



Managing hazardous chemicals in the workplace

Hazardous chemicals are substances that can harm people, property and the environment. They include many common industrial, commercial, pharmaceutical, agricultural and domestic chemicals.

Hazardous chemicals must be treated as a risk in the workplace. This includes storing, handling and managing them correctly to avoid harm to workers, members of the public, property and the environment. You must:

- identify the hazardous chemicals in your workplace
- create a hazardous chemical register
- attach current safety data sheets (SDS) to the hazardous chemical register
- develop a risk management plan to ensure the safety as per the duties of the person in control of a business or undertaking (PCBU)
- keep up to date with work health and safety legislation and codes of practice as well as checking the currency of the SDS
- provide control measures to ensure the safety of workers and others
- train workers in how to use chemicals safely.

It's very important to put a risk management plan in place whenever employees or employers are required to use, handle or store hazardous chemicals in the workplace. This will help you meet your obligations under the *Work Health and Safety Act 2011* ([PDF 1.42MB](#)).

This guide will help you to identify hazardous chemicals, assess and control their risks in the workplace, and safely store and transport them.

Types of hazardous chemicals

A variety of hazardous chemicals are commonly found in the workplace. It's important to understand the substances that fall under this classification, as they can have an adverse effect on human health and cause harm to property and the environment.

Hazardous chemicals

Hazardous chemicals are substances that can cause adverse health effects such as poisoning, breathing problems, skin rashes, allergic reactions, allergic sensitisation, cancer, and other health problems from exposure.

Many hazardous chemicals are also classified as dangerous goods. These can cause fires, explosions, corrosion, and hazardous reactions if not handled safely.

Examples of hazardous chemicals include:

- paints
- drugs
- cosmetics
- cleaning chemicals
- degreasers
- detergents
- gas cylinders
- refrigerant gases
- pesticides
- herbicides
- diesel fuel
- petrol
- liquefied petroleum gas
- welding fumes
- asbestos
- flammable liquids
- gases
- corrosives
- chemically reactive or acutely (highly) toxic substances.

Related links

- Learn more about workplace [hazardous chemicals](#) on the Safe Work Australia website.
- Get an overview of Queensland's work health and safety laws at <https://www.worksafe.qld.gov.au/laws-and-compliance>

How to identify hazardous chemicals

To keep your workplace safe, it is important that you understand what hazardous chemicals are and how to identify them.

Safety data sheets (SDS)

Suppliers (manufacturers or importers) are responsible for clearly identifying hazardous substances. They must label them appropriately and provide a safety data sheet (SDS).

The SDS is a document that tells you what the chemical and physical properties of a material are. An SDS also provides advice on how to safely store, handle and dispose of hazardous chemicals. Included is information on what protective equipment to wear and what emergency procedures should be followed.

To identify if a substance is hazardous, you should always look at the SDS the supplier provides and follow the instructions on labels and the SDS. The labels of hazardous chemicals usually contain the words 'hazardous', 'warning', 'poison', 'dangerous poison', 'harmful' or 'corrosive', as well as details of hazards.

Request an SDS from a supplier

Suppliers are responsible for preparing an SDS for a hazardous chemical. If you use hazardous chemicals in your workplace, you should always request an SDS from your supplier.

Supplier's obligations to prepare an SDS and label containers

If you are a supplier of hazardous chemicals, the *Work Health and Safety Act 2011* requires that you provide an SDS at first supply of the material, or on request, and correctly label containers of hazardous chemicals.

Find out how to:

- prepare an SDS in the Queensland code of practice for the preparation of safety data sheets for hazardous chemicals (PDF, 1.28MB)
https://www.worksafe.qld.gov.au/_data/assets/pdf_file/0011/58178/preparation-safety-data-sheets-hazardous-chemicals-cop-2011.pdf
- prepare a label for a hazardous chemical container in the Queensland code of practice for labelling of workplace hazardous chemicals (PDF, 928KB)
https://www.worksafe.qld.gov.au/_data/assets/pdf_file/0010/58168/labelling-workplace-hazardous-chemicals-cop-2011.pdf

Where to get help identifying hazardous chemicals

Always assume that a substance is hazardous unless the label or SDS says otherwise. However, if you are still uncertain, you can:

- seek advice from the supplier or manufacturer
- seek advice from your occupation health and safety advisor

- visit the Workplace Health and Safety Queensland website <https://www.worksafe.qld.gov.au/>
- contact [Safe Work Australia](#) (SWA) on (02) 6121 5317 or email info@safeworkaustralia.gov.au.

You can also use Safe Work Australia's [hazardous substances information system \(HSIS\)](#). However, be aware that the HSIS is not a comprehensive source of information.

Related links

- Learn more about [keeping your workplace safe](#).

Assess the risks of hazardous chemicals

Once you have identified the hazardous chemicals in your workplace you should assess:

- the risks that may arise from their use
- the extent of the risk.

This will allow you to take appropriate risk control measures.

How to assess the risk of hazardous chemicals

The first step in assessing the risks of hazardous chemicals is to read the [safety data sheet \(SDS\)](#). The SDS provides information about the health hazards if it is breathed in, swallowed, or if there is contact with the skin or eyes. It also provides other hazard information such as whether it is flammable or toxic.

If a product does not have an SDS, and you suspect it is hazardous, you should request an SDS from your supplier and/or contact health and safety authorities.

To properly understand the risks involved with certain hazardous chemicals, you should consult all health and safety resources available to you, including the Workplace Health and Safety Queensland website <https://www.worksafe.qld.gov.au/>

Assess the extent of the risk and decide how to manage it

Once you have assessed what chemicals pose a safety risk, you should:

- consider how significant the risk is
- check if anyone is being exposed to the hazardous chemical and might be
 - breathing in fumes or dust

- swallowing them from contaminated hands or face
 - getting them on their skin or in their eyes
- consider how exposure to hazardous chemicals should be controlled
- consider the hazards for storage and handling, and how you might, for example, control ignition sources around flammable substances or ensure reactive chemicals do not interact
- decide if exposure monitoring or health monitoring is needed.

Create a risk management plan

Record your assessment for the risks and develop a [risk management plan](#). Include information on what decisions should be made about the risks, including how they can be avoided and what safety measures should be used. You will need to update this plan regularly and make sure any new chemicals are included.

Find out more about [workplace health and safety risk management](#).

Outgoing employees who may have been exposed to a carcinogen

You must provide a copy of the risk assessment for hazardous chemicals in your workplace to employees who leave your business if they have, or if you suspect they have, been exposed to a carcinogenic substance.

Read schedule 10 of the [Work Health and Safety Regulation 2011 \(PDF, 2.53MB\)](#) for a list of prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.

Generic assessments of hazardous chemicals

Industry bodies can provide a generic assessment so you don't have to develop one from scratch. If you decide to use a generic assessment, you should use one from a similar workplace. You should also read [How to manage work health and safety risks Code of Practice 2011 \(PDF, 510KB\)](#) for risk management information for specific hazardous chemicals.

Related links

- Get an overview of Queensland's work health and safety laws at <https://www.worksafe.qld.gov.au/laws-and-compliance>
- Learn more about managing risks of hazardous chemicals in the workplace from the code of practice https://www.worksafe.qld.gov.au/_data/assets/pdf_file/0005/58172/Managing-risks-of-hazardous-chemicals-COP-2013.pdf
- Find out more about [risk management](#).
- Learn more about workplace [hazardous chemicals](#) on the SWA website.

Control the risks for hazardous chemicals

Once you have identified hazardous chemicals and assessed the risks, you must put controls in place to manage health and safety risks.

Eliminating and minimising risks

When controlling the risks of hazardous chemicals, your first strategy must always be to eliminate the hazard and associated risk. If this is not reasonably practicable, <https://www.worksafe.qld.gov.au/laws-and-compliance/workplace-health-and-safety-laws/definitions> the risk must be minimised by using one or more of the following approaches:

- substitution
- isolation
- engineering controls.

Using administrative controls

If a risk still remains, it must be minimised with administrative controls (e.g. procedures, employee training, and signs and warning labels), so far as is reasonably practicable. Any remaining risk must be minimised with suitable personal protective equipment (PPE).

Administrative control measures and PPE rely on human behaviour and supervision and, when used on their own, tend to be the least effective ways of minimising risks.

Find out about how to manage work health and safety risks at.

https://www.worksafe.qld.gov.au/_data/assets/pdf_file/0003/58170/Manage-WHS-risks-COP-2011.pdf

Safety training

You have certain [legal obligations when training your staff](#). Information on safety training should be included in any [risk management plan](#) that you develop.

Read the [Workplace Health and Safety Queensland codes of practice](#) for information on safety training practices for hazardous chemicals.

Related links

- Learn more about [risk management](#).
- Find out more about [keeping your workplace safe](#).
- Learn more about workplace [hazardous chemicals](#) on the Safe Work Australia website.

- Read more about [preparing and reporting workplace incidents](#).
 - See the Queensland codes of practice <https://www.worksafe.qld.gov.au/laws-and-compliance/codes-of-practice>
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Prevent emergencies caused by hazardous chemicals

If you have an emergency or incident, call 000 or the poisons information hotline on 13 11 26.

Emergencies and incidents

Find out what to do in an emergency and check if you need to report an incident: <https://www.worksafe.qld.gov.au/>

Preventing emergencies

Preventing emergencies at your workplace caused by hazardous chemicals requires you to first [control the associated risks](#).

You should also have an emergency plan in place, as not all emergencies can be predicted or prevented. An emergency plan will help you minimise the effects of an emergency by dealing with it quickly and strategically.

Develop an emergency plan

Knowing what to do in an emergency is an important aspect of any [risk management plan](#). If your workplace has any hazardous chemicals, an emergency plan is vital - especially if it contains flammable chemicals and/or gas.

Developing an emergency plan includes preparing an [incident response plan](#), developing evacuation plans/routes and testing your plan (e.g. with fire drills).

Find out more about emergency planning for hazardous chemicals.

Storage and transport

Remember that you should also include information about any storage or transport requirements for hazardous chemicals in your emergency plan.

Related links

- Learn more about [risk management](#).
- Find out more about [keeping your workplace safe](#).

- Read more about [preparing and reporting workplace incidents](#).
 - Learn about workplace [hazardous chemicals](#) on the Safe Work Australia site.
 - Get an overview of Queensland's work health and safety laws at <https://www.worksafe.qld.gov.au/laws-and-compliance>
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Storing and transporting hazardous chemicals

Hazardous chemicals must be stored and transported carefully according to specific instructions, which often vary for different substances.

Employees and employers must understand these instructions, as they are both responsible for storing and transporting chemicals safely.

Storing hazardous chemicals

If hazardous chemicals are not stored correctly, they can lead to contamination, fires, spills, accidental inhalation or ingestion. Information for storing any hazardous material can be found on its [safety data sheet \(SDS\)](#).

Before you store hazardous chemicals

Before storing hazardous chemicals, check the label for advice about storage and:

- assess the quantity of the substance to be stored
- assess how long you need to store the substance for
- identify the toxicity and stability of the substance
- check the state of the containers (only use original containers - never use food containers)
- check the state of the labels (replace labels if they have come off)
- consider storing chemicals in a depot with a bund or some other spill containment system (where possible)

How to store hazardous chemicals safely

Once you are ready to store hazardous chemicals, you should:

- ensure safe design, location and installation of storage and handling systems (e.g. racking systems, tanks)
- separate incompatible substances to prevent reactive chemicals interacting
- control potential ignition sources around flammable substances
- have appropriate safety signage and placards
- be prepared for spill containment and have clean up systems
- have [emergency plans](#) in place to deal with an incident involving the hazardous chemicals

- have the appropriate personal protective equipment (PPE) and store it correctly (e.g. sealing respirators). See <https://www.worksafe.qld.gov.au/injury-prevention-safety/managing-risks/personal-protective-equipment-ppe>
- have fire-fighting equipment that is easily accessible
- secure chemicals from unauthorised access.

Find out about the national standard for the storage and handling of workplace dangerous goods at <https://www.safeworkaustralia.gov.au/doc/national-standard-storage-and-handling-workplace-dangerous-goods-nohsc-1015-2001>

Transporting hazardous chemicals

Many hazardous chemicals and dangerous goods used in workplaces may, at some point, need to be moved. The [Australian dangerous goods code](#) provides the necessary information on transporting hazardous chemicals and dangerous goods for all states and territories in Australia (except the Northern Territory).

Read more about [transporting dangerous goods](#) in Queensland.

Checklist for transporting hazardous chemicals

When transporting chemicals:

- avoid transporting with food, water or other reactive chemicals
- follow the separation and segregation rules for transporting mixed classes of hazardous chemicals (those classified as dangerous goods)
- secure hazardous chemicals on the vehicle so they can't move or fall
- keep a record of the chemicals you are carrying
- separate foodstuffs from chemicals
- make sure you have the required signs and equipment for the vehicle
- make sure the driver of the vehicle has the correct licence and is trained in emergency procedures.

Related links

- Learn more about the [transport of dangerous goods](#) in Australia.
- Get an overview of Queensland's work health and safety laws at <https://www.worksafe.qld.gov.au/laws-and-compliance>

GHS Pictograms and Hazard Classes

Health Hazard



- Carcinogen
- Mutagenicity
- Reproductive Toxicity
- Respiratory Sensitizer
- Target Organ Toxicity
- Aspiration Toxicity

Exclamation Mark



- Irritant (skin and eye)
- Skin Sensitizer
- Acute Toxicity (harmful)
- Narcotic Effects
- Respiratory Tract Irritant
- Hazardous to Ozone Layer

Skull and Crossbones



- Acute Toxicity (Oral, Dermal or Inhalation)

Corrosion



- Skin Corrosion/Burns
- Eye Damage
- Corrosive to Metals

Gas Cylinder



- Gases Under Pressure

Flame Over Circle



- Oxidizers

Flame



- Flammables
- Pyrophorics
- Self-Heating
- Emits Flammable Gas
- Organic Peroxides

Exploding Bomb



- Explosives
- Self Reactives
- Organic Peroxides

Environment



- Aquatic Toxicity

Safety Data Sheets

WHS Regulation 2011, s. 330(2) and Sch. 7, s.1(2)

WHS Code of Practice – Preparation of safety data sheets for hazardous chemicals

Section	Heading
1	Identification
2	Hazard(s) Identification
3	Composition and Information on Ingredients
4	First Aid Measures
5	Fire Fighting Measures
6	Accidental Release Measures
7	Handling and Storage
8	Exposure Controls and Personal Protection
9	Physical and Chemical Properties (Physiochemical Hazards)
10	Stability and Reactivity
11	Toxicological Information
12	Ecological Information
13	Disposal Considerations
14	Transport Information
15	Regulatory Information
16	Other Information

HAZARDOUS CHEMICALS REGISTER (example)

(Incorporates hazardous substances and dangerous goods)

ID #	Chemical Name	Manufacturer's contact details	SDS Date	Signal Word	HS / HC	DG	UN #	DG Class # or CL	DG Sub-Risk	PG I, II or III	Haz Chem Code	Location	Quantity stored
1	Super Big oven cleaner	Mamix. 12 Hope St. Kawana. Q. 4205. P: 5479 1666	10/10/10	DANGER	Yes	Yes	1719	8	None	II	2R	Kitchen	2 x 500g spray cans
2													

Where:

- ID # - Internal business identifier for the product (if desired)
- SDS Date – the date that the SDS was written or the latest revision date (not the date of printing). The SDS is valid for 5 years from this date, unless the product has since been changed by the manufacturer. No written R/A is required for 2011 WHS legislation, however if identified as a hazardous chemical, controls need to be in place.
- Signal Word – it with either be 'DANGER'; 'WARNING' or 'NO SIGNAL WORD'
- HS / HC - Hazardous Substance (current legislation) / Hazardous Chemical (GHS terminology) - Yes or No according to the Safety Data Sheet (SDS)
- DG - Dangerous Good - Yes or No according to the Safety Data Sheet (SDS)
- UN # - United Nations number is a system of classifying chemicals. All Dangerous Goods have a UN number
- DG Class # or CL - the Dangerous Goods Class according to the Safety Data Sheet (SDS). A dangerous good will have a UN number. CL is if the chemical is a combustible liquid. A CL(1) has a flash point between 61-150°C e.g. diesel. A CL(2) has a flash point >150°C e.g. lube oil.
- DG Sub-Risk – Note: Not all DG have a sub-risk allocated.
- PG - Packaging Group according to the Safety Data Sheet (SDS)
- Hazchem Code according to the Safety Data Sheet (SDS), used on placards for particular hazardous chemicals stored in bulk (see WHS Regulation 2011, Schedule 13 (4)) to alert *Emergency Services* of the types of potential chemical hazards
- Location – The specific location or area where the chemical is used / stored
- Quantity stored – in litres or kilograms

Other:

- CAS No. – Chemical Abstract Series Number
- Flash Point – the lowest temperature at which the application of an ignition source causes vapours of a liquid to ignite (under specified test conditions)
- GHS – Globally Harmonised System is a European system of classifying chemicals and used by Australian WHS legislation.
- NOHSC – National Occupational Health and Safety Commission
- R/A - risk assessment. The *WHS 2011 Regulation* requires that *Persons in Control of a Business or Undertaking* (PCBU) manage risks to health and safety. R/A need to be reviewed if something changes with the product by the manufacturer or to processes used at the workplace or if requested by a *Health & Safety Representative* (HSR). Refer to sections 34 – 38 of the WHS 2011 Regulation.

References: *WHS Regulation 2011, sections 346 – Hazardous chemical register; 34 – Duty to identify hazards; 35 – Managing risks to H&S; 36 – Hierarchy of controls; 37 & 38 - Maintenance & review of controls; 39 – Information, training & instruction; Code of Practice – Managing risks of HC in the workplace – 2013; Code of Practice - Preparation of Safety Data Sheets for Hazardous Chemicals - 2011; Code of Practice – Labelling of workplace hazardous chemicals – 2011.*

HAZARDOUS CHEMICALS REGISTER

(Incorporates hazardous substances and dangerous goods)

Business Logo and Contact Details

ID #	Chemical Name	Manufacturer's contact details	SDS Date	Signal Word	HS / HC	DG	UN #	DG Class # or CL	DG Sub-Risk	PG I, II or III	Haz Chem Code	Location	Quantity stored
1													
2													
3													
4													
5													
6													
7													

Worksheet system for safe use of substances & exposures to hazardous chemicals

For assessing basic risks to health from chemicals listed in the Safety Data Sheet (SDS), note routes of entry into the body e.g. inhalation; ingestion; bodily contact and injection. The chemical's label and SDS are required. If no SDS or label is available e.g. for a work process/by-products, other sources of information will need to be investigated.

Ref: Work Health and Safety Act and Regulation 2011 and Code of Practice - Managing risks of hazardous chemicals in the workplace 2013.

1. Name of product/substance/chemical mixture: _____

2. How is the substance used? i.e. describe the process? <i>(If the chemical is used for a number of different processes, an assessment may be needed for each task. Also consider decanting, storage & disposal)</i>		
3. How are people in your workplace exposed to the substance? <i>(Tick applicable routes or entry)</i>	Skin (splashed onto or absorbed through):	
	Eyes (splashed onto or absorbed through):	
	Inhalation (breathed in):	
	Ingestion (swallowed):	
4. How much of the substance are workers exposed to during the task? <i>(Give details e.g. in litres, millilitres, etc.)</i>		
5. For how long are workers exposed to the substance? <i>(How often is the chemical used, e.g. in minutes or hours per day and days per week?)</i>		
6. Is there a signal word? <i>SDS – section 2</i>	DANGER <input type="checkbox"/> WARNING <input type="checkbox"/> No signal word <input type="checkbox"/>	
7. Hazard statements (List H numbers)		
8. Precautionary statements (List P numbers)		
9. Briefly, what are the health effects of exposure to this substance? <i>Consider the:</i> ➤ <i>SDS - section 11 (toxicological information)</i> ➤ <i>Other sources of information</i>	Skin:	
	Eyes:	
	Inhalation:	
	Ingestion:	
10. What engineering control measures (e.g.: extraction ventilation; dilution ventilation) are recommended by the SDS; label; supplier or manufacturer? <i>Consider the:</i> ➤ <i>SDS - section 8 (exposure controls & personal protection)</i>		
11. Currently, what engineering controls are used to control exposure to the substance? If engineering controls are used, are they maintained and checked for effectiveness? <i>(Give details)</i>		
12. What Personal Protective Equipment (PPE) is recommended by the SDS and/or label? <i>Consider the:</i> ➤ <i>SDS - section 8 (exposure controls & personal protection)</i>	Skin:	
	Eyes:	
	Inhalation:	
13. Currently, what PPE is used? <i>(Give details)</i>	Skin:	
	Eyes:	
	Inhalation:	

<p>14. Are any other control measures recommended by the SDS and/or label? (e.g. procedures, rotation of people, using substance after hours to minimise how many people are exposed, etc....) Consider the:</p> <p>➤ SDS – sections 2, 10, 12, 13, 14, 16</p>				
<p>15. Are any other control measures currently used or implemented at the workplace?</p>				
<p>16. (a) Is there an exposure standard? 16. (b) Does air monitoring need to be done? You can have air monitoring done to:</p> <ul style="list-style-type: none"> • find out how much dust, fumes, etc., your workers are being exposed to • find out if the controls being used are adequate to ensure employee's health and safety is protected <p>➤ SDS – sections 8</p>	<p>(a) YES <input type="checkbox"/> NO <input type="checkbox"/></p> <p>If YES, what is the:</p> <p>TWA:</p> <p>STEL:</p> <p>(b) YES <input type="checkbox"/> NO <input type="checkbox"/> More information required <input type="checkbox"/></p>			
<p>17. Is health monitoring required? Health monitoring is required if: The level of risk (from question 14) is <u>significant and not effectively controlled</u> and the chemical contains (or is) one or more of the following:</p> <table border="1" data-bbox="79 873 798 1052"> <tr> <td> <ul style="list-style-type: none"> • Acrylonitrile • Arsenic (inorganic) • Benzene • Cadmium • Chromium (inorganic) • Creosote </td> <td> <ul style="list-style-type: none"> • Crystalline silica • Isocyanates • Lead • 4,4' methylene bis (2-chloroaniline) (MOCA) • Organophosphate pesticides </td> <td> <ul style="list-style-type: none"> • Pentachlorophenol (PCP) • Polycyclic aromatic hydrocarbons (PAH) • Thallium • Vinyl chloride </td> </tr> </table> <p><small>(Refer to Parts 7.2; 8.5 and Schedule 14 of the Work Health and Safety Regulation 2011 & Code of Practice for Hazardous Chemicals 2013 - Appendix E). Asbestos is listed in other regulations.</small></p>	<ul style="list-style-type: none"> • Acrylonitrile • Arsenic (inorganic) • Benzene • Cadmium • Chromium (inorganic) • Creosote 	<ul style="list-style-type: none"> • Crystalline silica • Isocyanates • Lead • 4,4' methylene bis (2-chloroaniline) (MOCA) • Organophosphate pesticides 	<ul style="list-style-type: none"> • Pentachlorophenol (PCP) • Polycyclic aromatic hydrocarbons (PAH) • Thallium • Vinyl chloride 	<p style="text-align: center; opacity: 0.5; font-size: 48px; transform: rotate(-30deg);">Disclosure Log</p>
<ul style="list-style-type: none"> • Acrylonitrile • Arsenic (inorganic) • Benzene • Cadmium • Chromium (inorganic) • Creosote 	<ul style="list-style-type: none"> • Crystalline silica • Isocyanates • Lead • 4,4' methylene bis (2-chloroaniline) (MOCA) • Organophosphate pesticides 	<ul style="list-style-type: none"> • Pentachlorophenol (PCP) • Polycyclic aromatic hydrocarbons (PAH) • Thallium • Vinyl chloride 		
<p>18. What is the level of risk from use of this hazardous chemical (select one)?</p> <ol style="list-style-type: none"> 1. Risks not significant and not likely to increase in the future 2. Risks are <u>significant</u> but effectively controlled (but could increase in the future) 3. Risks are <u>significant and not effectively controlled</u> 4. <u>Uncertain about the risks</u> (Conduct air monitoring and/or health monitoring [see below] or obtain further information & advice from a competent person) 	<p>Level of risk:</p> <p>Explanation of why this risk level is chosen:</p>			
<p>19. What additional control measures will be implemented? (The best type of control is by elimination; however other types of controls can be used). Give details (if any):</p> <p style="text-align: center;">Hierarchy of Control Measures</p> <p><u>Elimination</u> (MOST EFFECTIVE) <u>Substitution, Isolation and Engineering controls</u> – relates to processes or physical barriers/controls <u>Administrative controls & PPE</u> – relates to human behaviours (LEAST EFFECTIVE)</p>	<p>Elimination:</p> <hr/> <p>Substitute / Isolate / Engineer:</p> <hr/> <p>Administration & PPE:</p>			

20. Date: _____ 21. Review Date: _____

22. Reason for review: SDS expired; Incident occurred; SMS accreditation; Training purposes; Other (please specify).

23. Person/s conducting risk assessment and their positions: _____

Worksheet system for safe use of substances & exposures to hazardous chemicals

For assessing basic risks to health from chemicals listed in the Safety Data Sheet (SDS), note routes of entry into the body e.g. inhalation; ingestion; bodily contact and injection. The chemical's label and SDS are required. If no SDS or label is available e.g. for a work process/by-products, other sources of information will need to be investigated.

Ref: Work Health and Safety Act and Regulation 2011 and Code of Practice - Managing risks of hazardous chemicals in the workplace 2013.

1. Name of product/substance/chemical mixture: **Methylated Spirits 100% (commonly referred to as Metho)**

2. How is the substance used? i.e. describe the process? <i>(If the chemical is used for a number of different processes, an assessment may be needed for each task. Also consider decanting, storage & disposal)</i>	<i>Small amounts are put on a rag & used for spot cleaning marks off aluminium frame & glass surfaces. Rag is wiped over surfaces using bare hands</i>	
3. How are people in your workplace exposed to the substance? <i>(Tick applicable routes or entry)</i>	Skin (splashed onto or absorbed through):	<input checked="" type="checkbox"/>
	Eyes (splashed onto or absorbed through):	<input checked="" type="checkbox"/>
	Inhalation (breathed in):	<input checked="" type="checkbox"/>
	Ingestion (swallowed): <i>not intentionally</i>	<input checked="" type="checkbox"/>
4. How much of the substance are workers exposed to during the task? <i>(Give details e.g. in litres, millilitres, etc.)</i>	<i>Approximately 20 - 30 ml each time</i>	
5. For how long are workers exposed to the substance? <i>(How often is the chemical used, e.g. in minutes or hours per day and days per week?)</i>	<i>This task is done approximately 5 times per day, for approximately 1 minute each time</i>	
6. Is there a signal word? <i>SDS – section 2</i>	DANGER <input checked="" type="checkbox"/> WARNING <input type="checkbox"/> No signal word <input type="checkbox"/>	
7. Hazard statements (List H numbers)	225; 301; 311; 330; 370	
8. Precautionary statements (List P numbers)	210; 260; 270; 271; 301+310; 304+340; 308+311; 320; 403+233; 403+235; 405; 501	
9. Briefly, what are the health effects of exposure to this substance? <i>Consider the:</i> <ul style="list-style-type: none"> ➤ <i>SDS - section 11 (toxicological information)</i> ➤ <i>Other sources of information</i> 	Skin:	<i>Possible liver damage</i>
	Eyes:	<i>No information</i>
	Inhalation:	<i>No information</i>
	Ingestion:	<i>Alcoholism if taken deliberately</i>
10. What engineering control measures (e.g.: extraction ventilation; dilution ventilation) are recommended by the SDS; label; supplier or manufacturer? <i>Consider the:</i> <ul style="list-style-type: none"> ➤ <i>SDS - section 8 (exposure controls & personal protection)</i> 	<i>Use in an area with adequate ventilation – mechanical ventilation if used in a confined space</i>	
11. Currently, what engineering controls are used to control exposure to the substance? If engineering controls are used, are they maintained and checked for effectiveness? <i>(Give details)</i>	<i>Used in an open area with good natural ventilation</i>	
12. What Personal Protective Equipment (PPE) is recommended by the SDS and/or label? <i>Consider the:</i> <ul style="list-style-type: none"> ➤ <i>SDS - section 8 (exposure controls & personal protection)</i> 	Skin:	<i>Avoid prolonged contact</i>
	Eyes:	<i>Avoid contact</i>
	Inhalation:	<i>No information</i>
13. Currently, what PPE is used? <i>(Give details)</i>	Skin:	<i>None</i>
	Eyes:	<i>Safety glasses always worn</i>
	Inhalation:	<i>None</i>

<p>14. Are any other control measures recommended by the SDS and/or label? (e.g. procedures, rotation of people, using substance after hours to minimise how many people are exposed, etc....) Consider the:</p> <p>➤ SDS – sections 2, 10, 12, 13, 14, 16</p>	<p><i>First aid: If swallowed – induce vomiting and give water to drink; flush eyes with water; skin contact – remove contaminated clothing and wash skin with soap and water</i></p>			
<p>15. Are any other control measures currently used or implemented at the workplace?</p>	<p><i>We have emergency eye wash bottles located around the workplace and saline eye wash tubes in the first aid kit</i></p>			
<p>16. (a) Is there an exposure standard? 16. (b) Does air monitoring need to be done? You can have air monitoring done to:</p> <ul style="list-style-type: none"> • find out how much dust, fumes, etc., your workers are being exposed to • find out if the controls being used are adequate to ensure employee's health and safety is protected <p>➤ SDS – sections 8</p>	<p>(a) YES <input checked="" type="checkbox"/> NO <input type="checkbox"/></p> <p>If YES, what is the:</p> <p>TWA:200 ppm</p> <p>STEL:250 ppm (Sk)</p> <p>(b) YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> More information required <input type="checkbox"/></p>			
<p>17. Is health monitoring required? Health monitoring is required if: The level of risk (from question 14) is significant and not effectively controlled and the chemical contains (or is) one or more of the following:</p> <table border="1" data-bbox="81 887 799 1066"> <tr> <td> <ul style="list-style-type: none"> • Acrylonitrile • Arsenic (inorganic) • Benzene • Cadmium • Chromium (inorganic) • Creosote </td> <td> <ul style="list-style-type: none"> • Crystalline silica • Isocyanates • Lead • 4,4' methylene bis (2-chloroaniline) (MOCA) • Organophosphate pesticides </td> <td> <ul style="list-style-type: none"> • Pentachlorophenol (PCP) • Polycyclic aromatic hydrocarbons (PAH) • Thallium • Vinyl chloride </td> </tr> </table> <p><small>(Refer to Parts 7.2; 8.5 and Schedule 14 of the Work Health and Safety Regulation 2011 & Code of Practice for Hazardous Chemicals 2013 - Appendix E). Asbestos is listed in other regulations.</small></p>	<ul style="list-style-type: none"> • Acrylonitrile • Arsenic (inorganic) • Benzene • Cadmium • Chromium (inorganic) • Creosote 	<ul style="list-style-type: none"> • Crystalline silica • Isocyanates • Lead • 4,4' methylene bis (2-chloroaniline) (MOCA) • Organophosphate pesticides 	<ul style="list-style-type: none"> • Pentachlorophenol (PCP) • Polycyclic aromatic hydrocarbons (PAH) • Thallium • Vinyl chloride 	<p><i>No – not required</i></p>
<ul style="list-style-type: none"> • Acrylonitrile • Arsenic (inorganic) • Benzene • Cadmium • Chromium (inorganic) • Creosote 	<ul style="list-style-type: none"> • Crystalline silica • Isocyanates • Lead • 4,4' methylene bis (2-chloroaniline) (MOCA) • Organophosphate pesticides 	<ul style="list-style-type: none"> • Pentachlorophenol (PCP) • Polycyclic aromatic hydrocarbons (PAH) • Thallium • Vinyl chloride 		
<p>18. What is the level of risk from use of this hazardous chemical (select one)?</p> <ol style="list-style-type: none"> 1. Risks not significant and not likely to increase in the future 2. Risks are significant but effectively controlled (but could increase in the future) 3. Risks are significant and not effectively controlled 4. Uncertain about the risks (Conduct air monitoring and/or health monitoring [see below] or obtain further information & advice from a competent person) 	<p>Level of risk: ... 1</p> <p>Explanation of why this risk level is chosen:</p> <p><i>Not a significant risk as we use very small quantities of Metho. Exposure to the skin is very minor as the rags that are used are thick and doubled over several times</i></p>			
<p>19. What additional control measures will be implemented? (The best type of control is by elimination; however other types of controls can be used). Give details (if any):</p> <p style="text-align: center;">Hierarchy of Control Measures</p> <p><u>Elimination</u> (MOST EFFECTIVE) Substitution, Isolation and Engineering controls – relates to processes or physical barriers/controls <u>Administrative controls & PPE</u> – relates to human behaviours (LEAST EFFECTIVE)</p>	<p>Elimination: <i>Cannot eliminate as Metho is the basis of many cleaning products for this type of work</i></p> <p>Substitute / Isolate / Engineer: <i>There is currently no other substance that can be substituted for Metho. The workplace uses natural ventilation</i></p> <p>Administration & PPE: <i>Monitor staff for reactions and encourage them to report any issues from the use of Metho. Use 'Nitrile' based gloves.</i></p>			

20. Date: 24 June 2014 21. Review Date: 24 June 2015

22. Reason for review: SDS expired; Incident occurred; SMS accreditation; Training purposes; Other (please specify).

Company safety system annual review

23. Person/s conducting risk assessment and their positions: *Max Smart – Manager; Pete Best – Purchasing Officer;*

William Tell – Welder (worker)



Tips for hazardous manual task training


For trainers:

- Workers must be provided with information about how to do their job safely.
- This tip sheet is the minimum information that should be included in your workers' hazardous manual tasks training. More information about **hazardous manual tasks** is available.
- Discuss the following sections and insert examples/photos from your workplace.






Hazardous manual tasks (HMT) are any manual tasks that have one or more risk factors which may cause a sprain or strain injury. They are preventable, yet the most common type of workplace injury.

Risk factors

There are six risk factors that lead to sprain and strain injuries.

 **Insert** photos of your workers doing tasks that have these risk factors (click example images to replace them).

 **Discuss** the work activities in your workplace that have one or more of these risk factors.

Exertion/force		<p><i>Very tiring work that takes a lot of effort.</i></p> <p><i>Can be held for a period of time, repeated over and over, or occur suddenly.</i></p> <p>Example: Unloading a container of shelving</p>
Awkward postures		<p><i>Postures that are uncomfortable or require significant bending, twisting or over-reaching that workers hold over a period of time</i></p> <p>Example: Building Pallets</p>
Vibration		<p><i>Sitting/standing on or holding vibrating equipment – can result in back pain or circulation issues in the hand or arm.</i></p> <p>Example: Using power tools such as Grinders and Orbital Sanders</p>
Duration		<p><i>Doing a task continuously for more than 30 minutes, or more than a total of two hours over a whole shift can increase likelihood of injury.</i></p> <p>Example: Assembling Scope Hooks in large quantities</p>
Repetition		<p><i>Using the same parts of the body to repeat similar movements over and over.</i></p> <p>Example: Assembling Scope Hooks in Large quantities</p>

Mental stress/work pressure



Mental stress and work pressure can increase the risk of physical injuries when not managed as part of hazardous manual tasks.

Example: Pressure to meet deadlines

Causes of risk factors and how to prevent them

The four causes of sprain and strain risk factors are:

1. **Work areas** (e.g. benches that are too low, working in tight areas where you can't freely move).
2. **What is being handled and how** (e.g. carrying a top-heavy container, handling objects with poor handles, pushing a trolley 100 metres up a slope, unloading pallets of stock all shift).
3. **Environmental factors** (e.g. uneven/slippery floor surfaces, poor lighting, hot/cold/windy/humid weather).
4. **Work organisation** (e.g. time pressures, work pace, lack of communication, no proactive maintenance, poor support, very boring or overly mentally demanding work).

Examples of controls (solutions) that are used to reduce sprain and strain risk factors include:

- mechanical aids (e.g. robotics, trolleys, overhead cranes, forklifts, pallet jacks, pallet raisers)
- adjustable equipment (e.g. bench height, pallet raisers)
- clear access (allows use of mechanical aids)
- adequate space to conduct tasks
- adequate lighting
- preventative maintenance of tools/equipment
- non-slip floors/surfaces
- work organisation reduces risk to workers (e.g. task variation, adequate work pace, time, staffing levels, resources, supervisor support)
- well defined communication
- specific safe work procedures that address HMT.

Performing specific hazardous manual tasks safely



Insert examples of tasks in the table that are relevant to the workers attending training.
You may wish to complete this information before the training session



Discuss the workplace tasks including the risk factors and the controls to minimise the risk of injury.

Hazardous manual task (describe the task)	Risk factors in the task (Exertion/force, awkward postures, vibration, duration, repetition, mental stress-work pressure)	Controls used for the task (mechanical aids, tools, equipment, safe work procedures)
<i>Unloading a Container of shelving stock</i>	<i>Exertion/Force, Awkward Postures, Duration, Repetition</i>	<i>Use Trolleys to move stock, take regular breaks, SOP for Manual Handling has been discussed with the team</i>
<i>Building Pallets</i>	<i>Awkward Postures</i>	<i>Use of Bench at an appropriate height where possible</i>


Use of Power Tools such as Angle Grinder and Orbital Sander	Vibration	Take Regular Breaks, regular equipment maintenance, Work benches set at an appropriate height for the task Use of these tools is intermittent in our workplace (15min periods max)
Building parts in large quantities	Duration, Repetition	Take regular breaks, break the job up, do a small qty and move on to the next process, then come back and start again
Pressure to meet deadlines and shipping dates	Mental Stress, Work Pressure	Work organisation using schedules and regular communication (daily pre-start meetings) to ensure that everyone is aware of their tasks for the day but also to ensure that help is provided when required

Reporting

Workplaces must have procedures for reporting hazards (including risk factors), faulty equipment, maintenance issues or any work-related symptoms including:

- pain, joint stiffness or muscle tightness
- swelling, numbness, pins and needles
- skin colour changes.

 **Insert** information about your workplace procedures for reporting hazards, faults, maintenance issues and symptoms.

 **Discuss** with workers the importance of and procedures for reporting sprains and strains.

Hazards	Procedure
Faulty equipment	Hazard report form, Notify your supervisor
Maintenance	Notify your supervisor, Tag the equipment if necessary
Work-related symptoms	Incident Report form


Record of training

Keep a record of any HMT training.

Date of session: *Click to choose a date*

Trainer: *Enter name/s here*

Topics covered: *Enter topics here*

 **Insert** information about your HMT training.

Worker's name	Worker's signature
<i>Enter worker's name here</i>	
<i>Enter worker's name here</i>	

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**This factsheet is based on the Hazardous manual tasks Code of Practice 2011.*

PN12534

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