

Exposure To Chemical Fumes Risk Assessment

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

THIS RISK ASSESSMENT IS APPROVED BY THE PCBU ON THE 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:	

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:								Notes on Hierarchy of Controls:	
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.								Remember to apply controls in the preferred order shown by the coloured pyramid:	
3H Review and approve additional controls before task starts. Senior supervisor sign-off needed.								1. Eliminate	
2M Ensure all nominated controls are in place and effective. Proceed with caution; monitor conditions.								2. Substitute	
1L Proceed, following standard operating procedures. Monitor and keep records.								3. Isolate	
								4. Engineering	
								5. Administrative	
								6. PPE	
Consequence Scale:								Always document why a lower-order control is accepted if elimination or substitution is not reasonably practicable.	
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				
								<i>aligned with Safe Work Australia's Managing the risk of fatigue at work (2023) and ISO 45001:2018 clauses 6–8.</i>	

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. Preparation	Exposure to fumes, Inhalation of toxic vapours	3H	<p>Conduct a risk assessment before starting work</p> <p>Ensure all workers are trained in the safe handling of chemicals</p> <p>Review Safety Data Sheets (SDS) for all chemicals to be used</p> <p>Prepare and maintain an inventory of chemicals on site</p> <p>Ensure appropriate signage is visible in chemical storage areas</p> <p>Store chemicals in well-ventilated areas away from ignition sources</p> <p>Ensure that spill kits are easily accessible in the event of a chemical spill</p> <p>Organise work areas to minimise the number of people exposed</p> <p>Ensure that adequate ventilation is provided during handling</p> <p>Implement a job rotation system to limit exposure time</p>	2M
2. Chemical Storage	Chemical spills, Release of toxic vapours	4H	<p>Use appropriate storage containers with clear labelling</p> <p>Avoid overstocking to prevent container leakage and spillage</p> <p>Separate incompatible chemicals using barriers or distance</p> <p>Install secondary containment systems to manage spills</p> <p>Ensure all storage areas have sufficient ventilation systems</p> <p>Regularly inspect storage containers for integrity</p> <p>Provide training on proper storage techniques</p> <p>Ensure storage areas are only accessible by authorised personnel</p> <p>Use fire-resistant cabinets for flammable substances</p> <p>Place chemicals at appropriate heights to minimise spill risk</p>	3H
3. Mixing Chemicals	Chemical reaction, Fume release	4A	<p>Wear full protective clothing including gloves and goggles</p> <p>Conduct mixing in areas with adequate ventilation or fume hoods</p> <p>Add chemicals in the correct order to prevent reactions</p> <p>Use mechanical aids to minimise manual handling</p> <p>Train workers in emergency procedures for chemical exposure</p> <p>Ensure spill kits and first aid equipment are on site</p> <p>Follow manufacturer guidelines and instructions for mixing</p> <p>Have a buddy system to monitor each other's safety</p>	2M

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			Maintain clear communications during the process Use automated systems to reduce manual involvement if possible	
4. Application of Chemicals	Inhalation of fumes, Contact with skin	3H	[REDACTED]	1L
5. Waste Disposal	Exposure to harmful fumes, Chemical spillage	3H	[REDACTED]	2M
6. Emergency Response	Chemical exposure, Inadequate first aid response	4A	[REDACTED]	2M

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7. Ventilation Systems Maintenance	System failure, Build-up of fumes	4A		2M
8. Monitoring and Record Keeping	Inadequate data, Non-compliance with regulations	3H		2M
9. Staff Training	Inadequate training, Unfamiliarity with safety protocols	3H		1L

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10. Equipment Maintenance	Equipment failure, Ineffective control measures	3H		2M
11. Personal Protective Equipment (PPE) Usage	Inadequate protection, Improper use	3H		2M
12. Handling and Transporting Chemicals	Chemical spillage, Inhalation of fumes	4A		2M

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13. Use of Protective Barriers	Exposure to chemicals, Cross-contamination	3H		2M
14. Housekeeping and Decontamination	Chemical residue, Slips and trips	3H		1L
15. Review and Continuous Improvement	Outdated procedures, Lack of adaptability	3H		1L

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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 IF 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 2017

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) Regulations 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>

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

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>

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.