

Chemicals - Handling and Use

Business Name:	ABN:
Business Address:	
Contact Person:	Phone: Email:

THIS RISK ASSESSMENT IS APPROVED BY THE PCBU ON THIS PROJECT

Under the Work Health and Safety Regulation (WHS Regulation), a person conducting a business or undertaking (PCBU) is required to ensure that a RISK ASSESSMENT is prepared before the proposed work starts.

Full Name:		
Signature:	Title:	Date:

CLIENT OR PRINCIPAL CONTRACTOR DETAILS

Client:	SCOPE OF WORKS
Project Name:	
Project Address:	
Project Manager:	
Contact Phone:	
Date Risk Assessment supplied to Project Manager:	

SAMPLE

RISK MATRIX									
LIKELIHOOD	INSIGNIFICANT	MINOR	MODERATE	MAJOR	CATASTROPHIC	SCORE	ACTION	HIERARCHY OF CONTROLS	
ALMOST CERTAIN	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4 ACUTE			Elimination Remove the hazard.	
LIKELY	2 MODERATE	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4A ACUTE	DO NOT PROCEED	Substitution Replace the hazard.	
POSSIBLE	1 LOW	2 MODERATE	3 HIGH	4 ACUTE	4 ACUTE	3H HIGH	Review before work starts.	Isolation Isolate People from the hazard	
UNLIKELY	1 LOW	1 LOW	2 MODERATE	3 HIGH	4 ACUTE	2M MODERATE	Ensure control measures in place.	Engineering Isolate the hazard	
RARE	1 LOW	1 LOW	2 MODERATE	3 HIGH	3 HIGH	1L LOW	Monitor and keep records.	Administrative Change	
								PPE	

Risk Rating & Required Action:	
4A	Stop work. The risk is intolerable. Eliminate the hazard or redesign the activity before proceeding. A Safe Work Method Statement (SWMS) or higher-level authorisation is required.
3H	Review and approve additional controls before task starts. Senior supervisor sign-off needed.
2M	Ensure all nominated controls are in place and effective. Proceed with caution; monitor conditions.
1L	Proceed, following standard operating procedures. Monitor and keep records.

Consequence Scale:			
Consequence	People (injury/illness)	Project / Assets	Compliance / Reputation
Catastrophic	Fatality or permanent total disability	project shutdown	Significant regulator intervention; criminal prosecution
Major	Serious injury/illness (hospital > 5 days)	critical delay	Improvement notice; major media coverage
Moderate	Medical-treatment injury; lost-time > 1 day	moderate delay	Minor breach; adverse client comment
Minor	First-aid only, no lost time	negligible delay	Isolated non-conformance
Insignificant	No injury	no schedule impact	Deviation caught and corrected on site

Notes on Hierarchy of Controls:
Remember to apply controls in the preferred order shown by the coloured pyramid:

1. **Eliminate**
2. **Substitute**
3. **Isolate**
4. **Engineering**
5. **Administrative**
6. **PPE**

Always document **why** a lower-order control is accepted if elimination or substitution is not reasonably practicable.

aligned with Safe Work Australia's Managing the risk of fatigue at work (2023) and ISO 45001:2018 clauses 6–8.

JOB STEP	POTENTIAL HAZARDS	IR	CONTROL MEASURES	RR
SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
1. Procurement, Supplier Management and Product Selection	<ul style="list-style-type: none"> Procurement of hazardous chemicals without formal approval or risk assessment Inadequate review of Safety Data Sheets (SDS) prior to purchase Selection of highly hazardous substances when safer alternatives are reasonably practicable Inconsistent supplier quality, labelling and SDS currency Uncontrolled online or ad-hoc purchasing outside approved systems 	High	<ul style="list-style-type: none"> Establish a formal chemical procurement procedure requiring WHS review and authorisation before purchase of any hazardous chemical, aligned with WHS Act 2011 and WHS Regulations (Hazardous Chemicals) Require suppliers to provide current (≤5 years old) Australian-compliant SDS for all chemicals prior to purchase and maintain an approved supplier list Implement a chemical approval process that evaluates less hazardous substitutes (elimination or substitution) before introducing new chemicals to site Develop and maintain a controlled chemical register linked to the procurement system so only approved products can be ordered Specify minimum supplier requirements for labelling, packaging integrity, SDS format and emergency information in purchasing contracts Prohibit staff from purchasing chemicals via retail/online channels outside the approved procurement pathway Include WHS criteria in supplier evaluation and periodic performance reviews (e.g. SDS quality, delivery documentation, incident history) 	Medium
2. Chemical Inventory, Register and Information Management	<ul style="list-style-type: none"> Incomplete, inaccurate or outdated chemical register Safety Data Sheets not readily accessible to workers and emergency services Failure to identify prohibited or restricted chemicals on site Lack of visibility of total quantities and storage locations for emergency planning Multiple naming conventions leading to confusion between trade names and substances Inadequate change management when chemicals are added, changed or removed 	High	<ul style="list-style-type: none"> Develop and maintain a site-wide hazardous chemicals register that meets WHS Regulation requirements, including product name, UN number, DG class, quantity bands and storage location Implement an electronic chemical management system (or centralised register) accessible to all workers and relevant contractors, with version control and audit trail Ensure current Australian-compliant SDS for all hazardous chemicals are accessible at points of use and for remote or field workers (printed copies or offline digital access) Introduce a change management procedure requiring WHS review when chemicals are introduced, reformulated or discontinued, including update of the register and risk assessments Standardise naming conventions (trade name + generic name) across the register, labelling, procedures and training materials Periodically audit the chemical register against physical stocks and disposal records to verify accuracy and identify obsolete or orphan chemicals Flag and review restricted or high-consequence chemicals (e.g. carcinogens, scheduled poisons, major hazard facility substances) with higher-level approval and specific controls 	Medium
3. Governance, WHS Management System and Legal Compliance	<ul style="list-style-type: none"> Lack of clear organisational accountability for chemical safety management Inadequate integration of chemical risks into the broader WHS management system 	High	<ul style="list-style-type: none"> Assign defined roles and responsibilities for chemical safety (e.g. PCBU representative, chemical coordinator, supervisors) within the WHS management system and position descriptions Develop and implement a documented hazardous chemicals management procedure that aligns with WHS Act 2011, WHS Regulations and relevant Codes of Practice Integrate chemical risk management into the organisation's WHS policy, objectives, risk registers and consultation arrangements 	Medium

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	<ul style="list-style-type: none"> • Non-compliance with WHS Act 2011 and WHS Regulations regarding hazardous chemicals, labelling, storage and notification • Insufficient consultation with workers and HSRs on chemical-related decisions • Inadequate incident reporting and learning processes for chemical exposures or near misses 		<ul style="list-style-type: none"> • Establish consultation processes with Health and Safety Representatives (HSRs) and workers regarding selection, assessment and control of hazardous chemicals • Ensure regulatory notifications, licences and manifests are completed where required (e.g. placard quantities, manifest quantities, scheduled carcinogens) and reviewed periodically • Embed chemical incidents and exposures into the existing WHS incident reporting, investigation and corrective action system, with root cause analysis and trend monitoring • Schedule periodic internal and, where appropriate, external audits of chemical management compliance and system effectiveness, with documented action plans 	
4. Risk Management Framework and Assessment Processes	<ul style="list-style-type: none"> • Absence of formal risk assessments for hazardous chemicals and mixtures • Generic or outdated assessments not reflecting site-specific use conditions • Failure to consider cumulative exposure and interaction between multiple chemicals • Over-reliance on personal protective equipment as the primary control • Inadequate review of risk controls following changes in processes, scale or workforce 	High	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	Medium
5. Training, Competency and Supervision	<ul style="list-style-type: none"> • Workers handling chemicals without appropriate induction, training or verification of competency • Inadequate supervision of new, young or inexperienced workers • Failure to train workers on specific chemical hazards, SDS interpretation and control measures • Contractors and labour hire workers not integrated into the organisation's training and competency systems 	High	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	Medium

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	<ul style="list-style-type: none"> Language, literacy or cultural barriers leading to misunderstanding of instructions and warnings 		[REDACTED]	
6. Storage, Segregation and Inventory Control Systems	<ul style="list-style-type: none"> Incompatible chemicals stored together creating fire, explosion or toxic gas risks Inadequate segregation of flammable, oxidising, corrosive or toxic substances Storage locations not designed or rated for the type and quantity of hazardous chemicals Poor inventory control leading to overstocking, container deterioration and expired chemicals Inadequate secondary containment or spill systems for bulk and decanted chemicals 	High	[REDACTED]	Medium
7. Labelling, Decanting and Container Management	<ul style="list-style-type: none"> Unlabelled or incorrectly labelled containers leading to misuse or incompatible mixing Uncontrolled decanting into unsuitable or non-compliant containers Loss of critical hazard and first aid information when chemicals are transferred from original packaging Use of informal containers (e.g. drink bottles) creating ingestion risks Inconsistent or non-GHS labelling across the workplace 	High	[REDACTED]	Medium

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			[REDACTED]	
8. Engineering Controls and Equipment Management	<ul style="list-style-type: none"> Inadequate ventilation and extraction systems leading to inhalation exposures Poorly specified or maintained process equipment, dosing systems and containment Failure or bypassing of interlocks, alarms or automatic shut-offs Lack of standardisation and maintenance of spill kits, eyewash stations and safety showers Inadequate design review for new plant or process changes involving hazardous chemicals 	High	[REDACTED]	Medium
9. Personal Protective Equipment (PPE) Management	<ul style="list-style-type: none"> Inadequate selection of PPE for specific chemical hazards and exposure routes PPE used as the primary control instead of higher-order controls Poor fit, condition or availability of PPE leading to false sense of protection Lack of systems for cleaning, storage and replacement of contaminated PPE Failure to provide respiratory fit testing and health monitoring where required 	Medium	[REDACTED]	Low

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10. Health Monitoring, Exposure Assessment and Medical Management	<ul style="list-style-type: none"> • Unrecognised over-exposure to hazardous chemicals (acute or chronic) • Lack of baseline and periodic health monitoring for workers exposed to specific substances • Failure to identify and manage sensitive or vulnerable workers (e.g. pregnant workers, respiratory conditions) • Inadequate systems for managing, recording and following up on exposures, symptoms or health monitoring results 	High	[REDACTED]	Medium
11. Emergency Preparedness, Spill Response and First Aid	<ul style="list-style-type: none"> • Inadequate planning for chemical spills, releases, fires or exposures • Lack of coordination with emergency services and neighbouring business • Insufficient first aid capability for chemical burns, inhalation and ingestion • Poorly maintained or incorrectly located spill kits, eyewash and safety showers • Workers unaware of emergency roles, evacuation routes and communication methods 	High	[REDACTED]	Medium

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12. Contractor, Visitor and Third-Party Interface Management	<ul style="list-style-type: none"> Contractors bringing unapproved chemicals onto site without risk assessment Inconsistent standards of chemical management between the PCBU and contractors Visitors and other third parties inadvertently entering chemical storage or handling areas Poor communication of chemical hazards to neighbouring tenants, landlords or shared workplaces 	Medium	[REDACTED]	Low
13. Transport, Logistics and Off-Site Handling Governance	<ul style="list-style-type: none"> Non-compliance with dangerous goods transport requirements during inbound and outbound logistics Inadequate controls for transporting chemicals between site and customer locations Lack of documentation and emergency information accompanying transported chemicals Poor coordination between the PCBU and transport providers regarding chemical hazards and controls 	Medium	[REDACTED]	Low
14. Environmental Protection and Waste Management Systems	<ul style="list-style-type: none"> Uncontrolled discharge of chemicals to air, soil, stormwater or sewer Improper classification, storage and disposal of chemical wastes Lack of coordination between WHS and environmental compliance obligations 	Medium	[REDACTED]	Low

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	<ul style="list-style-type: none"> Inadequate oversight of waste contractors handling hazardous substances 		[REDACTED]	
15. Monitoring, Review, Audit and Continuous Improvement	<ul style="list-style-type: none"> Risk controls becoming ineffective over time due to drift, cost-cutting or complacency Failure to detect emerging risks from new chemicals, processes or regulatory changes Incomplete implementation of corrective actions from audits, inspections or investigations Lack of measurable performance indicators specific to risk management 	High	[REDACTED]	Medium

SAMPLE

EMERGENCY RESPONSE – CALL 000 FOR EMERGENCIES

Ensure to have an Emergency Management Plan in place as well as adequate numbers of trained first aid staff with easy access to fully stocked first aid kits, rescue equipment, material safety data sheets, adequate access to emergency communication equipment and fire-fighting equipment suitable for all classes of fire and ignition sources.

LEGISLATIVE REFERENCES

RELEVANT LEGISLATION AND CODES OF PRACTICE. DELETE THE LEGISLATIVE REFERENCES FOR ANY STATE THAT ARE NOT APPLICABLE

Queensland & Australian Capital Territory

Work Health and Safety Act 2011
 Work Health and Safety Regulations 2011
 Legislation QLD: <https://www.worksafe.qld.gov.au/laws-and-compliance/work-health-and-safety-laws>
 Codes of Practice QLD: <https://www.worksafe.qld.gov.au/laws-and-compliance/codes-of-practice>
 Legislation ACT: <https://www.worksafe.act.gov.au/laws-and-compliance/acts-and-regulations>
 Codes of Practice ACT: <https://www.worksafe.act.gov.au/laws-and-compliance/codes-of-practice>

Victoria

Occupational Health and Safety Act 2004
 Occupational Health and Safety Regulations 2017
 Legislation VIC: <https://www.worksafe.vic.gov.au/occupational-health-and-safety-act-and-regulations>
 Codes of Practice VIC: <https://www.worksafe.vic.gov.au/compliance-codes-and-codes-practice>

New South Wales

Work Health and Safety Act 2011
 Work Health and Safety Regulations 2025
 Legislation NSW: <https://www.safework.nsw.gov.au/legal-obligations/legislation>
 Codes of Practice NSW: <https://www.safework.nsw.gov.au/resource-library/list-codes-of-practice>

Western Australia

Work Health and Safety Act 2020
 Work Health and Safety Regulations 2022
 Legislation Western Australia: <https://www.commerce.wa.gov.au/worksafe/legislation>
 Codes of Practice WA: <https://www.commerce.wa.gov.au/worksafe/codes-practice>

Northern Territory

Work Health and Safety (National Uniform Legislation) Act 2011
 Work Health and Safety (National Uniform Legislation) Regulation 2011
 Legislation NT: <https://worksafe.nt.gov.au/laws-and-compliance/workplace-safety-laws>
 Codes of Practice NT: <https://worksafe.nt.gov.au/laws-and-compliance/codes-of-practice>

Safe Work Australia Links

Law and Regulation (All States): <https://www.safeworkaustralia.gov.au/law-and-regulation>
 Model Codes of Practice: <https://www.safeworkaustralia.gov.au/resources-publications/model-codes-of-practice>

South Australia

Work Health and Safety Act 2012 (SA)
 Work Health and Safety Regulations 2012 (SA)
 Legislation for SA: <https://www.safework.sa.gov.au/resources/legislation>
 Codes of Practice for SA: <https://www.safework.sa.gov.au/workplaces/codes-of-practice#COPs>

Model Codes of Practice

- Managing noise and preventing hearing loss at work
- Confined spaces
- Labelling of workplace hazardous chemicals
- Managing risks of hazardous chemicals in the workplace
- Welding processes
- First aid in the workplace
- Managing the risk of falls at workplaces
- Hazardous manual tasks
- Managing the risk of falls in housing construction
- Managing electrical risks in the workplace
- Demolition work
- Excavation work
- Work health and safety consultation, cooperation and coordination
- Managing the work environment and facilities
- How to manage work health and safety risks
- Managing risks of plant in the workplace
- Construction work

Tasmania

Work Health and Safety Act 2012
 Work Health and Safety (Transitional and Consequential Provisions) Act 2012
 Work Health and Safety Regulations 2012
 Work Health and Safety (Transitional) Regulations 2012
 Legislation for TAS: <https://worksafe.tas.gov.au/topics/laws-and-compliance/acts-and-regulations>
 Codes of Practice for TAS: <https://worksafe.tas.gov.au/topics/laws-and-compliance/codes-of-practice>

Details of permits, licenses or access required by regulatory bodies (add or delete as required):

- Permits from local council
- Authorisation to commence work
- Any required documents.