



Australian Government

MSMPMC334 Assemble, use and maintain moulds in precast concrete manufacture

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Modification History

Release	Comments
1	This unit of competency was first released in MSM Manufacturing Training Package Release 9.0.

Application

This unit describes the skills and knowledge required to plan moulding work requirements for precast concrete products, assemble moulds, remove products from moulds and maintain moulds in optimum condition. In the context of this unit, moulds include casting beds.

The unit applies to individuals who work in accordance with pre-determined instructions and established standard operating procedures (SOPs). They work in a team, but take responsibility for their own work using discretion and judgement to monitor work processes and solve both routine and non-routine problems.

The manufacture of precast concrete products is subject to various statutory and industry requirements, and the relevant legislation, industry standards and codes of practice within Australia must be applied. Requirements may vary across states and territories.

Licensing/Regulatory Information

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite unit(s)

No prerequisite units.

Competency field(s)

N/A

Unit sector(s)

N/A

Elements and Performance Criteria

Elements	Performance Criteria
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Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Plan work requirements	1.1 Identify mould requirements from work instructions 1.2 Identify required work process, equipment and materials to meet requirements 1.3 Identify upstream and downstream processes that impact moulding work and organise tasks accordingly 1.4 Identify workplace documentation and quality assurance requirements 1.5 Identify hazards associated with moulding work and follow risk control procedures
2. Assemble moulds	2.1 Check and set up mould assembly equipment and materials in accordance with SOPs 2.2 Select and confirm required mould parts are to specification 2.3 Follow mould assembly sequence, allowing for cast-in components, in accordance with work instructions and shop drawings 2.4 Select sealers and form release agents suited to mould material and type and apply in accordance with manufacturer instructions 2.5 Check and confirm mould sealing, dimensions and tolerance against requirements 2.6 Complete final pre-pour mould checks in accordance with SOPs 2.7 Recognise potential or actual problems and make adjustments to meet required outcomes
3. Demould products	3.1 Identify and follow requirements for concrete curing check 3.2 Confirm product match to documented requirements 3.3 Complete pre-demoulding checks and confirm adequate equipment, space, time and assistance is available 3.4 Follow demoulding sequence as detailed in work instructions 3.5 Complete workplace documentation requirements in accordance with SOPs
4. Clean, inspect and maintain moulds	4.1 Dismantle moulds in accordance with SOPs 4.2 Clean mould and mould parts, using processes and cleaning agents suited to mould size and materials

	4.3 Identify any faults in surfaces, joints and hardware 4.4 Rectify minor mould faults and complete routine servicing in accordance with SOPs 4.5 Follow procedures for reporting faults that require specialised repair 4.6 Safely move and store moulds in accordance with SOPs
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Foundation Skills

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

- Numeracy skills to locate and interpret explicit information involving measurement in specifications and workplace procedures.
- Reading skills to locate and interpret explicit information in visual and text-based workplace instructions and procedures.
- Writing skills to complete familiar workplace documentation.
- Oral communication skills to share information with team members during the moulding process.
- Teamwork skills to work cooperatively with others during processes involving multiple people.

Range of conditions

No conditions apply to this unit of competency at the time of publication.

Unit Mapping Information

Current Code and Title	Previous Code and Title	Comments	Equivalence
MSMPMC334 Assemble, use and maintain moulds in precast concrete manufacture		This unit has been created to address a skill or task required by industry that is not covered by an existing unit of competency	Newly created

Assessment Requirements for MSMPMC334 Assemble, use and maintain moulds in precast concrete manufacture

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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 demonstrated the ability to:

- use timber and/or steel moulds
- complete mould assembly and product demoulding in accordance with work instructions on two occasions
- clean, inspect and maintain moulds on two occasions.

Knowledge Evidence

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- key features of work instructions about mould requirements, including:
 - types of information included and how the information is used when working with moulds, including shop drawings
 - main requirements of the Australian Standards that apply to moulds
 - documentation and traceability requirements
 - implications of not following detailed work instructions
- common types of moulds and their use in precast concrete products, including:
 - tolerances
 - differences for 3D elements
- individual mould parts and their purpose, including fixtures and fittings
- features and operating principles of commonly used tools and equipment for mould assembly and demoulding of products
- sequencing of mould assembly and demoulding of products
- types of chemicals used in moulds, including sealers, mould release agents, lubricants and retarders

- personal protective equipment requirements for use of different chemicals
- typical mould process and product problems, including early warning signs, possible causes and corrective actions
- cleaning and storage requirements for moulds
- hazards associated with the use of moulds in precast concrete manufacturing, including:
 - their possible causes
 - potential consequences
 - workplace risk controls.

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:
 - operational concrete manufacturing facility equipped with tools, machinery and materials for casting products
 - safety and personal protective equipment
 - work instructions and shop drawings
 - standard operating procedures.

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

Link

Companion volumes, including implementation guides, are found on the national training register - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=d1287d36-dff4-4e9f-ad2c-9d6270054027>.