

Title	Perform asphalt tests in a civil engineering laboratory		
Level	4	Credits	20

Purpose	People credited with this unit standard are able to perform asphalt tests in a civil engineering laboratory.
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Classification	Infrastructure Civil Engineering > Infrastructure Laboratory
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Available grade	Achieved
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Guidance Information

- 1 Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with applicable legislative and organisational requirements.
- 2 Applicable legislation, regulations, rules, standards, and codes include but are not limited to: Health and Safety at Work Act 2015, Hazardous Substances and New Organisms Act 1996, and their associated regulations and subsequent amendments; ISO/IEC 17025:2018 *General requirements for the competence of testing and calibration laboratories* available from <https://www.iso.org/store.html>; AS/NZS 2891: 2014-2015 *Methods of sampling and testing asphalt*, available from <https://standards.govt.nz>.
- 3 Evidence is required for two asphalt tests used in a civil engineering laboratory from each of the following categories:
Asphalt design tests including but not limited to – specific gravity and density, maximum specific gravity, specimen compaction, tensile strength ratio, Cantabro, fatigue, wheel tracking, resilient modulus;
Asphalt manufacture tests including but not limited to – binder content, grading, maximum specific gravity, air voids;
Asphalt construction tests including but not limited to – pavement density (cores and nuclear density meter), NAASRA (ride), permeability, texture.
Samples may include but are not limited to – prepared materials and test materials such as standards and reagents.
- 4 Definitions
Organisational requirements refer to instructions to staff on policy and procedures which are formally documented or generally accepted at the worksite. This may include legislation; industry standards and methods; national and international standards and methods; standard operating procedures; specifications; manuals; and manufacturer's information.

Perform refers to completing the individual components of the test sequentially in terms of the relevant test method and organisational requirements. Components will vary between tests and include but are not limited to – the completion of tasks, from sample and equipment preparation to the calculation and reporting of results. Perform does not include the evaluation or the troubleshooting of tests.

- 5 It is recommended people achieve Unit 26669, *Describe asphalt tests in a civil engineering laboratory*, or demonstrate equivalent knowledge and skills, before being assessed against this unit standard.

Outcomes and performance criteria

Outcome 1

Perform asphalt tests in a civil engineering laboratory.

Performance criteria

- 1.1 Samples and equipment are prepared.
- 1.2 Test is performed.
- 1.3 Test measurements are checked to be within precision requirements.
- 1.4 Test equipment is maintained and stored.
- 1.5 Results are recorded, and calculations are performed.
Range may include but is not limited to – sample site, sample description.
- 1.6 Results are reported.

Planned review date	31 December 2025
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	21 January 2011	31 December 2016
Review	2	19 February 2015	31 December 2021
Review	3	23 January 2020	31 December 2021
Review	4	22 October 2020	N/A
Rollover and Revision	5	24 October 2024	N/A

Consent and Moderation Requirements (CMR) reference	0101
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Waihangā Ara Rau Construction and Infrastructure Workforce Development Council at qualifications@WaihangāAraRau.nz if you wish to suggest changes to the content of this unit standard.