

Draft 0.1

This is our work-in-progress update to CPCCCO3043 Cure concrete:
<https://training.gov.au/Training/Details/CPCCCO3043>.

We are working with industry experts to ensure the updated unit:

- meets current and anticipated industry needs
- complies with current Standards for Training Packages
- is written in clear understandable English.

Information on our training package review and development process is available here:
<http://www.artibus.com.au/project-stage>.

Summary of changes from current endorsed unit:

- code changed to comply with policy for NSSC endorsement required changes to units
- elements and PCs modified to clarify requirements
- Element 2 modified (didn't encapsulate all PCs and duplicated the unit title):
 - PC 2.2 – deleted “compounds” as there are other techniques used to cure concrete
 - new PC 2.2 Assess impact of weather on curing process, calculate duration and make any adjustments necessary to achieve required curing outcome
- performance evidence modified to require two different types of curing techniques
- knowledge simplified to remove duplication and add specificity, eg:
 - all safety and environmental requirements under WHS and environmental legislation and regulations
 - ‘workplace requirements for curing concrete, cleaning up, maintaining and storing materials, tools and equipment, quality and reporting problems’
 - new sub-points for concrete curing techniques and duration:
 - covering
 - curing compound
 - flooding or ponding
 - fogging
 - steaming
 - new knowledge points:
 - basic science of concrete:
 - chemical structure
 - plastic and hardened states
 - strength as measured using megapascals (MPa)
 - concrete hydration process and ways to minimise hydration loss during curing including using additives
 - effects of weather and climatic conditions on the properties of concrete and precautions that should be taken to minimise any potential adverse effects when curing concrete
 - methods for calculating curing duration
- assessment conditions: standard wording changed and modified requirement for candidates

Unit of Competency

CPCCON3043 Cure concrete

Modification history

Release	Comments
1	Supersedes and equivalent to CPCCCO3043A Cure concrete. The unit of competency was updated to the Standards for Training Packages 2012. This version first released with CPC Construction, Plumbing and Services Training Package Version 4.0.
2	Supersedes and equivalent to CPCCCO3043 Cure concrete. This version first released with CPC Construction, Plumbing and Services Training Package Version 6.0.

Application

This unit of competency specifies the skills and knowledge required to carry out the initial curing process to poured concrete in order to control moisture evaporation from finished concrete. It includes using curing agents and techniques in accordance with engineering specifications.

A person who has achieved this unit of competency would be expected to take responsibility for organising and completing these tasks with a high degree of self-direction.

Licensing, legislative, regulatory or certification requirements apply to this unit of competency in some states and territories. For further information, check with the relevant regulatory authority.

Prerequisite Unit

CPCCWHS2001 Apply WHS requirements, policies and procedures in the construction industry

Unit Sector

Concreting

Elements and Performance Criteria

1. Plan and prepare to cure concrete.	<ul style="list-style-type: none">1.1 Interpret specifications to confirm concrete curing methods and clarify requirements with relevant persons.1.2 Plan all work to comply with relevant legislation, regulations, standards, codes, work health and safety, environmental and workplace requirements.1.3 Identify necessary preventative barriers to comply with regulatory and workplace requirements.1.4 Select and fit personal protective equipment appropriate for work activities.1.5 Inspect work site, assess hazards and apply risk controls, including required signage and barricades.1.6 Select tools and equipment, check for serviceability and rectify or report any faults.1.7 Calculate and acquire materials for specified curing methods and safely locate them ready for use.
2. Carry out concrete curing activities.	<ul style="list-style-type: none">2.1 Install and maintain preventative barriers to stop curing agents from affecting the surrounding environment.

	<p>2.2 Assess weather and climatic conditions, calculate curing duration and make any adjustments necessary to achieve required curing outcome.</p> <p>2.3 Apply and maintain curing method on concrete surface in accordance with manufacturers' instructions and workplace requirements.</p> <p>2.4 Protect concrete during curing process in accordance with workplace requirements.</p>
3. Clean up.	<p>3.1 Clear work area and dispose of, reuse or recycle materials in accordance with regulatory and workplace requirements.</p> <p>3.2 Clean, check, maintain and store materials, tools and equipment in accordance with manufacturers' instructions, regulatory and workplace requirements.</p>

Foundation skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent to CPCCCO3043 Cure concrete

Links

Companion Volume Implementation Guide:

<https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCCON3043 Cure concrete

Modification history

Release	Comments
1	Supersedes and equivalent to CPCCCO3043A Cure concrete. The unit of competency was updated to the Standards for Training Packages 2012. This version first released with CPC Construction, Plumbing and Services Training Package Version 4.0.
2	Supersedes and equivalent to CPCCCO3043 Cure concrete. This version first released with CPC Construction, Plumbing and Services Training Package Version 6.0.

Performance Evidence

To demonstrate competency, a candidate must meet the elements and performance criteria of this unit by curing concrete in five different projects, each measuring at least 100 square metres using two curing techniques:

- curing compound
- another technique selected from the following:
 - covering
 - flooding or ponding
 - fogging
 - steaming.

Knowledge Evidence

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

- basic science of concrete:
 - chemical structure
 - plastic and hardened states
 - strength as measured using megapascals (MPa)
- concrete curing techniques:
 - covering
 - curing compound
 - flooding or ponding
 - fogging
 - steaming
- concrete hydration process and ways to minimise hydration loss during curing including using additives
- effects of weather and climatic conditions on the properties of concrete and precautions that should be taken to minimise any potential adverse effects when curing concrete
- methods for calculating curing duration
- processes for protecting concrete during curing in different weather conditions
- requirements of Australian Standards and the National Construction Code related to concrete curing
- requirements of Commonwealth and state or territory work health and safety and environmental legislation and regulations relevant to concrete curing:
 - hazard identification and risk control
 - hazardous material and waste disposal

- job safety analyses
 - personal protective equipment
 - safety data sheets
 - safe work method statements
 - safety manuals and instructions for tools and equipment
 - signage and barricades
- specifications used to interpret material quantities and concrete curing requirements
- types and applications of materials and compounds used when curing concrete
- types and purpose of concrete additives
- types, characteristics, uses and limitations of tools and equipment used when curing concrete
- workplace requirements for curing concrete:
 - cleaning up
 - maintaining and storing materials, tools and equipment
 - quality
 - reporting problems.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

Assessment must be conducted in the workplace or a simulated workplace using realistic conditions, materials, activities, responsibilities, procedures, safety requirements and environmental considerations.

Candidates must have access to documentation, specifications, materials, tools and equipment required to achieve the performance evidence.

Links

Companion Volume Implementation Guide:

<https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>