



Australian Government

Assessment Requirements for MSL974014

Classify soils

Release: 1

Assessment Requirements for MSL974014 Classify soils

Modification History

Release 1. New unit

Performance Evidence

Evidence of competence in this unit must satisfy all of the requirements of the elements and performance criteria, and include demonstration of:

- correctly classifying at least two (2) different samples of each of the following:
 - gravel
 - sand
 - silt
 - clay
- accurately interpreting job requests, client specifications and the relevant requirements of *AS 1726-1993 Geotechnical site investigations*, or its replacement
- recognising soil characteristics and logging an accurate soil description that supports the classification given to the sample
- interpreting test results and field observations with close attention to detail and making logical conclusions
- reading graphs and tables to extract classification data, such as D10, D30 and D60 points
- comparing the physical properties of samples with test results and expected values and recognising anomalous results
- safely conducting laboratory tests to resolve anomalous results
- performing accurate calculations, such as coefficients of curvature and uniformity for gravels and sands
- seeking timely advice to deal with situations beyond own technical competence
- providing classification results within the expected timeframe
- maintaining accurate and complete records and confidentiality of client information
- efficiently setting up, checking, using and cleaning/maintaining tools and equipment
- collecting, storing and disposing of waste in accordance with workplace procedures.

Knowledge Evidence

Must provide evidence that demonstrates knowledge of:

- terms, symbols and requirements of *AS 1726-1993 Geotechnical site investigations*, or its replacement, used to perform soil classifications as part of job role
- common purposes and client requirements for soil classifications conducted as part of job role
- differences between classification of soils for agricultural and engineering purposes
- common causes of misclassification of soils, such as:
 - identification of hard clay as sand or gravel
 - clayey gravels can have high plasticity
 - non-representative or contaminated samples
 - selecting inappropriate tests (e.g. clay-DCP and sand-penetrometer)
- testing methods used for soil classifications as part of job role
- relevant hazards, work health and safety (WHS) and environment requirements.

Assessment Conditions

- Judgment of competence must be based on holistic assessment of the evidence. Assessment methods must confirm consistency of performance over time, rather than a single assessment event.
- This unit of competency is to be assessed in the workplace or a simulated workplace environment. A simulated workplace environment must reflect realistic operational workplace conditions that cover all aspects of workplace performance, including the environment, task skills, task management skills, contingency management skills and job role environment skills.
- Foundation skills are integral to competent performance of the unit and should not be assessed separately.
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.
- Knowledge evidence may be collected concurrently with performance evidence or through an independent process, such as workbooks, written assessments or interviews (provided a record is kept in each case).
- This unit of competency may be assessed with:
 - MSL974012 Perform tests to determine the properties of construction materials
- Holistic assessment methods include:
 - review of soil classifications completed by the candidate
 - feedback from peers and supervisors about the candidate's ability to conduct soil classifications safely, efficiently and in accordance with work instructions
 - examples of workplace documentation completed by the candidate such as records and calculations
 - observation of the candidate performing soil classification tasks
 - oral or written questioning about soil classification procedures, test methods, common soil classification problems and interpretation of site data.
- Access is required to instruments, equipment, materials, workplace documentation, procedures and specifications associated with this unit, including, but not limited to:
 - access to job requests, client requirements, relevant site documentation and samples
 - workplace procedures, standards, test methods and equipment manuals
 - equipment and materials specified in test methods
 - safety clothing and equipment, including helmets, boots, gloves, earmuffs and glasses.
- Assessors must satisfy the assessor competency requirements that are in place at the time of the assessment as set by the VET regulator.
- The assessor must demonstrate both technical competence and currency.
- Technical competence can be demonstrated through:
 - relevant VET or other qualification/Statement of Attainment AND/OR
 - relevant workplace experience.
- Currency can be demonstrated through:
 - performing the competency being assessed as part of current employment OR
 - having consulted with a laboratory about performing the competency being assessed within the last twelve months.

Links

MSA Training Package Implementation Guides - <http://mskills.org.au/training-packages/info/>