

Material Mixing Operations Risk Assessment

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:	

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	Slips, trips, and falls, Improper lifting techniques	3H	<ul style="list-style-type: none"> - Keep walkways clear of obstruction at all times - Use correct lifting techniques when handling materials - Conduct pre-start checks on all equipment - Ensure proper lighting in the work area - Wear appropriate footwear to reduce slip risk - Train workers on safe manual handling practices - Display signage on any wet or uneven surfaces - Regularly inspect and maintain all tools and equipment - Establish a clean-as-you-go practice - Implement a housekeeping schedule for regular cleaning 	1L
2. Material Identification	Chemical exposure, Incorrect material selection	3H	<ul style="list-style-type: none"> - Use Safety Data Sheets (SDS) to identify materials - Train staff to recognise hazardous chemicals - Store chemicals according to their compatibility - Label all materials clearly and accurately - Conduct regular inventory checks - Establish verification procedures for material selection - Have emergency equipment available for chemical exposure - Use appropriate PPE when handling materials - Segregate incompatible materials - Conduct periodic audits of the material handling process 	2M
3. PPE Selection	Improper PPE use, PPE damage	3H	<ul style="list-style-type: none"> - Provide training on correct PPE usage and limitations - Regularly inspect PPE for damage before and after use - Replace PPE according to the manufacturer's guidelines - Ensure correct fit of PPE for all employees - Store PPE in a clean and dry environment - Use a PPE checklist before work commencement - Establish a PPE maintenance and repair schedule - Have supervisors monitor PPE compliance 	1L

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			- Supply suitable PPE for specific hazards - Conduct refresher training on PPE regularly	
4. Equipment Inspection	Equipment malfunction, Electrical hazards	4A	1. Inspect equipment for damage or wear before use. 2. Ensure all electrical components are properly grounded. 3. Use insulated tools when working with electrical equipment. 4. Lock out/tag out equipment before performing maintenance. 5. Report any equipment issues to the supervisor immediately. 6. Follow proper lifting techniques when moving equipment. 7. Keep work area clean and free of clutter. 8. Use proper storage procedures for equipment. 9. Regularly inspect safety equipment (PPE). 10. Ensure all personnel are trained on equipment use.	2M
5. Mixing Machine Setup	Machine entanglement, Noise pollution	4A	1. Read and understand the machine's safety manual. 2. Wear appropriate PPE (hard hat, safety glasses, earplugs). 3. Ensure the machine is properly guarded before operation. 4. Use proper locking and tagging procedures. 5. Minimize noise exposure by using hearing protection. 6. Keep hands and clothing away from moving parts. 7. Use proper lifting techniques for heavy components. 8. Regularly inspect the machine for wear and tear. 9. Follow proper storage procedures for tools and equipment. 10. Ensure all personnel are trained on machine setup.	2M
6. Material Addition	Spill incidents, Manual handling injuries	3H	1. Use proper lifting techniques (bend knees, lift with back). 2. Wear appropriate PPE (gloves, safety glasses). 3. Use proper storage procedures for materials. 4. Keep work area clean and free of clutter. 5. Use proper disposal procedures for waste materials. 6. Regularly inspect equipment for damage. 7. Follow proper storage procedures for tools and equipment. 8. Ensure all personnel are trained on material handling. 9. Use proper disposal procedures for waste materials. 10. Regularly inspect equipment for damage.	1L

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7. Mixing Process Initiation	Uncontrolled chemical reactions, High-pressure release	4A		2M
8. Monitoring and Control	Temperature fluctuations, Gas emissions	3H		2M
9. Completion of Mixing Cycle	Residual chemical exposure, Unexpected machine operation	3H		1L

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10. Product Sampling	Cross-contamination, Biological exposure	3H		2M
11. Waste Management	Chemical spills, Improper waste disposal	3H		1L
12. Equipment Cleaning	Exposure to cleaning chemicals, Injury from tools	3H		1L

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13. Recordkeeping	Data entry errors, Data loss	2M		1L
14. Safety Review	Incomplete risk assessment, Overlooked safety protocols	2M		1L
15. Staff Training and Development	Skill discrepancies, Inadequate Emergency Preparedness	3H		1L

on, Delayed incident

2M

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.