



Australian Government

**MSMPMC333 Meet compliance and quality
requirements 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 performance outcomes, skills and knowledge required to work effectively in a precast concrete manufacturing context in accordance with compliance and quality requirements. This involves interpreting work instructions, meeting compliance requirements and monitoring quality during manufacture.

The unit applies to individuals who work in accordance with pre-determined specifications 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. They use a sound general (rather than in-depth) knowledge of precast concrete and its associated compliance and quality requirements.

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
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Interpret precast concrete work instructions	1.1 Identify required work instructions for precast concrete manufacturing process 1.2 Identify features of individual elements and how they fit together 1.3 Interpret symbols, codes, legends and diagrams in shop drawings to determine information about size, location and positioning of components 1.4 Determine required materials and equipment from work instructions
2. Monitor quality to meet requirements	2.1 Identify quality requirements, traceability and control points from work instructions 2.2 Identify factors that could impact quality at each stage of the manufacturing process 2.3 Use specified control and testing points to confirm quality requirements and identify process or product problems
3. Address compliance requirements	3.1 Source information about compliance requirements for precast concrete work 3.2 Use manufacturing work processes that comply with requirements within scope of own job role 3.3 Complete documentation in accordance with workplace and compliance requirements 3.4 Recognise potential or actual breaches of compliance requirements and report in accordance with SOPs

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 workplace instructions and procedures
 - calculate material and resource requirements.
- Reading skills to:

- locate and interpret explicit information in visual and text-based workplace instructions and procedures
- interpret information in potentially unfamiliar Australian Standards.
- Writing skills to complete familiar workplace documentation.

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

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
MSMPMC333 Meet compliance and quality requirements 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 MSMPMC333 Meet compliance and quality requirements 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:

- interpret both visual and text-based workplace instructions for two different precast concrete products and extract accurate information about requirements for each of the following:
 - moulds
 - reinforcement
 - concrete placement
 - finishing
 - curing
 - product and process compliance requirements, including traceability
- use instructions to monitor the quality of two different precast concrete products.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- types and applications of precast elements, including structural and non-structural
- overview differences between load bearing and non-load bearing elements and the basic implications for:
 - amount of detail in shop drawings
 - types of concrete required and implications for placement, curing and finishing
 - reinforcement requirements, including differences between flexural and shear reinforcement
- elements of the compliance and quality framework that governs precast concrete manufacture in Australia, and the role of each, including:
 - Australian Standards

- safety regulations and specific safety considerations associated with handling and lifting of concrete, moulds and reinforcement
 - licensing requirements for workers undertaking high-risk work
 - code(s) of practice
 - precast and sustainability, including benefits
 - internal workplace standards
- purpose and key provisions of the following Australian Standards at an overview level, and how each standard impacts different areas of work in precast concrete manufacture:
 - AS 3850 Prefabricated Concrete Elements (Parts 1, 2 and 3)
 - AS 3610 Formwork
 - AS 3600 Concrete structures
 - AS1012 Methods of testing concrete
 - AS 4671 Reinforcing
- how to source authoritative information about compliance and quality requirements when specific information may not be known
- roles and responsibilities of different workers involved in the precast concrete manufacturing process
- types of work instructions in precast concrete manufacture, including:
 - types of information included
 - format of information – structural drawings, shop drawings
 - how to interpret shop drawings, including terminology, abbreviations and labelling conventions
- general knowledge of concrete sufficient to interpret work instructions and monitor quality during all stages of the manufacturing process, including:
 - composition of concrete, including importance of water content
 - different type of concrete mixes and their application
 - different methods of casting concrete
 - how concrete reacts at each stage of the precast manufacturing process and what this means for quality
 - types of concrete quality checks, including how and when they are conducted – visual, physical and sampling.

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:
 - work instructions and shop drawings
 - standard operating procedures
 - industry compliance information relevant to the work role and geographic location.

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>.