

Title	Demonstrate knowledge of materials used for refractory installation		
Level	4	Credits	6

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 demonstrate knowledge of materials used for refractory installation 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 Definition

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.

- 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

Demonstrate knowledge of materials used for refractory installation.

Knowledge

The different types, properties, limitations and layout of refractory bricks, blocks, tiles and components of different shapes and sizes.

Range types of refractories include – basic, high alumina, fireclay, silica, insulating, specialist;
properties include – shape, size, texture, chemical composition, density, porosity, specific gravity, strength, thermal effects, compatibility with other materials.

The different types, ingredients and composition of refractory mixes, castables and mortars.

Range includes mortars used exclusively for refractory installation;
refractory mortar may include water as a catalyst for chemicals to react.

The different types and purposes of accessories used in refractories.

Range sealants, fillers, reinforcing fibres, ceramic cups, fire blanket wool wrap.

How to read and interpret required technical data included in manufacturer's material specifications for refractory installation work.

Performance level guidance

Performance must reflect interpretation and reference to manufacturer's specifications for refractory installation work.

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

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.