

<b>Title</b>	<b>Demonstrate knowledge of roof membrane system installation, re-roofing considerations, and potential problems</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>8</b>

<b>Purpose</b>	<p>This unit standard is intended for use in the training and assessment of people carrying out the installation of roof membrane systems and covers knowledge of the preparation and installation, re-roofing considerations, and potential problems associated with the installation of single layer roof membrane systems, liquid roof membrane systems, and torch on roof membrane systems.</p> <p>People credited with this unit standard are able to demonstrate knowledge of:</p> <ul style="list-style-type: none"> <li>- the affects the environment may have on roof membrane systems;</li> <li>- a ballast roof installation;</li> <li>- the use of bond breaker release tape and detail tape on roof membrane;</li> <li>- lap bonding requirements and causes of failure;</li> <li>- the detail for mounting and fastening plant to roof membrane; and</li> <li>- roof membrane repair and restoration.</li> </ul>
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<b>Classification</b>	Plumbing, Gasfitting and Drainlaying > Roofing
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<b>Available grade</b>	Achieved
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**Guidance Information**

- 1 This unit standard has been developed for learning and assessment on-job and off-job.
- 2 References  
 Construction Contracts Act 2002;  
 Historic Places Act 1993;  
 Local Government Act 2002;  
 Building Act 2004 and associated regulations;  
 Health and Safety at Work Act 2015;  
 Resource Management Act 1991;  
 Acceptable Solutions and Verification Methods for New Zealand Building Code Clause E2 External Moisture;  
 Licensed Building Practitioner Scheme – Understanding the Regulatory Environment Booklet – available at: <http://www.business.govt.nz/lbp/the-board/getting-licensed/applying-for-licensing>;

NZS 3604:2011 Timber-framed buildings;  
NZS 3902:2004 Housing, alterations and small buildings contract;  
NZS 4121:2001, Design for access and mobility: Buildings and associated facilities;  
New Zealand Building Code Hand Book – available at:  
<http://www.building.govt.nz/building-code-compliance/building-code-and-handbooks/building-code-handbook>;  
and all subsequent amendments and replacements.

3 This unit standard applies to both new roof and re-roofing installations.

4 Range

- a Candidates must refer to current legislation and Standards during assessment.
- b Demonstration of safe working practices are essential components of assessment of this unit standard.
- c All activities and evidence presented for all outcomes and performance criteria in this unit standard must be in accordance with:
  - i legislation;
  - ii policies and procedures;
  - iii ethical codes;
  - iv Standards – may include but are not limited to those cited in the New Zealand Building Code Hand Book;
  - v applicable site, enterprise, and industry practice; and,
  - vi manufacturers' instructions, specifications, and data sheets.

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## Outcomes and performance criteria

### Outcome 1

Demonstrate knowledge of the affects the environment may have on roof membrane systems.

#### Performance criteria

- 1.1 Explain the potential effects of temperature and humidity on uncured adhesive in terms of solvent evaporation and solvent entrapment.
- 1.2 Explain the effects of weather on roof membrane systems.
- 1.3 Describe the effects of UV on roof membrane systems.
- 1.4 Explain deterioration caused by foot traffic and identify prevention methods.
- 1.5 Explain deterioration factors in terms of not following manufacturers' instructions.

### Outcome 2

Demonstrate knowledge of a ballast roof installation.

**Performance criteria**

2.1 Explain the principles of a ballast roof and its installation.

Range joins, manufacturing, bonding.

**Outcome 3**

Demonstrate knowledge of the use of bond breaker release tape and detail tape on roof membrane.

**Performance criteria**

3.1 Explain the purpose and use of bond breaker release tape in accordance with the New Zealand Building Code Acceptable Solution E2/AS1.

3.2 Explain the purpose and use of detail tape in terms of industry use and manufacturers' instructions.

**Outcome 4**

Demonstrate knowledge of lap bonding requirements and causes of failure.

**Performance criteria**

4.1 Explain lap bonding requirements in accordance with New Zealand Building Code Acceptable Solution E2/AS1.

4.2 Explain causes of failure in terms of incorrect practical application and material use.

**Outcome 5**

Demonstrate knowledge of the detail for mounting and fastening plant to roof membrane.

**Performance criteria**

5.1 Explain the detail of mounting structure, membrane coverage, and fastening placement.

**Outcome 6**

Demonstrate knowledge of roof membrane repair and restoration.

Range faults may include – poor installation or deterioration;  
restoration includes – localised repair, total replacement.

**Performance criteria**

6.1 Explain roof inspection activities in terms of determining existing condition and potential hazards before repair or replacement.

- 6.2 Explain the importance of work planning sequence in terms of minimising impact to occupants and potential risks of exposure damage to building.
- 6.3 Explain considerations for determining the extent of membrane repairs or replacement.
- 6.4 Propose solutions for membrane repairs or replacement in accordance with New Zealand Building Code requirements.

<b>Replacement information</b>	This unit standard replaced unit standards 25291, 25294 and 25297.
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**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	16 March 2017	31 December 2027
Rollover	2	25 August 2022	31 December 2027
Review	3	28 November 2024	31 December 2027

<b>Consent and Moderation Requirements (CMR) reference</b>	0003
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.