



Australian Government

**CPCSIL4002 Supervise and manage work
with products and materials generating
respirable crystalline silica**

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Modification History

Release	Comments
1	This unit of competency was first released in CPC Construction, Plumbing and Services Training Package Release 11.0.

Application

This unit of competency specifies the skills and knowledge required to supervise and manage work involving products and materials that generate respirable crystalline silica (RCS).

The unit includes planning for and supervising the use of compliant plant, tools and equipment when working with products and materials containing crystalline silica (CS).

The unit also includes briefing workers on compliant and safe work requirements and establishing appropriate risk control measures to manage potential exposure to RCS, and reviewing work practices to support continuous improvement processes for work health and safety (WHS).

The unit applies to people with responsibility for managing health and safety, such as persons conducting a business or undertaking (PCBU), employers, supervisors and managers of employees, contractors, sub-contractors and suppliers working with products and materials containing CS.

The work may be carried out in factory or workshop settings, construction sites, commercial or residential settings, and sites such as tunnels, mines, quarries and demolition sites.

Licensing/Regulatory Information

Completion of the general construction induction training program, specified in the Safe Work Australia model *Code of Practice: Construction Work*, is required by anyone carrying out construction work. Additional Licensing, legislative, regulatory or certification requirements may apply in some states and territories. For further information, check with the relevant regulatory authority.

Pre-requisite unit(s)

Nil.

Competency field(s)

Silica Safety

Unit sector(s)

Building and Construction

Elements and Performance Criteria

<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe what needs to be done to demonstrate achievement of the element.</i>
1. Plan and prepare for work.	1.1 Check work or design requirements and workplace environment to determine level of exposure to RCS from work activity in accordance with WHS requirements, and manufacturer instructions.
	1.2 Conduct a risk assessment before work starts in accordance with WHS requirements.
	1.3 Check whether air monitoring is required and if needed, arrange appropriate air monitoring processes in accordance with WHS requirements.
	1.4 Identify WHS requirements for working with products containing CS, including relevant codes of practice, guidance material, safety data sheets (SDS), and standards, where available.
	1.5 Check relevant safety documentation is available.
	1.6 Analyse SDS or relevant technical data sheets to identify products and materials containing CS to meet work specifications and requirements.
	1.7 Plan how to implement and manage an appropriate combination of risk controls in accordance with WHS requirements.
	1.8 Check that relevant engineering controls, plant, tools, equipment, personal protective equipment (PPE) and respiratory protective equipment (RPE) eliminate or minimise worker exposure to

	RCS for the planned work, in accordance with WHS requirements and manufacturer specifications.
	1.9 Determine competency requirements for all workers performing the specified work and arrange for training, where required, in accordance with WHS requirements.
	1.10 Prepare briefing information, records and communication protocols, including management of contingencies, to cover the project's duration.
2. Conduct workplace briefings and consultations.	2.1 Explain how work activities will be monitored, including work schedules, products and materials to be used, and the related risk control measures, to all workers, and how secondary exposure risks to other workers and the public will be managed in accordance with WHS requirements.
	2.2 Assign work roles and responsibilities to workers and confirm their understanding of health and safety risks when working with products and materials containing CS.
	2.3 Discuss communication and reporting processes with workers, including responsibilities and when to seek expert or authoritative advice when working with products and materials containing CS.
	2.4 Confirm with workers what action to take if they are unsure whether products and materials contain CS, in accordance with workplace WHS requirements.
	2.5 Discuss expected safe work practices with workers, including correct use of PPE, RPE and safe work practices for working with products and materials containing CS in accordance with WHS

	requirements and manufacturer instructions.
	2.6 Explain RPE fit-testing requirements to workers and confirm their responsibilities for carrying out fit checking RPE before use, in accordance with WHS requirements and manufacturer instructions.
3. Implement safety requirements.	3.1 Develop and implement relevant safety documentation for work activity.
	3.2 Confirm workers are appropriately trained in the use of RPE, fit testing results, fit checking, maintenance, serviceability and storage, in accordance with WHS requirements and manufacturer instructions.
	3.3 Check that plant, tools and equipment meet workplace WHS requirements and that dust capture, extraction, suppression and management measures are in place and operational.
	3.4 Apply an appropriate combination of control measures based on the duration of work activity.
	3.5 Conduct or arrange fit testing for operators and other workers, where applicable, in accordance with Australian Standards and manufacturer instructions.
4. Manage worksite operations.	4.1 Confirm with workers that PPE and relevant RPE are suitable and serviceable for the type and scope of work, in accordance with WHS requirements and manufacturer specifications.
	4.2 Monitor that plant, tools, equipment and work activities are compliant with processes used to manage RCS risks, in accordance with WHS requirements.

	4.3 Conduct ongoing monitoring and assessment checks to confirm safe work practices and control measures are being complied with in accordance with WHS requirements.
	4.4 Conduct ongoing worksite consultation and communication to ensure compliance with agreed control measures and WHS requirements when working with products and materials containing CS.
	4.5 Apply appropriate escalation processes where control measures or mitigation strategies are deemed to be ineffective, compromised and/or beyond scope of supervisor's authority, in accordance with WHS requirements.
	4.6 Coordinate relevant manufacturers, suppliers, installers and other relevant trades in accordance with work schedules, product and material use and relevant risk control measures.
	4.7 Manage changes to work practices and risk controls to address varying weather and site conditions in accordance with WHS requirements.
5. Oversee compliant clean-up, maintenance and storage operations.	5.1 Check that on completion of the work activity, the work area has been cleaned, plant, tools, equipment and PPE have been cleared, and dust and slurry has been disposed of in accordance with WHS requirements.
	5.2 Check reusable RPE has been cleaned, maintained and stored correctly in accordance with manufacturer instructions.
	5.3 Check that disposable RPE and PPE are disposed of in accordance with WHS requirements and manufacturer instructions.

6. Review workplace operations.	6.1 Review work practices used when working with products and materials containing CS and confirm they comply with WHS requirements, including employee regulatory requirements.
	6.2 Review how effective the control measures were in managing exposure risks during workplace operations.
	6.3 Review the serviceability and effectiveness of the PPE, including RPE, used to reduce exposure risks for the duration of the work.
	6.4 Record, report and recommend actions to address compliance findings in accordance with workplace continuous improvement processes and requirements.
	6.5 Record and report high risk work relating to CS in accordance with WHS requirements.
	6.6 Record and store air monitoring and worker health monitoring reports in accordance with WHS requirements.

Foundation skills

Skill	Description
Numeracy	Interprets and applies numerical information including exposure levels, monitoring results, equipment settings, timeframes and resource requirements relevant to managing RCS control measures.

Range of conditions

N/A

Assessment Requirements for CPCSIL4002 Supervise and manage work with products and materials generating respirable crystalline silica

Performance Evidence

A person demonstrating competency in this unit must satisfy the requirements of the elements and performance criteria of this unit.

Specifically, the candidate must:

- demonstrate compliance with employer responsibilities, including compulsory reporting requirements
- select and supervise the application of a combination of control measures for three different work activities, such as cutting, drilling or grinding of products or materials containing crystalline silica (CS).

In doing so, the candidate must:

- confirm that suitable respiratory protective equipment (RPE) is selected and used correctly by all workers for the work activity
- verify that fit testing and fit checking of RPE have been completed and that all workers have been trained in the use, maintenance and storage of RPE
- confirm RPE fit testing results and currency where required
- verify that plant, tools and equipment are setup, used and maintained in line with selected control measures.

Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- mandatory control measures, including the hierarchy of control:
 - elimination
 - substitution
 - isolation
 - engineering controls
 - administrative controls
 - personal protective equipment (PPE)/RPE
- health risks working with products and materials containing CS
- health effects from inhaling respirable crystalline silica (RCS)
- products containing CS, including:

- engineered stone
 - concrete
 - mortar
 - bricks
 - pavers
 - tiles
 - natural stone material
 - cement sheeting
 - aerated concrete
 - sand
 - mulch
- work health and safety (WHS) policies, procedures, regulations and legislation
- how and when to access the silica register, including:
 - to confirm that required health monitoring has been completed before assigning any worker to high-risk silica work
 - providing information from the register to authorised persons or regulatory authorities upon request, according to privacy and legislative requirements
- Australian Standards, regulations and codes of practice relevant to supervising and managing work with products and materials generating RCS
- persons conducting a business or undertaking (PCBU), employers, supervisors and managers responsibilities and duty of care requirements:
 - consultation and communication processes
 - WHS regulations and legislation, and health monitoring requirements
 - related to secondary exposure of other workers and general public
 - air monitoring
 - referral for medical assessment according to jurisdictional regulatory requirements
- safety information documents:
 - codes of practice
 - guidance notes
 - job safety analysis (JSA)
 - safety data sheets (SDS)
 - safe work method statement (SWMS)
- types of silicosis based on frequency of exposure and level of dust
- industries impacted by potential exposure to RCS

- compliant use of a range of plant, tools and equipment used with products and materials containing silica content
- maintenance requirements of respirators for RCS and for power tools, plant and equipment
- maintenance and storage requirements for reusable PPE and RPE
- RPE fit testing and fit checking requirements
- manufacturer requirements
- training for RPE use, maintenance and storage
- safe use and disposal of disposable PPE and RPE
- housekeeping methods:
 - regular cleaning practices
 - wearing RPE during cleaning
 - not sweeping or blowing of dust
 - a minimum class of vacuum cleaner, according to Australian Standards
 - wet wiping
 - use of water filtration
- dust control measures
- engineering controls, including maintenance:
 - dust capture extraction
 - wet cutting methods and water suppression
 - respiratory protection
 - local exhaust ventilation
- activities generating RCS health hazards and risks may include:
 - cutting
 - crushing
 - drilling
 - grinding
 - chiselling
 - abrasive polishing
 - exfoliating or flaming
 - demolishing
 - excavating, earth moving and drilling plant operations
 - clay and stone processing machine operations
 - paving and surfacing

- mining, quarrying and mineral ore treating processes
- tunnelling
- construction labouring activities
- brick, concrete or stone cutting; especially using dry methods
- abrasive blasting (blasting agent must not contain greater than 1 per cent of CS) foundry casting
- angle grinding, jack hammering, and chiselling, tuck pointing and wall chasing of concrete or masonry
- hydraulic fracturing of gas and oil wells
- removing form work
- cleaning activities
- pottery making
- WHS policies and procedures
- reporting notifiable incidents
- WHS recording, reporting and audit requirements of records
- environmental guidelines regarding waste disposal of slurry mixtures and dust containment strategies.

Assessment Conditions

Candidates must be provided with access to:

- real or simulated worksites
- relevant tasks or work specifications
- appropriate documents, materials, tools, equipment, PPE and RPE currently approved for use in industry
- relevant codes of practice, Australian Standards, legislation, regulations and requirements of workplace policies and procedures as required by Commonwealth, state and territory regulators
- relevant environmental guideline requirements.

Mandatory Workplace Requirements

Assessment of performance evidence may be in a workplace setting or an environment that accurately represents a real workplace.

Unit Mapping Information

Previous Code and Title	Equivalence	Comments
CPCSIL4001 Supervise and manage work with products and materials generating respirable crystalline silica	Not equivalent	Edits to application, performance criteria, performance evidence, knowledge evidence, and assessment conditions.

Links

Companion volumes, including implementation guides, are found on the national training register - <https://training.gov.au/training/details/CPC>.