



Australian Government

CPCCCO3043A Cure concrete

Release 1

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Modification History

This version first released with CPC08 Construction, Plumbing and Services Training Package Version 9.

- Changes to descriptor, elements and performance criteria, range statement, critical aspects for assessment, and methods of assessment
- Range of other minor editorial changes

Not equivalent to CPCCCO3023A Cure concrete

Unit Descriptor

This unit of competency specifies the outcomes required to carry out the initial curing process to poured concrete in order to control moisture evaporation from finished concrete. The unit includes using curing agents and curing techniques according to engineering specifications. It may also include working with others and as a member of a team.

Application of the Unit

This unit of competency supports the role of concreters working on residential, commercial or civil construction sites.

Licensing/Regulatory Information

Licensing, legislative, regulatory or certification requirements apply to concreting work in different states and territories. Candidates are advised to consult with the relevant regulatory authorities.

Pre-Requisites

CPCCOHS2001A Apply OHS requirements, policies and procedures in the construction industry

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

- | | | |
|---|-------------------------------------|---|
| 1 | Plan and prepare. | <p>1.1 Work instructions, <i>work health and safety (WHS) requirements</i> and other <i>information</i> relevant to the work are identified, confirmed and applied to <i>planning and preparation</i>.</p> <p>1.2 Plant, <i>tools and equipment</i> consistent with the requirements of the job are selected and checked for serviceability, and faults are rectified and reported before work begins.</p> <p>1.3 Material quantity requirements are identified and calculated according to plans, specifications and <i>quality requirements</i>.</p> <p>1.4 <i>Materials</i> appropriate to the work application are obtained, prepared, safely handled and located ready for use.</p> <p>1.5 <i>Environmental requirements</i> are identified for the project according to environmental plans and regulatory requirements.</p> |
| 2 | Apply curing technique to concrete. | <p>2.1 Preventive barriers are installed and maintained to prevent curing agents from affecting surrounding environment.</p> <p>2.2 <i>Curing compound</i> and <i>curing method</i> are applied and maintained on concrete surface to project specifications.</p> <p>2.3 <i>Concrete is protected</i> during curing process.</p> |

- 3 Clean up.
 - 3.1 Work area is cleared and materials disposed of, reused or recycled according to regulations, codes of practice and job specification.
 - 3.2 Tools and equipment are cleaned, checked, maintained and stored according to manufacturer recommendations and standard work practices.

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- learning skills to:
 - evaluate own actions and make judgments about performance and necessary improvements
 - respond to change, such as differences in work site, and environmental and quality requirements
- numeracy skills to calculate and confirm correct quantities of materials for work tasks
- oral communication skills to:
 - enable clear and direct communication, using questioning to identify and confirm requirements, and share information
 - report work site hazards to appropriate personnel, including faults in tools, equipment or materials
 - use language and concepts appropriate to cultural differences
- reading skills to:
 - interpret documentation, including drawings and specifications
 - interpret manufacturer instructions for safely handling tools, equipment and materials
 - understand written instructions, procedures and signage
- writing skills to complete equipment fault forms

Required knowledge

- concrete curing techniques, including curing duration and effect on ultimate strength
- processes for material storage and environmentally friendly waste management
- processes for calculating material requirements
- properties of concrete to be able to minimise waste, delay and faults in curing concrete
- quality requirements relevant to curing concrete
- types and applications of concrete materials used in the curing process
- types, characteristics, uses and limitations of plant, tools and equipment relevant to curing concrete
- types, location and use of relevant safety resources and information:
 - job safety analyses (JSA) and safe work method statements (SWMS)
 - safety data sheets (SDS)
 - signage and barricades

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment This unit of competency could be assessed by undertaking a range of tasks in the workplace or a close simulation of the workplace environment, provided that simulated or project-based assessment techniques fully replicate construction workplace conditions, materials, activities, responsibilities and procedures.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

A person should demonstrate the ability to apply curing compound and methods to a minimum of five projects each measuring a minimum of 100 square metres of finished concrete according to project specifications, using at least two of the compounds and methods specified in the range statement.

The evidence provided should demonstrate the ability to:

- locate, interpret and apply information, standards and specifications relating to curing concrete
- comply with site safety plans and procedures
- comply with organisational policies and procedures relating to curing concrete while maintaining quality requirements outlined in job specifications
- safely and effectively operate and use plant, tools and equipment required to cure concrete
- communicate and work effectively and safely with others.

Context of and specific resources for assessment

Assessment of this unit:

- must be in the context of the work environment
- may be conducted in an off-site context, provided it is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills
- must meet relevant compliance requirements.

Resource implications for assessment include:

- an induction procedure
- realistic tasks or simulated tasks covering the mandatory task requirements
- tools and equipment appropriate to applying safe work practices
- support materials appropriate to curing concrete
- workplace instructions relating to safe work practices and addressing hazards and emergencies

- safety data sheets.

Method of assessment

Assessment for this unit must verify the practical application of the required skills and knowledge, using a combination of the following methods:

- direct observation of tasks in real or simulated work conditions
- questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- review of relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

Guidance information for assessment

This unit could be assessed on its own or in combination with other units relevant to the job function for example:

- CPCCCO2022A Use and maintain concreting plant, tools and equipment.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

Assessment processes and techniques should, as far as is practical, take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Work health and safety requirements must comply with according to state and territory legislation and regulations and project safety plan, and may include:

- assistance of others or the use of manual or mechanical lifting devices with handling activities where size, weight or other issues, such as disability, are a factor
- emergency procedures, including extinguishing fires, organisational first aid requirements, and evacuation procedures
- hazard control
- hazardous materials and substances

- personal protective equipment (PPE) prescribed under legislation, regulations and workplace policies and practices
 - safe operating procedures, including the conduct of operational risk assessment and treatments associated with:
 - earth leakage boxes
 - lighting
 - power cables, including overhead service trays, cables and conduits
 - signage and restricted access barriers
 - surrounding structures
 - traffic control
 - trip hazards
 - work site visitors and the public
 - working at heights
 - working in confined spaces
 - working in proximity to others
 - working outdoors in warm climates
 - use of firefighting equipment
 - use of tools and equipment
 - workplace environmental requirements and safety.
 - instructions issued by authorised organisational and external personnel
 - memos
 - regulatory and legislative requirements relating to curing concrete, including relevant Australian standards
 - safe work procedures relating to curing concrete
 - safety data sheets
 - signage
 - verbal, written and diagrammatic instructions, including manufacturer specifications and instructions where specified
 - work bulletins
 - work schedules, plans and specifications.
 - assessing conditions and hazards
 - calculating time required to complete task
 - determining work requirements, safety plans and procedures
 - identifying and rectifying equipment defects
 - inspecting the work site.
 - hoses and sprinklers
 - rollers
 - spray applicators
 - tarpaulins and covers.
- Information*** may include:
- Planning and preparation*** must include:
- Tools and equipment*** may include:

Quality requirements must include:

- internal organisational quality policy and standards
- manufacturer specifications where specified
- relevant regulations and Australian standards
- workplace operations and procedures.

Materials may include:

- curing compounds
- evaporation retardants
- objects to hold plastic film in place
- plastic film
- steam
- water.

Environmental requirements may include:

- clean-up management
- dust and noise control
- stormwater management
- vibration management
- waste management.

Curing compounds may include:

- chlorinated compounds
- hydrocarbon compounds
- polyvinyl alcohol (PVA) compounds
- silicate compounds
- solvent-based acrylic compounds
- water
- water-based acrylic compounds
- wax-based compounds.

Curing methods may include:

- curing compounds
- fogging
- hessian overlays
- hosing
- impervious plastic membranes
- misting
- ponding
- sprinklers
- steam.

Protecting concrete must include:

- isolating and/or barricading the area
- using plastic membrane where required.

Unit Sector(s)

Concreting

Custom Content Section

Not applicable.