



Australian Government

MSMPMC323 Prepare asphalt

Release: 1

MSMPMC323 Prepare asphalt

Modification History

Release 1. New unit. Supersedes and is equivalent to PMC552065 Prepare asphalt

Application

This unit describes the skills and knowledge required to prepare batches of asphalt. It applies to batching plants used in the asphalt industry, including batch, continuous, fixed and mobile plants. It applies to natural bitumen obtained from oil refineries and synthetic bitumen for coloured asphalt.

This unit applies to operators who are required to take responsibility for own outputs and follow established procedures to prepare aggregates, bitumen and other materials; set and adjust plant conditions and mix and discharge asphalt. 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 Check work schedule, job specification or job card 1.2 Select correct type and quantity of aggregates and other materials 1.3 Meet all special requirements and specifications 1.4 Identify any material handling problems 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. Mix asphalt	2.1 Check setup of equipment as required by specifications and standard procedures 2.2 Set and adjust plant conditions for required product 2.3 Feed aggregate to dryer at required rates 2.4 Prepare bitumen and other materials and add to mixer 2.5 Check that materials prepared match requirements 2.6 Use ancillary equipment 2.7 Mix to obtain required results 2.8 Discharge product to asphalt storage or delivery
3. Monitor asphalt process	3.1 Check and adjust settings 3.2 Make routine checks and recognise developing problems 3.3 Recognise equipment in need of maintenance or repair 3.4 Take sample and interpret test results 3.5 Take appropriate action to ensure continuing quality production
4. Maintain batching plant and area	4.1 Keep area and equipment clean and in good order 4.2 Unload and shut down equipment 4.3 Respond to routine problems
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 asphalt preparation 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

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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 MSMPMC323 Prepare asphalt

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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:

- prepared asphalt on at least 1 occasion, including:
 - monitoring the following key variables to ensure product integrity and conformance to specification:
 - moisture content
 - temperature
 - feed rates
 - quantity and mix of aggregates, additives and bitumen
 - equipment maintenance and 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
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Knowledge Evidence

There must be evidence the candidate has knowledge of:

- principles of mixing asphalt
- types of bitumen, aggregates and additives commonly used and their role
- asphalt mixing equipment including:
 - start-up, operation and shutdown procedures
 - limitations and impact on blending and mixing efficiency and effectiveness
 - 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
- sampling and testing procedures and schedule
- asphalt preparation 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:
 - asphalt mixing plant and ancillary equipment
 - raw materials
 - 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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