

## Build\_L3\_3 Describe concrete used in construction

<b>Kaupae   Level</b>	3
<b>Whiwhinga   Credit</b>	3
<b>Whāinga   Purpose</b>	This skill standard recognises knowledge of concrete used in construction. It contributes to qualification pathways across construction trades

### Hua o te ako me Paearu aromatawai | Learning outcomes and assessment criteria

Hua o te ako   Learning outcomes	Paearu aromatawai   Assessment criteria
1. Describe the composition and characteristics of concrete used in construction.	a. Composition of concrete according to NZ Standards is described.
	b. The main characteristics of concrete are described.
2. Describe additives and their use in concrete used for construction.	a. The composition and function of each concrete additive is described.
	b. The effect of additives on the properties of concrete is described.

### Pārongo aromatawai me te taumata paearu | Assessment information and grade criteria

#### Assessment specifications:

Composition of concrete includes fine and coarse aggregate, cement, water.

Characteristics of concrete include colour, presence of additives, aggregate size and type, water content.

#### Ngā momo whiwhinga | Grades available

Achieved.

#### Ihirangi waitohu | Indicative content

##### Composition

- Cement.
- Aggregates: fine and coarse.
- The role of water.

##### Characteristics of concrete

- Strength.
- Durability.

- Workability.
- Density.
- Permeability.
- Shrinkage and cracking.

### Additives

- Set-retarding.
- Air entrained.
- Water-reducing.
- Set accelerator.
- Superplasticisers.
- Purpose and benefits.
- Effects on concrete properties.
- Environmental and health considerations.

### Uses

- Precast and in-situ structures
- Foundation slabs
- Driveways
- Block masonry

### Stages of construction

- Pour to cure and finishing.

### Rauemi | Resources

Refer to the Core Construction Skills Guidance document which includes resources, definitions, and other information of relevance to this standard, available from [qualifications@waihangaararau.nz](mailto:qualifications@waihangaararau.nz)

NZS 3109:1997 Concrete construction

NZS 3121:2015 Water and aggregate for concrete

NZS 3122:2009 Specification for Portland and blended cements (General and special purpose), available from [www.standards.govt.nz](http://www.standards.govt.nz).

### Pārongo Whakaū Kounga | Quality assurance information

<b>Ngā rōpū whakatau-paerewa  </b> Standard Setting Body	Waihanga Ara Rau Construction and Infrastructure Workforce Development Council
<b>Whakaritenga Rārangi Paetae Aromatawai  </b> DASS classification	Planning and Construction > Construction > Core Planning and Construction
<b>Ko te tohutoro ki ngā Whakaritenga i te Whakamanatanga me te Whakaōritenga  </b> CMR	0048

<b>Hātepe  </b> Process	<b>Putanga  </b> Version	<b>Rā whakaputa  </b> Date	<b>Rā whakamutunga mō te aromatawai  </b> Last date for assessment
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<b>Rēhitanga   Registration</b>	1	dd June 2024	N/A
<b>Rā arotake   Planned review date</b>	dd June 2029		

Please contact Waihanga Ara Rau Construction and Infrastructure Workforce Development Council at [qualifications@waihangaararau.nz](mailto:qualifications@waihangaararau.nz) to suggest changes to the content of this skill standard.