Title	Install refractory mixes		
Level	4	Credits	20

Purpose	This unit standard aligns with the New Zealand Certificate in Trowel Trades – Specifications, developed on behalf of the trowel trades to specify the skills and knowledge required to achieve 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].
	This unit standard is intended for those working in the refractory installation industry.
	People credited with this unit standard are able to install refractory mixes to the level required of a commercially competent refectory installer.

Classification	Masonry > Refractory Installation
Available grade	Achieved

Guidance Information

This unit standard is one of a family of standards that align with the *New Zealand Certificate in Trowel Trades – Specifications* and should be read, interpreted and assessed in the context of those *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].

The overarching level of performance for the family of unit standards is 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.

The sufficiency of evidence required to demonstrate commercial competence against this unit standard is determined within the context of the family of unit standards aligned to the *Specifications*.

The assessor must be confident that the candidate is capable of applying the skills and knowledge included in this skill specification to the level, scope and complexity required to support the achievement of related skills included in the *Specifications*.

Commercial competence can only be demonstrated, and must be assessed, in the workplace.

The assessment of commercial competence must be corroborated and confirmed by a person who has current expertise in the refractory installation trade and has had the opportunity to regularly observe the candidate in the workplace.

Reference

New Zealand Certificate in Trowel Trades – Specifications, BCITO, February 2016, available from www.bcito.org.nz.

Skill specification and performance level guidance

Skill specification

Install refractory mixes.

Know How to set up ready to install refractory mixes.

How to install refractory mixes.

Do Set up ready to install refractory mixes.

Install refractory mixes to flat and curved surfaces.

Performance level guidance

Types of refractory mixes include plastic, monolithic, ramming, gunning, castables, acid resistant linings and man-made mineral fibres.

Set-up includes the use of formwork and moulds where required.

Installation is either fed or placed and includes placing anchors and vents.

Replacement information This unit standard was replaced by unit standard 33079.

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	27 September 2018	31 December 2025
Review	2	25 August 2022	31 December 2025

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.