



Australian Government

Assessment Requirements for CPCCON3041 Place concrete

Release: 1

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Modification History

- Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.
- Supersedes and is equivalent to CPCCCO3041 Place concrete.

Performance Evidence

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

- for the non-precast work environment, placing concrete at five different sites:
 - each site must measure at least 100 square metres
 - one site must include a fall of at least 25 millimetres over 1 metre in distance
- for the precast work environment, on five different occasions, placing concrete for a minimum of three panels involving more than one truck load of concrete.

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
- compliance requirements of legislation, regulations, codes and Australian Standards relevant to concrete placement tasks:
 - damp proofing
 - environmental protection and waste disposal
 - material specifications and placement tolerances
 - minimum and maximum temperature limits for pouring concrete
 - work health and safety (WHS)
- concrete placement techniques:
 - horizontal layering

- controlling vertical drop
- cold joints and how to manage them effectively
- consolidation
- concrete reinforcement
- levelling
- screeding
- correct positioning of reinforcement for different concrete products to ensure reinforcement is free from movement and has the correct cover within tolerance
- correct concrete compaction and vibration techniques and risks associated with improper vibration
- 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 placing concrete
- health risks associated with silica dust exposure
- preparation requirements of concrete placement locations:
 - single slab
 - multi-level slab
 - set down and wet areas
 - temporary formwork
- processes for calculating material requirements at various times throughout a concrete pour
- processes for determining levels indicated by:
 - level pegs
 - lines
 - markers
- purpose and importance of slump testing and the impact to concrete strength and durability of adding water on site:
 - drying shrinkage
 - early age strength
 - density
 - cracking
 - discolouration
- specifications used to interpret concrete placement requirements:
 - methods for calculating concrete quantities
 - methods for checking minimum strength and mix specifications
 - types and applications of concrete materials
- types and purpose of concrete additives
- types, characteristics, uses and limitations of plant, tools, equipment and materials used when placing concrete
- workplace requirements for placing concrete:

- cleaning up the work area
- maintaining and storing plant, tools and equipment
- placing orders for shortfalls in materials
- 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, work sites, materials, plant, tools and equipment required to achieve the performance evidence.

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>