



Australian Government

CPCCON3050 Carry out high-performance concreting

Release: 2

CPCCON3050 Carry out high-performance concreting

Modification History

Release 2	Updated reference to general construction induction training program.
Release 1	This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0. Supersedes and is equivalent to CPCCCO3050 Carry out high performance concreting.

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 is expected to take responsibility for organising and completing these tasks with a high degree of self-direction.

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

Completion of the general construction induction training program, specified in the Safe Work Australia model *Code of Practice: Construction Work*, is required by anyone carrying out construction work. Achievement of *CPCWHS1001 Prepare to work safely in the construction industry* meets this requirement.

Pre-requisite Unit

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

Unit Sector

Concreting

Elements and Performance Criteria

Elements describe the essential outcomes.	Performance criteria describe what needs to be done to demonstrate achievement of the element.
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| 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 work tasks to comply with relevant legislation, regulations, standards, codes, work health and safety (WHS), environmental and workplace requirements.1.3 Select and fit required personal protective equipment (PPE).1.4 Inspect worksite, identify hazards, assess risks 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 and acquire material quantities to meet task specifications and safely locate materials ready for use. |
| 2 Place, finish and cure high-performance concrete. | <ul style="list-style-type: none">2.1 Carry out tests to check required properties of high-performance concrete in accordance with specifications and relevant standards.2.2 Use appropriate mechanical or manual handling techniques and processes to discharge high-performance concrete into formwork.2.3 Use required technique to ensure high-performance concrete is placed in a timely manner to avoid material segregation in accordance with specifications.2.4 Compact or vibrate high-performance concrete and screed into designated formwork in accordance with specifications and supporting drawings.2.5 Finish high-performance concrete to specified thickness and height.2.6 Apply and document high-performance concrete curing regime in accordance with specifications.2.7 Use plastic membrane to protect concrete from damage and pollution during construction. |
| 3 Clean up. | <ul style="list-style-type: none">3.1 Clear work area and dispose of, reuse or recycle materials in accordance with regulatory and workplace |

requirements.

- 3.2 Clean, check, maintain and store plant, tools and equipment in accordance with manufacturer and workplace requirements.

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 CPCCCO3050 Carry out high performance concreting

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCCON3050 Carry out high-performance concreting

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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:

- compliance requirements of legislation, regulations and Australian Standards relevant to high-performance concreting tasks:
 - environmental protection and waste disposal
 - testing required to check concrete properties
 - work health and safety (WHS)
- health risks associated with silica dust exposure
- importance of correct placement of concrete to ensure concrete durability, strength, class of finish and self-compacting properties are not impacted
- processes for placing, finishing and curing high-performance concrete using:
 - approved vibration methods
 - high-performance concrete with a range of compressive strengths, including 100 megapascals (MPa)
- 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 the work area
 - maintaining and storing plant, tools and equipment
 - quality

- reporting problems
- safety requirements, including personal protective equipment (PPE).

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, sites, materials, plant, tools and equipment required to achieve the performance criteria and performance evidence.

Links

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