



Australian Government

CPCCON3043 Cure concrete

Release: 2

CPCCON3043 Cure concrete

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 CPCCCO3043 Cure concrete

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.

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.
1 Plan and prepare to cure concrete.	1.1 Interpret specifications to confirm concrete curing methods 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 Identify necessary preventative barriers to comply with regulatory and workplace requirements.
 - 1.4 Select and fit required personal protective equipment (PPE).
 - 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 required material quantities for specified curing methods and safely locate materials ready for use.
- 2 Carry out concrete curing activities.
 - 2.1 Install and maintain preventative barriers to stop curing agents from affecting the surrounding environment.
 - 2.2 Assess weather and climatic conditions, calculate curing duration and make any adjustments necessary to achieve required curing outcome.
 - 2.3 Apply and maintain curing method on concrete surface in accordance with manufacturer and workplace requirements.
 - 2.4 Protect concrete during curing process in accordance with workplace requirements.
- 3 Clean up.
 - 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 materials, tools and equipment in accordance with manufacturer, regulatory 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 CPCCCO3043 Cure concrete

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 CPCCON3043 Cure concrete

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Performance Evidence

To demonstrate competency, a candidate must meet the elements and performance criteria of this unit by curing concrete in either a non-precast work environment or a precast work environment:

- for the non-precast work environment, curing concrete at five different sites, each measuring at least 100 square metres
- for the precast work environment, curing a minimum of three panels on five different occasions.

A total of two curing techniques must be used:

- 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 involving cement chemical reaction (hydration) dependent on water content, temperature and time:
 - effect on plastic state performance
 - benefits and non-benefits of admixture types and doses
 - plastic shrinkage cracking risk
 - effect on hardened state performance:
 - early age and later age strength development
 - drying shrinkage and cracking
- compatibilities of curing compounds with different floor finishes including vinyl, timber and natural stone products

- compliance requirements of legislation, regulations, codes and Australian Standards relevant to concrete curing tasks:
 - environmental protection and waste disposal
 - work health and safety (WHS)
- concrete curing techniques:
 - covering
 - curing compound
 - flooding or ponding
 - fogging
 - steaming
- effects of temperature, wind and low humidity on the properties of concrete:
 - detrimental effect of water addition to concrete properties
 - precautions that should be taken to minimise any potential adverse effects when curing concrete
- health risks associated with silica dust exposure
- methods for calculating curing duration
- specifications used to interpret material quantities and concrete curing requirements
- types and applications of materials and compounds used when curing concrete
- types, characteristics, uses and limitations of tools and equipment used when curing concrete
- ways to minimise moisture loss during curing using different curing methods
- workplace requirements for curing concrete:
 - cleaning up the work area
 - maintaining and storing materials, 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, materials, tools and equipment required to achieve the performance evidence.

Links

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