



**Australian Government**

# **Assessment Requirements for MSL974026 Perform tests to determine the properties of construction materials**

**Release: 1**

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## Modification History

| Release   | Comments                                                                                                                                                                                                                                                                                                                |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Release 1 | <p>This version was released in <i>MSL Laboratory Operations Training Package Release 2.0</i>.</p> <p>Supersedes and equivalent to MSL974012 Perform tests to determine the properties of construction materials. Foundation skill information added. Range of conditions removed. Assessment requirements amended.</p> |

## Performance Evidence

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

- safely prepared at least 3 different construction material laboratory samples or test pieces and conducting multi-stage tests on them to determine their properties, including:
  - accurately interpreting client's test requests, test methods, workplace procedures and safety information.

## Knowledge Evidence

There must be evidence the candidate has knowledge of:

- relationship between properties and uses of construction materials
- details of construction materials test methods routinely used in job role, including:
  - purpose and principles of test
  - relationship between the properties and uses of construction materials
  - sample preparation procedures
  - key treatment/measurement stages
  - calculation steps to give results in appropriate units and precision
  - expected values for sample type
  - sources of uncertainty and methods for their control
- principles and concepts underpinning the test method
- principles and concepts related to equipment/instrument operation and testing, including the function of key components and effects on test of modifying variables
- pre-use checks and operating procedures for test equipment/instruments routinely used in job role
- basic equipment/method troubleshooting procedures

- common tests
- typical samples and test pieces:
  - samples of aggregates, soil, rock, concrete, road pavement and binders
  - disturbed and undisturbed samples
- corrective actions
- procedures for ensuring traceability of samples, test pieces, test data and results
- procedures for recording and reporting test results, calculations, test observations and unexpected or atypical results and equipment problems
- confidentiality requirements
- awareness of environmental sustainability issues as they relate to the work task
- legal, ethical and work health and safety (WHS) requirements specific to the work task.

## 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:
  - sample preparation and test equipment and materials specified in the test method
  - test methods and description of test set-up, data sets and technical/administrative records, and workplace procedures
  - calculator and/or computer and relevant software or laboratory information system.

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

## Links

MSL Laboratory Operations Companion Volume Implementation Guide is available from VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c63a03b-4a6b-4ae5-9560-1e3c5f462baa>