

## Carry out cement based grouting

**Level** 2

**Credits** 10

**Purpose** People credited with this unit standard are able to: set up for cement based grouting; carry out grouting for pre-cast, pre-stressed, and post-tensioned concrete units; and complete work operations.

**Subfield** Construction Trades

**Domain** Concrete Construction

**Status** Registered

**Status date** 26 July 2004

**Date version published** 25 January 2008

**Planned review date** 31 July 2008

**Entry information** Open.

**Accreditation** Evaluation of documentation and visit by NZQA and industry.

**Standard setting body (SSB)** Building and Construction Industry Training Organisation

**Accreditation and Moderation Action Plan (AMAP) reference** 0048

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

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### Special notes

- 1 Legislation relevant to this unit standard includes: Health and Safety in Employment Act 1992.
- 2 Reference material relevant to this unit standard includes:  
NZS 3109:1997 *Concrete construction*;  
NZS 3112.4:1986 *Method of test for concrete – Tests relating to grout*;  
New Zealand Standards are available from <http://www.standards.co.nz>.
- 3 Assessment against this unit standard must be undertaken on site. *On site* refers to a wide range of building and construction environments within which trade skills are required, and includes concrete production and concrete construction sites.

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## Elements and performance criteria

### Element 1

Set up for cement based grouting.

#### Performance criteria

- 1.1 Grouting plant is set up in accordance with NZS 3109 and job specifications.  
Range plant – mixer and pump.
- 1.2 Determination of grout flow time is in accordance with NZS 3112.4.  
Range factors to consider – scope, apparatus, needle gauge setting sample.
- 1.3 Grout is mixed in accordance with job specifications and NZS 3109.  
Range cement, additives, water, admixtures.
- 1.4 Waiting times are adhered to in accordance with NZS 3109.

### Element 2

Carry out grouting for pre-cast, pre-stressed and post-tensioned concrete units.

#### Performance criteria

- 2.1 Procedures for grouting pre-cast, pre-stressed and post-tensioned concrete units are in accordance with NZS 3109 and manufacturer's specifications.  
Range factors to consider – materials, flow time, sequence, bleeding, plant, temperature.
- 2.2 Grout leakage or interconnection of ducts are resolved in accordance with NZS 3109.

### Element 3

Complete work operations.

#### Performance criteria

- 3.1 All operations are carried out with hazard control procedures in place for identified hazards in accordance with manufacturer's recommendations, site safety plan, and Health and Safety in Employment Act 1992.
- 3.2 Documentation is completed and processed in accordance with workplace practice.

### **Please note**

Providers must be accredited by NZQA, or an inter-institutional body with delegated authority for quality assurance, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be accredited by NZQA before they can register credits from assessment against unit standards.

Accredited providers and Industry Training Organisations assessing against unit standards must engage with the moderation system that applies to those standards.

Accreditation requirements and an outline of the moderation system that applies to this standard are outlined in the Accreditation and Moderation Action Plan (AMAP). The AMAP also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

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### **Comments on this unit standard**

Please contact the Building and Construction Industry Training Organisation [national.office@bcito.org.nz](mailto:national.office@bcito.org.nz) if you wish to suggest changes to the content of this unit standard.