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

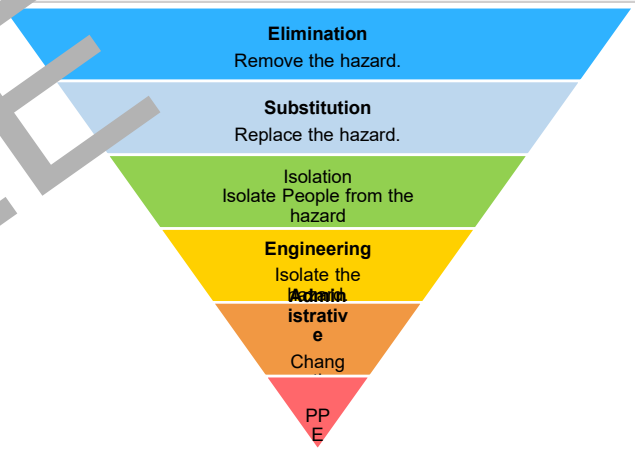
THIS RISK ASSESSMENT IS APPROVED BY THE PCBU OF THE PROJECT		
Under the Work Health and Safety Regulation (WHS Regulation), a person conducting a business or undertaking (PCBU) is required to ensure that a RISK ASSESSMENT is prepared before the proposed work starts.		
Full Name:		
Signature:	Title:	Date:

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
ALMOST CERTAIN	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4 ACUTE		
LIKELY	2 MODERATE	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4A ACUTE	DO NOT PROCEED
POSSIBLE	1 LOW	2 MODERATE	3 HIGH	4 ACUTE	4 ACUTE	3H HIGH	Rev before work
UNLIKELY	1 LOW	1 LOW	2 MODERATE	3 HIGH	4 ACU	2M MO RATE	Ensure control measures in place.
RARE	1 LOW	1 LOW	2 MODERATE	3 HIGH	3 H	1L LOW	Monitor and keep records.

HIERARCHY OF CONTROLS



Risk Rating & Required Action:

4A	Stop work. The risk is intolerable. E inate the hazar redesign the activity before proceeding. A Safe Work Method Statement (SWMS) or hi er-level authorisati is required.
3H	Review and approve additional c rols b ask arts. Senior supervisor sign-off needed.
2M	Ensure all nominated controls are in ace and effe ive. 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. Governance, Legal Compliance and WHS Duties	• Failure to recognise respirable crystalline silica (RCS) as a significant health hazard under WHS Act 2011 and WHS Regulations • Lack of a documented silica dust management plan covering cutting, grinding, polishing and handling of silica-containing products • Inadequate identification of work activities that generate silica dust, including tile cutting, grinding, drilling and use of dust-making machinery • No formal process to review changes in legislation, exposure standards, or Safe Work Australia codes of practice relating to silica • Poor integration of silica dust controls into the organisation's overall WHS management system and risk register • Lack of clearly assigned responsibilities for silica dust exposure prevention at executive, management and supervisor levels	High	• Develop and implement a written Respirable Crystalline Silica (RCS) Management Plan that aligns with the WHS Act 2011, WHS Regulations, model Code of Practice and relevant state/territory requirements • Formally identify all work activities involving potential silica dust creation (e.g. cutting tiles, grinding concrete, working with engineered stone, handling building products containing silica, mobile dust extractor use) and record them in a silica-specific risk register • Embed silica dust management into the organisation's WHS policy framework, including specific objectives for silica dust exposure prevention and continuous improvement • Appoint a competent person (e.g. WHS advisor or hygienist) to oversee RCS risk management, including exposure assessment, control implementation and review • Establish a WHS legal and standards compliance register for silica, with scheduled (e.g. annual) reviews to capture updates to exposure standards, guidance material and prohibited practices • Include silica dust risks, controls and performance indicators in executive WHS reports and Safety Committee agendas to ensure leadership oversight • Ensure consultation with workers and Health and Safety Representatives (HSRs) on all changes to silica dust management systems, including new procedures, plant, and control technologies	Medium
2. Planning, Design and Procurement of Plant, Tools and Materials	• Procurement of high-silica content materials and products without consideration of long-term health risks (e.g. engineered stone with high RCS content) • Purchase of machinery and tools that generate excessive dust (e.g. dry grinders, saws, polishers) without integrated dust collector or dust extractor systems • Selection of dust extractors and mobile dust collection units that are not fit for purpose or inadequately sized for the task, leading to ineffective RCS dust control • Failure to specify water-suppression or on-tool extraction systems in purchasing requirements for dust-making machinery	High	• Develop procurement standards that require selection of lower-silica materials where reasonably practicable and prohibit or strictly control purchase of high-silica content products where safer alternatives exist • Specify mandatory engineering controls for all dust-making machinery (e.g. on-tool extraction, shrouds, water suppression, integrated dust collectors) in purchase and hire contracts • Adopt technical specifications for dust extraction and collection systems, including minimum airflow, capture efficiency, HEPA filtration for respirable particles, and compatibility with specific tools and processes • Require suppliers to provide evidence of performance for RCS dust control (e.g. test reports, certification) and relevant WHS information, including silica content of building products • Integrate WHS review and sign-off (by a competent person) into procurement workflows for new dust-generating plant, dust collectors and dust extractor mobile units • Plan for adequate infrastructure to support engineering controls (e.g. power supply, ducting, disposal of collected dust, secure storage for extraction units) at both fixed and mobile worksites • Include lifecycle considerations in procurement (e.g. availability of replacement filters, maintenance support, and training materials for dust control equipment)	Medium

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	• Absence of engineering control criteria in plant and equipment procurement standards (e.g. minimum filtration efficiency, HEPA rating, negative pressure capability) • Inadequate planning for power, maintenance and storage needs of dust collector and dust extractor mobile systems, leading to under-utilisation or bypassing of controls			
3. Risk Management Planning and Worksite Design	• Poor worksite layout that allows silica dust to spread to adjacent work areas, amenities and public spaces • Lack of segregation between high-dust tasks (e.g. grinding, cutting tiles) and other work, increasing exposure to workers not directly engaged in dust-creating activities • Inadequate planning for ventilation and local exhaust systems, resulting in accumulation of dust and restricted visibility due to dust clouds • No formal process to assess cumulative dust exposure from multiple tasks, trades or concurrent activities • Insufficient planning for work in enclosed or partially enclosed spaces where dust and particulates can concentrate • Failure to consider prevailing wind direction and environmental conditions for outdoor dusty work, leading to uncontrolled spread of dust and respirable particles	High	• Require pre-job planning for all projects involving silica, including a documented silica dust risk assessment and worksite layout plan • Designate and physically separate high-dust zones from general work areas using barriers, exclusion zones, or enclosures, with restricted access controls • Integrate local exhaust ventilation, dust extraction and general ventilation design into project planning, ensuring airflow patterns draw dust away from workers and clean areas • Implement planning controls to phase or schedule high-dust activities separately from other tasks to limit numbers of potentially exposed workers • Develop specific procedures for work in confined or enclosed spaces involving silica dust, including enhanced ventilation, monitoring and entry controls • In outdoor environments, require planners and supervisors to consider wind direction, neighbouring properties and public areas when locating dust-generating work, and to adjust work locations or timing accordingly • Include management of restricted visibility due to dust in work planning, with requirements to suspend or modify work where visibility falls below safe thresholds for plant and vehicle operations	Medium
4. Exposure Assessment, Monitoring and Health Surveillance	• Unknown or underestimated levels of respirable crystalline silica exposure during dusty work, such as tile cutting, grinding, polishing and handling dusty building products • No systematic air monitoring to verify effectiveness of dust collectors, dust extractors and other RCS dust control measures	High	[redacted]	Medium

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	• Failure to identify workers with higher risk due to frequency, duration and intensity of exposure to dust and particulates • Absence of health monitoring and surveillance for workers exposed to silica, delaying detection of silicosis, COPD or other respiratory conditions • Inadequate record keeping of exposure data, health surveillance results and control performance, leading to poor long-term risk management decisions • No process to trigger review of controls when monitoring results or health data indicate increased exposure risk		[redacted]	
5. Training, Competency and Supervision	• Lack of worker and supervisor understanding of respirable crystalline silica exposure risk and long-term health effects • Inadequate training in the correct use, limitations and maintenance of dust collectors, dust extractor mobile units and local exhaust system • Poor knowledge of safe systems of work for managing dust exposure while grinding, cutting tile and [illegible] building products containing silica • Insufficient competency in selection, fitting and care of respiratory protective equipment (RPE) for working in dusty conditions • Supervisors not adequately trained to recognise unsafe dust-generating practices or to enforce controls and cease work when necessary • No refresher training to sustain awareness of silica dust exposure prevention measures	High	[redacted]	Medium
6. Safe Systems of Work and Operational Control	• Lack of formalised procedures for implementing controls to minimise silica exposure during routine and non-routine tasks	High	[redacted]	Medium

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SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
	• Reliance on ad-hoc or informal practices when using dust-making machinery, leading to inconsistent use of engineering and administrative controls • Failure to manage dust exposure while grinding or cutting tiles in confined or poorly ventilated areas • Inadequate procedures for managing gloss dust, fine particulates and secondary dust raised by sweeping or compressed air • No systematic approach to housekeeping, resulting in settled dust being repeatedly disturbed and contributing to ongoing exposure • Uncontrolled use of portable tools without on-tool extraction, water suppression or appropriate RPE		[redacted]	
7. Plant, Equipment and Engineering Control Management	• Dust collectors, dust extractor mobiles and local exhaust systems not properl designed, installed or commissioned, leading to inadequate capture of respirable particles • Poor maintenanc nd inspection of dust control plant sing reduced performance, leaks d re iatio f contaminated air • Blocked or damaged filters in dus collectors and extractors g exposure to dust and particulates during normal operation and filter change-out • Inadequate procedures for safe handling and disposal of collected dust, resulting in secondary exposure to silica • No performance verification (e.g. airflow checks, capture velocity measurements) for engineering controls installed for silica dust exposure prevention • Uncontrolled modification or bypassing of dust control equipment by workers or	High	[redacted]	Medium

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	contractors (e.g. removal of guards, disabling extraction for convenience)			
8. Personal Protective Equipment (PPE) and Respiratory Protection Program	• Over-reliance on PPE rather than higher-order controls to manage exposure to silica dust and respirable particles • Incorrect selection of RPE that does not provide adequate protection for RCS levels present in dusty conditions • Poor fit, maintenance and storage of RPE leading to inward leakage and reduced protection factors • Lack of systems to ensure bearded or unshaven workers do not use tight-fitting respirators, undermining silica dust exposure prevention • Inadequate management of eye and skin protection where dust and particulates create irritation or restricted visibility • Failure to ensure continuous and correct use of required PPE during all stages of dust-generati	Medium	[redacted]	Low
9. Environmental Management, Housekeeping and Visibility Control	• Accumulation of s[redacted] dust on surfaces, equipme[redacted] and floors contributing to ong[redacted] crystalline silica exposure when disturbed • Use of dry sweeping or [redacted]ssed air that re-suspends fine silica particles and gloss dust into the breathing zone • Restricted visibility due to dust clouds, increasing the risk of plant and vehicle incidents, slips, trips and falls • Uncontrolled migration of dust beyond the immediate work area, affecting other workers, visitors and neighbouring properties • Ineffective waste management for dusty materials and collected dust from dust collectors and extractors	High	[redacted]	Medium

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	• Lack of criteria or triggers to stop work when dust levels or visibility become unsafe			
10. Contractor, Supplier and Labour Hire Management	• Contractors and labour hire workers engaging in dusty work without alignment to the principal PCBU's silica dust management systems • Suppliers of dust-making machinery, building products and dust collectors failing to provide adequate information on silica content and required controls • Inconsistent expectations and control standards across multiple PCBUs on the same site, leading to uncontrolled exposure to dust and particulates • Lack of verification that contractors implement effective RCS dust control, health monitoring and training for their own workers • Poor communication of site-specific risks related to work with respirable particles and dusty conditions to short-term or transient workers	High	[redacted]	Medium
11. Incident Management, Non-Conformance and Continuous Improvement	• Under-reporting of incidents, misses and health [redacted] related exposure to dust and particulates • Inadequate investigation of events where workers were exposed to visible dust clouds or where dust controls failed • Lack of corrective action systems to address identified deficiencies in RCS dust control, training or supervision • No structured review of silica dust management performance over time, leading to repeated issues and systemic weaknesses • Poor worker feedback mechanisms on effectiveness and practicality of dust extraction and control measures	Medium	[redacted]	Low

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SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
12. Emergency Preparedness and Abnormal Conditions	• Unplanned release of large quantities of dust due to equipment failure, filter rupture or damage to dust collectors and extraction ducting • Visibility loss from sudden dust clouds affecting operation of vehicles, mobile plant and pedestrian safety • Inadequate emergency procedures for responding to acute dust exposure, including first aid and medical evaluation • No contingency plans for maintaining silica controls during power failures, plant breakdowns or severe weather events that increase dust migration • Lack of worker knowledge on how to safely respond to spills or breakages of high-silica materials or bags of powdered products	Medium	[redacted]	Low

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

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-of-codes-of-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/forms-and-resources/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

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.

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

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

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