

Title	Evaluate and select materials and finishes for buildings		
Level	4	Credits	10

Purpose	People credited with this unit standard are able to, for buildings: explain the characteristics and physical properties of materials and finishes used; evaluate performance and compatibility of materials and finishes used; and select materials and finishes to be used.
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Classification	Construction > Core Planning and Construction
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Available grade	Achieved
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Guidance Information

- 1 Definition
Sustainability means the ability to complete building works using a minimum of the earth's resources, and having minimal negative effect on the environment.
- 2 For the purpose of this unit standard, materials and finishes are those commonly used in construction and include – plaster board, carpet, vinyl, timber and wood-based products, glass, concrete, metal, plastic, fibre cement, sealants, paint, adhesives, insulation materials.
- 3 Assessment of this unit standard can be by simulation and/or observation.
- 4 Range of buildings – new and existing.
- 5 Legislation and publications relevant to this unit standard include: Health and Safety in Employment Act 1992 and Health and Safety in Employment Regulations 1995; Resource Management Act 1991; Building Act 2004.

Outcomes and performance criteria

Outcome 1

Explain the characteristics and physical properties of materials and finishes used in buildings.

Performance criteria

- 1.1 Materials and finishes are identified and described in terms of their characteristics and physical properties.

- 1.2 The effects of incompatibility of materials and finishes on building design and construction are described.
- Range galvanic incompatibility of metals, differential co-efficient of linear expansion of materials, timbers.
- 1.3 Identification of materials and finishes establishes their potential hazards in buildings.
- Range chemical, physical, environmental.

Outcome 2

Evaluate performance and compatibility of materials and finishes used in buildings.

Performance criteria

- 2.1 Performance of materials and finishes is evaluated in terms of function and/or use.
- Range durability, climate, environmental factors, energy, safety, fire protection properties, standards approval, strength, sustainability rating.
- 2.2 Evaluation of materials and finishes establishes their compatibility.
- 2.3 Performance of finishes is evaluated in terms of the environment's effects on them.

Outcome 3

Select materials and finishes to be used in buildings.

Performance criteria

- 3.1 Criteria for selecting materials and finishes are identified to match the design considerations.
- 3.2 Required materials and finishes are determined from supplied analyses.
- Range physical properties, durability, fire resistance, stiffness, chemical resistance, strength, ductility, weight, colour effect, sustainability rating.
- 3.3 Design and construction measures are described that eliminate or minimise the potential hazards of materials and finishes for buildings.

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	21 March 1997	31 December 2024
Revision	2	10 December 1997	31 December 2024
Revision	3	7 June 2000	31 December 2024
Review	4	20 March 2003	31 December 2024
Revision	5	19 July 2004	31 December 2024
Review	6	18 March 2011	31 December 2024
Review	7	25 August 2022	31 December 2024

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>.