

Chemical Management Procedure

UNDER REVIEW

Related Policy	<i>Work Health and Safety Policy</i>
Responsible Officer	Executive Director – Human Resources
Approved by	Executive Director – Human Resources
Approved and commenced	December 2014
Review by	December 2017
Responsible Organisational Unit	Work Health and Safety Unit – Human Resources

CONTENTS

1	Objective	2
2	Scope	2
3	Procedure	2
3.1	Management of Risk	2
3.1.1	Assessment of Risk	2
3.1.2	Control of Risk	2
3.1.3	Significant risk	3
3.2	Hazardous Chemicals Co-Ordinator	3
3.3	Chemical Management System	3
3.4	Hazardous Chemicals Register	4
3.5	Purchasing	4
3.6	Safety Data Sheets (SDS)	4
3.7	Labelling	5
3.8	Licences and Permits	5
3.8.1	Scheduled Substances	5
3.8.2	Prohibited Carcinogens, Restricted Carcinogens and Restricted Hazardous Chemicals	6
3.8.3	Radiation	6
3.8.4	Security-Sensitive Dangerous Substances	6
3.8.5	Major Hazard Facility	7
3.8.6	Transportation of Dangerous Goods	7
3.8.7	Explosives	7
3.9	Waste Disposal	8
3.10	Health Monitoring	8
3.11	Emergency Preparedness	8
3.12	Incidents/Accidents	8
3.13	Training	9
4	Responsibilities	9
5	Definitions and Term/Acronym	10
6	Versioning	Error! Bookmark not defined.
7	Legislation	10
8	Supporting Documentation	11
9	Appendices	11

1 Objective

The objectives of this Procedure are to support the identification, assessment and control of risk associated with hazardous chemicals and to ensure that applicable licences and permits are held and renewed by the University in accordance with legislative requirements.

2 Scope

This Procedure describes the process for managing hazardous chemicals at all University of Tasmania workplaces.

3 Procedure

3.1 Management of Risk

3.1.1 Assessment of Risk

The manager or laboratory/research supervisor is to ensure an assessment of risk:

- includes the potential for exposure to hazardous chemicals
- is completed in consultation with staff in the work area and
- includes relevant specialist advice where required.

Steps involved in the assessment of risk are to include:

- a review of relevant information about the hazardous chemical
- identification and assessment of the risks and
- confirmation of the adequacy of controls.

Where an inspection of work practices shows that a risk can be, or is already, controlled in accordance with the Safety Data Sheet (SDS), or equivalent information concerning safe use and handling and there is not a significant risk to health and safety, then the assessment is complete.

Hazardous chemical assessments may be undertaken utilising either the Chemwatch™ system, or manually using for example the *Hazardous Chemical Risk Management Form*.

Where there is a risk to health and safety, or uncertainty about the degree of risk, a more detailed assessment is to be completed to include additional information about health hazards, evaluation of the work practices, exposure monitoring (if appropriate) and examination or testing of existing control measures.

3.1.2 Control of Risk

Hazardous chemical risks are to be managed with reference to the [hierarchy of risk control](#):

- where reasonably practicable, the hazardous chemicals is to be eliminated
- where not reasonably practical, substitution for a less hazardous chemical is to be considered
- should substitution not be practical, consideration is to be given to the following (in priority order) isolation, engineering controls, safe work practices, administration and personal protective equipment
- signs, SDS and documented procedures are to be located in the work area as

required by the risk assessment and

- the use of personal protective equipment is to be used only where other controls are not practicable, or where personal protective equipment is used in conjunction with other measures.

3.1.3 Significant risk

Where a risk assessment indicates that there is a significant risk to health or safety, completed assessment forms and any additional information are to be retained in the work area with a copy provided to the Organisational Unit head.

3.2 Hazardous Chemicals Co-Ordinator

The Organisational Unit head is to nominate a Hazardous Chemicals Co-ordinator with responsibility for the co-ordination of hazardous chemical information within the Organisational Unit.

3.3 Chemical Management System

The University's Chemical Management System may be accessed through the [Hazardous Chemicals and Poisons](#) web page.

The system utilises [Chemwatch™ GoldFFX](#) which includes two different access levels:

Basic level provides access to search, read and print Safety Data Sheets (SDSs) and chemical labels

Login details for basic level are:

User Login: EVERYONE

Password: everyone

Advanced level provides full functionality with access to:

- chemicals manifest
- risk assessment
- custom label generator
- review documents and
- emergency response information.

To login to the advanced level GoldFFX contact your Hazardous Chemical Coordinator or Laboratory/Workshop/Studio Manager for the correct Academic Unit specific details. For general information and login page for Gold FFX system go to the [Chemical Management System](#) page under Hazardous Chemicals and Poisons page.

For further assistance please contact the WHS Unit on health.safety@utas.edu.au

An on-line training program in the use of the Chemwatch system is provided for staff and students once logged on GOLDFFX in either access level. The eLearning module link can be found on the top right hand toolbar. This toolbar also provides additional training through links to a user guide and on-line chat.

Further information is available from ChemWatch at <http://www.chemwatch.net/>

Hazardous chemicals may also be managed through a manual process using the *Hazardous Chemical Risk Assessment Form*.

3.4 Hazardous Chemicals Register

A Hazardous Chemical Register is to be compiled for each Organisational Unit where hazardous chemicals are held.

The Hazardous Chemicals Co-Ordinator is to:

- maintain a register of all hazardous chemicals used, stored or handled in their Organisational Unit
- ensure the register is readily accessible to all workers and available in the event of an emergency.

Laboratory and research supervisors are to:

- maintain registers for all hazardous chemicals stored, used or produced within the laboratories or work areas for which they are responsible.

Hazardous chemical registers may be compiled using an Organisational Unit system or through the *Hazardous Chemical Risk Management Form* or other manual system.

Data from hazardous chemical registers not kept in Chemwatch is to be uploaded to, the [Chemwatch](#) system on a regular basis. An Excel spreadsheet template has been developed for this purpose and is available from the WHS webpage.

A centralised register process is necessary to ensure the University complies with its licence requirements for aggregated quantities of hazardous chemicals and to facilitate communication of information regarding hazardous chemicals.

3.5 Purchasing

A copy of the SDS, a completed risk assessment, and summary of the handling and storage information is to be forwarded to the Hazardous Chemicals Coordinator for approval prior to purchase and introduction of the chemical into the workplace.

Following approval, the new hazardous chemical is to be included in the Organisational Unit's Hazardous Chemicals Register

3.6 Safety Data Sheets (SDS)

A copy of the current SDS for a hazardous chemical used in a work area is to be readily accessible to those using the hazardous chemical.

SDSs are to be reviewed and kept up to date (not exceeding five years from date of issue). Currency of SDSs is maintained through the ChemWatch system.

Summary, 'mini' SDS, or Work Practice Data Sheets provide an accessible and practical means of communicating hazardous chemical information in the workplace. These summaries are for information only, they are not a replacement for an SDS and a full SDS must always be readily accessible.

Full SDS or summary versions can be printed by the Organisational Unit as required. Organisational Units are to ensure that any printed copies of SDSs are current.

The legal responsibility for providing a current SDS sits with the manufacturer, importer or supplier of the hazardous chemical.

Chemwatch provide copies of manufacturer and supplier SDS as 'vendor' SDS. Chemwatch also write SDS on behalf of manufacturers and suppliers and these are compliant with the Regulations, even though they also bear the ChemWatch brand.

A 'generic' SDS whether available through ChemWatch or any other system does not comply with WHS Regulations, a manufacturer or supplier SDS must always be accessible.

Where a copy of the manufacturer or supplier SDS is not available through Chemwatch it is the Organisational Unit responsibility to ensure this is requested and made available in accordance with the WHS Regulations. Once received, a copy is also to be forwarded to Chemwatch for inclusion on the system.

When an SDS is updated, registers containing that SDS are to be updated.

Should an Organisational Unit need to prepare an SDS, it is to be developed in accordance with the [Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice](#).

3.7 Labelling

Containers holding hazardous chemicals including storage tanks, piping and vessels shall be clearly and durably labelled to ensure proper identification in accordance with the [Labelling of Workplace Hazardous Chemicals Code of Practice](#)

This includes all containers into which hazardous chemicals are decanted, unless the hazardous chemical is completely used immediately, and provided the container is cleaned so that it no longer contains the chemical.

All hazardous chemicals are to be retained in their original packaging where practicable.

The ChemWatch system has a label printing function.

3.8 Licences and Permits

3.8.1 Scheduled Substances

All Scheduled substances purchasing must be approved and documented by the Hazardous Chemical Co-ordinator prior to purchase. A copy of all current Schedule substance permits must be sent to the WHS Unit for their records.

In Tasmania a Scheduled Substance is a substance as defined in accordance with the *Poisons Act 1971* and the *Poisons Regulations 2008*.

The use of Schedule 4 and Schedule 8 drugs on animals is restricted to Veterinary Surgeons. Under special circumstances the Chief Pharmacist, Pharmaceutical Services Branch, Department of Human Health Services may issue permits for others to hold and use these substances.

At the University, special permits are issued only to research groups for projects that are approved by the Animal Ethics Committee and are overseen by the Animal Welfare Officer. There are special requirements for the storage of substances held under these permits.

The University through the WHS Unit maintains a current *Authorisation to obtain, possess and use a schedule 7 substance* as approved by [the Chief Pharmacist, Pharmaceutical Services Branch](#), Department of Human Health Services.

Under this authorisation, Specified Officers are appointed and are authorised to obtain, possess and use Schedule 7 substances for University purposes subject to the conditions.

The Executive Dean, Head of Academic Unit, Head of Division,, Head of Budget Centre and Head of Administrative Unit at the University and who has been specified in writing by the Vice Chancellor may purchase or otherwise obtain Schedule 7 substances for and on behalf of the University and may possess and use that substance in strict accordance with the terms of the authorisation.

All Scheduled drugs and conditions are listed under the *Poisons Standard 2014* in the *Standard for the Uniform Scheduling of Medicines and Poisons* (SUSMP) No. 5. available at <http://www.comlaw.gov.au/Details/F2014L01343>

Further information is available at <http://www.tga.gov.au/scheduling-medicines-poisons>

3.8.2 Prohibited Carcinogens, Restricted Carcinogens and Restricted Hazardous Chemicals

Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals are not to be used at a University workplace unless:

- a suitable and sufficient risk assessment has been conducted and
- an appropriate Laboratory Notification has been submitted and approved.

Laboratory Notifications are forwarded by the Hazardous Chemical Coordinator to the WHS Unit for review and submission to the Regulator, WorkSafe Tasmania. The application must include the information stipulated in the WHS Regulations and any other information requested by the Regulator.

In accordance with Regulation 383 of the WHS Regulations, the Regulator may provide authorisation to use, handle or store a prohibited carcinogen or restricted carcinogen referred to in Schedule 10 at the workplace.

3.8.3 Radiation

The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) is the Australian Government's primary authority on radiation protection and nuclear safety. <http://www.arpansa.gov.au/index.htm>. ARPANSA works with state and territory regulators, which in Tasmania is the Radiation Protection Unit, Department of Health and Human Services (DHHS).

http://www.dhhs.tas.gov.au/peh/radiation_protection

Where a Licence is required for a hazardous chemical that is a radiation source, this is managed in accordance with the applicable legislation the *Radiation Protection Act 2005* and *Radiation Protection Regulations 2006* and through the University's *Radiation Safety Minimum Standard* and *Radiation Management Plan*.

3.8.4 Security-Sensitive Dangerous Substances

Security-Sensitive Dangerous Substances are managed through the University's *Security-Sensitive Dangerous Substances Procedure*.

On issue of an Exemption Certificate by the Regulator, WorkSafe Tasmania, the WHS Unit is to file the Exemption Certificate, noting the expiry date and forward a copy to the head of the Organisational Unit.

The head of the Organisational Unit or delegate is to ensure all Certificate terms are complied with and the Certificate is current.

The Exemption Certificate holder or person nominated to purchase/secure SSDS must comply with all conditions of the Exemption Certificate, keep required records and advise the Regulator of any alterations, theft or loss and within stipulated time frames.

The Regulator's Dangerous Substances Unit (DSU) may conduct site audits to ensure compliance with the conditions of the Exemption Certificate.

3.8.5 Major Hazard Facility

Under the Act each University campus/workplace will be either:

1. Hazardous Chemical Workplace
 - A workplace where quantities of hazardous chemicals do not exceed set amounts specified in the WHS legislation.
2. Manifest Quantity Workplace (MQW)
 - A workplace with hazardous chemicals where quantities exceed amounts in Schedule 11 of the Work Health and Safety Regulations (Appendix 2).
The University must notify WorkSafe Tasmania using the Manifest Quantity Workplace notification form and include a copy of the hazardous chemical manifest.
3. Major Hazard Facilities (MHF)
 - A workplace where, because of the hazardous chemicals present, WorkSafe Tasmania has determined there is potential for a major incident.

To enable WorkSafe to make an MHF determination, the University must notify where quantities exceeds 10% amounts in Schedule 15 of the Work Health and Safety Regulations (Appendix 3).

The Organisational Unit head or delegate is to monitor the quantities of hazardous chemicals present, or likely to be present, at the workplace to ensure they do not exceed 10% of their threshold quantity and so do not meet the requirements for a Major Hazard Facility (MHF);

Additional guidance is available through the University's *Hazardous Chemicals, Dangerous Goods and Explosives Storage and Transport Procedure*.

3.8.6 Transportation of Dangerous Goods

Transportation of dangerous goods is subject to State and Territory laws based on the requirements under the *Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code)*.

The head of the Organisational Unit or delegate is to ensure that both the driver and the vehicle are licenced to transport Dangerous Goods where quantities of dangerous goods transported by road exceed:

- 500 litres or kilograms for a container Class 2-9;
- 3000 litres for an IBC (Intermediate Bulk Container for Class 2-9 where not filled or emptied on the vehicle);
- risk category 2 of the Australian Explosives Code for Class 1 (Explosives).

Additional guidance is available through the University's *Hazardous Chemicals, Dangerous Goods and Explosives Storage and Transport Procedure*.

3.8.7 Explosives

The head of the Organisational Unit or delegate is to:

- keep a manifest of hazardous chemicals that are explosives;
- ensure compliance with the requirements of the *Explosives Act 2012* and the *Explosives Regulations 2012*.

Additional guidance is available through the University's *Hazardous Chemicals, Dangerous Goods and Explosives Storage and Transport Procedure*.

3.9 Waste Disposal

Hazardous chemicals and materials and containers contaminated by hazardous chemicals are to be disposed of in accordance with the relevant State and local regulations. All waste chemicals must be stored using the correct chemical segregation system. The storage and disposal of these chemicals is to be co-ordinated by the Hazardous Chemical Co-ordinator.

In most cases the services of a licensed contractor will be required to comply with hazardous chemical waste disposal requirements.

A schedule of chemical waste collection is managed by the WHS Unit.

3.10 Health Monitoring

Where there is a potential for exposure to a hazardous chemical and a risk assessment identifies a requirement for health monitoring, this is to be provided to workers.

The Hazardous Chemical Coordinator is to identify those workers from the Organisational Unit who require health monitoring and liaise with the WHS Unit to ensure health monitoring is undertaken.

The WHS Unit is to oversee health monitoring to ensure:

- monitoring is conducted by a competent person
- results are recorded and made available to effected workers.

The Organisational Unit head or delegate is to ensure all monitoring records are filed and a copy forwarded to the WHS Unit.

Health monitoring records are to be kept in accordance with legislative requirements as noted in the *Work Health and Safety Records Management Guidelines*.

3.11 Emergency Preparedness

The head of the Organisational Unit or delegate is to ensure that emergency response is provided in accordance with the hazardous chemical SDS and as identified through the hazardous chemical risk assessment.

This includes ensuring:

- SDS are readily available at the workplace
- First Aiders are trained and First Aid kits are provided
- emergency eye wash and showers are in place and operating
- fire response, spill kits and other emergency equipment is provided
- routine workplace checks are undertaken to confirm the operation of emergency response equipment.

3.12 Incidents/Accidents

In the event of an accident involving exposure to a hazardous chemical the first aid provisions detailed in the SDS are to be followed in the first instance and medical advice sought.

The head of the Organisational Unit or delegate is to ensure:

- all incidents or accidents involving hazardous chemicals are reported to the Manager/Supervisor immediately
- the WHS Unit is notified as soon as practicable of hazardous chemical incidents or accidents
- the Regulator is notified of a serious incident or injury including medical treatment within 48 hours of exposure to a substance, or of a dangerous incident in relation to a workplace that exposes a worker or any other person to a serious risk to a person's health or safety emanating from an immediate or imminent exposure to an uncontrolled escape, spillage or leakage of a substance and
- an investigation is carried out to identify the incident causes and the controls required to prevent a re-occurrence.

3.13 Training

Workers required to handle, store, transport or use hazardous chemicals are to receive appropriate training. Training includes but is not limited to:

- labelling information
- information provided on SDSs
- the risk assessment process and the worker's role
- the procedures to be followed in the use, handling, processing, storage, transportation, cleaning-up and disposal of hazardous chemicals
- First Aid, accident, incident and hazard reporting and emergency procedures.

The Organisational Unit head or delegate is to ensure that a record of training is maintained and kept in accordance with WHS record retention requirements.

4 Responsibilities

Hazardous Chemicals Co-ordinator

Each Organisational Unit is to nominate a Hazardous Chemicals Co-Coordinator responsible for the co-ordination of hazardous chemical information within that Organisational Unit.

Organisational Unit head or delegate

Is to ensure:

- risk assessments are carried out and recorded for all hazardous chemicals used or produced in their area of responsibility
- all workers, for whom they are responsible are informed regarding the risks of hazardous chemicals in the workplace
- workers are trained in the correct handling and use of hazardous chemicals and associated equipment, and that appropriate equipment and information is available
- supervision is provided as is reasonably practicable to ensure the workers' health and safety when using or producing hazardous chemicals.

Officer

Has a duty to ensure this Procedure is implemented within their areas of responsibility.

WHS Unit The WHS Unit is to oversee the University's compliance with this Procedure and provide advice and guidance to Organisational Units.

5 Definitions and Term/Acronym

Academic Unit Means the secondary organisational unit in the academic structure of the University, reporting directly to the College Executive Deans, as per Ordinance 14 – Academic Structure.

Chemwatch™ Chemwatch provides software solutions and services for SDS management, chemical risk assessments and emergency response.

College Means
(a) the primary organisational unit in the academic structure of the University, as per Ordinance 14 – Academic Structure
(b) the University College

Executive Dean Means:
(a) the Executive Dean of the relevant College, or
(b) in relation to the University College, the Principal of the University College

Head of Academic Unit Means the head of the relevant Academic Unit, and includes a person to whom the Head of Academic Unit has delegated any power conferred or imposed by these rules.

Organisational Unit College, Faculty, School, Centre, University Institute, other University Entity, Division, Section or University Business Enterprise.

SDS Safety Data Sheet

Worker A University staff member, contractor, volunteer or student gaining work experience.

6 Legislation

The following legislation is applicable to this Procedure:

- *Work Health and Safety Regulations 2012*
- *Dangerous Goods (Road and Rail Transport) Act 2010*
- *Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code)*
- *Explosives Act 2012*
- *Explosives Regulations 2012*

7 Supporting Documentation

Hazardous Chemical Risk Assessment Form

Managing Risks of Hazardous Chemicals Minimum Standard

Prohibited Carcinogens, Restricted Carcinogens and Restricted Hazardous Chemicals Procedure

Security-Sensitive Dangerous Substances

Hazardous Chemicals Dangerous Goods and Explosives Storage and Transport Procedure

8 Appendices

Appendix 1: Placard and Manifest Quantities

Appendix 2: SCHEDULE 11 - Placard and Manifest Quantities

Appendix 3: SCHEDULE 15 - Hazardous Chemicals at Major Hazard Facilities (and their Threshold Quantity)

9 Versioning

Former Version	Version 1 – Chemical Management System Procedure; approved December 2014, amended in December 2016 to incorporate Colleges.
Current Version	Version 2 – <i>Chemical Management Procedure</i> (current Document); approved December 2014, amended in December 2017 to incorporate final academic structure.

Appendix 1: Placard and Manifest Quantities

The table below shows placard and manifest quantities of hazardous chemicals, as specified in the WHS Regulations (Schedule 11). The final column of this table shows the link between the GHS classes and categories and the equivalent classes and categories of dangerous goods under the ADG Code.

Note: Where the WHS Regulations (Schedule 13) require a placard due to the volume stored in bulk or in packages, the relevant dangerous goods class label (pictogram) must be displayed on the placard, rather than the corresponding GHS pictogram.

Column 1	Column 2	Column 3	Column 4	Column 5	ADG Code Classification
Item	Description of hazardous chemical		Placard quantity	Manifest quantity	
	Hazard Class	Hazard Category			
1	Flammable gases	Category 1	200L	5000L	2.1
2	Gases under pressure	with acute toxicity, categories 1, 2, 3 or 4 Note—Category 4 only up to LC ₅₀ of 5000 ppmV	50L	500L	2.3
3		with skin corrosion categories 1A, 1B or 1C	50L	500L	2.3
4		aerosols	5000L	10 000L	2.1 or 2.2
5		not specified elsewhere in this Table	1000L	10 000L	2.2
6		Flammable liquids	Category 1	50L	500L
7	Category 2		250L	2500L	3 (PG II)
8	Category 3		1000L	10 000L	3 (PG III)
9	Any mix of chemicals from Items 6 – 8 where none of the items exceeds the quantities in columns 4 or 5 on their own		1000L	10 000L	
10	Category 4		10 000L	100 000L	Note 3
11	Self-reactive substances	Type A	5kg or 5L	50kg or 50L	GTDTBT – Note 4
12		Type B	50kg or 50L	500kg or 500L	4.1 (Type B)
13		Type C-F	250kg or 250L	2500kg or 2500L	4.1 (Type C-F)
14	Flammable solids	Category 1	250kg	2500kg	4.1 (PG II)
15		Category 2	1000kg	10 000kg	4.1 (PG III)
16		Any mix of chemicals from Items 12 - 15 where none of the items exceeds the quantities in columns 4 or 5 on their own	1000kg or 1000L	10 000kg or 10 000L	
17	Pyrophoric liquids and Pyrophoric	Category 1	50kg or 50L	500kg or 500L	4.2 (PG I)

Column 1	Column 2	Column 3	Column 4	Column 5	ADG Code Classification
Item	Description of hazardous chemical		Placard quantity	Manifest quantity	
	Hazard Class	Hazard Category			
	solids				
18	Self-heating substances and mixtures	Category 1	250kg or 250L	2500kg or 2500L	4.2 (PG II)
19		Category 2	1000kg or 1000L	10 000kg or 10 000L	4.2 (PG III)
20		Any mix of chemicals from Items 17 - 19 where none of the items exceeds the quantities in columns 4 or 5 on their own	1000kg or 1000L	10 000kg or 10 000L	
21	Substances which in contact with water emit flammable gas	Category 1	50kg or 50L	500kg or 500L	4.3 (PG I)
22		Category 2	250kg or 250L	2500kg or 2500L	4.3 (PG II)
23		Category 3	1000kg or 1000L	10 000kg or 10 000L	4.3 (PG III)
24		Any mix of chemicals from Items 21 - 23 where none of the items exceeds the quantities in columns 4 or 5 on their own	1000kg or 1000L	10 000kg or 10 000L	
25	Oxidising liquids and Oxidising solids	Category 1	50kg or 50L	500kg or 500L	5.1 (PG I)
26		Category 2	250kg or 250L	2500kg or 2500L	5.1 (PG II)
27		Category 3	1000kg or 1000L	10 000kg or 10 000L	5.1 (PG III)
28		Any mix of chemicals from Items 25 - 27 where none of the items exceeds the quantities in columns 4 or 5 on their own	1000kg or 1000L	10 000kg or 10 000L	
29	Organic peroxides	Type A	5kg or 5L	50kg or 50L	GTDTBT – Note 4
30		Type B	50kg or 50L	500kg or 500L	5.2 (Type B)
31		Type C - F	250kg or 250L	2500kg or 2500L	5.2 (Type C-F)
32		Any mix of chemicals from Items 30 and 31 where none of the items exceeds the	250kg or 250L	2500kg or 2500L	

Column 1	Column 2	Column 3	Column 4	Column 5	ADG Code Classification
Item	Description of hazardous chemical		Placard quantity	Manifest quantity	
	Hazard Class	Hazard Category			
		quantities in columns 4 or 5 on their own			
33	Acute Toxicity	Category 1	50kg or 50L	500kg or 500L	6.1 (PG I) – <i>Note 5</i>
34		Category 2	250kg or 250L	2500kg or 2500L	6.1 (PG II)
35		Category 3	1000kg or 1000L	10 000kg or 10 000L	6.1 (PG III)
36		Any mix of chemicals from Items 33 - 35 where none of the items exceeds the quantities in columns 4 or 5 on their own	1000kg or 1000L	10 000kg or 10 000L	
37	Skin corrosion	Category 1A	50kg or 50L	500kg or 500L	8 (PG I)
38		Category 1B	250kg or 250L	2500kg or 2500L	8 (PG II)
39		Category 1C	1000kg or 1000L	10 000kg or 10 000L	8 (PG III)
40	Corrosive to metals	Category 1	1000kg or 1000L	10 000kg or 10 000L	8 (PG III)
41		Any mix of chemicals from Items 37 - 40 where none of the items exceeds the quantities in columns 4 or 5 on their own	1000kg or 1000L	10 000kg or 10 000L	
42	Unstable explosives		5kg or 5L	50kg or 50L	GTDTBT – <i>Note 4</i>
43		Any mix of chemicals from Items 11, 29 and 42 where none of the items exceeds the quantities in columns 4 or 5 on their own	5kg or 5L	50kg or 50L	

(1) For the purposes of this table, if a flammable liquid category 4 is used, handled or stored in the same spill compound as one or more flammable liquids of categories 1, 2 or 3, the total quantity of flammable liquids categories 1, 2 or 3 must be determined as if the flammable liquid category 4 had the same classification as the flammable liquid in the spill compound with the lowest flash point.

Example: For placard and manifest purposes, a spill compound containing 1000L of flammable liquid category 1 and 1000L of flammable liquid category 4 is considered to contain 2000L of flammable liquid category 1.

(2) For the item 2 in the table, Gases under pressure with acute toxicity category 4 only applies up to a LC₅₀ of 5000 ppmV. This is equivalent to Division 2.3 dangerous goods under the ADG Code.

(3) Only flammable liquids with a flash point of up to 93°C are classified as hazardous chemicals under the WHS Regulations and the GHS. C1 combustible liquids with flashpoints between 93°C and 150°C are not classified as hazardous workplace chemicals.

(4) GTDTBT means goods too dangerous to be transported.

(5) Division 2.3 under the ADG Code includes gases and vapours classified as acutely toxic (categories 1, 2 and 3) and gases which are corrosive to skin (category 1).

Appendix 2: SCHEDULE 11 - Placard and Manifest Quantities
[Regulations 347](#) – [350](#), [361](#), [390](#) and [391](#)

Table 11.1				
Column 1	Column 2	Column 3	Column 4	Column 5
Item	Description	of hazardous chemical	Placard quantity	Manifest quantity
1.	Flammable gases	Category 1	200L	5 000L
2.	Gases under pressure	With acute toxicity, categories 1, 2, 3 or 4	50L	500L
3.		With skin corrosion, categories 1A, 1B or 1C	50L	500L
4.		Aerosols	5 000L	10 000L
5.		Not specified elsewhere in this table	1 000L	10 000L
6.	Flammable liquids	Category 1	50L	500L
7.		Category 2	250L	2 500L
8.		Category 3	1 000L	10 000L
9.		Any combination of chemicals from items 6 to 8 where none of the items exceeds the quantities in columns 4 or 5 on their own	1 000L	10 000L
10.		Category 4	10 000L	100 000L
11.	Self-reactive substances	Type A	5kg or 5L	50kg or 50L
12.		Type B	50kg or 50L	500kg or 500L
13.		Type C to F	250kg or 250L	2 500kg or 2 500L
14.	Flammable solids	Category 1	250kg	2 500kg
15.		Category 2	1 000kg	10 000kg
16.		Any combination of chemicals from items 12 to 15 where none of the items exceeds the quantities in columns 4 or 5 on their own	1 000kg or 1 000L	10 000kg or 10 000L
17.	Pyrophoric liquids and pyrophoric solids	Category 1	50kg or 50L	500kg or 500L
18.	Self-heating substances and mixtures	Category 1	250kg or 250L	2 500kg or 2 500L
19.		Category 2	1 000kg or 1 000L	10 000kg or 10 000L
20.		Any combination of chemicals from items 17 to 19 where none of the items exceeds the quantities in columns 4 or 5 on their own	1 000kg or 1 000L	10 000kg or 10 000L
21.	Substances which in contact with water emit flammable gas	Category 1	50kg or 50L	500kg or 500L
22.		Category 2	250kg or 250L	2 500kg or 2 500L
23.		Category 3	1 000kg or 1 000L	10 000kg or 10 000L
24.		Any combination of chemicals from items 21 to 23 where none of the items exceeds the quantities in columns 4 or 5 on their own	1 000kg or 1 000L	10 000kg or 10 000L
25.	Oxidising liquids and oxidising solids	Category 1	50kg or 50L	500kg or 500L
26.		Category 2	250kg or 250L	2 500kg or 2 500L
27.		Category 3	1 000kg or 1 000L	10 000kg or 10 000L

28.		Any combination of chemicals from items 25 to 27 where none of the items exceeds the quantities in columns 4 or 5 on their own	1 000kg or 1 000L	10 000kg or 10 000L
29.	Organic peroxides	Type A	5kg or 5L	50kg or 50L
30.		Type B	50kg or 50L	500kg or 500L
31.		Type C to F	250kg or 250L	2 500kg or 2 500L
32.		Any combination of chemicals from items 30 and 31 where none of the items exceeds the quantities in columns 4 or 5 on their own	250kg or 250L	2 500kg or 2 500L
33.	Acute toxicity	Category 1	50kg or 50L	500kg or 500L
34.		Category 2	250kg or 250L	2 500kg or 2 500L
35.		Category 3	1 000kg or 1 000L	10 000kg or 10 000L
36.		Any combination of chemicals from items 33 to 35 where none of the items exceeds the quantities in columns 4 or 5 on their own	1 000kg or 1 000L	10 000kg or 10 000L
37.	Skin corrosion	Category 1A	50kg or 50L	500kg or 500L
38.		Category 1B	250kg or 250L	2 500kg or 2 500L
39.		Category 1C	1 000kg or 1 000L	10 000kg or 10 000L
40.	Corrosive to metals	Category 1	1 000kg or 1 000L	10 000kg or 10 000L
41.		Any combination of chemicals from items 37 to 40 where none of the items exceeds the quantities in columns 4 or 5 on their own	1 000kg or 1 000L	10 000kg or 10 000L
42.	Unstable explosives		5kg or 5L	50kg or 50L
43.	Unstable chemicals	Any combination of chemicals from items 11, 29 and 42 where none of the items exceeds the quantities in columns 4 or 5 on their own	5kg or 5L	50kg or 50L

Notes

- 1 In item 2, Gases under pressure with acute toxicity, category 4 only applies up to a LC50 of 5 000 ppmV. This is equivalent to dangerous goods of Division 2.3.
- 2 Item 4 includes flammable aerosols.

1 Determination of classification of flammable liquids

For the purposes of this table, if a flammable liquid category 4 is used, handled or stored in the same spill compound as one or more flammable liquids of categories 1, 2 or 3, the total quantity of flammable liquids categories 1, 2 or 3 must be determined as if the flammable liquid category 4 had the same classification as the flammable liquid in the spill compound with the lowest flash point.

Example

For placarding and manifest purposes, a spill compound containing 1 000L of flammable liquid category 1 and 1 000L of flammable liquid category 4 is considered to contain 2 000L of flammable liquid category 1.

Appendix 3: SCHEDULE 15 - Hazardous Chemicals at Major Hazard Facilities (and their Threshold Quantity)

Chapter 9

1. Definitions

In this Schedule –

Class has the same meaning as in the ADG Code;

Division has the same meaning as in the ADG Code;

LD₅₀ (median lethal dose) for acute oral toxicity is the statistically derived single dose of a substance that can be expected to cause death within 14 days in 50% of young adult albino rats when administered by the oral route. The LD₅₀ value is expressed in terms of mass of test substance per mass of test animal (mg/kg);

LD₅₀ for acute dermal toxicity is that dose of the substance which, administered by continuous contact for 24 hours with the bare skin of albino rabbits, is most likely to cause death within 14 days in one half of the animals tested. The number of animals tested must be sufficient to give a statistically significant result and be in conformity with good pharmacological practice. The result is expressed in milligrams per kg body mass;

LC₅₀ for acute toxicity on inhalation is that concentration of vapour, mist or dust which, administered by continuous inhalation to both male and female young adult albino rats for one hour, is most likely to cause death within 14 days in one half of the animals tested. A solid substance must be tested if at least 10% (by mass) of its total mass is likely to be dust in a respirable range, e.g. the aerodynamic diameter of that particle fraction is 10 microns or less. A liquid substance must be tested if a mist is likely to be generated in a leakage of the transport containment. Both for solid and liquid substances exceeding 90% (by mass) of a specimen prepared for inhalation toxicity must be in the respirable range as defined above. The result is expressed in milligrams per litre of air for dusts and mists or in millilitres per cubic metre of air (parts per million) for vapours;

Packing Group has the same meaning as in the ADG Code;

subsidiary risk has the same meaning as in the ADG Code.

2. Relevant hazardous chemicals

The hazardous chemicals that characterise a workplace as a facility for the purposes of these regulations are the chemicals specifically referred to in table 15.1 and chemicals that belong to the types, classes and categories referred to in table 15.2.

3. Threshold quantity of one hazardous chemical

(1) In relation to each hazardous chemical referred to in clause 2, column 3 of tables 15.1 and 15.2 provides a quantity that is described as the **threshold quantity** of that chemical.

(2) If a hazardous chemical is referred to in table 15.1, the **threshold quantity** of the chemical is that described in table 15.1, whether or not the chemical also belongs to a type, class or category referred to in table 15.2.

(3) If a hazardous chemical is not referred to in table 15.1, and the chemical belongs to a type, class or category referred to in table 15.2, the **threshold quantity** of that chemical is that of the type, class or category to which it belongs.

(4) If a hazardous chemical is not referred to in table 15.1, and the chemical appears to belong to more than 1 of the types, classes or categories referred to in table 15.2, the **threshold quantity** of that chemical is that of the relevant type, class or category which has the lower or lowest threshold quantity.

4. Threshold quantity of more than 1 hazardous chemical

If there is more than 1 hazardous chemical, a threshold quantity of chemicals exists where, if a number of chemicals are present, the result of the following aggregation formula exceeds 1:

[Click here to view image](#)

5. How table 15.1 must be used

(1) The UN number listed against the named hazardous chemical in table 15.1 does not restrict the meaning of the name, which also applies to hazardous chemicals that fall outside the UN number.

Examples	
1	The hazardous chemicals are too dangerous to be transported.
2	The hazardous chemicals are part of mixtures covered by a different UN number.

(2) Any hazardous chemicals that are covered by the listed UN numbers must be included in the quantity of the chemical named.

6. How table 15.2 must be used

(1) The quantities specified for explosives in table 15.2 relate to the weight of explosive exclusive of packagings, casings and other non-explosive components.

(2) If explosives of different hazard divisions are present in the same area or storage, all of the

explosives must, before table 15.2 is applied, be classified in accordance with the following table:

Div.	1.1	1.2	1.3	1.4	1.5	1.6
1.1	1.1	1.1	1.1	1.1	1.1	1.1
1.2	1.1	1.2	1.1	1.2	1.1	1.2
1.3	1.1	1.1	1.3	1.3	1.1	1.3
1.4	1.1	1.2	1.3	1.4	1.5	1.6
1.5	1.1	1.1	1.1	1.5	1.5	1.5
1.6	1.1	1.2	1.3	1.6	1.5	1.6

Table 15.1			
	Column 1	Column 2	Column 3
Item	Hazardous chemical	UN Nos included under name	Threshold quantity (tonnes)
1.	ACETONE CYANOHYDRIN	1541	20
2.	ACETYLENE	1001	50
3.	ACROLEIN	1092	200
4.	ACRYLONITRILE	1093	200
5.	ALLYL ALCOHOL	1098	20
6.	ALLYLAMINE	2334	200
7.	AMMONIA, ANHYDROUS, LIQUEFIED or AMMONIA SOLUTIONS, relative density less than 0.880 at 15 degrees C in water, with more than 50% ammonia	1005	200
8.	AMMONIUM NITRATE FERTILISERS	2067	5 000
		2068	
		2069	
		2070	
9.	AMMONIUM NITRATE, with not more than 0.2% combustible substances, including any organic substance calculated as carbon, to the exclusion of any other added substance	1942	2 500
10.	ARSENIC PENTOXIDE, Arsenic (V) Acid and other salts	1559	10
11.	ARSENIC TRIOXIDE, Arsenious (III) Acid and other salts	1561	0.1
12.	ARSINE	2188	1.0
13.	BROMINE or BROMINE SOLUTIONS	1744	100
14.	CARBON DISULFIDE	1131	200
15.	CHLORINE	1017	25
16.	DIOXINS	–	0.1
17.	ETHYL NITRATE	–	50
18.	ETHYLENE DIBROMIDE	1605	50
19.	ETHYLENE OXIDE	1040	50
20.	ETHYLENEIMINE	1185	50
21.	FLUORINE	1045	25
22.	FORMALDEHYDE (greater than 90%)	–	50
23.	HYDROFLUORIC ACID SOLUTION (greater than 50%)	1790	50
24.	HYDROGEN	1049	50
25.	HYDROGEN CHLORIDE		
	– Anhydrous	1050	250
	– Refrigerated Liquid	2186	250
26.	HYDROGEN CYANIDE	1051	20
		1614	
27.	HYDROGEN FLUORIDE	1052	50
28.	HYDROGEN SULFIDE	1053	50
29.	LP GASES	1011	200
		1012	
		1075	

		1077	
		1978	
30.	METHANE or NATURAL GAS	1971	200
		1972	
31.	METHYL BROMIDE	1062	200
32.	METHYL ISOCYANATE	2480	0.15
33.	OXIDES OF NITROGEN, including nitrous oxide, nitrogen dioxide and nitrogen trioxide	1067	50
		1070	
		1660	
		1975	
		2201	
		2421	
34.	OXYGEN	1072	2 000
		1073	
35.	PHOSGENE	1076	0.75
36.	PROPYLENE OXIDE	1280	50
37.	PROPYLENEIMINE	1921	200
38.	SODIUM CHLORATE, solid	1495	200
39.	SULFUR DICHLORIDE	1828	1
40.	SULFUR DIOXIDE, LIQUEFIED	1079	200
41.	SULFURIC ANHYDRIDE (Alt. SULFUR TRIOXIDE)	1829	75
42.	TITANIUM TETRACHLORIDE	1838	500
43.	TOLUENE DIISOCYANATE	2078	200

Table 15.2

	Column 1	Column 2	Column 3
Item	Hazardous chemical	Description	Threshold quantity (tonnes)
1.	Explosive materials	Explosive of Division 1.1A	10
		All other explosives of Division 1.1	50
		Explosive of Division 1.2	200
		Explosive of Division 1.3	200
2.	Compressed and liquefied gases	Compressed or liquefied gases of Division 2.1 or Subsidiary Risk 2.1	200
		Liquefied gases of Subsidiary Risk 5	200
		Compressed or liquefied gases that meet the criteria for Very Toxic in table 15.3	20
		Compressed or liquefied gases that meet the criteria for Toxic in table 15.3	200
3.	Flammable materials	Liquids that meet the criteria for Class 3 Packing Group I Materials (except for crude oil in remote locations)	200
		Crude oil in remote locations that meet the criteria for Class 3 Packing Group I	2 000
		Liquids that meet the criteria for Class 3 Packing Group II or III	50 000
		Liquids with flash points <61°C kept above their boiling points at ambient conditions	200
		Materials that meet the criteria for Division 4.1 Packing Group I	200
		Spontaneously combustible materials that meet the criteria for Division 4.2 Packing Group I or II	200
		Materials that liberate flammable gases or react violently on contact with water which meet the criteria for Division 4.3 Packing Group I or II	200
		Materials that belong to Classes 3 or 8 Packing Group	500

		I or II which have Hazchem codes of 4WE (materials that react violently with water)	
4.	Oxidising materials	Oxidising material listed in Appendix A to the ADG Code	50
		Oxidising materials that meet the criteria for Division 5.1 Packing Group I or II	200
5.	Peroxides	Peroxides that are listed in Appendix A to the ADG Code	50
		Organic Peroxides that meet the criteria for Division 5.2	200
6.	Toxic solids and liquids	Materials that meet the criteria for Very Toxic in table 15.3 except materials that are classified as Infectious Substances (Division 6.2) or as Radioactive (Class 7)	20
		Materials that meet the criteria for Toxic in table 15.3	200

Table 15.3
– Criteria
for toxicity

	Column 1	Column 2	Column 3
Description	Oral Toxicity¹ LD₅₀ (mg/kg)	Dermal Toxicity² LD₅₀ (mg/kg)	Inhalation Toxicity³ LC₅₀ (mg/L)
Very Toxic	LD ₅₀ ≤ 5	LD ₅₀ ≤ 40	LC ₅₀ ≤ 0.2
Toxic	5 < LD ₅₀ ≤ 40	40 < LD ₅₀ ≤ 200	0.5 < LC ₅₀ ≤ 2
Key			
1	In rats		
2	In rabbits		
3	4 hours in rats		