)
- National code of practice for chemicals of security concern (Cth)

8.1.4. Importation

There are importation requirements for CWC Scheduled Chemicals.

For further information see the CWC website: [Chemical Weapons Convention: Australia's National Authority for the Chemical Weapons Convention](#).

8.1.5. Access Arrangements

Authorised access should include the safety requirements outlined in Section 2.19. In addition, the arrangements should consider reducing the opportunity for theft and other illegal behaviours, such as an inventory system in place that can account for the use and movements of the chemicals.

HIGH CONSEQUENCE DANGEROUS GOODS (HCDG) – AMMONIUM NITRATE

9.1. Scope

The general chemical management requirements listed in Section 2. are relevant to the chemical management of high consequence dangerous goods. Additional requirements for high consequence dangerous goods are identified in this section.

9.2. Introduction

The term high consequence dangerous goods (HCDG) has been given to dangerous goods of security concern because their misuse may lead to mass casualties and/or destruction.

HCDG are those dangerous goods declared to be HCDG via an order-in-council made under the authority of Section 9B of the Dangerous Goods Act 1985.

9.3. Legislation

9.3.1. Acts and Regulations

- *Dangerous Goods Act 1985 (Vic)*
- *Dangerous Goods (HCDG) Regulations 2016 (Vic)*
- *Dangerous Goods (Storage and Handling) Regulations 2012 (Vic)*
- *Dangerous Goods (Transport by Road or Rail) Regulations 2008 (Vic)*

9.3.2. Supporting Standards, Codes and Guidance Materials

- [Application for a Licence to Access High Consequence Dangerous Goods](#) – WorkSafe Victoria

9.4. License

Tertiary education institutions in Victoria are exempt from licensing approvals under the following conditions:

- the HCDG is for the purposes of educational instruction, research or testing; and
- that the quantity does not exceed 3 kg per area (laboratory).

To comply with the exemption, the University of Melbourne maintains the quantity of ammonium nitrate below 3kg by storing ammonium nitrate centrally in the Specialist Stores and restricting any local areas to purchase ammonium nitrate directly from suppliers. [Ammonium Nitrate Management Plan](#) is established to provide framework on how to obtain, use, store, handle and dispose of ammonium nitrate. The process outlined in this document must be

followed by all staff/students when working with ammonium nitrate.

9.5. Access Arrangements

Authorised access should include the safety requirements outlined in Section 2.19. In addition, the arrangements should consider reducing the opportunity for theft and other illegal behaviours, such as an inventory system in place that can account for the use and movements of the chemicals.

PRECURSOR CHEMICALS

10.1. Scope

The general chemical management requirements listed in Section 2. are relevant to the chemical management of precursor chemicals. Additional requirements for precursor chemicals are identified in this section.

10.2. Introduction

Precursor chemicals are chemicals that are known to have been used in the illicit manufacture of drugs. Precursor apparatus are apparatus that can be used to manufacture illicit chemicals. The chemicals and apparatus have been divided into 3 categories.

The *Drugs, Poisons and Controlled Substances (Precursor Chemicals) Regulations 2007* (Vic) define a precursor chemical as a substance (including its salts, derivatives, isomers, analogues and homologues) that may be used in the preparation of a drug of dependence, whether or not the substance is contained in, or mixed with, another substance. The list of prescribed precursor chemical is listed in Schedule 1 of the *Drugs, Poisons and Controlled Substances (Precursor Chemicals) Regulations 2007* (Vic).

Additionally, the prescribed precursor chemicals are categorised into three groups. These categories (Category 1, Category 2 and Category 3) and some apparatus are detailed in the *Drugs, Poisons and Controlled Substances (Precursor Supply) Regulations 2010* (Vic). The following table defines user obligations from the *Drugs, Poisons and Controlled Substances (Precursor Supply) Regulations 2010* (Vic).

PRESCRIBED CATEGORY	DESCRIPTION
Prescribed Category 1	Chemicals that require an End user declaration with each purchase.
Prescribed Category II	Chemicals and apparatus that require an End user declaration with each purchase.
Prescribed Category III	Apparatus that may be used in the illicit production of drugs that require an End User Declaration with each purchase.

Table 3: Precursor prescribes categories

10.3. Legislation

10.3.1. Acts and Regulations

- *Drugs, Poisons and Controlled Substances (Precursor Chemicals) Regulations 2007* (Vic)
- *Drugs, Poisons and Controlled Substances (Precursor Supply) Regulations 2010* (Vic)

10.3.2. Supporting Standards, Codes and Guidance Materials

- [*Code of practice for supply diversion into illicit drug manufacture*](#) (PACIA)

10.4. End User Declaration

End user declaration (EUD) is required for the purchase of precursor chemicals and apparatus.

The EUD is required at the time of purchase. The format of the declaration will vary depending on the manufacturer/supplier, but must include:

- for Prescribed Category 1 precursor chemicals:
 - the name and address of the receiver; and
 - details of the receiver's proof of identity provided by the receiver to the supplier; and
 - the name and quantity of the Category 1 precursor chemical to be supplied; and
 - the proposed date of the supply of the Category 1 precursor chemical from the supplier's premises (if known); and
 - the intended use of the Category 1 precursor chemical.
- for Prescribed Category 2 precursor chemicals:
 - the name and address of the receiver; and
 - details of the receiver's proof of identity provided by the receiver to the supplier; and
 - the name and quantity of the Category 2 precursor chemical to be supplied; and
 - the intended use of the Category 2 precursor chemical.
- for Prescribed Category 3 precursor apparatus:
 - the name and address of the receiver; and
 - details of the receiver's proof of identity provided by the receiver to the supplier; and
 - the name and quantity of the Category 3 precursor apparatus to be supplied; and
 - the intended use of the Category 3 precursor apparatus.

10.5. Access Arrangements

Authorised access should include the safety requirements outlined in Section 2.19. In addition, the arrangements should consider reducing the opportunity for theft and other illegal behaviours, such as an inventory system in place that can account for the use and movements of the chemicals and apparatus.

11.1. Scope

The general chemical management requirements listed in Section 2. are relevant to the chemical management of agricultural and veterinary chemicals and fertilisers. Additional requirements for agricultural and veterinary chemicals and fertilisers are identified in this section.

11.2. Introduction

The Commonwealth department Australian Pesticides and Veterinary Medicines Authority (APVMA) in partnership with the states and territories prescribes AgVet¹⁹ chemical regulation. The Victorian state partner overseeing AgVet regulation is the Department of Jobs, Precincts and Regions (DJPR) and therefore regulates the use of agricultural and veterinary chemicals in this state.

In Victoria DJPR also regulates the manufacture and use of fertilisers.

11.2.1. Agricultural Chemicals

Broadly speaking an agricultural chemical is any substance or organism used to:

- destroy, stupefy, repel, inhibit the feeding of, or prevent pests on plants or other commodities;
- destroy a plant or to modify its physiology;
- modify the effect of another agricultural chemical product; or
- attract a pest for the purpose of destroying it.

This includes herbicides, insecticides and fungicides.

11.2.2. Veterinary Chemicals

Veterinary chemicals are any substance administered or applied to an animal to:

- prevent, diagnose, cure or alleviate a disease, condition or pest infestation;
- cure or alleviate an injury; or
- modify the physiology.

It also includes:

- any substance that modifies the effect of another veterinary chemical product;
- vitamins, minerals and additives if they are used for any of the purposes mentioned above; and
- allergenic substances, medicated blocks and licks, enzymes for animals, direct-fed antimicrobial products and sheep-branding substances.

Veterinary chemicals fall into two categories: 'over-the-counter' and 'prescription animal remedy' products.

¹⁹ AgVet refers to agricultural and veterinary chemicals.

11.2.3. Fertilisers

A fertiliser is any material added to the soil or applied to a plant to improve the supply of nutrients and promote plant growth. This includes both inorganic and organic fertilisers.

11.3. Legislation

11.3.1. Acts and Regulations

- *Agricultural and Veterinary Chemicals Code Act 1994* (Cth)
- *Agricultural and Veterinary Chemicals Code Regulations 1995* (Cth)
- *Agricultural and Veterinary Chemicals (Control of Use) Act 1992* (Vic)
- *Agricultural and Veterinary Chemicals (Control of Use) (Fertilisers) Regulations 2015* (Vic)
- *Agricultural and Veterinary Chemicals (Control of Use) Regulations 2007* (Vic)
- *Agricultural and Veterinary Chemicals (Victoria) Act 1994* (Vic)
- *Drugs, Poisons and Controlled Substances Act 1981* (Vic)
- *Drugs Poisons and Controlled Substances Regulations 2017* (Vic)

11.3.2. Supporting Standards, Codes and Guidance Materials

- AS 2507: The storage and handling of agricultural and veterinary chemicals
- [*A guide to using agricultural chemicals in Victoria*](#)
- [*Guidelines for prescribing, authorising and dispensing veterinary medicines*](#)
- [*On-farm pesticide storage \(minor storage\)*](#)
- [*The Agricultural labelling code*](#)
- [*Veterinary labelling code*](#)
- [*National code of practice for fertilizer description and labelling*](#)
- [*Fertilizer Australia*](#)

11.4. Permits and Licensing

11.4.1. Agricultural Chemicals

11.4.1.1. Restricted use chemicals

APVMA has declared certain high risk agricultural chemical products as restricted chemical products. In Victoria these chemicals are known as *restricted use chemicals* and specific controls over this group of agricultural chemical have been introduced.

Restricted use chemicals are agricultural chemical products that:

- are Schedule 7 Poisons (Dangerous Poisons);
- contain atrazine;
- contain metham sodium; or
- contain ester formulations of 2,4-D, 2,4-DB, MCPA or triclopyr.

11.4.1.2. Agricultural Chemical User Permit (ACUP)

A person must hold a valid Agricultural Chemical User Permit (ACUP) issued by DJPR to use an agricultural chemical that:

- is a restricted use chemical; or
- contains pindone concentrate for the preparation of poison baits.

11.4.1.3. Application for a Permit

Application forms for differing types of restricted use permits (including an ACUP) and an explanation of the differing permits are available at the [Agricultural chemical user permits](#) web site.

11.4.2. Veterinary Chemicals

Veterinary practitioners are authorised to obtain, possess, use or supply most drugs and poisons for the lawful practice of their profession, i.e. for the veterinary treatment of animals under their care.

11.5. Importation

11.5.1. Fertilisers

There are permit requirements associated with importing fertilisers into Australia. These requirements are regulated by the Australian Government, Department of Agriculture and Water Resources. Refer to [Importing Fertiliser](#) for more information.

11.6. Labelling

11.6.1. Agricultural Chemicals

The assessment and approval of labels is required for the registration of agricultural chemical products by APVMA. Legislation that applies to the assessment and approval of labels for agricultural chemical products includes:

- *Agricultural and Veterinary Chemicals Act 1994* (Cth);
- *Agricultural and Veterinary Chemicals Code Act 1994* (Cth) and its schedule, the Agricultural and Veterinary Chemicals Code (the AgVet Code); and
- *Agricultural and Veterinary Chemicals Code Regulations* (Cth).

In addition to the labelling requirements for manufacturers/suppliers as outlined in Section 2.12.1, labelling of agricultural chemicals also includes:

- active constituents
- approved uses
- situations in which the chemical can be used
- pests the chemical is registered to control
- mixing instructions
- application rates and methods
- warnings, restraints and prohibitions
- withholding periods (WHP)²⁰
- storage and disposal instructions
- safety and first aid.

11.6.1.1. Decanted Agricultural Chemicals

The labelling requirements for decanted agricultural chemicals must be written in English, include the product identifier and where reasonably practicable:

- the hazard pictogram or hazard statement;
- the precautionary statements; and
- the signal word.

11.6.2. Veterinary Chemicals

Dispensing labels must comply with:

- the *Agricultural and Veterinary Chemical (Control of Use) Regulations 2007* (Vic); and
- the *Drugs Poisons and Controlled Substances Regulations 2017* (Vic).

The dispensing labels must include:

- signal heading
 - the words 'KEEP OUT OF REACH OF CHILDREN' in red on a white background
 - if the substance is intended for external use only, the word 'POISON' or the words 'FOR EXTERNAL USE ONLY' in red on a white background
 - the words 'FOR ANIMAL TREATMENT ONLY'
- business name, address and telephone number of the veterinary practitioner
- the identity of the animal(s) to be treated; e.g. tag number, species, breed, age, sex

²⁰ A WHP is the minimum length of time that must elapse between the last application of an agricultural chemical to a crop and the harvest, sale or use of the agricultural produce to which the chemical was applied

- the name of the animal's owner or person in charge
- the date the product was used or sold
- the trade name which unambiguously identifies the poison or controlled substance and its strength, and form, or the name of the active constituent and its strength and form for unregistered products
- the quantity in the container
- adequate directions for treating the animal with the product including the method of administration, dose rate, dose frequency and number of days of treatment
- the withholding period or the statement 'Nil withholding period required' when treating food producing animals.

11.6.2.1. Decanted Veterinary Chemicals

The labelling requirements for veterinary chemicals must be written in English, include the product identifier; and

- the relevant Poison Schedule.

These labelling requirements refer to drugs, poisons and controlled substances that are not intended for prescription (prescribed/dispensed to an animal for the intention of therapeutic treatment).

11.6.3. Fertilisers

The [*National code of practice for fertilizer description and labelling*](#) was developed by Fertilizer Australia in conjunction with the Department of Agriculture and Water Resources and State and Territory fertiliser regulators.

The Code of practice is not a replacement for the Regulations, as it is not currently underpinned by legislation. However, the Code of practice incorporates the general requirements of the Victorian Regulations. Refer to the Code of practice for more information.

11.7. Health Surveillance

The use of some agricultural chemicals may require health surveillance. This is relevant to pesticides that contain:

- organophosphates; or
- carbamates.

The use of some fertilisers may require health surveillance. This is relevant to fertilisers that contain trace elements, such as cadmium and lead.

These chemicals may also fall into the same group of hazardous substances identified in the *Occupational Health and Safety Regulations 2017* (Vic) that require health surveillance. Refer to Section 2.16. for more information.

For further health surveillance advice email ohs-enquiries@unimelb.edu.au

11.8. Access Arrangements

A registered veterinary practitioner does not require a poisons permit to use and dispense scheduled drugs. However the access arrangements for scheduled drugs/veterinary chemicals will require the same access arrangements as drugs, poisons and controlled substances (see Section 7.6.).

This will include access only by:

- a registered veterinary practitioner; or
- staff/students directly under the control of the registered veterinary practitioner.

11.9. Records

11.9.1. Agricultural Chemicals

Under the *Agricultural and Veterinary Chemicals (Control of Use) Regulations 2007* (Vic), it is compulsory to keep records within 48 hours of using an agricultural chemical product, and keep these records for a period of two years. This applies to all agricultural chemicals used, including poison baits used for pest animal control. The records must include the:

- product trade name;
- date the product was used
- application rate of the product;
- crop/commodity that was treated or the situation in which the product was applied;
- extent of use – the area of land treated, or the volume of water treated, or the volume of stored commodity treated, or the weight of the commodity treated (Not required when using poison baits for pest animal control);
- specific location where the product was used;
- name and address of the applicator/supervisor;
- name and address of the person for whom the application was carried out;
- wind speed and direction at the time of application (Only required when a product is being sprayed outdoors – excludes hand-held devices that are operated manually e.g. knapsacks);
- date the baiting period began (only required when using poison baits for pest animal control); and
- date the baiting period ended (only required when using poison baits for pest animal control).

Records may be kept in a format that suits your individual business (e.g. handwritten, on computer). The only requirement is that they contain all of the above information, are clear, accurate and must be readily available to a DJPR Authorised Officer upon request.

11.9.2. Veterinary Chemicals

The following requirements apply to the use of a veterinary chemical product that:

- contains a Schedule 4 Poison substance;
- is not registered as a veterinary chemical product by the Australian Pesticides and Veterinary Medicines Authority (APVMA);
- is sold without an APVMA approved label;
- is sold for a use not specified on the product label; or
- has an applicable WHP.

Veterinary practitioners are required to make the following records within 24 hours of selling or using a veterinary chemical product for the treatment of a stock animal including the:

- product name;
- date the product was sold/used;
- directions for use;
- name and address of the person purchasing the product;
- quantity of the product sold/used;
- species of animal to be treated;
- location of the animal to be treated; and
- any applicable WHP.

If the veterinary chemical product is unregistered, three additional records must be made:

- the name of the active constituent;
- the concentration of the product at time of sale/use; and
- the form of product at time of sale/use.

RADIOACTIVE CHEMICALS

12.1. Scope

The general chemical management requirements listed in Section 2. are relevant to the chemical management of radioactive chemicals. Additional requirements for radioactive chemicals are identified in this section.

12.2. Introduction

Radioactive chemicals are often referred to as open sources and spontaneously emit radiation. Radioactive chemicals are often supplied as single chemical element isotopes. For example, phosphorus is used at the University and is used as phosphorus-32 or phosphorus-33.

Radioactive materials are defined in Schedule 1 of the *Radiation Regulations 2017* (Vic).

12.3. Legislation

12.3.1. Acts and Regulations

- *Radiation Act 2005* (Vic)
- *Radiation Regulations 2017* (Vic)

12.3.2. Supporting Standards, Codes and Guidance Materials

- AS 2243.4: Safety in laboratories. Part 4: Ionizing radiations
- RPS No. 1: Recommendations for limiting exposure to ionizing radiation and national standard for limiting occupational exposure to ionizing radiation (Cth)
- [Mandatory reporting of radiation incidents](#) (Department of Health [DH])

12.4. Licensing

The *Radiation Act 2005* (Vic) requires the University of Melbourne to hold a Management licence for the possession and use of all radiation sources.

The Management licence is centrally controlled and maintained by the University of Melbourne Radiation Safety Advisor. This includes:

- maintaining an inventory of all radiation sources used by the University of Melbourne; and
- coordinating variations to the licence.

12.5. Radioactive Chemicals Risk Assessment

The chemical risk assessment process described in Section 2.9. is relevant for the risk assessment of radioactive chemicals. However there are additional risk assessment requirements for radioactive chemicals.

The hazard-specific risk assessment for radioactive chemicals form:

- [Radioactive material risk assessment form](#)

12.6. Labelling

The container and the storage location should be clearly marked with a radiation tri-foil symbol. Decanted radioactive chemicals must be written in English, include the:

- product identifier; and
- radioactivity.

12.7. Waste Management

Radioactive chemical waste is managed in one of the following three ways:

- **Dilution and Dispersion**

Dilution and dispersion enables short lived or very dilute radioactive wastes to be diluted further until the waste is deemed to be non-radioactive²¹. They can then be disposed of through appropriate waste streams.

- **Delay and Decay**

Short-lived radiation sources can be stored and allowed to decay and then disposed of as non-radioactive waste. They can then be disposed of through appropriate waste streams.

- **Concentration and Containment**

Radiation sources with long half-lives require long term storage in a suitably built facility. At the University is managed by the Health & Safety team.

When disposing of this chemical waste through an appropriate waste stream, for example using the University hazardous waste contractor (see Section 2.18.5.) ensure:

- the waste is no longer radioactive;
- all radioactive markings, symbols and markings are removed;
- the waste is labelled so that it is clearly identifiable as a chemical hazardous waste; and
- select a suitable container that will hold the waste.

12.8. Access Arrangements

Access to Radioactive Chemicals that require are listed on the University of Melbourne Radiation Management Licence should be restricted to staff who:

- work directly with the radioactive chemical;
- have received Safe radiation practices – Ionising training;
- have been fully briefed on the chemical risk assessment; and
- staff/students directly under the control of a manager/supervisor who meet the above three points.

²¹ The waste no longer meets the definition of a radioactive material as prescribed in the *Radiation Act 2005* (Vic).

12.9 Incident Reporting and Recording

All holders of a radiation Management Licence, as a condition of the licence, must report “radiation incidents” to the DHHS. The [Mandatory reporting of radiation incidents](#) (DH) prescribe these incidents based on the use of the radioactive source and the type of incident.

Examples of radiation incidents that may involve radioactive chemicals include:

- unplanned or abnormal exposures;
- surface, substance or material contamination; and
- lost or stolen radiation sources.

Local area emergency and incident procedures must take in to account the requirements for reporting radiological incidents. The Departmental Radiation Safety Officer (DRSO) should be contacted following any radiation incident to determine if there are mandatory reporting requirements.

The DRSO shall contact the University of Melbourne Radiation Safety Adviser for clarification and/or assistance following a radiological incident. The University of Melbourne Radiation Safety Adviser shall notify the DHHS in the prescribed manner where a radiological incident must be reported.

For radiological incident advice or notification the email contact is: radiation-info@unimelb.edu.au.

PART C – APPENDICES

APPENDIX 1 – GLOSSARY OF TERMS

TERM	DEFINITION
AICIS	Australian Industrial Chemicals Introduction Scheme
APVMA	Australian Pesticides and Veterinary Medicines Authority
Chemical Inventory	An inventory used by the University of Melbourne to identify the nature, quantity and location of chemicals kept by a Division/School/Faculty or laboratory/workshop/other local area. Its purpose is to collect and maintain information that will satisfy the regulatory requirements of different Victorian statutes.
Controlled Substances (Scheduled Drugs and Poisons)	Controlled Substances is a classification of pharmaceuticals and poisons that require licensing. Under the licence conditions there are restrictions on access, labelling and use. Restrictions are determined by the <i>Drugs, Poisons and Controlled Substances Regulations 2017</i> (Vic).
Dangerous Goods	Dangerous goods are solids, liquids or gases, which have been classified as dangerous under the Australian code for the transport of dangerous goods by road or rail, 7th Edition (ADG Code 7). Persons in control of chemicals in this classification must adhere to legislative requirements when being transported and stored. Safety hazards such as flammability, explosiveness and dangerous reactions are controlled under the <i>Dangerous Goods (Storage and Handling) Regulations 2012</i> (Vic).
Dangerous Goods Manifest	A list of all manifest quantities of dangerous goods stored in the workplace – prescribed by the <i>Dangerous Goods (Storage and Handling) Regulations 2012</i> (Vic)
Explosives	Explosives as listed in Class 1 of the Australian code for the transport of dangerous goods by road or rail, 7th Edition.
Fertiliser	A substance that is manufactured, represented, sold or used as a means of directly or indirectly fertilising the soil, or supplying nutrients to plants, or conditioning the soil by altering the chemical, physical or biological composition of the soil. <i>Agricultural and Veterinary Chemicals (Control of Use) (Fertilisers) Regulations 2005</i> (Vic)
GHS	Globally Harmonised System of Classification and Labelling of Chemicals
Hazard Pictogram	A graphical composition including a symbol combined with other graphical

TERM	DEFINITION
	elements that is assigned in the Global Harmonised System of Classification and Labelling of Chemicals (GHS) to a hazard class or hazard category.
Hazard Statement	A statement assigned in the GHS to a hazard class or hazard category to a hazard class or hazard category describing the nature of the hazards of a hazardous substance including, if appropriate, the degree of the hazard. <i>Occupational Health and Safety Regulations 2017 (Vic)</i>
Hazardous Chemical	Any substance, mixture or article that satisfies the criteria for a hazard class in the Globally Harmonised System of Classification and Labelling of Chemicals (GHS). <i>Occupational Health and Safety Regulations 2017 (Vic)</i>
Hazardous Substances	Hazardous Substance means a substance that satisfies the criteria for hazard classification set out in Part 3 (Health Hazards) of the GHS, but does not include a substance that satisfies the criteria solely for one of the following hazard classes: <ul style="list-style-type: none"> • acute toxicity—oral—category 5 • acute toxicity—dermal—category 5 • acute toxicity—inhalation—category 5 • skin corrosion/irritation—category 3 • serious eye damage/eye irritation—category 2B • aspiration hazard—category 2 <i>Occupational Health and Safety Regulations 2017 (Vic)</i>
Hazardous Substances Register	A register of hazardous substances that lists all hazardous substances in the workplace – prescribed by the <i>Occupational Health and Safety Regulations 2017 (Vic)</i>
Ionising Radiation	Electromagnetic or particulate radiation capable of producing ions directly or indirectly but does not include electromagnetic radiation of a wavelength of greater than 100 nanometres. <i>(Radiation Act 2005 [Vic])</i>
Manifest Quantities	Quantities of dangerous goods that are at least or greater than the manifest quantities prescribed in Schedule 2 of the <i>Dangerous Goods (Storage and Handling) Regulations 2012 (Vic)</i> . See Appendix 3.
Manufacture or Supply	Chemicals that are created within the University of Melbourne for sale or exchange to another workplace (other than the University of Melbourne).
Minor Quantities	Quantities of dangerous goods that are less than placarding quantities as prescribed in Schedule 2 of the <i>Dangerous Goods (Storage and Handling) Regulations 2012 (Vic)</i> . See Appendix 3.

TERM	DEFINITION
Placarding Quantities	Quantities of dangerous goods that are equal to or greater than the placarding quantities as prescribed in Schedule 2 of the <i>Dangerous Goods (Storage and Handling) Regulations 2012</i> (Vic). See Appendix 3.
PPE	Personal protective equipment
Precautionary Statement	A hazard statement (from the Model Work Health and Safety Regulations) describes the recommended measures that should be taken to minimise or prevent adverse effects resulting from exposure to, or improper storage or handling of a hazardous chemical.
Product Identifier	A unique name or number used to identify a product on a label or in a safety data sheet. [Labelling of Workplace Hazardous Chemicals Code of Practice]
Product Name	In relation to a hazardous substance, means the brand name or trade name given to the substance by the manufacturer or supplier of the substance; Note: A supplier includes an importing supplier <i>Occupational Health and Safety Regulations 2017</i> (Vic)
Prohibited Hazardous Substance	Prohibited hazardous substances are any hazardous substances: (a) listed in Schedule 6 of the <i>Occupational Health and Safety Regulations 2017</i> (Vic). <i>Occupational Health and Safety Regulations 2017</i> (Vic)
Research Chemical	A substance or mixture that has been manufactured in a laboratory for the purposes of genuine research and is not for use or supply to others for a purpose other than genuine research. [Labelling of Workplace Hazardous Chemicals Code of Practice]
Safety Data Sheet (SDS)	In relation to a hazardous substance, means a safety data sheet: (b) required to be prepared for the substance under regulation 144; or (c) prepared for the substance by the manufacturer or the importing supplier in accordance with equivalent legislation; <i>Occupational Health and Safety Regulations 2017</i> (Vic)
Schedule 10 Carcinogenic Substance	A substance [chemical] (or any of its salts) listed in Schedule 10 used – (a) as a pure substance; or (b) in a mixture containing 0.1% or more of that substance (or any of its salts), determined as a weight/weight (w/w) concentration for solids or liquids and a volume/volume (v/v) concentration for gases. <i>Occupational Health and Safety Regulations 2017</i> (Vic)
Schedule 11 Carcinogenic Substance	Means – (a) benzene as listed in Schedule 11; and (b) any other substance (or any of its salts) listed in that Schedule used –

TERM	DEFINITION
	<p>(i) as a pure substance; or</p> <p>(ii) in a mixture containing 0.1% or more of that substance (or any of its salts), determined as a weight/weight (w/w) concentration for solids or liquids and a volume/volume (v/v) concentration for gases.</p> <p><i>Occupational Health and Safety Regulations 2017 (Vic)</i></p>
Scheduled Carcinogenic Substance	<p>Means a Schedule 10 carcinogenic substance or a Schedule 11 carcinogenic substance</p> <p><i>Occupational Health and Safety Regulations 2017 (Vic)</i></p>
Scheduled Drugs and Poisons	See Controlled Substances
SDS	Safety Data Sheet
SDS Database	An electronic Safety Data Sheet (SDS) repository and Chemical inventory management system implemented by the University of Melbourne that can assist a Division meet its chemical regulatory requirements.
Type I Ingredient	<p>In relation to a hazardous substance, means a Type I ingredient within the meaning of Schedule 1 to the National Model Regulations for the Control of Workplace Hazardous Substances</p> <p><i>Occupational Health and Safety Regulations 2017 (Vic)</i></p>
Type II Ingredient	<p>In relation to a hazardous substance, means a Type II ingredient within the meaning of Schedule 1 to the National Model Regulations for the Control of Workplace Hazardous Substances</p> <p><i>Occupational Health and Safety Regulations 2017 (Vic)</i></p>
Type III Ingredient	<p>In relation to a hazardous substance, means a Type III ingredient within the meaning of Schedule 1 to the National Model Regulations for the Control of Workplace Hazardous Substances</p> <p><i>Occupational Health and Safety Regulations 2017 (Vic)</i></p>
WHP	The minimum length of time that must elapse between the last application of an agricultural chemical to a crop and the harvest, sale or use of the agricultural produce to which the chemical was applied.

APPENDIX 2 – LABELLING DECANTED CHEMICALS

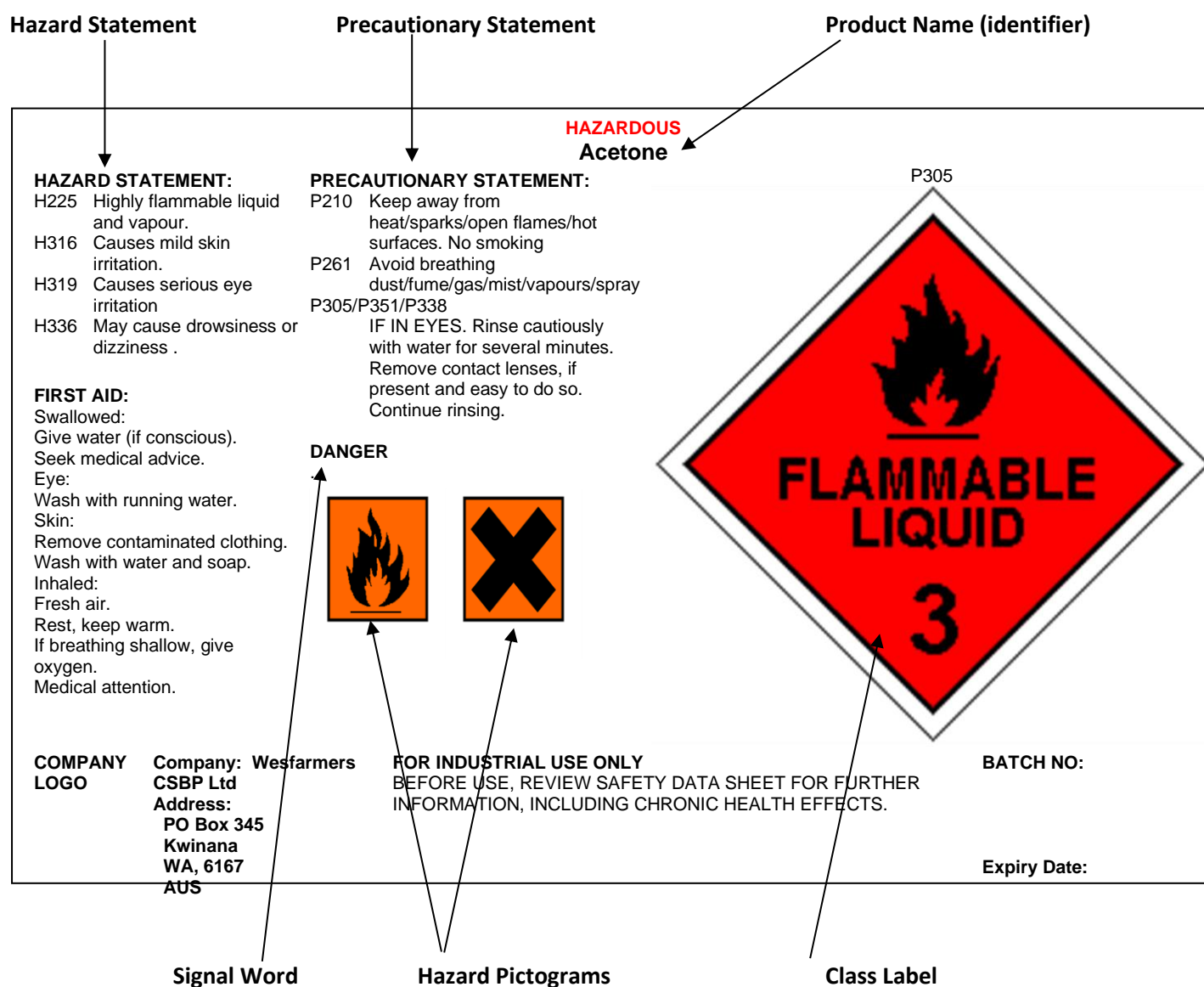
LABELLING REQUIREMENTS FOR CHEMICAL CLASSIFICATIONS	
ALL DECANTED CHEMICALS The label for a decanted chemical must be written in English and include the product identifier. A product identifier is a name or number used to identify a product on a label or in a safety data sheet.	
CHEMICAL CLASSIFICATION	LABELLING REQUIREMENTS
Hazardous Substances	The labelling requirements for decanted hazardous substances must be written in English, include the product identifier and where reasonably practicable: <ul style="list-style-type: none"> the hazard pictogram or hazard statement; the precautionary statements; and the signal word
Engineered Nanoparticles	Where the hazard(s) have been characterised the labelling requirements for decanted engineered nanoparticles must be written in English, include the product identifier and where reasonably practicable: <ul style="list-style-type: none"> the hazard pictogram or hazard statement; the precautionary statements; and the signal word. Where the hazard(s) have not been fully characterised the labelling requirements for decanted engineered nanoparticles must also include a statement: <ul style="list-style-type: none"> contains engineered/manufactured nanomaterials. Caution: Hazards unknown; or contains engineered/manufactured nanomaterials. Caution: Hazards not fully characterised.
Scheduled Carcinogenic Substances	The labelling requirements for decanted Schedule 10 and Schedule 11 carcinogenic substances must be written in English, include the product identifier and where reasonably practicable; <ul style="list-style-type: none"> the hazard pictogram or hazard statement; the precautionary statements; and the signal word
Dangerous Goods Note: This labelling applies to decanting into portable containers	The labelling requirements for decanted dangerous goods must be written in English, include the product identifier; and <ul style="list-style-type: none"> the relevant Class label and subsidiary risk label.
Drugs Poisons and Controlled Substances Note: This labelling does not apply to dispensing	The labelling requirements for decanted drugs, poisons and controlled substances must be written in English, include the product identifier; and <ul style="list-style-type: none"> the relevant Poison Schedule.
Agricultural Chemicals	The labelling requirements for decanted hazardous substances must be written in English, include the product identifier and where reasonably practicable; <ul style="list-style-type: none"> the hazard pictogram or hazard statement; the precautionary statements; and the signal word.
Veterinary Chemicals Note: This labelling does not apply to dispensing	The labelling requirements for decanted drugs, poisons and controlled substances must be written in English, include the product identifier; and <ul style="list-style-type: none"> the relevant Poison Schedule.

CHEMICALS WITH MORE THAN ONE CLASSIFICATION

Many chemicals fall into more than one classification. The labelling conditions for these chemicals will include the requirements for each classification. For example acetone is both a hazardous substance and a dangerous good. Therefore the label on the decanted container of acetone must be written in English, include the product identifier and:

- for the **hazardous substances** classification (Section 3.5.), where reasonably practicable, include:
 - the hazard pictogram or hazard statement;
 - the precautionary statements; and
 - the signal word
- for the **dangerous goods** classification (Section 6.5.) include:
 - the relevant Class label and subsidiary risk label.

The following is an example of an acetone label.



APPENDIX 3 – SCHEDULE 2 OF THE DANGEROUS GOODS (STORAGE AND HANDLING) REGULATIONS 2012 (VIC)

This information is reproduced from Schedule 2 of the *Dangerous Goods (Storage and Handling) Regulations 2012* (Vic), available from <http://www.legislation.vic.gov.au/>. Please refer to the source for the most current version of this information.

ITEM	DESCRIPTION OF DANGEROUS GOODS	PACKING GROUP	PLACARDING QUANTITY	MANIFEST QUANTITY	FIRE PROTECTION QUANTITY
1.	Class 2				
	Class 2.1	N/A	500 L	5000 L	5000 L
	Class 2.2 Subsidiary Risk 5.1	N/A	2000 L	10 000 L	20 000 L
	Other Class 2.2	N/A	5000 L	10 000 L	20 000 L
	Class 2.3	N/A	50 L	500 L	2000 L
	Aerosols	N/A	5000 L	10 000 L	20 000 L
	Cryogenic Fluids	N/A	1000 L	10 000 L	20 000 L
2.	Class 3, 4.1, 4.2, 4.3, 5.1, 5.2, 6.1 or 8	I	50 kg or L	500 kg or L	2000 kg or L
		II	250 kg or L	2500 kg or L	10 000 kg or L
		III	1000 kg or L	10 000 kg or L	20 000 kg or L
		Mixed Packing Groups in a single Class with the quantity of each Packing Group below the specified quantity for the Packing Group .	1000 kg or L	10 000 kg or L	20 000 kg or L
3.	Class 9	II	1000 kg or L	10 000 kg or L	20 000 kg or L
		III	5000 kg or L	10 000 kg or L	20 000 kg or L
		Mixed Packing Groups in Class 9 with the quantity of each Packing Group below the specified quantity for the Packing Group .	5000 kg or L	10 000 kg or L	20 000 kg or L
4.	Mixed Classes of dangerous goods where none of the Classes , types or Packing Groups (if any) present exceeds the quantities specified for the relevant quantity in Items 1, 2 and 3 of this Table.	N/A	5000 kg or L— The quantity only applies where the Placarding Quantity for an individual Class that is present is 5000 kg or L.	10 000 kg or L	20 000 kg or L

ITEM	DESCRIPTION OF DANGEROUS GOODS	PACKING GROUP	PLACARDING QUANTITY	MANIFEST QUANTITY	FIRE PROTECTION QUANTITY
			2000 kg or L— The quantity only applies where the Placarding Quantity for all of the Classes present is 2000 kg or L or less.		
5.	C1 combustible liquids stored and handled with fire risk dangerous goods where none of the Classes , types or Packing Groups (if any) present exceeds the relevant quantities in Items 1, 2 or 3 of this Table.	N/A	1000 kg or L	10 000 kg or L	20 000 kg or L
6.	Goods too dangerous to be transported that are not kept in a laboratory.	N/A	0 kg or L	0 kg or L	0 kg or L
7.	C1 combustible liquids in bulk stored and handled in isolation from other dangerous goods.	N/A	10 000 L	100 000 L	100 000 L
	C1 combustible liquids stored and handled in packages in isolation from other dangerous goods.	N/A	50 000 L	100 000 L	100 000 L
	C1 combustible liquids in bulk and in packages stored and handled in isolation from other dangerous goods provided the quantity in bulk is 10 000 L or less.	N/A	50 000 L	100 000 L	100 000 L

Note: For the purposes of item 3 in the Table, where Class 9 dangerous goods do not have a packaging group assigned to them, they are deemed to be assigned to Packing Group III.

APPENDIX 4 – DRUGS, POISONS AND CONTROLLED SUBSTANCES SCHEDULES

Drugs, poisons and controlled substances listed in the [Poisons Code](#) or in [The Poisons Standard \(Cth\)](#) are divided into the following schedules. Please refer to these sources for the most current version of this information.

SCHEDULE	DESCRIPTION
Schedule 1	Nil
Schedule 2	Poisons for therapeutic use that should be available to the public only from pharmacists, or where there is no pharmacy service is available, from persons licensed to sell Schedule 2 poisons.
Schedule 3	Poisons for therapeutic use that are dangerous or are so liable to abuse as to warrant their availability to the public being restricted to supply by pharmacists or medical, dental or veterinary practitioners.
Schedule 4	Poisons that should, in the public interest, be restricted to medical, dental or veterinary prescription or supply, together with substances or preparations intended for therapeutic use, the safety or efficacy of which requires further evaluation.
Schedule 5	Poisons of a hazardous nature that must be readily available to the public but require caution in handling, storage and use.
Schedule 6	Poisons that must be available to the public but are of a more hazardous nature or poisonous nature than those classified in Schedule 5.
Schedule 7	Poisons which require special precautions in manufacture, handling, storage or use, or special individual regulations regarding labelling or availability.
Schedule 8	Poisons to which the restrictions recommended for drugs of dependence by the 1980 Australian Royal Commission of Inquiry into Drugs should apply.
Schedule 9	Poisons, which are drugs of abuse, the manufacture, possession, sale or use of which, should be prohibited by law except for amounts, which may be necessary for medical or scientific research conducted with the approval of Australian, state and/or territory health authorities.