

Draft 0.1

This is our work-in-progress update to CPCCCO3050 Carry out high performance concreting:
<https://training.gov.au/Training/Details/CPCCCO3050>.

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
- application modified
- performance criteria modified to clarify requirements and remove duplication
- performance evidence requirements changed as 'high performance concrete' was not clarified and the requirement for 10 square metres not consistent with the requirements of other units at this level
- knowledge points rationalised and modified to clarify requirements
- new knowledge points:
 - processes for carrying out high performance concreting using high performance concrete with a range of compressive strengths including 100 megapascals (MPa)
 - processes for placing, finishing and curing concrete
- assessment conditions: standard wording changed and modified requirement for candidates

Unit of Competency

CPCCON3050 Carry out high performance concreting

Modification history

Release	Comments
1	Supersedes and equivalent to CPCCCO3050A Carry out high performance concreting. 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 CPCCCO3050 Carry out high performance concreting. 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 place high performance concrete onto structures requiring high strength attributes and durability. It applies to concrete work on structures such as bridges, airport runways, dams, cooling towers, foundation supports for high rise facilities, roadways and tunnels.

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 carry out high performance concreting.	<ul style="list-style-type: none">1.1 Interpret specifications for high performance concreting tasks 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 Select and fit personal protective equipment appropriate for work activities.1.4 Inspect work site, assess hazards and apply risk controls, including required signage and barricades.1.5 Select plant, tools and equipment, check for serviceability and rectify or report any faults.1.6 Calculate material quantities to meet work specifications.1.7 Acquire required materials and safely locate them ready for use.
2. Place, finish and cure high performance concrete.	<ul style="list-style-type: none">2.1 Carry out tests for each property of high performance concrete in accordance with specifications and associated testing standards.2.2 Use appropriate mechanical or manual handling techniques and processes to discharge high performance concrete into formwork.

	<p>2.3 Use required technique to ensure high performance concrete is placed in a timely manner to avoid material segregation in accordance with specifications.</p> <p>2.4 Compact or vibrate high performance concrete and screed into designated formwork in accordance with specifications and supporting drawings.</p> <p>2.5 Finish high performance concrete to specified thickness and height.</p> <p>2.6 Apply and document high performance concrete curing regime in accordance with specifications.</p> <p>2.7 Protect concrete from damage and pollution during construction using plastic membrane.</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 plant, tools and equipment in accordance with manufacturers' instructions and workplace requirements.</p>

Foundation skills

Candidates require:

- numeracy skills to calculate concrete strength grades in megapascals (MPa).

Unit Mapping Information

Supersedes and is equivalent to CPCCCO3050 Carry out high performance concreting

Links

Companion Volume Implementation Guide:

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

Assessment Requirements for CPCCON3050 Carry out high performance concreting

Modification history

Release	Comments
1	Supersedes and equivalent to CPCCCO3050A Carry out high performance concreting. 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 CPCCCO3050 Carry out high performance concreting. 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 placing, finishing and curing five different surfaces using high early strength concrete with chemical additives, each surface measuring at least 10 square metres.

Knowledge Evidence

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

- processes for carrying out high performance concreting using high performance concrete with a range of compressive strengths including 100 megapascals (MPa)
- processes for placing, finishing and curing concrete
- requirements of Australian Standards and the National Construction Code related to high performance concreting
- requirements of Commonwealth and state or territory work health and safety and environmental legislation and regulations relevant to high performance concreting:
 - hazard identification and risk control
 - hazardous material and waste disposal
 - job safety analyses
 - personal protective equipment
 - safe work method statements
 - safety manuals and instructions for plant, tools and equipment
 - signage and barricades
- types, characteristics, uses and limitations of plant, tools, equipment and materials used to carry out high performance concreting
- typical uses and applications for high performance concreting
- workplace requirements for carrying out high performance concreting:
 - cleaning up
 - maintaining and storing plant, tools and equipment
 - reporting problems
 - quality.

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, work sites, materials, plant, 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>