

**Tile Cutting Grinding and Silica Dust Control**

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			<b>Elimination</b> Remove the hazard.	
LIKELY	2 MODERATE	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4A ACUTE	DO NOT PROCEED	<b>Substitution</b> 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.	<b>Engineering</b> 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:	
<b>4A</b>	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.
<b>3H</b>	Review and approve additional controls before task starts. Senior supervisor sign-off needed.
<b>2M</b>	Ensure all nominated controls are in place and effective. Proceed with caution; monitor conditions.
<b>1L</b>	Proceed, following standard operating procedures. Monitor and keep records.

  

Consequence Scale:			
Consequence	People (injury/illness)	Project / Assets	Compliance / Reputation
<b>Catastrophic</b>	Fatality or permanent total disability	project shutdown	Significant regulator intervention; criminal prosecution
<b>Major</b>	Serious injury/illness (hospital > 5 days)	critical delay	Improvement notice; major media coverage
<b>Moderate</b>	Medical-treatment injury; lost-time > 1 day	moderate delay	Minor breach; adverse client comment
<b>Minor</b>	First-aid only, no lost time	negligible delay	Isolated non-conformance
<b>Insignificant</b>	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. WHS Governance, Duties and Legal Compliance	<ul style="list-style-type: none"> <li>Lack of clear allocation of WHS duties for tile cutting, grinding and silica dust control under WHS Act 2011 and WHS Regulations</li> <li>Failure to identify tile cutting, grinding and drilling into tiles or stucco as a crystalline silica process requiring specific risk management</li> <li>Absence of a documented WHS management plan for silica and hazardous dusts on projects involving tile saws, grinders and tile cutters</li> <li>Inadequate consultation with workers and health and safety representatives (HSRs) on changes to cutting methods or equipment</li> <li>Poor coordination of WHS responsibilities between PCBUs (e.g. builders, tiling contractors, labour hire providers) on shared worksites</li> <li>No system to ensure codes of practice (e.g. Managing the risks of respirable crystalline silica from engineered stone, and other relevant guidance) are reviewed and applied as far as reasonably practicable</li> </ul>	4A	<ul style="list-style-type: none"> <li>Establish and maintain a WHS management system that explicitly addresses tile cutting, grinding, tile saw use, tile drills and respirable crystalline silica (RCS) in line with WHS Act 2011 and WHS Regulations</li> <li>Define and document WHS roles, responsibilities and due diligence obligations for officers, managers, supervisors and workers involved in tiling operations</li> <li>Develop a silica and dust control procedure that covers all tile cutting processes, including power saws, grinders, tile cutters, drilling into tile or stone surfaces, and cutting for outlet box inserts</li> <li>Ensure consultation arrangements with workers and HSRs are in place and used when selecting cutting methods, ventilation systems, and PPE for tile cutting and grinding</li> <li>Implement formal PCBU consultation and coordination arrangements (e.g. WHS coordination plans, pre-start site meetings) on multi-PCBU sites covering silica dust control and machine safety requirements</li> <li>Schedule periodic compliance reviews against WHS legislation, relevant codes of practice and Safe Work Australia guidance on silica and power tool safety, with documented corrective actions</li> </ul>	2M
2. Silica and Dust Risk Identification, Assessment and Monitoring	<ul style="list-style-type: none"> <li>Failure to identify tiles, grout, adhesives, backing boards or stucco renders that contain respirable crystalline silica or other hazardous constituents</li> <li>Inadequate task-based risk assessment for tile cutting processes including dry cutting, grinding, drilling and shaping operations</li> <li>No monitoring or validation of respirable crystalline silica (RCS) and nuisance dust levels in work areas with heavy use of tile saws and grinders</li> <li>Underestimation of cumulative exposure from repeated short tile cutting tasks across a shift or multiple projects</li> </ul>	4A	<ul style="list-style-type: none"> <li>Implement a formal silica and hazardous dust identification process for all tiling projects, including materials review (SDS, manufacturer technical data) before works commence</li> <li>Require documented RCS risk assessments for all tile cutting, grinding and drilling tasks, including disassembly and reassembly of large tiling machines where dust residues may be present</li> <li>Engage competent occupational hygienists as required to undertake baseline and periodic personal exposure monitoring for RCS during representative tile cutting and grinding activities</li> <li>Maintain a database of monitoring results, health surveillance data and workplace inspections to track trends and trigger review of controls where exposures approach or exceed internal trigger levels</li> <li>Review RCS risk assessments whenever there is a change in materials, equipment (e.g. new tile saw model, different grinder guards) or cutting methods (wet versus dry), and communicate changes to workers</li> </ul>	2M

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
	<ul style="list-style-type: none"> <li>Lack of system for reviewing incident reports, health surveillance results and inspection findings related to dust exposure</li> </ul>			
3. Plant Selection, Design and Engineering Controls for Dust	<ul style="list-style-type: none"> <li>Procurement of tile saws, grinders and tile cutters that are not compatible with wet-cutting or integrated dust extraction systems</li> <li>Use of grinders for tile cutting without appropriate guards, shrouds or local exhaust ventilation attachments</li> <li>Inadequate design of large tiling machines leading to difficult access for maintenance and cleaning, causing dust accumulation and exposure during servicing</li> <li>Failure to segregate high-dust tile cutting areas from general work zones, increasing exposure to other trades and occupants</li> <li>Reliance on dry-cutting techniques when reasonably practicable wet-cutting or on-tool extraction methods are available</li> </ul>	4A	<ul style="list-style-type: none"> <li>Implement an engineering control specification for tile cutting and grinding plant, requiring compatibility with wet-cutting, on-tool dust extraction, and appropriate guarding and interlock systems</li> <li>Standardise the use of tile saws and grinders used with compliant blade guards, dust shrouds and HEPA-rated dust extraction where wet-cutting is not practicable</li> <li>Designate and physically separate tile cutting stations with either enclosed or partially enclosed booths, local exhaust ventilation or water-suppressed cutting tables as appropriate</li> <li>Ensure large tiling machines are selected or modified to allow safe access for maintenance and cleaning including removable covers, lockable isolators and dust-containment features</li> <li>Adopt a hierarchy-based procurement policy that prioritises lower-dust equipment and processes (e.g. wet-cut tile saws over dry-cut grinders) and documents justification where higher-risk plant must be used</li> </ul>	2M
4. Plant Management, Inspection, Maintenance and Isolation	<ul style="list-style-type: none"> <li>Lack of a scheduled maintenance program for tile saws, tile cutters, grinders leading to missing guards, ineffective water feeds and degraded extraction systems</li> <li>Uncontrolled modification or removal of guards, shrouds or water delivery components on tile cutting plant</li> <li>Failure to isolate and tag out large tiling machines during disassembly, reassembly, servicing or blade changes</li> <li>Inadequate inspection regime for electrical safety, leading to shock or fire risks in wet tile cutting environments</li> <li>Use of incorrect or damaged cutting discs and blades on tile saws and grinders due to poor stock control and tool management systems</li> </ul>	3H	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	1L

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
5. Safe Systems of Work and Procedure Development	<ul style="list-style-type: none"> <li>Absence of documented procedures or safe systems of work for tile cutting, grinding and drilling into tiles or stucco surfaces</li> <li>Over-reliance on generic SWMS that do not adequately address site-specific silica risks and plant configurations</li> <li>Inconsistent work practices between teams and subcontractors leading to uncontrolled dry-cutting or uncontrolled grinder use</li> <li>Inadequate planning for tile cutting sequences, resulting in ad-hoc cutting in occupied areas or confined spaces</li> <li>Lack of integration between tile cutting procedures and other site systems (e.g. hot works, confined space, isolation, permit-to-work)</li> </ul>	3H	[REDACTED]	1L
6. Training, Competency and Supervision	<ul style="list-style-type: none"> <li>Workers operating tile saws, grinders and tile cutters without formal competency assessment or verification of experience</li> <li>Insufficient training on health risks, control measures and correct use of wet-cutting and extraction systems</li> <li>Poor understanding of correct disassembly and reassembly method for large tiling machines, leading to mechanical failures or ejection</li> <li>Inadequate supervision of apprentices, new workers and labour hire personnel performing tile cutting and drilling tasks</li> <li>Failure to provide refresher training when new equipment, blades or tile materials are introduced</li> </ul>	4A	[REDACTED]	2M
7. Respiratory Protection and PPE Management	<ul style="list-style-type: none"> <li>Reliance on respiratory protective equipment (RPE) as the primary control instead of higher-order controls such as wet-cutting and extraction</li> <li>Inadequate RPE selection for RCS (e.g. use of nuisance-dust masks not compliant with P2 or higher standards)</li> </ul>	3H	[REDACTED]	1L

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
	<ul style="list-style-type: none"> <li>No fit-testing program or records for tight-fitting respirators used during tile grinding and cutting</li> <li>Poor storage, cleaning and replacement systems for RPE and protective clothing leading to contamination and reduced protection</li> <li>Inconsistent PPE requirements and enforcement between principal contractor and subcontractor workforces</li> </ul>		[REDACTED]	
8. Work Environment, Ventilation and Layout Management	<ul style="list-style-type: none"> <li>Tile cutting and grinding conducted in poorly ventilated, enclosed or partially enclosed areas without appropriate extraction or air changes</li> <li>Inadequate planning of tile cutting locations resulting in work near building air intakes, occupied areas or public interfaces</li> <li>Insufficient management of dust migration from dedicated tile cutting zones into clean areas such as offices amenities or finished apartments</li> <li>Inappropriate storage and handling of slurry and dust waste leading to dry re-suspension and secondary exposures</li> <li>Failure to consider other risks such as noise, lighting and trip hazard introduced by tile cutting equipment layout and hoses</li> </ul>	3H	[REDACTED]	1L
9. Large Tiling Machine Handling, Assembly and Disassembly Systems	<ul style="list-style-type: none"> <li>Manual handling and ergonomic risks during moving, disassembling and reassembling large tiling machines without mechanical aids or team lifts</li> <li>Incorrect reassembly leading to mechanical failure, detachment of components or loss of guarding during tile cutting operations</li> <li>Exposure to accumulated silica dust during opening of covers, removal of guards and cleaning of internal components</li> <li>Lack of clear documentation or manufacturer instructions accessible to</li> </ul>	3H	[REDACTED]	1L

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
	<ul style="list-style-type: none"> <li>workers undertaking assembly and disassembly</li> <li>Inadequate verification and sign-off of large machine set-up before use on new sites</li> </ul>		[REDACTED]	
10. Electrical, Fire and Other Physical Risk Management	<ul style="list-style-type: none"> <li>Use of power tools (grinders, tile saws, drills) with damaged leads or without RCD protection in wet cutting environments</li> <li>Overloaded temporary power supplies and multi-boards near water sources and slurry from tile cutting processes</li> <li>Fire risk from sparks generated by grinders during tile cutting near combustible materials or flammable finishes</li> <li>Uncontrolled noise levels from tile saws and grinders leading to hearing damage and interference with communication</li> <li>Flying fragments from tile or discs due to incorrect set-up, incompatible materials or lack of guard systems</li> </ul>	3H	[REDACTED]	1L
11. Contractor, Subcontractor and Labour Hire Management	<ul style="list-style-type: none"> <li>Inconsistent WHS standards between principal contractor and tiling subcontractors regarding silica dust control and plant safety</li> <li>Subcontractors providing their own tile cutters and grinders that do not meet required engineering control specifications</li> <li>Insufficient verification of training, competency and licences for workers supplied by labour hire agencies to operate tile cutting plant</li> <li>Poor communication of site-specific silica controls, exclusion zones and housekeeping expectations to short-term contractors</li> <li>Lack of performance monitoring or auditing of subcontractors' compliance</li> </ul>	3H	[REDACTED]	1L

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
	with organisational tile cutting and dust control procedures			
12. Health Surveillance, Incident Management and Worker Wellbeing	<ul style="list-style-type: none"> <li>Failure to provide appropriate health monitoring for workers with ongoing exposure to respirable crystalline silica from tile cutting and grinding</li> <li>Under-reporting or poor investigation of incidents, near misses or complaints related to dust, respiratory symptoms or eye injuries</li> <li>Inadequate systems for managing fitness for work, fatigue and mental health stressors in high-pressure tiling environments</li> <li>Lack of feedback loop between health surveillance findings, incident data and review of control measures</li> <li>Insufficient support for workers who develop silica-related health concerns or musculoskeletal disorders from repetitive cutting tasks</li> </ul>	3H	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	1L
13. Emergency Preparedness and Response for Tile Cutting Operations	<ul style="list-style-type: none"> <li>No specific emergency response planning for injuries and exposures arising from tile cutting and grinding activities</li> <li>Inadequate first aid kit and equipment for eye injuries from flying fragments or chemical splashes from tile cutting coolants</li> <li>Lack of clarity on response to uncontrolled dust releases, extraction failures or major spills of slurry in confined areas</li> <li>Poor communication protocols in the event of electrical shocks, fire or serious injury involving tile cutting equipment</li> <li>Insufficient drills or practice for site personnel to manage emergencies originating from tile cutting zones</li> </ul>	2M	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	1L
14. Documentation, Record Keeping and	<ul style="list-style-type: none"> <li>Inadequate documentation of silica risk assessments, plant inspections,</li> </ul>	2M		1L

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
Continuous Improvement	<p>maintenance, training and health surveillance for tile cutting operations</p> <ul style="list-style-type: none"> <li>• Loss or fragmentation of records between principal contractor, subcontractors and labour hire providers, leading to gaps in risk management evidence</li> <li>• Failure to systematically review and learn from incidents, monitoring results and worker feedback relating to tile cutting and grinding</li> <li>• Outdated procedures and guidance materials not reflecting current best practice or regulatory expectations for RCS control</li> <li>• Lack of measurable KPIs to track performance of tile cutting and silica management systems over time</li> </ul>		<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	

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.