

<b>Title</b>	<b>Demonstrate knowledge of roof membrane systems</b>		
<b>Level</b>	<b>3</b>	<b>Credits</b>	<b>6</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 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>- roof membrane substrates and system materials;</li> <li>- equipment used to install roof membrane systems;</li> <li>- regulations and important information sources that apply to roof membrane projects;</li> <li>- roof membrane installation site preparation activities; and</li> <li>- roof membrane installation process.</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 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 roof membrane substrates and system materials.

#### Performance criteria

1.1 Identify roofing terms relevant to roof membrane systems in accordance with industry practice.

Range evidence of five roofing terms is required.

1.2 Identify substrate types suitable for roof membrane in terms of substrate's adhesive attributes.

1.3 Explain the importance of proper substrate preparation in terms of achieving soundness of the finished installation and substrate's adhesive attributes.

1.4 Describe roof configuration types and slope suitable for roof membrane application in accordance with the New Zealand Building Code Acceptable Solutions E2/AS1.

Range includes but is not limited to – fall, lowest point of profile.

1.5 Identify system materials used in roof membrane installations.

Range includes – membrane reinforcement.

- 1.6 Identify roof membrane system types in terms of the variation of system components between the types.

Range single layer membrane systems, double layer systems, triple layer systems, ventilation layer, liquid, torch on.

## Outcome 2

Demonstrate knowledge of equipment used to install roof membrane systems.

### Performance criteria

- 2.1 Identify personal protection equipment used when installing roof membrane systems in terms of material safety data information and site procedures.

Range includes – solvent spray system.

- 2.2 Describe suitable fire fighting equipment for use when applying roof membrane systems in accordance with site procedures.

- 2.3 Describe equipment and tools used for the installation of roof membrane systems in terms of their purpose.

Range equipment – edge protection/scaffolding, ladders, residual current device (RCD), short and long stem torches and igniter, brooms, squeegee, rags for cleaning;  
personal tools – apron, spanner, hammer, rule and tape, chalk line and chalk, stanley knife (with regular and hook blade), small pressure roller, roller handle, sleeve and pole, scissors, sealant gun, paintbrush, flint strike, trowel set, half brush and tray.

## Outcome 3

Demonstrate knowledge of regulations and important information sources that apply to roof membrane projects.

### Performance criteria

- 3.1 Identify the information contained in Material Safety Data Sheets (MSDS).

- 3.2 Identify the function of the New Zealand Building Code and associated regulations in relation to liquid membrane roofing projects.

- 3.3 Identify the purpose of Alternative Solutions in relation to the New Zealand Building Code.

- 3.4 Describe the primary purpose of notifiable work compared to non-notifiable work.

## Outcome 4

Demonstrate knowledge of roof membrane installation site preparation activities.

**Performance criteria**

- 4.1 Identify three basic site preparation activities.
- 4.2 List substrate preparation requirements.
- 4.3 Identify roof membrane preparation requirements.
- 4.4 Describe delivered material checks.
- 4.5 Identify material storage requirements in accordance with material type site procedures.
- 4.6 Describe roof structure inspections that establish readiness for liquid roof membrane application.
- 4.7 Describe membrane marking, cutting, rolling, and sweeping processes.
- 4.8 Describe the use of tape on substrate and membrane.
- 4.9 Describe the use of adhesive.
- 4.10 Describe the effects of weather on solvents, substrate, membrane, and adhesives.

**Outcome 5**

Demonstrate knowledge of roof membrane installation process.

**Performance criteria**

- 5.1 Describe roof membrane installation process in accordance with manufacturers' instructions.  
  
Range evidence of one roof membrane system is required.

<b>Replacement information</b>	This unit standard replaced unit standards 25289, 25292 and 25295.
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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

**Consent and Moderation Requirements (CMR) reference**

0003

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.