



Australian Government

CPCCCO3055A Install topping slabs

Release 1

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Modification History

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

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

Not equivalent to CPCCCO3025A Resurface concrete

Unit Descriptor

This unit of competency specifies the outcomes required to install bonded or unbonded topping slabs to existing concrete.

The unit includes grinding and scabbling preparation techniques. 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 for <i>planning and preparation</i> purposes.</p> <p>1.2 Plant, <i>tools and equipment</i> consistent with job requirements 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 obligations.</p> |
| 2 | Prepare concrete for topping slab. | <p>2.1 Need for concrete reinforcement is determined through consultation with <i>relevant personnel</i> and reinforcement is installed as required according to specifications.</p> <p>2.2 Preparation equipment is selected for the process.</p> <p>2.3 Existing concrete is scarified using appropriate <i>preparation techniques</i> according to specifications.</p> <p>2.4 Surface area to be topped is cleared of loose particles and debris.</p> |

- 2.5 Existing control joints in substrate are checked to ensure they are carried through and reflected in the proposed topping.
- 3 Pour concrete slab.
 - 3.1 Existing concrete surface is prepared for topping slab with bonded topping or separation material according to specifications.
 - 3.2 Topping slab is poured on to existing concrete surface and screeded to specifications.
- 4 Cure and seal concrete.
 - 4.1 Following setting, *curing agents* and *curing techniques* are applied to concrete according to specifications.
 - 4.2 Curing and sealing are maintained for period specified according to specifications.
- 5 Clean up.
 - 5.1 Work area is cleared and materials disposed of, reused or recycled according to regulations, codes of practice and job specification.
 - 5.2 Plant, 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 apply correct timings required for curing and sealing
 - 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 pre-operational checklists and simple equipment fault forms

Required knowledge

- application and use of control joints
- concrete resurfacing materials and techniques, including:
 - curing duration and effect on ultimate strength
 - role of abrasive blasting when installing bonded topping slabs
- general construction terminology
- mortar mix composition and additives relevant to topping slabs
- processes for calculating material requirements
- properties of concrete to be able to minimise waste, delay and faults in installing topping slabs
- quality requirements of the task, including:
 - internal organisational quality policy and standards
 - manufacturer specifications

- workplace operations and procedures
- processes for material storage and environmentally friendly waste management
- types and applications of concrete materials used when installing topping slabs
- types, characteristics, uses and limitations of plant, tools and equipment relevant to installing topping slabs and resurfacing existing concrete
- types, location and use of relevant safety resources and information such as:
 - job safety analyses (JSA) and safe work method statements (SWMS)
 - safety data sheets (SDS)
 - signage and barricades
- workplace and equipment safety requirements, including procedures for identifying, recording and rectifying equipment faults

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:

- prepare the surfaces of at least four existing concrete slabs each measuring at least 10 square metres; two slabs must be prepared for bonded topping slabs and two for unbonded topping slabs
- install bonded and unbonded topping slabs to prepared surfaces
- cure and finish the topping slabs to specifications
- locate, interpret and apply relevant information, standards and specifications relating to installing topping slabs
- comply with site safety plans and procedures
- comply with organisational policies and procedures relating to installing topping slabs while maintaining quality requirements outlined in job requirements
- safely and effectively operate and use plant, tools and equipment required to install topping slabs
- 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
- relevant specifications and work instructions
- tools and equipment appropriate to applying safe work practices

- support materials appropriate to activity
- 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.

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 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
 - 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 resurfacing concrete
- relevant Australian standards
- safe work procedures relating to resurfacing 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
- determining work requirements and safety plans and policies
- identifying and rectifying equipment defects
- inspecting work sites.
- must include:
 - brooms
 - floats
 - hoses

Information may include:

Planning and preparation must include:

Tools and equipment:

- scabblers
- screeds
- shovels
- trowels
- wheelbarrows
- may include:
 - concrete mixers
 - grinders
 - power trowels
 - rollers
 - sand and water blasters.

Quality requirements
must include:

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

Materials:

- must include concrete
- may include:
 - acid solutions for cleaning and etching
 - bonding agents
 - curing compounds.

Environmental requirements may
include:

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

Relevant personnel may
include:

- engineer
- site manager.

Preparation techniques
may include:

- abrasive blasting (sand or grit)
- acid etching
- grinding
- scabbling.

Curing agents may
include:

- water-based curing compounds
- hessian
- polythene sheets
- water.

Curing techniques may
include:

- applying curing agents
- applying plastic film
- hosing
- ponding
- using sprinklers.

Unit Sector(s)

Concreting

Custom Content Section

Not applicable.