



Australian Government

MSMPMC315 Cast moulded concrete products

Release: 1

MSMPMC315 Cast moulded concrete products

Modification History

Release 1. New unit. Supersedes and is equivalent to PMC552052 Cast moulded concrete products

Application

This unit describes the skills and knowledge required to cast moulded concrete products. It applies to timber, glass fibre, metal casing, latex rubber, plaster and other moulds.

This unit applies to operators who are required to take responsibility for own outputs and follow established procedures to prepare moulds; place reinforcement and fittings (such as pipes and tubing, hooks and cones) and set up and operate equipment to cast and vibrate concrete. Operators are also required to work autonomously and apply their own judgement to interpret information; monitor processes; identify and address routine and non-routine problems and control hazards.

This unit applies to an individual working alone or as part of a team or group and in liaison with other shift team members, team leader and supervisor.

No licensing or certification requirements exist at the time of publication. Relevant legislation, industry standards and codes of practice within Australia must be applied.

Pre-requisite Unit

Nil

Competency Field

Operations

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Set up mould and accessories	1.1 Fit reinforcement and fittings according to work instructions 1.2 Pre-stress reinforcement 1.3 Strap pipes and accessories down 1.4 Inspect mould assembly is to specification 1.5 Check mould for defects and correct

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Prepare equipment for the mix	2.1 Set up tools required 2.2 Set up vibrators to standard 2.3 Check concrete dispenser is in action 2.4 Check mix is to standard consistency
3. Cast concrete into moulds	3.1 Check casting schedule, job specification and drawings 3.2 Clean, seal and oil moulds 3.3 Pour mix into mould at correct speed 3.4 Vibrate according to standard operating procedures (SOPs) 3.5 Finish and cover mould 3.6 Clean mould and work site
4. Rectify routine problems	4.1 Identify and rectify faults and equipment failure 4.2 Maintain records and log books of equipment operations 4.3 Identify non-routine problems and report to designated person
5. Control hazards	5.1 Identify casting hazards 5.2 Assess the risks arising from those hazards 5.3 Implement measures to control those risks

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

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

Unit Mapping Information

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Links

Companion Volume Implementation Guides are available at VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=d1287d36-dff4-4e9f-ad2c-9d6270054027>

Assessment Requirements for MSMPMC315 Cast moulded concrete products

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Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and:

- cast moulded concrete products on at least 1 occasion, including:
 - selecting and preparing moulds, accessories, equipment and materials
 - monitoring the following key variables to ensure product integrity and conformance to specification:
 - mould condition
 - amount and grade of concrete
 - consistency of mix
 - placement of reinforcing and accessories
 - placement and stressing of strands
 - compaction and vibration
 - recognising possible causes of the following routine problems:
 - raw material and mix variations
 - mould anomalies
 - casting and operating conditions
 - process errors
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Knowledge Evidence

There must be evidence the candidate has knowledge of:

- common types of moulds and their application
- causes and impact of mould wear
- problems resulting from mould leakage
- importance of vibration on compaction
- role of reinforcement, types of reinforcement and significance of concrete cover
- the potential effects of variations in raw materials and equipment operation and processes in relation to quality of product
- routine problems and factors which may affect product quality or production output, their probable causes and relevant corrective actions
- hazards from pre-stressed reinforcement

- casting hazards and:
 - their possible causes
 - potential consequences
 - risk control procedures.
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Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - casting equipment and ancillary equipment
 - materials to be cast
 - specifications, procedures and job sheets
- modelling of industry operating conditions, including:
 - routine and non-routine problems.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

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