

Title	Mix refractory mixes, castables and mortars		
Level	4	Credits	10

Purpose	<p>This unit standard is intended for people working in the refractory installation industry.</p> <p>People credited with this unit standard are able to mix refractory mixes, castables and mortars to the level required of a commercially competent refractory installer.</p>
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Classification	Masonry > Refractory Installation
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Available grade	Achieved
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Guidance Information

1 Assessment

This unit standard is one of a family of standards intended to align with the *New Zealand Certificate in Trowel Trades – Specifications*, and the *New Zealand Certificate in Trowel Trades (Level 4)* with strands in Brick and Block Laying, Floor and Wall Tiling, Proprietary Plaster Cladding Systems, Ferro-cement Tank Manufacture, Refractory Installation, and Solid Plastering (with optional strands in Fixing Cavities and Substrates, and Decorative Mouldings) [Ref: 3137].

Evidence for this unit standard must reflect commercial competence.

Commercial competence requires a candidate to be capable of consistently performing the requirements of the unit specification:

- to current regulatory, industry and commercial standards
- within a commercially viable timeframe
- in commercial environments
- without supervision
- in different and unfamiliar contexts.

Commercial competence must be confirmed by a person who has current expertise in the refractory installation trade.

2 Definitions

Environmental conditions are a set of factors associated with the environment in which work is conducted; factors may relate to temperature, humidity, precipitation, and wind in the work environment.

Job description pack refers to all required documentation for a provided to a supervisor for a specific job. A supervisor uses the information in the job description pack to provide guidance to the refractory installers.

Manufacturer's specifications refer to the documented technical data for materials provided by the manufacturer, including the specific composition of ingredients, properties, use, and safe handling procedures for the material.

Workplace procedures refer to the documented procedures specific to a workplace which sets out the standard and the required practices of that workplace.

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

New Zealand Certificate in Trowel Trades – Specifications, BCITO, August 2021, available from www.WaihangaAraRau.nz.

Legislation accessed at www.legislation.govt.nz

- Health and Safety at Work Act 2015,
- Resource Management Act 1991.

Skill specification and performance level guidance

Skill specification

Mix refractory mixes, castables and mortars.

Knowledge

How refractory mixes, castables and mortars are mixed.

Range includes – appropriate water percentage and mixing time, adapting to environmental conditions.

How to add additional ingredients to mixes.

Range additional ingredients may include – accelerants, retardants, stainless steel fibres.

The process to set up and break down a mixing station on site.

Range consideration for – personal safety, safety of others on site, protection for the environment.

Skills

Mix refractory mixes, castables and mortars.

Range includes – water percentage, mixing time, additional ingredients, adapting to environmental conditions.

Set up and break down a mixing station on site.

Performance level guidance

Performance must reflect knowledge of different refractory mixes, castables and mortars required for different applications, in accordance with the job description pack, manufacturer's specifications, and workplace procedures

Planned review date	31 December 2027
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	27 September 2018	31 December 2025
Review	2	25 August 2022	N/A

Consent and Moderation Requirements (CMR) reference	0048
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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 Waihanga Ara Rau Construction and Infrastructure Workforce Development Council qualifications@WaihangaAraRau.nz if you wish to suggest changes to the content of this unit standard.