

Metal Sputtering Operation 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	Uneven surfaces, Slippery floors	3H	<ul style="list-style-type: none"> - Ensure stable and level flooring. - Provide anti-slip mats at workstations. - Regularly inspect surfaces for hazards. - Schedule routine cleaning processes. - Provide training on hazard recognition. - Install warning signs on hazard areas. - Ensure appropriate lighting is available. - Evaluate floor drainage systems. - Provide proper footwear for workers. - Implement moisture control techniques. 	2M
2. Setting Up Equipment	Electric shock, Improper assembly	4H	<ul style="list-style-type: none"> - Use equipment as per the manufacturer's guidelines. - Ensure all equipment is grounded. - Implement lockout/tagout procedures. - Train workers on equipment setup. - Provide personal protective equipment (PPE). - Regularly inspect equipment for damage. - Use circuit breakers and surge protectors. - Ensure use of insulated tools. - Establish supervision protocols for setup steps. - Maintain a checklist for setup procedures. 	3H
3. Material Handling	Manual handling injuries, Chemical exposure	3H	<ul style="list-style-type: none"> - Provide manual handling training. - Implement use of hoists or lifting equipment. - Store chemicals in labelled containers. - Use appropriate PPE for handling chemicals. - Establish spill response procedures. - Regularly audit storage facilities. - Use mechanical aids for heavy items. - Provide SDS for chemicals on-site. 	2M

Injury Type	Frequency	Prevention Measures
Burns, Heat injuries	4A	<ul style="list-style-type: none"> - Install emergency showers and eyewash stations. - Provide training on proper handling of hot materials. - Use appropriate PPE (heat-resistant gloves, clothing). - Establish safe work practices for handling hot components. - Ensure adequate ventilation in areas with heat sources. - Post warning signs for hot surfaces. - Regular maintenance of equipment to prevent overheating. - First aid training for heat-related injuries. - Limit exposure time to high-temperature areas. - Use barriers to protect workers from hot parts. - Implement a permit-to-work system for high-temperature tasks. - Provide cooling breaks in hot environments. - Hydration and electrolyte replacement. - Acclimatization for workers in hot climates. - Monitor weather conditions and adjust work schedules. - Use shade or sun protection for outdoor work. - Regular health monitoring for heat stress. - Emergency response plan for heat-related incidents. - Clear communication of safety protocols. - Supervision and enforcement of safety rules. - Encourage a safety culture where workers report hazards. - Regular safety audits and reviews. - Provide access to cooling facilities. - Use of heat-resistant PPE for all tasks. - Training on recognizing signs of heat stress. - Immediate response to heat-related symptoms. - First aid kit with cooling packs. - Designated cooling areas with fans. - Hydration stations with electrolyte drinks. - Acclimatization schedule for new workers. - Weather monitoring system. - Shade structures for outdoor work. - Sunscreen and protective clothing. - Health checks before and after work. - Emergency contact information. - Clear signage for safety zones. - Regular safety meetings. - Encourage workers to look out for each other. - Document all incidents and near misses. - Review and improve safety measures. - Provide cooling vests or blankets. - Use of heat-resistant PPE for all tasks. - Training on recognizing signs of heat stress. - Immediate response to heat-related symptoms. - First aid kit with cooling packs. - Designated cooling areas with fans. - Hydration stations with electrolyte drinks. - Acclimatization schedule for new workers. - Weather monitoring system. - Shade structures for outdoor work. - Sunscreen and protective clothing. - Health checks before and after work. - Emergency contact information. - Clear signage for safety zones. - Regular safety meetings. - Encourage workers to look out for each other. - Document all incidents and near misses. - Review and improve safety measures.
Burns from hot parts	4A	<ul style="list-style-type: none"> - Use barriers to protect workers from hot parts. - Implement a permit-to-work system for high-temperature tasks. - Provide cooling breaks in hot environments. - Hydration and electrolyte replacement. - Acclimatization for workers in hot climates. - Monitor weather conditions and adjust work schedules. - Use shade or sun protection for outdoor work. - Regular health monitoring for heat stress. - Emergency response plan for heat-related incidents. - Clear communication of safety protocols. - Supervision and enforcement of safety rules. - Encourage a safety culture where workers report hazards. - Regular safety audits and reviews. - Provide access to cooling facilities. - Use of heat-resistant PPE for all tasks. - Training on recognizing signs of heat stress. - Immediate response to heat-related symptoms. - First aid kit with cooling packs. - Designated cooling areas with fans. - Hydration stations with electrolyte drinks. - Acclimatization schedule for new workers. - Weather monitoring system. - Shade structures for outdoor work. - Sunscreen and protective clothing. - Health checks before and after work. - Emergency contact information. - Clear signage for safety zones. - Regular safety meetings. - Encourage workers to look out for each other. - Document all incidents and near misses. - Review and improve safety measures. - Provide cooling vests or blankets. - Use of heat-resistant PPE for all tasks. - Training on recognizing signs of heat stress. - Immediate response to heat-related symptoms. - First aid kit with cooling packs. - Designated cooling areas with fans. - Hydration stations with electrolyte drinks. - Acclimatization schedule for new workers. - Weather monitoring system. - Shade structures for outdoor work. - Sunscreen and protective clothing. - Health checks before and after work. - Emergency contact information. - Clear signage for safety zones. - Regular safety meetings. - Encourage workers to look out for each other. - Document all incidents and near misses. - Review and improve safety measures.

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7. Adjustments and Maintenance	Mechanical injury, Electrical burn	4A		3H
8. Shutdown Process	Electrocution, Residual burns	3H		2M
9. Cleaning	Exposure to cleaning chemicals, Slip hazards	3H		2M

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10. Waste Management	Chemical spills, Injury from sharp waste	3H		2M
11. Inspections and Audits	Slips, Unchecked equipment faults	3H		1L
12. Reporting and Documentation	Data loss, Incomplete records	2M		1L

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13. Emergency Preparedness	Poor emergency response, Communication failure	4A		2M
14. Training and Competence	Inadequate knowledge, Non-compliance	4A		2M

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15. Review and Continuous Improvement	Stagnant safety practices, Missed risk factors	3H	<div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> </div>	1L

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.