Charles Sturt University

Chemical Safety Manual

Booklet 1 - Introduction

IN THIS BOOKLET

1. Introduction

1.1. Purpose

The purpose of this document is to outline aspects associated with the management of chemicals at all Charles Sturt University sites. This includes purchasing, safe use, storage, management, transportation and disposal of chemicals. There may be other standards and legislation in addition to those outlined in this document that may need to be considered as applicable.

1.2. Aim

The aim of this document is to outline Charles Sturt University's process and expectations for managing chemicals and their associated risks to ensure:

- that arrangements are in place to minimise the risk of adverse health effects and protect the safety of staff, students, contractors and members of the public, due to exposure to hazardous substances and dangerous goods;
- the mitigation of adverse environmental impacts; and
- compliance with State and Commonwealth regulatory requirements.

1.3. Scope

This document applies to all Charles Sturt University staff, students, visitors, volunteers and contractors who are required to use chemicals and/or controlled substances within the scope of their duties at Charles Sturt University.

The Chemical Management System is intended for the use of chemicals such as, but not limited to, hazardous substances/chemicals, dangerous goods and otherwise controlled substances. The general legislative requirements for hazardous substances and dangerous goods will be outlined in the first portion of the document. The later portion will cover other controlled substances which require additional specific controls (See section 2.4).

This document should be used in conjunction with other Charles Sturt University documentation and procedures surrounding the management of chemicals (including specific area safety management plans, area and task specific risk assessments and standard operating procedures). This document has been developed in line with legislation and guidance that were current at the time of writing. New legislation and guidelines developed since the authoring of this document must be considered.

1.4. Not included in this document

The following are not included as part of this document:

- Class 1 Dangerous goods (Explosives)
- Biological safety (Biological Materials and Genetically Modified Organisms)
- The built environment - Asbestos, natural mineral fibres (NMF), CFC's
- Bulk storage of petroleum fuels (including underground storage tanks)

For each of these topics please see alternative guidance document or advice ensure appropriate risk assessment and ***safety documentation*** are completed, reviewed and approved.

1.5. Responsibilities

All staff, students, visitors, volunteers and contractors who purchase, use, store or dispose of chemicals or controlled substances on behalf of Charles Sturt University are required to undertake their responsibilities in line with the Work Health and Safety Policy. For more detail on the Health and Safety Responsibilities within Charles Sturt University, including individual performance criteria for each responsible party, see the guidelines as per the policy library.

Table 1 provides a summary of the main roles and responsibilities for chemical management across the Charles Sturt University campus. Specific responsibilities will also be outlined in each subsection where applicable.

Definitions

Name	Definition
ADG Code	The Australian Code for the Transport of Dangerous Goods by Road or Rail ('Australian Dangerous Goods Code') 7th Edition.
Bulk storage	Storage of liquids, such as petroleum products in tanks as distinguished from drum or packaged storage
Chemwatch Gold FFX Authorised Users	Charles Sturt University staff and students who have been provided with write access to the Chemwatch Gold FFX system by the Chemwatch Administrator.
Chemwatch Gold FFX	An electronic Safety Data Sheet (SDS) repository and chemical inventory management system that aids Charles Sturt University to meet its chemical regulatory requirements.
Chemical	Term used to define chemical substances, including Dangerous Goods, Hazardous Substances as well as substances that do not fall into either classification. They may be solids, liquids or gases; they may be pure substances or mixtures.
Class	Class of dangerous goods, means the number assigned to the goods in the ADG Code indicating the hazard, or most predominant hazard, exhibited by the goods.
Container	Means anything in or by which a hazardous chemical is, or has been, wholly or partly covered, enclosed or packed, including anything necessary to perform its function as a container.
Controlled substances	Controlled substances is a classification of pharmaceuticals and poisons that require licensing. Under the license conditions there are restrictions on access, labelling and use. Scheduled Poison – means any medicine, drug or toxic chemical scheduled under the Poisons and Therapeutic Goods Act 1946 and associated regulations, for the purpose of protecting the public from harm.
Correct classification	Means the set of hazard classes and hazard categories assigned to a hazardous chemical when it is correctly classified.
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). Due to their physical properties that have the immediate potential to harm people, property or the environment.
Division	Division of dangerous goods, means a number, in a class of dangerous goods, to which the dangerous goods are assigned in the ADG Code.
Exposure standard	Exposure standard represents the airborne concentration of a particular substance or mixture that must not be exceeded. The exposure standard can be of three forms: • 8-hour time-weighted average • peak limitation • short term exposure limit.
GHS	Means the 'Globally Harmonized System of Classification and Labelling of Chemicals, 3rd Revised Edition', published by the United Nations as modified under Schedule 6 of the WHS Regulations.
Hazardous substance	Is a substance that has the potential to cause acute or chronic health effects as listed in the List of Designated Hazardous Substances [NOHSC:10005 (1999)]
Hazardous chemical	A substance that has the potential to cause acute or chronic health effects, damage to property or environment.
Hazard	Means a situation or thing that has the potential to harm people, property or the environment. The GHS covers physicochemical, health and environmental hazards for hazardous chemicals.
Hazard category	Means a division of criteria within a hazard class in the GHS.
Hazard class	Means the nature of a physical, health or environmental hazard under the GHS. Note: This includes dangerous goods.
Hazard pictogram	Means a graphical composition, including a symbol plus other graphical elements, that is assigned in the GHS to a hazard class or hazard category.
Hazard statement	Means a statement assigned in the GHS to a hazard class or hazard category describing the nature of the hazards of a hazardous chemical including, if appropriate, the degree of hazard.
Hazchem Code	Means 'Hazchem Code' under the ADG Code. Also known as the Emergency Action Code.
CIRGs	Charles Sturt University's Critical Incident Response Groups
Label	Means written, printed or graphical information elements concerning a hazardous chemical that is affixed to, printed on, or attached to the container of a hazardous chemical.
Laboratory	Means a building or room equipped for analysis, genuine research or practical teaching, and which is not used for production purposes.
Manufacture	Includes the activities of packing, repacking, formulating, blending, mixing, making, remaking and synthesizing of the chemical.
Mixture	Means a combination of, or a solution composed of, two or more substances that do not react with each other.
Placard	means a sign or notice: a) displayed or intended for display in a prominent place, or next to a container or storage area for hazardous chemicals at a workplace b) that contains information about the hazardous chemical stored in the container or storage area.

Placard quantity	Means the quantity referred to in Schedule 11 of the WHS Regulations, table 11.1, and column 4 for that hazardous chemical. Note: This schedule has been replicated in Appendix D of this Code.
PPE	Personal protective equipment
Product identifier	Means the name or number used to identify a product on a label or in a safety data sheet.
Regulated waste	Includes trackable waste and means non-domestic waste mentioned in Hazardous Waste Data Assessment (Department of Sustainability, Environment, Water, Population and Communities April 2013) (whether or not it has been treated or immobilised), and includes: for an element – any chemical compound containing the element; and anything that has contained the waste.
Research chemical	Means a substance or mixture that is manufactured in a laboratory for genuine research and is not for use or supply for a purpose other than analysis or genuine research.
Risk	The likelihood that a substance will cause harm in the circumstances of its use.
Safety Data Sheet (SDS)	A document prepared by a manufacturer or importer of chemicals, which describes the use, chemical and physical properties, health hazard information, precautions for use, safe handling information and the emergency information.
Substance	means a chemical element or compound in its natural state or obtained or generated by a process: • including any additive necessary to preserve the stability of the element or compound and any impurities deriving from the process, but • excluding any solvent that may be separated without affecting the stability of the element or compound, or changing its composition.
SUSMP	Means the Standard for the Uniform Scheduling of Medicines and Poisons (the Poisons Standard), published by the Advisory Committee on Medicines Scheduling (ACMS) and the Advisory Committee on Chemicals Scheduling (ACCS) of the Therapeutic Goods Administration as amended from time to time.
Spillage	The loss of containment. An uncontrolled release of a substance outside its container.
Transfer	Includes the pumping, dispensing or decanting from one container into another or from one place to another.

Table 1: Main Roles, Responsibilities and Authorities related to chemical management.

The Charles Sturt University WHS Responsibilities, Authority and Accountability Matrix

Position	WHS Responsibilities	WHS Authority	Accountability Mechanisms
University Council/Officers	• Implementation of due diligence requirements: - acquire and keep up-to-date knowledge of work health and safety matters; - gain an understanding of the operations of the business and the hazards and risks involved; - ensure appropriate resources and processes are provided and used to enable hazards to be identified and risks to be eliminated or minimised; - ensure information regarding incidents, hazards and risks is received and the information is responded to in a timely way; - ensure the University has, and implements, processes for complying with any legal duty or obligation; - ensure processes are verified, monitored and reviewed. • Monitor the University's implementation of the WHS Policy.	• May act in all matters concerning the University in such manner as appears to the Council to be best calculated to promote the object and interests of the University.	• Charles Sturt University Act and By-Law (1989) • Finance Audit and Risk Report • University Governance Charter

Position	WHS Responsibilities	WHS Authority	Accountability Mechanisms
Vice Chancellor	• Provide leadership and exercise due diligence in taking reasonable steps to: - acquire and keep up-to-date knowledge of work health and safety matters; - gain an understanding of the operations of the business and the hazards and risks involved; - ensure appropriate resources and processes are provided and used to enable hazards to be identified and risks to be eliminated or minimised; - ensure information regarding incidents, hazards and risks is received and the information is responded to in a timely way; - ensure the University has, and implements, processes for complying with any legal duty or obligation; - ensure processes are verified, monitored and reviewed.	• The authority to make decisions and act on any matter of WHS management for the University and as outlined and as described in the Delegations and Authorisations Policy	• University Governance Charter
Deputy Vice-Chancellors, Pro Vice-Chancellor, Executive Deans, Chief Financial Officer and Executive Director, Human Resources	• Ensure areas of responsibility comply with work health and safety legislation and the CSU WHS Management System; • Provide resources to implement the requirements of WHS policy and procedures; • Participate in the monitoring and review of the implementation of the WHS Management System for area of responsibility.	• The authority to make decisions and act on any matter of WHS management within their area of responsibility as described in the Delegations and Authorisations Policy and applicable WHS Guidelines.	• EDRS Performance Reviews; • CSU strategic plans; • WHS verification audits
Dean, Administrative Directors and Executive Directors (other than Human Resources)	• Ensure activities of the Faculty/Division comply with WHS legislation and CSU WHS Management System, including implementation and monitoring to ensure legal compliance; • Ensure WHS consultation arrangements are implemented; • Allocate appropriate resources to fulfil WHS requirements;	• The authority to make decisions and act on any matter of WHS management within their area of responsibility and as described in the Delegations and Authorisations Policy and applicable WHS Guidelines.	• WHS performance indicators; • Faculty/Division strategic plans; • Hazard and incident reports; • WHS verification audits; • EDRS Performance Reviews

Position	WHS Responsibilities	WHS Authority	Accountability Mechanisms
	• Monitor WHS performance of faculty/division and direct reports including internal WHS verification reports and performance indicators; • Other responsibilities as outlined in the WHS Management System documentation.		
Head of School or Department/ Research Institute Directors/Unit Managers	• Ensure activities of the school/research centre/unit comply with WHS legislation and CSU WHS Management System. This include but is not limited to: - implement WHS risk management activities e.g. inspections, report of incidents and any local specific measures required to eliminate or reduce risk in their area that are identified, documented and implemented; - provide safe equipment and processes for staff, students and others; - provide staff and students with the necessary instruction, information, induction, training and supervision to enable work to be carried out safely; - implement corrective actions as a result of hazard/incident reports or incident investigations; - monitor the WHS performance of unit and direct reports via internal WHS verification audits and performance indicators; • Implement responsibilities as identified in CSU Injury Management Program; • Other responsibilities as outlined in the WHS Management System documentation.	• The authority to make decisions and act on any matter of WHS management within their area of responsibility and as described in the University's Delegations and Authorisations Policy and applicable WHS Guidelines.	• WHS performance indicators; • Unit plans; • WHS verification audits; • Hazard and incident reports; • EDRS Performance Reviews.

Position	WHS Responsibilities	WHS Authority	Accountability Mechanisms
Academic & Professional/General staff with responsibility for the management or supervision of staff, students or facilities	• Ensure that work areas and equipment under their control is safe and without risk to health and safety; • Ensure all hazards and incidents are identified, assessed, controlled and reported via the SCRIM reporting process; • Provide appropriate instruction, information, training and supervision to staff, students and others to enable work to be carried out safely; • Implement responsibilities as identified in CSU Injury Management Program; • Other responsibilities as outlined in the WHS Management System documentation.	• The authority to make decisions and act on any matter of WHS management within their area of responsibility as described in the University's Delegations and Authorisations Policy and applicable WHS Guidelines.	• Performance reviews; • Hazard and incident reporting; • WHS inspections; • WHS verification audits; • EDRS Performance Reviews.

2. Legislation & Licensing

2.1. Acts & Regulations

The State and Commonwealth legislation that governs the use, storage, handling and disposal of chemicals is complex and considerable. The following list represents the Acts and Regulations that may be applicable to Charles Sturt University they can be accessed by the following websites. Please ensure that if you are working in a state different to New South Wales that you consult their legislation concerning the use, storage, handling and disposal of chemicals before commencing any work.

- **NSW State Legislation** **https://www.legislation.nsw.gov.au/#/**
- Work Health and Safety Act 2011
- Work Health and Safety Regulations 2017
- Dangerous Goods (Road and Rail Transport) Act 2008 No 95
- Dangerous Goods (Road and Rail Transport) Regulation 2014
- Code of Practice: Managing Risks of Hazardous Chemicals in the Workplace (2019)
- Storage and Handling of Dangerous Goods Code of Practice 2005
- NSW SafeWork Notification for Schedule 11 Hazardous Chemicals and Abandoned Tanks – Guidance Material
- WH&S Safety Regulation 2017 – Schedule 11 Placard and manifest quantities
- Poisons and Therapeutic Goods Act 1966 No 31
- Poisons and Therapeutic Goods Regulation 2008
- Agricultural and Veterinary Chemicals NSW Act (1994)
- Agricultural and Veterinary Chemicals NSW regulations 2015
- Environmental Planning and Assessment Act (1979)
- Environmental Planning and Assessment Regulation 2000
- Environmentally Hazardous Chemicals Act 1985 No 14
- Environmentally Hazardous Chemicals Regulation 2017
- Drug Misuse and Trafficking Act 1985
- Drug Misuse and Trafficking Regulation 2011
- Radiation Control Act (1990)
- Radiation Control Regulation 2013

Commonwealth Law **http://www.comlaw.gov.au**

- Chemical Weapons (Prohibition) Act (1994)
- Chemical Weapons (Prohibition) Regulations (1997)
- Industrial Chemicals (Notification and Assessment) Act (1989)
- Agricultural and Veterinary Chemicals Code Act (1994)
- Agricultural and Veterinary Chemicals Code Regulations (1995)
- Customs Act (1901)
- Defence Trade Controls Act (2012)
- Excise Act (1901)

- Excise Regulations (2015)
- Therapeutic Goods Act (1989)

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

2.2. National & International Guidance Materials, Standards and Codes of Practice.

There is an extensive list of Standards, Codes and Guidance Materials relevant to the management of chemicals at Charles Sturt University. These include:

- GHS Hazardous Chemical Information List
- Australian Dangerous Goods Code [Edition 7.5 (2018)]
- International Air Transport Association (IATA) Dangerous Goods Regulations
- The Poisons Standard (Standard for the Uniform Scheduling of Medicines and Poisons, SUSMP)
- Labelling of Workplace Hazardous Chemicals Code of Practice (2015, WHS)
- Workplace Exposure Standards for Airborne Contaminants (2013, WHS)
- Guidance on the Interpretation of Workplace Exposure Standards for Airborne Contaminants (2013, WHS)
- Storage and Handling of Dangerous Goods Code of Practice 2005
- Approved Criteria for Classifying Hazardous Substances [NOHSC:1008(2004)]
- Hazardous Chemical Information Systems (HCIS)
- National Code of Practice for the Labelling of Workplace Substances [NOHSC:2012 (1994)]
- Model Code of Practice: Labelling of workplace hazardous chemicals

2.3. Australian Standards

The Australian Standards that may apply to the use, storage, handling and disposal of chemicals at Charles Sturt University can be found at the following website and can be accessed through the Charles Sturt University Library databases.

- AS/NZS 2243.1Safety in Laboratories, Planning and Operational Aspects
- AS/NZS 2243.2 Safety in Laboratories, Chemical Aspects
- AS/NZS 2243.10 Safety in Laboratories, Storage of Chemicals
- AS/NZS 3833 Storage and Handling of Mixed Classes of Dangerous Goods, in Packages and Intermediate Bulk Containers
- AS 1940 The Storage and Handling of Flammable and Combustible Liquids
- AS 3780 Storage and handling of corrosive substances
- AS 4775 Emergency Eyewash and Shower Equipment.
- AS 4332 The storage and handling of gases in cylinders.
- AS 1596 The storage and handling of LP gas.
- AS 1894 The storage and handling of non-flammable cryogenic and refrigerated liquids.
- AS 4326 The storage and handling of oxidising agents
- AS 2714 The storage and handling of organic peroxides
- AS/NZS 4452 The storage and handling of toxic substances
- AS 2780 The storage and handling of corrosive substances
- AS4681 The storage and handling of class 9 (miscellaneous) dangerous goods and articles

- AS 1216 Class labels for Dangerous Goods
- AS 1319 Safety Signs for the Occupational Environment
- AS/NZS 1020 The control of undesirable static electricity
- AS/NZS 2022 Anhydrous ammonia – storage and handling
- AS/NZS 2229 Fuel dispensing equipment for explosive atmospheres

2.4. Additional Approvals, Permits & Licensing.

The procurement and possession of some chemical classifications have additional approval, permit and/or licensing requirements. Refer to the relevant sections in this for details of these additional requirements.

- Hazardous substances
- Nanomaterials
- Scheduled carcinogens
- Dangerous goods
- Security risk substances
- Chemicals of security concern
- Scheduled poisons (including medicines and drugs)
- Precursor chemicals for illicit drugs
- Agricultural chemicals and veterinary medicines
- Radioactive chemicals
- Concessional spirits

3. Signage & Placarding

3.1. Signage & Placarding of Chemical Stores and Buildings

Placarding is required where volumes stored exceed placarding quantities. There are also signage requirements for chemical stores. For details of these requirements please refer to the Guidance for the Storage of Chemicals document. (AS 1319)

3.1.1. Laboratory Signage

Individual Schools/Areas are required to ensure that signage is displayed in appropriate locations to identify the presence of hazardous chemicals.

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