



Australian Government

MSMPMC321 Batch mix concrete

Release: 1

MSMPMC321 Batch mix concrete

Modification History

Release 1. New unit. Supersedes and is equivalent to PMC552060 Batch mix concrete

Application

This unit describes the skills and knowledge required to batch mix concrete. It applies to concrete batching plants in the pre-mixed and manufactured concrete products sectors. It applies to wet and dry batching.

This unit applies to operators who are required to take responsibility for own outputs and follow established procedures to select, batch and load materials; operate and adjust batching and/or mixing equipment and discharge batched 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. Determine mix requirements	1.1 Identify job requirements, standards and specifications 1.2 Select the correct type of materials 1.3 Calculate quantity of materials required 1.4 Identify any material handling problems and take the appropriate action 1.5 Update material records

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. Batch mix raw materials	2.1 Set up and operate batching and/or mixing equipment to specifications and procedures 2.2 Batch materials as required by specifications and procedures 2.3 Check that materials prepared match requirements 2.4 Use ancillary equipment as required according to procedures 2.5 Discharge batched concrete into delivery trucks or mixers
3. Monitor batch mixing process	3.1 Check and adjust settings 3.2 Make routine checks and recognise developing problems 3.3 Identify equipment in need of maintenance or repair 3.4 Take samples and interpret test results 3.5 Check the production process and product complies with the appropriate quality procedures 3.6 Complete all required records
4. Maintain batch mixing plant and area	4.1 Keep the area and equipment clean and in good order 4.2 Shut down equipment 4.3 Complete maintenance checklists
5. Rectify routine problems	5.1 Identify and rectify faults and equipment failure 5.2 Maintain records and log books of equipment operations 5.3 Identify non-routine problems and report to designated person
6. Control hazards	6.1 Identify batching hazards 6.2 Assess the risks arising from those hazards 6.3 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

Release 1. New unit. Supersedes and is equivalent to PMC552060 Batch mix concrete

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 MSMPMC321 Batch mix concrete

Modification History

Release 1. New unit. Supersedes and is equivalent to PMC552060 Batch mix concrete

Performance Evidence

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

- batch mixed concrete on at least 1 occasion, including:
 - monitoring the following key variables to ensure product integrity and conformance to specification:
 - moisture content
 - sand content
 - particle size
 - quantity and mix of materials
 - equipment maintenance or repair needs
 - recognising possible causes of the following routine problems:
 - incorrect quantity of materials
 - contaminated materials and additives
 - wrong raw materials and additives
 - incorrect mixing time and technique
 - equipment faults, damage, failure.
-

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- AS 1379: Specification and supply of concrete or equivalent
- sampling and testing procedures and schedule
- principles of batch mixing concrete
- batch mixing equipment and ancillary equipment, including:
 - functions, limitations
 - start-up, operation and shutdown processes
 - the potential effects of equipment operation in relation to quality of product
- the potential effects of variations in raw materials 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
- batching hazards and:
 - their possible causes

- potential consequences
- risk control procedures.
-

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:
 - batching equipment and ancillary equipment
 - materials to be batched
 - 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.

Links

Companion Volume Implementation Guides are available at VETNet -

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