



Australian Government

CPCSIL3002 Work with products and materials containing crystalline silica

CPCSIL3002 Work with products and materials containing crystalline silica

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 work with products and materials containing crystalline silica (CS) and respirable crystalline silica (RCS).

The unit includes preparing for work, identifying and using appropriate tools and equipment, including personal protective equipment (PPE) and respiratory protective equipment (RPE).

The unit also covers reviewing work activities involving products and materials containing CS.

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

Licensing/Regulatory Information

Licensing, legislative, regulatory or certification requirements may apply to this unit. Relevant work health and safety (WHS) state and territory regulatory authorities should be consulted to confirm jurisdictional requirements.

Pre-requisite unit(s)

CPCSIL2002 Use and maintain respiratory protective equipment

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. Prepare to handle products and materials containing CS.	1.1 Interpret work requirements and instructions to handle identified products containing CS.
	1.2 Seek supervisor advice if the CS content of a product or material is unknown or unclear.
	1.3 Read and interpret specifications for products or materials containing CS to identify the type of product, level of risk, and required risk controls to reduce personal exposure.
	1.4 Discuss health and safety matters related to exposure to RCS with supervisor.
	1.5 Assess the risk of exposure to airborne respirable crystalline silica (RCS) for all identified products, materials and task to determine the risk level in accordance with WHS requirements.
	1.6 Select required plant, tools, equipment, PPE and RPE to carry out work in accordance with the hierarchy of controls and WHS regulatory requirements.
	1.7 Review relevant safety documentation for the planned work and work environment and report any identified issues to supervisor.
	1.8 Check serviceability of plant, tools, equipment, PPE and RPE used in the work activity in accordance with WHS procedures and manufacturer instructions before starting work.

	1.9 Report any faults or damage to plant, tools, equipment, PPE and RPE in accordance with WHS procedures.
2. Perform work.	2.1 Inspect worksite, locate services, assess hazards and apply risk controls, including required signage and barricades.
	2.2 Conduct fit check of fit-tested RPE in accordance with WHS procedures and manufacturer instructions.
	2.3 Confirm risk control measures for planned work are in accordance with WHS procedures and manufacturer instructions.
	2.4 Use the required plant, tools, equipment, PPE and RPE to complete work activity in accordance with WHS procedures and manufacturer instructions.
	2.5 Monitor and adjust risk control measures if required while completing work activity in accordance with WHS procedures.
3. Perform maintenance activities and clean-up of work area.	3.1 Identify manufacturer requirements and workplace procedures for maintaining, storing and disposing of PPE and RPE.
	3.2 Clean up and dispose of dust and slurry from work area in accordance with WHS procedures.
	3.3 Clean and inspect PPE, RPE, tools and equipment, and check their serviceability in accordance with

	WHS procedures and manufacturer instructions.
	3.4 Maintain, store and secure PPE, RPE, tools and equipment used in work activity in accordance with WHS procedures and manufacturer instructions.
	3.5 Record and report serviceability inspection results in accordance with WHS procedures and manufacturer instructions.
4. Review working with products containing CS.	4.1 Assess how effectively PPE, RPE, plant, tools and equipment mitigated exposure risks from working with products containing CS.
	4.2 Record and report WHS incidents involving work activities using products and materials containing CS as required.
	4.3 Record and report how products and materials containing CS were handled and used to support workplace continuous improvement in accordance with WHS procedures.

Range of conditions

N/A

Assessment Requirements for CPCSIL3002 Work with products and materials containing 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 safe use, cleaning and maintenance of personal protective equipment (PPE) and respiratory protective equipment (RPE), including fit checking of disposable and re-usable devices for three different work activities in accordance with manufacturer instructions
- demonstrate three different work activities, such as cutting, drilling or grinding products or materials containing crystalline silica (CS) while applying all relevant work health and safety (WHS) risk controls, including dust capture, suppression, removal and disposal measures
- demonstrate the correct selection, fitting and use of PPE and RPE
- review and report on how effective the control measures were.

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
 - PPE/RPE
- WHS risks working with products and materials containing CS, including features, commonalities and differences between CS and respirable crystalline silica (RCS)
- products containing CS, such as:
 - engineered stone
 - concrete
 - mortar
 - bricks

- pavers
- tiles
- natural stone materials
- cement sheeting
- aerated concrete
- sand
- mulch
- silica dust generated by workplace processes, including:
 - cutting
 - crushing
 - drilling
 - grinding
 - chiselling
 - abrasive polishing
 - exfoliating or flaming
 - demolition activities
- additional work activities that could generate respirable silica dust particles, may include:
 - excavation, 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, chiselling, tuck pointing and wall chasing of concrete or masonry
 - hydraulic fracturing of gas and oil wells
 - removing form work
 - cleaning activities
 - pottery making
- worksites where silica dust can be found:
 - manufacturing environment

- residential construction
 - commercial construction
 - concrete mixing plants
 - civil construction
- RPE types, and their selection, use and maintenance in accordance with Australian Standards
- Australian Standards, regulations and codes of practice relevant to working with products and materials containing CS
- WHS procedures
- relevant legislation governing handling and working with products containing CS, including monitoring requirements
- employer responsibilities and duty of care requirements:
 - consultation and communication processes
 - health monitoring
 - personal exposure monitoring
- use of PPE and compliant RPE, including disposable and re-usable devices in accordance with Australian Standards
- types of RPE, including:
 - disposable
 - half-face reusable
 - full-face reusable
 - powered air purifying respirators
- characteristics, limitations and application of RPE and factors affecting effectiveness of RPE such as beards and facial hair, sweat due to heat and humidity, and the requirement for a clean-shaven face when using tight-fitting models to ensure an effective seal
- the possible health implications of incorrect use of RPE
- range of compliant plant, tools and equipment used with products containing CS
- relevant documents with information on safe work practices and technical information on products containing CS, such as:
 - WHS policies and procedures
 - relevant jurisdictional legislation
 - relevant codes of practice
 - safe work method statements (SWMS)
 - job safety and environmental analysis (JSEA)
 - safety data sheets (SDS)

- silica risk control plan
- silica risk assessment
- product manuals
- technical specifications
- product labels
- maintenance requirements on respirators for RCS and for power tools, plant and equipment
- safe cleaning and housekeeping methods with silica dust, including cleaning and managing wet or dry material on clothing
- dust control measures.

Assessment Conditions

Candidates must be provided with access to:

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

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
CPCSIL3001 Work with products and materials containing crystalline silica	Not equivalent	CPCSIL2002 use and maintain respiratory equipment added as a pre-requisite unit of competency 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>.