

Title	Demonstrate knowledge of concrete used for the manufacture of concrete products		
Level	3	Credits	3

Purpose	<p>This unit standard is intended for those working in the concrete product manufacturing industry</p> <p>People credited with this standard are able to demonstrate knowledge of concrete used for the manufacture of concrete products to commercial standards.</p>
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Classification	Concrete > Concrete Product Manufacture
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Available grade	Achieved
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Guidance Information

1 Assessment

This unit standard is intended to align with the *New Zealand Certificate in Concrete Construction Skills Specifications* and the *New Zealand Certificate in Concrete Construction Skills (Level 3)* [Ref: 4189].

Evidence for this standard must reflect commercial standards.

Commercial standards refer to verbal and written information covering company policy, standard operating procedures and processes, and job-specific instructions.

Working to commercial standards refers to the ability to consistently:

- perform standard processes to current industry standards, on demand and within a commercially acceptable timeframe;
- perform non-standard processes to current industry standards, on demand and within a commercially acceptable timeframe, under the supervision of a commercially competent practitioner.

Working to commercial standards must be confirmed by a person with current expertise in concrete product manufacture.

2 Definition

Concrete product manufacture refers to the manufacture of concrete products using automated or semi-automated standardised production processes.

- 3 Legislation, standards and guidance information relevant to this standard includes the following; and any subsequent amendments and replacements.

New Zealand Certificate in Concrete Construction Skills – Specifications, BCITO, May 2021, accessed at www.bcito.org.nz.

Legislation accessed at www.legislation.govt.nz

- Health and Safety at Work Act 2015
- Resource Management Act 1991
- Health and Safety at Work (General Risk and Workplace Management) Regulations 2016
- The New Zealand Building Code.

Standards accessed at www.standards.govt.nz

- NZS 3101.1&2:2006 *Concrete structures*
- NZS 3114:1987 *Specification for concrete surface finishes*
- NZS 4230:2004 *Design of reinforced concrete masonry structures*.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of concrete used for the manufacture of concrete products.

Knowledge

The main ingredients, composition and physical characteristics of fresh and hardened concrete.

Range ingredients include – cement, aggregate, water and additives that modify the appearance and workability of concrete;
physical characteristics include – colour, presence of additives, aggregate size and type and water content.

The processes for testing concrete for concrete product manufacture.

Range may include – testing fresh concrete and hardened concrete.

Performance criteria

Performance must reflect current regulatory, industry and commercial standards relevant to concrete product manufacture.

Testing processes include visual checks, tests on fresh and hardened concrete, and quality control procedures expected in a commercial concrete product-manufacturing environment.

This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	28 October 2021	31 December 2027
Review	2	26 February 2026	31 December 2027

Consent and Moderation Requirements (CMR) reference

0048

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.