

Hazardous Substances Guidelines – General Areas

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1 PURPOSE

This guideline outlines how Massey University will manage the identified critical risk of Hazardous Substance use and storage in non-laboratory areas at Massey University to ensure the safety and security of workers and compliance to meet the requirements of the University Safety Management framework.

2 SCOPE

This guideline applies to all entities, officers, workers, and contractors of Massey University, its operations, and all joint ventures with Massey University of at least 50% ownership and/or controlled by the University. This document serves as a minimum requirement and is subject to the additional requirements of legislation, other PCBU's or plant manufacturers.

3 DEFINITIONS

For the interpretation of this document, the following definitions shall apply (singular form includes the plural and vice versa, the list is not exhaustive):

Term	Definition
<i>Approvals and approval numbers</i>	Importing, manufacturing, or using hazardous substances, a hazardous substance must be approved under the Hazardous Substances and New Organisms (HSNO) Act 1996 and/or manufactured in accordance with the MU Hazardous Substances, Use, Synthesis, and Importation Procedure .
<i>Approved filler</i>	A person who has the necessary training, knowledge, and skills to fill gas containers safely and has obtained an approved filler compliance certificate from a compliance certifier.
<i>Certified handler</i>	A person who has specific knowledge and experience on how to use hazardous substances safely. This person needs to apply to a compliance certifier to get a certified handler compliance certificate. Where class 6.1A or 6.1B are used, handled, or stored outside a laboratory they are required to be under the control and supervision of a certified handler.
<i>Classification</i>	The properties of a substance are classified according to their hazards. Based on the classification, controls are put in place to manage the risks that arise from these hazards. In New Zealand HSNO and GHS classification are used.
<i>Compliance certificates</i>	Certification issued by a registered compliance certifier where a PCBU holds Class 1, Class 2, Class 3, Class 4, Class 5, Class 6 and Class 8 hazardous substances in volumes that trigger the requirement for Location Compliance Certification.
<i>Compliance certifier</i>	An independent service provider approved by WorkSafe to issue compliance certificates.
<i>Controlled substance licence</i>	A controlled substance licence (CSL) is required to possess certain explosives, vertebrate toxic agents, and fumigants. To obtain a CSL, a person must be a certified handler and a fit and proper person to possess the substance concerned.
<i>Dangerous goods</i>	The term 'dangerous goods' is used internationally to describe the goods covered by the United Nations Recommendations on the Transport of Dangerous Goods Model Regulations.
<i>Emergency response plan</i>	An emergency response plan is a written document that covers what will be done and who is responsible for each task in an emergency involving <i>hazardous substances</i> at a workplace.
<i>Hazardous area</i>	A hazardous area surrounds a place where flammable substances are used or stored, and flammable vapours may be present (explosive atmosphere)

	Within these areas, special precautions need to be taken to prevent unintended ignition so that a fire or explosion does not occur.
<i>Hazardous substances</i>	<p>A hazardous substance is a substance classified as having one or more of the following properties:</p> <ul style="list-style-type: none"> • an explosive nature, including fireworks. • flammability, for example, petrol, turps, LPG, diesel • ability to oxidise, accelerate a fire, for example hydrogen peroxide. • corrosiveness, for example, caustic drain cleaner
<i>Hazardous Substance Location</i>	A hazardous substance location (HSL) is a place where specific controls are put in place to safely store certain hazardous substances above specified amounts. You must establish an HSL (or hold the substances in a transit depot) if you hold tracked substances in a place for more than 2 hours or if you hold untracked substances in a place for more than 24 hours. You will need a location compliance certificate for some HSLs.
<i>HSNO</i>	HSNO refers to the Hazardous Substances and New Organisms Act 1996 and supporting regulations. Under HSNO, the Environmental Protection Authority (EPA) approves substances and sets environmental controls top of the supply chain controls for manufacturers and importers for matters such as packaging and disposal or the content of labels or safety data sheets (SDSs).
<i>HSWA</i>	HSWA refers to the Health and Safety at Work Act 2015. The main purpose of HSWA is to provide a balanced framework to ensure the health and safety of workers and others.
<i>Incompatible substances</i>	Incompatible substances are substances that must be kept away from each other to prevent them from mixing and causing a fire or explosion or any other potentially harmful chemical reaction, such as production of toxic fumes.
<i>Inventory</i>	An inventory is a list of all <i>hazardous substances</i> used, handled, manufactured, and stored at your workplace.
<i>Location Compliance Certificate</i>	A location compliance certificate certifies that the place where <i>hazardous substances</i> are used and stored is safely managed, according to the rules. <i>Compliance certificates</i> are issued by <i>compliance certifiers</i> .
<i>PCBU</i>	<p>This is the abbreviation for Person Conducting a Business or Undertaking. The PCBU is a key duty holder in workplace health and safety and may be an organisation (e.g., a company), or a person (e.g. a sole trader).</p> <p>A business is an activity carried out with the intention of making a profit or gain.</p> <p>An undertaking is an activity that is non-commercial in nature, such as a not-for-profit group.</p>
<i>Personal Protective Equipment (PPE)</i>	PPE is used to handle hazardous substances. It can include respiratory protective equipment (RPE). As the PCBU, you must make sure that suitable PPE is provided to your workers, that it fits them, and that it is properly maintained.
<i>Regulations</i>	Regulations are rules that must be complied with under a specific Act, such as the Health and Safety at Work Act 2015.

<i>Risk</i>	Risk is the combination of the likelihood of adverse effects occurring and the magnitude of the effects if they were to occur.
<i>Safety Data Sheet (SDS)</i>	A safety data sheet includes information about how to safely use and store a hazardous substance, first aid information and what to do in an emergency. Safety data sheets must be provided by your supplier when you purchase a hazardous substance for the first time.
<i>Secondary Containment (bundling)</i>	A secondary containment system ensures that liquid substances (or liquefiable substances) can be contained if they leak or spill from the container in which they are stored. The system should also enable recovery of a spilled substance.
<i>Stationary Container System</i>	A stationary container system is a fixed tank and its associated pipework and fittings. If you have a stationary tank containing a gas or a liquid hazardous substance you may need a stationary container system compliance certificate. This certifies that your tank is safe and complies with the rules.
<i>Test station</i>	Test stations are authorised to inspect and test gas cylinders.
<i>Tracking</i>	Tracking refers to recording what happens to very <i>hazardous substances</i> from their manufacture through to use and/or disposal.

4 ROLES AND RESPONSIBILITIES

4.1 The PVC, Service Director:

- Ensuring the effective implementation of this guidance.
- Allocating sufficient resources to enable this guidance to be delivered.
- Ensuring adequate monitoring the overall effectiveness of this guidance.

4.2 Heads of School and Departments:

- Ensuring that the guidance is implemented within their respective areas of influence and management and adequately monitored and enforced.
- Ensuring that risk assessments are performed for all hazardous substances handling, storage and other associated operations involving hazardous substances, including those used by contractors.
- Ensuring that all reasonably practicable control measures are identified and implemented.
- Providing workers with suitable and sufficient information, instruction, and training in accordance with this procedure and taking all reasonably practicable steps to maintain, and where necessary, improve health and safety standards.
- Escalating, where it is not possible to implement adequate control measures.

4.3 Workers:

- Ensure their own safety, and that no action or inaction causes harm to any other person.
- Follow the safe systems of work identified when handling hazardous substances.
- Report any compliance failures, or concerns to their line manager, Health and Safety Representative and/or the Occupational Health, Safety and Wellbeing team.
- Report incidents, accidents and near misses.
- Attend training as required.

4.4 Occupational Health & Safety:

- Provide advice and support to managers regarding the implementation of this procedure.

- Provide the organisation with data and any reports related to hazardous substances as requested.
- Approving and maintaining a register of approved providers of services relating to hazardous substances.
- Monitor the effectiveness of this procedure through appropriate means including audits.

5 DEFINITION OF A HAZARDOUS SUBSTANCE

A Hazardous Substance is defined in the Hazardous Substances and New Organisms Act 1996 (HSNO) as a substance that is:

- Explosive (HSNO Class 1)
- Flammable (HSNO Class 2,3 & 4)
- Oxidiser (HSNO Class 5)
- Toxic (HSNO Class 6)
- Corrosive (HSNO Class 8)
- Ecotoxic (HSNO Class 9)

A substance may have more than one hazardous substance classification, i.e., it can be a mixture of classes.

Radioactive materials (class 7) are not included in the Hazardous Substances Regulations 2017 and are dealt with separately in the Radiation Safety Act 2016.

6 PROCEDURAL REQUIREMENTS

6.1 Key Controls for Managing Hazardous Substances:

All applicable steps in this guidance shall be followed. However, the following controls are highlighted throughout this document as they are considered key controls to eliminate or minimise the risks of fatalities and serious injuries arising from and including the management of processes and facilities where hazardous substances are used or stored:

1. All hazardous substances handled or stored by Massey University outside of a designated laboratory environment must be approved hazardous substances.
2. All hazardous substances require appropriate emergency management response planning. Emergency management involves preventing accidents and incidents as well as limiting the adverse effects of incidents, should they occur.
3. All personnel who handle, use and store hazardous substances shall be competent and authorised and will have received training, supervision and instruction that meets the requirements of Part 4.5(3) of the Health and Safety at Work (Hazardous Substances) Regulations 2017).
4. Safety Data Sheets (SDSs) for all substances must be easily accessible to the work area. SDSs must be obtained, when a hazardous substance is initially supplied to a work area and must be updated when any change is made to the SDS or has date expired.
5. Versions of SDSs are not more than five years old, from the date of last review.
6. An SDS can be the full 16 part or mini versions.
7. Appropriate risk management strategies that meet the requirements of the Hazardous Substances Regulations Part 2 and Part 3.2. Regulations 5-8 of the General Risk and Workplace Management Regulations will be in place for all hazardous substance activities including hazardous substance waste.
8. An inventory of all hazardous substances used, handled, or stored by Massey University including hazardous substance waste must be kept and maintained up to date and meet the requirements of regulation 3 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.
9. All containers that contain hazardous substances must be labelled in accordance with Part 2.1 of the Hazardous Substances Regulations and be <5L in size where practicably possible except for areas designated as a farm where a container size must not exceed 1000L.

6.2 Hazardous Waste:

Hazardous waste is waste generated that is likely to be, or contain, at least one hazardous substance that is explosive, flammable, oxidising, toxic, corrosive or ecotoxic. In other words, waste that comes from work involving a hazardous substance is likely to be hazardous. The Regulations apply to the use, handling, and storage of hazardous waste. There is no requirement to have a safety data sheet (SDS) unless it is known that the waste is of the same substance, however:

- hazardous waste must be included in the department's inventory of hazardous substances. This includes a name that best reflects what the waste is, the amount, its location, and any specific storage requirements.
- hazardous waste in containers must be correctly labelled. The label must be in English and identify the waste as closely as possible and include relevant hazard pictograms and statements, and contact details of the producer, if known.
- The department must provide workers with the relevant information, training, instruction, and supervision before they carry out work involving hazardous waste.
- The hazardous waste needs to be stored the same as any other hazardous substance with the same classification.
- The risk management for hazardous waste should be the same as for any other hazardous substance.

6.3 Risk Assessment:

Risk derived from the handling or storage of hazardous substances must be proactively managed in line with the requirements of:

- The Health and Safety at Work Act 2015
- The Health and Safety at Work (Hazardous Substances) Regulations 2017 which specify technical requirements to manage the risk of working with hazardous substances.
- The Health and Safety at Work (General Risk and Workplace Management) Regulations 2016, which set out a process for managing risks, including the risks that arise from hazardous substances.

The manager or supervisor in charge of the area must undertake the risk assessment of the hazardous substances handled or stored within their area. The risk assessment should address all reasonably foreseeable activities or exposure of persons to that substance including visitors.

6.4 Safety Data Sheets:

A safety data sheet (SDS) provides comprehensive information about the properties of a hazardous substance, how it affects health and safety in the workplace and how to manage these risks. An SDS explains how the substance should be safely used, stored, transported, and disposed of. It provides first aid information, information about the personal protective equipment that the person handling the substance should wear and what to do in the event of an emergency, such as a spill or fire.

The supplier of a hazardous substance to a workplace must provide a HSNO compliant SDS with their products.

There is also a duty on the PCBU that is being supplied with a hazardous substance to obtain an SDS:

- when the hazardous substance is first supplied. This includes if it is the first time it has been supplied to the workplace in five years.
- when the hazardous substance is first supplied after the SDS has been amended.

A current SDS for each hazardous substance (or a condensed version of the key information from the safety data sheet, for example a product safety card) must be kept with your inventory. It must be read, the risks posed by the substance understood and the appropriate measures put in place to manage them.

The full SDS, or the condensed version, must be readily accessible to people who may handle, or be exposed to, the hazardous substance such as workers and emergency services personnel.

SDS can be obtained via the University resource, ChemWatch for all hazardous substances held by a workplace.

You do not require an SDS when:

- a hazardous substance that is a consumer product to be used in quantities consistent with household use.
- a hazardous substance in a retailer's premises that is a consumer product **and** is in that workplace only for the purpose of supply to other premises **and** is not intended to be opened on the retailer's premises.
- anhydrous ammonia contained in equipment that forms part of any other equipment in which anhydrous ammonia is used as a refrigerant (unless the quantity of anhydrous ammonia is more than 100 kg).

However, in any of these exclusions there must be provision to make sure that information about the safe use, handling, and storage of the substance is readily accessible to workers.

6.5 Inventory:

For each hazardous substance used, handled, or stored, the inventory must include:

- the product or chemical name and United Nations (UN) number (if available). If there is a UN number, it will be in section 14 of the SDS. If there is no UN number assigned, then the UN number does not need to be included in the inventory.
- the maximum amount likely to be at the workplace.
- its location.
- any specific storage and segregation requirements.
- an SDS or a condensed version of the key information from the primary SDS.
- its HSNO or GHS classification

The inventory must also include hazardous waste. This means waste likely to meet the classification criteria for substances with explosive, flammable, oxidising, toxic or corrosive properties in the Hazardous Substances (Classification) Notice 2017.

For hazardous waste, the inventory must include:

- an identifier describing the waste as closely as possible (e.g. chlorinated solvent waste).
- the maximum quantity of the waste likely to be at the workplace.
- its location.
- any specific storage and segregation requirements for the waste.

6.6 Information, Training, and Instruction:

6.6.1 Information

Before workers carry out or supervise work that involves using, handling, manufacturing, or storing hazardous substances, they must know:

- about any work with hazardous substances in their work area.
- where to find information about handling and storing substances safely, including (but not limited to) the information found on the SDS.

The method in which this information is given must be effective and appropriate.

6.6.2 Training and Instruction

Before workers undertake or supervise, any work involving hazardous substances or work around hazardous substances, they must receive training and instruction on:

- the physico-chemical and health hazards of the substances they will handle (in other words, whether the substances are explosive, flammable, oxidising, toxic or corrosive, and what this means for the workers who handle them).

- any procedures for safely using, handling, manufacturing, storing, and disposing of the hazardous substances.
- how to safely use the plant (e.g., machinery, tools, and equipment, including PPE needed to manage the hazardous substances).
- any other duties or obligations they may have because of the substances they work with.
- what to do in an emergency involving the hazardous substances or that could affect the hazardous substances.
- Training needs to reflect the work that the worker will carry out. If workers are in possession of a current certified handler or GrowSafe certificate or similar then they will be considered as satisfying this training requirement.

6.6.3 Supervision

Workers must be supervised with an appropriate level of supervision to protect them from the risks associated with their work when they:

- use, handle, manufacture or store hazardous substances.
- operate, test, maintain, repair, or decommission plant used to store, manufacture, or handle hazardous substances at the workplace.
- are likely to be exposed to hazardous substances at the workplace.

Where it can be demonstrated (with documentation or certification) that a worker has equivalent previous experience and/or training for their work, there is no requirement to provide the above training and instruction unless it is decided that there is a requirement for refresher training.

6.6.4 Training Records

Records must show what training has taken place and when a refresher is needed.

Training records will be required if an inspector, compliance certifier or auditor requests to view them.

It is mandatory to keep records of training and instruction for each worker from 1 June 2018.

6.6.5 Training in Other Requirements

Information, instruction, and training are required for different types of certification and as part of emergency preparation.

6.6.6 Certified Handler

Workers require information, training, and instruction to become certified handlers, which are required where an area handles certain highly hazardous substances Class 6.1A, 6.1B. Areas defined as a laboratory who handle, store, use or manufacture Class 6.1A or 6.1B substances do not require these to be under the control of a certified handler.

6.6.7 Hazardous Substance Location

If a work area holds gas, liquid or solid hazardous substances that meet the classification and quantities stated in Appendix 2 then that work area will be required to commission a hazardous substance location and a Location Compliance Certificate obtained. The costs of the certification are borne by the department, see 5.6.8

Where an HSL has been identified, you must contact the Advisor, Hazardous Substances for guidance and management requirements of that location.

6.6.8 Hazardous Substance Location Compliance Certificates

Where an HSL has been established the HSL is required to obtain a Location Compliance Certificate (LCC). An LCC is an annual inspection of an HSL to ensure it meets the requirements of the regulations activated and is managed in accordance with those regulations. The HSL assessment is undertaken by a WorkSafe registered compliance certifier. Only location certifiers approved by the University can be engaged to undertake the LCC assessment. LCC assessments are arranged by the Advisor, Hazardous Substances.

7 EMERGENCY RESPONSE PLANNING

Where hazardous substances are stored, used, or handled in a workplace there must be an emergency response plan prepared. The plan must be appropriate to the amount(s) and type(s) of hazardous substance handled, used, or stored in that area.

The emergency response plan must describe and apply to all reasonably foreseeable emergencies that may arise from a breach or failure of the controls on any hazardous substance present or likely to be present, at the workplace.

The emergency response plan must, for each reasonably foreseeable emergency:

- describe the actions to be taken to warn people at the workplace, and in surrounding areas that may be adversely affected by the emergency, that the emergency has occurred; and
- advise those people about the actions they should take to protect themselves; and
- help or treat any person injured in the emergency; and
- manage the emergency so that its adverse effects are:
 - restricted to the area initially affected; and
 - reduced in severity as soon as practicable; and
 - eliminated, if reasonably possible; and
 - re-establish the controls put in place in respect of the hazardous substances at the workplace, including the use of protective equipment or chemical agents (for example, neutralisers or absorbents); and
 - identify each person with responsibility for the actions described in paragraph or any part of any of those actions and give information on how to contact the person, any skills the person is required to have, any special training needed to deal with an emergency involving the substance and any actions the person is expected to take.

The plan must specify:

- how to obtain information about the hazardous properties of, and means of controlling, the substance or substances that may be involved.
- actions to be taken to contact any emergency service provider.
- the purpose and location of each item of equipment or facilities to be used to manage the emergency.
- how to decide which actions to take.
- the sequence in which actions should be taken.

The plan must provide:

- an inventory of hazardous substances present at the workplace; and
- a site plan that shows the physical position of all hazardous substance locations within the boundary of the workplace (if applicable).

The emergency response plan must:

- specify the type and location of the fire extinguishers provided in accordance with regulation 5.3, and any extra fire-fighting equipment or facilities provided, if any of the reasonably foreseeable emergencies identified in the plan is a fire.
- must provide for the retention of any liquid or liquefied oxidising substance or organic peroxide to prevent it from contacting any incompatible substance.

For areas deemed a Hazardous Substance Location there is an expectation that the Emergency Response Plan is communicated to and reviewed by Fire and Emergency New Zealand (FENZ).

8 LABELLING

All containers that contain a hazardous substance must be labelled. This means:

- keeping the manufacturer's or importer's label on original containers of hazardous substances.
- labelling workplace containers.
- providing information about substances in transportable containers.

The label must be legible, written in English, and have all the information required for the type of container and substance.

The following workplace containers must be labelled:

- small portable containers for substances that are decanted or transferred from their original containers.
- containers of hazardous waste.

In a workplace, so far as reasonably practicable, hazardous substances in their original containers need to retain the manufacturer's or importer's label and that these need to be maintained in a legible condition.

8.1 Workplace Labels

When a substance is decanted from its original container the new container must be labelled. The information included on the label depends on the type of container. All labels must be written in English.

8.2 Information on Labels

Most labels have some common features. Importer and manufacturer labels generally have all the features listed below, but the workplace labels listed above can be a simpler version. Labels can include:

- hazard statements
- hazard pictograms
- signal words
- precautionary statements
- other information, including response, storage, and disposal statements.

8.3 Hazard Pictograms

Hazardous substances are put into classes depending on their hazardous properties.

On signs and labels, two types of pictograms (symbols) show the class a substance belongs to:

- GHS (Globally Harmonised System of Classification and Labelling of Chemicals) pictograms, or
- Transport of Dangerous Goods pictograms.

Table 1: Hazardous Substances Pictograms GHS and Transport of Dangerous Goods

Class	Subclass	Description
2: Flammable gases & Aerosols	2.1.1 A, B	Flammable gas
	2.1.2 A	Flammable aerosol
3: Flammable liquids	3.1 A, B, C, D	Flammable liquid
	3.2 A, B, C	Liquid desensitised explosive
4: Flammable solids	4.1.1 A, B	Readily combustible solid
	4.1.2 A, B, C, D, E, F	Self-reactive solid
	4.1.3 A, B, C	Desensitised explosive
	4.2 A, B, C	Spontaneously combustible
	4.3 A, B, C	Dangerous when wet
5: Oxidising substances	5.1.1 A, B, C	Oxidising liquid/solid
	5.1.2 A	Oxidising Gas
	5.2 A, B, C, D, E, F, G	Organic Peroxide
6: Toxic	6.1 A, B, C, D, E	Acute Toxicity
	6.3 A, B	Skin Irritant
	6.4 A	Eye Irritant
	6.5 A, B	Respiratory/contact sensitiser
	6.6 A, B	Mutagen
	6.7 A, B	Carcinogen
	6.8 A, B, C	Reproductive & development
	6.9 A, B	Target organ or systemic
	8: Corrosive	8.1 A
8.2 A, B, C		Skin corrosive
8.3 A		Eye corrosive
9: Ecotoxicity	9.1 A, B, C, D	Aquatic ecotoxic
	9.2 A, B, C, D	Soil ecotoxic
	9.3 A, B, C	Vertebrate ecotoxic
	9.4 A, B, C	Invertebrate ecotoxic

8.4 Hazardous Waste

Hazardous waste that is reasonably likely to be or contain a substance that meets one or more of the classification criteria for substances with explosive, flammable, oxidising, toxic and/or corrosive properties under the Hazardous Substances (Classification) Notice 2017 must be labelled.

Hazardous waste can be a mixture of different hazardous substances that cannot be separated back into the original substances. For this reason, the waste must be identified in a way that reflects its nature as closely as possible (e.g., flammable waste). The label must provide details about its producer, and a hazard pictogram and hazard statement.

9 SIGNAGE

Where hazardous substances are stored over specific amounts, signage must be displayed to inform workers, other people, and emergency services what hazardous substances are present and to inform them of the associated hazards.

Signage must:

- Be in English and readily understandable.
- Not contain abbreviations and acronyms unless people commonly understand them and that the term in full is used at least once on the sign.
- All information must be clearly visible and legible from no less than 10m in varying conditions (e.g., in the rain or changing light).
- Are made of durable materials that are resistant to sunlight and require minimal maintenance.

9.1 Placement of Signs

Signage must be placed in areas that make it clear to all persons what type of hazardous substances are present and where they are located on the worksite.

As a rule, if hazardous substances are:

- in a room, put a sign at the entrance to the room
- in a building, put a sign at every entrance to the building
- in a building on your land, put a sign at every entrance to the land
- outdoors, put a sign immediately next to the storage area

9.2 Content of Signs

Signs present information about safety and the immediate response to take in an emergency.

Key features:

- A warning that hazardous substances are present – this must use the words: EXPLOSIVES for class 1 substances or HAZCHEM for class 2, 3, 4, 5, 6, 8 or 9 substances on signs outside rooms or compartments inside buildings.
- A description of the hazardous property and general type of hazard of the substances that are present. The hazardous property means the class of the substance, represented by pictograms and/or a hazard statement (e.g., flammable liquid).
- The general type of hazard means the substance subclass, represented by pictograms or a hazard statement (e.g., dangerous when wet).
- Precautionary measures to prevent the hazards of explosives, flammables and oxidisers or organic peroxides.
- The immediate emergency response action.
- The sign contains no additional instruction such as PPE, authorised persons.

Where flammables, oxidisers, toxic or corrosive substances are present on a worksite in volumes that trigger the requirement for a test compliance certificate, the emergency response action can be represented by the HAZCHEM code.

9.3 Signs for Substances in Buildings

Where hazardous substances are present in quantities above the threshold for displaying signs in a building (but not a dedicated room or compartment in that building), the sign must state:

- that hazardous substances are present
- the general type of hazard of each hazardous substance presents
- the immediate emergency response action – the first action in an emergency

Signage must be displayed at every vehicular and pedestrian entrance:

- to the building
- to the land where the building is located.

9.4 Substances in a Dedicated Room or Compartment in a Building, or in an outdoor Area

When there are hazardous substances in a dedicated room or compartment in a building or an outdoor area at your workplace, your signs must include:

- a warning that hazardous substances are present – use the word ‘HAZCHEM’ for class 2, 3, 4, 5, 6, 8 or 9 substances or ‘EXPLOSIVES’ for class 1 substances
- the general type of hazard of each substance – use hazard pictograms or hazard statements reflecting the classification of the substance
- the immediate response action to take in an emergency involving the substances.

The signs must also include precautionary statements to prevent:

- unintended explosion for explosives (e.g., explosion risk in case of fire)
- unintended ignition of the substance for flammables (e.g., no smoking)
- unintended combustion, acceleration of fires, or thermal decomposition for oxidisers or organic peroxides (e.g., keep away from sparks).

Signs must be displayed:

- at each entrance to the room or compartment
- immediately next to the outdoor area.

10 PERSON IN CHARGE OF HAZARDOUS SUBSTANCES

A Person in Charge (PiC) of hazardous substances must be appointed to each area where hazardous substances are stored, used, or handled.

The PiC:

- In charge of all hazardous substances contained within the area, department, workshop, hazardous substance location, room, etc. assigned to them.
- may nominate any appropriately trained person to be in charge in their absence.
- must be treated as an individual who holds a controlled substance licence for the possession of substances that require a controlled substance licence.

Being in charge of the hazardous substances contained within the designated area means the PiC must ensure that:

- any approved hazardous substance is handled, used, and stored in accordance with Parts 9 to 17 & Part 19 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.
- there is an emergency response plan in place.

- all hazardous substances are entered on to those areas hazardous substance inventory and this is kept up to date.
- where that area is subject to a location compliance certificate that it is managed in accordance with the regulatory requirements for that/those substances and documentation is kept up to date.
- all substances are secured from unauthorised access or use.
- all persons using, handling, storing hazardous substances have been inducted into that area and refresher induction is carried out as a minimum, bi-annually.
- where substances are subject to tracking under Part 19 of the regulations that these are done so in accordance with the requirements of Part 19.

Workers are provided with the following information before handling a hazardous substance:

- Ensure that those workers handling hazardous substances have completed a Massey University approved hazardous substance awareness training course.
- procedures to prevent the contamination of any equipment, clothing, or part of the work area.
- if the substance is an approved hazardous substance, procedures to ensure that persons in the area are not exposed to more than the prescribed exposure standard (if any) for that substance.
- the disposal requirements for the substance set out in the Hazardous Substances (Disposal) Notice 2017.
- the actions required under the emergency response plan in the event of an accident or accidental exposure to the substance.

The PIC will ensure that:

- workers are trained in the correct use, storage and maintenance of personal protective equipment and respiratory protective equipment
- workers are trained in the correct operation, storage, and maintenance of any other required equipment
- information on hazardous substances is made available (i.e. SDS/Standard Operating Procedure/Safe Method of Use) and that all precautions are in place.

11 CERTIFIED HANDLER

A certified handler is someone who has a current compliance certificate to show that they have received the information, training, and instruction that they need to handle highly hazardous substances.

A certified handler is required for any amount of substances requiring a controlled substance license or where Class 6.1A or 6.1B substances are stored, used, or handled (not applicable to areas defined as a laboratory)

12 SECURED WHEN UNATTENDED

All hazardous substances must be secured when unattended to prevent them from being accessed by unauthorised persons (see Appendix 1)

13 LOCATION COMPLIANCE CERTIFICATE

A current compliance certificate is required at hazardous substance locations where flammable, oxidising, toxic or corrosive substances are stored or used, and the amount of substance is over the amounts described in Appendix 2. If no specific amount is listed for open or closed containers, then the amount is the same whether the substance is in an open or closed container. Only test certifiers who appear on the Massey University approved hazardous substance service providers register can be engaged to undertake certification on all Massey University sites.

14 COMMISSIONING A HAZARDOUS SUBSTANCE LOCATION

The regulations require that where a hazardous substance location has been established to notify WorkSafe New Zealand of the hazardous substance location before it is commissioned.

Time frames (before commissioning):

Hazardous Substance Location (excluding LPG)	at least 30 days
Hazardous Substance Location (where LPG is to be located)	at least 5 working days

15 TRACKING HAZARDOUS SUBSTANCES

If an area holds any amount of a substance with one or more of the following classifications that substance will require tracking:

- 3.1A, 3.2A
- 4.1.2A, 4.1.2B
- 4.1.3A
- 4.2A
- 4.3A
- 5.1.1A
- 5.2A, 5.2B
- 6.1A, 6.1B

16 STATIONARY CONTAINER

16.1 Stationary Container System with a Stationary Tank

Stationary tanks are used for storing or supplying hazardous liquids and are normally located at specific places. Stationary tanks include:

- all parts and materials that help to maintain the structure and integrity of the tanks
- any means of closing the tanks (e.g. a lid or fitted cover)
- any component of the tanks intended to protect the contents of the tank from harm (e.g. lightning protection), and
- any other components that are integral parts of the tanks (e.g. liquid height indicators, heating coils, or internal valves).

16.2 Stationary Container System with a Process Container

Process containers are stationary containers that hold a hazardous substance during manufacture or use (e.g. a mixing container, reaction vessel, distillation column, drier or dip tank).

16.3 Types of Compliance Certificates

It must be established if an area requires one or both of a stationary container system compliance certificate and a location compliance certificate for a tank or process container.

16.4 Requirements for Stationary Tanks

A stationary container system compliance certificate is required for your tank if it is:

- a below-ground tank (including tanks that are covered by earth or other material) holding more than 250L
- an above-ground tank, holding more than 2,500L of class 3.1A and 3.1B substances (e.g. petrol or solvents)
- an above-ground tank, holding more than 5,000 L of substances other than class 3.1A or 3.1B (e.g. diesel, caustic soda, or corrosives)
- an above-ground tank, holding more than 500L of gas used with a vaporiser dispenser

- a tank that provides fuel to an oil burning installation which has a capacity greater than: 500L for a class 3.1D substances (e.g. diesel and waste oil) supplying an internal combustion engine
- 50L for class 3.1A, 3.1B and 3.1C substances supplying an internal combustion engine
- 60L for class 3.1 flammable substances supplying a burner
- a tank that provides fuel to an oil burning installation with a service tank.

16.5 Requirements for Process Containers

A stationary container system compliance certificate is required for your process container if it is:

- below ground (including process containers that are covered by earth or other material) of any size
- above ground, greater than 250L and intended for use with a hazardous gas, or
- above ground, greater than 1,000L and intended for use with a hazardous liquid.

17 PROCUREMENT OF HAZARDOUS SUBSTANCES OR HAZARDOUS SUBSTANCE CONTAINING PRODUCTS

Before introducing any new hazardous substance or a product containing a hazardous substance to any Massey University facility, submit it for approval to Occupational Health, Safety. If the substance requires a Certified Handler, the appropriate Certified Handler must be consulted, and training must be given appropriate to the substance prior to it being introduced.

Occupational Health and Safety will require:

- A current (no older than 5 years) New Zealand compliant SDS.
- Product name and chemical name of substance(s) contained.
- Name, address, and contact number for New Zealand supplier.
- The HSNO and GHS Class of substance e.g., Class 3.1, Class 5.1A, Class 8.2 etc.
- Size of the container(s) product is supplied.
- The likely maximum amount to be stored and handled.
- Storage location and type, e.g., flammable cabinet, secured area.
- How would the substance or residual substance be disposed of?
- Documented statement on how the substance, if introduced to Massey University, will be safely managed in line with this SOP including the appointed Person in Charge details.

17.1 Contractors

All contractors bringing on to a Massey University site, a hazardous substance shall have a minimum safety management process that will ensure that those hazardous substances meet the requirements of the regulations and present no risk to the health or safety of the contractor, Massey University staff, and visitors to a Massey University campus.

As a minimum, a contractor shall have in place prior to bring a substance on site:

- Pre-approval for use from Health and Safety
- A Site-Specific Safety Plan or similar that details how that substance is safely managed.
- An SDS for all hazardous substances introduced on site.
- Appropriate Emergency Response Plan for any likely emergency event involving that substance including, but not limited to fire, spill, contamination, fume and vapour management, ingestion, and environmental exposure.
- Where a substance is classed as ecotoxic the Emergency Response Plan shall include environmental risk management.

- Evidence that they have received appropriate training, instruction, information, and supervision that fulfils the requirements, where appropriate of section of this SOP.

18 REFERENCES

- WorkSafe New Zealand 2018, Guidance to the changes introduced by the Health and Safety at Work (Hazardous Substances) Regulations 2017, viewed 16th of April 2020,
- WorkSafe New Zealand 2018, Certifying stationary container systems.
- WorkSafe New Zealand 2018, Working safely with hazardous substances.
- WorkSafe New Zealand 2018, Health, and Safety by Design
- WorkSafe New Zealand 2018, Information, training, and instruction for workers handling hazardous substances.
- WorkSafe New Zealand 2019, Hazardous substance signage viewed.
- WorkSafe New Zealand 2017, Identifying and Assessing Workplace Risk,
- WorkSafe New Zealand 2018, Inventory requirements for hazardous substances
- WorkSafe New Zealand 2017, Labelling, decanting, and repackaging hazardous substances in the workplace.
- WorkSafe New Zealand 2018, Hazardous substances that activate key safety controls,
- WorkSafe New Zealand 2017, Hazardous substance risk management
- WorkSafe New Zealand 2018, Certified handler requirements
- WorkSafe New Zealand 2017 Safety data sheets in the workplace
- Health and Safety at Work Act 2015
- Health and Safety at Work (Hazardous Substances) Regulations 2017
- Health and Safety at Work (General Risk and Workplace Management) Regulations 2016

19 APPENDIX 1: AMOUNTS OF SUBSTANCES THAT MUST BE SECURED WHEN UNATTENDED

Highly hazardous substances or large amounts equal to, or over, the amounts in the table below must be secured from people not permitted to have access to them when they are unattended.

Hazard of classification (HSNO) of substance	Substance must be secured when amount is equal to or over the amounts below
2.1.1A	100 kg (non-permanent gas) or 100 m ³ (permanent gas) permanent gas
2.1.2A	3,000 L (aggregate water capacity)
3.1A	Any amount
3.1B	250 L when in containers of more than 5 L or 500 L when in containers less than or 5 L in size
3.2A	Any amount
3.2B	100 L
4.1.1A	100 kg
4.1.2A, 4.1.2B	Any amount
4.1.2C, 4.1.2D	25 kg
4.1.2E, 4.1.2F	50 kg
4.1.3A	Any amount
4.1.3B	100 kg
4.2A	Any amount
4.2B	100 kg
4.3A	Any amount
4.3B	100 kg
5.1.1A	Any amount
5.1.1B	500 kg or 500 L
5.1.1C	1,000 kg or 1,000 L
5.1.2A	250 kg or 200 m ³
5.2A, 5.2B	Any amount
5.2C, 5.2D, 5.2E, 5.2F	10 kg or 10 L
6.1A, 6.1B	Any amount (must be either under the personal control of a certified handler or secured)
6.1C	Any amount (except for classes 1.1C (UN 0160) and 1.3C (UN 0161))
Anhydrous ammonia (HSNO approval number HSR001035)	100 kg
6.7A	10 kg or 10 L
8.2A	Any amount

20 APPENDIX 2: LOCATION COMPLIANCE CERTIFICATES

Hazard classification (HSNO) of substance	Location compliance certificate needed when have amounts of substance over those below
2.1.1A , 2.1.1B	100 kg or 100 m ³ for a permanent gas
2.1.2A	3,000 L (aggregate water capacity)
3.1A	20 L
3.1A (petrol, aviation gasoline, and racing gasoline)	50 L
3.1B	Closed containers 100 L (in containers more than 5 L in size) or 250 L (in containers 5 L or less in size) Open containers 50 L
3.1C	500 L (in containers more than 5 L in size) or 1,500 L (in containers 5 L or less in size) or Open containers 250 L
3.2A, 3.2B, 3.2C	1 L
4.1.1A	1 kg
4.1.1B	100 kg
4.1.2A, 4.1.2B	1 kg
4.1.2C, 4.1.2D	25 kg
4.1.2E, 4.1.2F, 4.1.2G	50 kg
4.1.3A, 4.1.3B, 4.1.3C	1 kg
4.2A	1 kg
4.2B, 4.2C	25 kg
4.3A	1 kg
4.3B	25 kg
4.3C	50 kg
5.1.1A	50 kg or 50 L
5.1.1B	500 kg or 500 L
5.1.1C	1,000 kg or 1,000 L
5.1.2A	100 kg non-permanent gas or 200 m ³ permanent gas
Oxygen in discrete cylinder or tank	200 m ³
Chlorine – HSR1001058	150 kg
5.2A, 5.2B	10 kg
5.2C, 5.2D	25 kg
5.2E, 5.2F	100 kg
6.1A	50 kg or 50 L
6.1B	250 kg or 250 L

6.1C	1,000 kg or 1,000 L
8.2A	50 kg or 50 L
8.2B	250 kg or 250 L