

Title	Demonstrate knowledge of roof membrane system preparation and installation procedures		
Level	4	Credits	7

Purpose	<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 for and 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"> – project planning activities for roof membrane installation; – the substrate and pre-installation preparation for the installation of a roof membrane installation; – the safety procedures prior to roof membrane installation; – roof membrane installation process and requirements; and – the process of taping and flashing roof membrane joints and penetrations in accordance with the New Zealand Building Code.
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Classification	Plumbing, Gasfitting and Drainlaying > Roofing
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Available grade	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.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of project planning activities for roof membrane installation.

Performance criteria

- 1.1 Describe the function of plans and specifications in relation to a job sheet, material schedule, and work schedule.
- 1.2 Prepare a work schedule for a roof membrane job in accordance with job specifications.
- 1.3 Describe notifiable work activities and procedures relevant to membrane roofing work in accordance with WorkSafe requirements.
- 1.4 Describe the purpose of an initial site meeting in terms of job organisation.

Outcome 2

Demonstrate knowledge of the substrate and pre-installation preparation for the installation of a roof membrane installation.

Performance criteria

- 2.1 Describe plywood substrate laying requirements in accordance with the New Zealand Building Code.
- Range joins, grain, fixings, lap rebate routing, checks to ensure readiness for installation.
- 2.2 Describe concrete substrate checks in terms of ensuring readiness for roof membrane installation.
- 2.3 Describe compressed cement board substrate checks in terms of ensuring readiness for roof membrane installation.
- 2.4 Describe materials checks.
- 2.5 Describe substrate joint treatment.
- Range movement joints, construction joints, joint taping.
- 2.6 Describe substrate ventilation requirements and explain substrate ventilation installation procedures.
- 2.7 Explain substrate moisture content requirements.
- 2.8 Identify damage that substrate can sustain and describe repair methods.

Outcome 3

Demonstrate knowledge of the safety procedures prior to roof membrane installation.

Performance criteria

- 3.1 Identify dangerous goods and materials and describe procedures and checks for their management in accordance with relevant legislative requirements and site procedures.

Outcome 4

Demonstrate knowledge of roof membrane installation process and requirements.

Performance criteria

- 4.1 Describe the process of underflashing in relation to the other membrane application stages.
- 4.2 Describe the installation of metal or plastic flashings in relation to the other membrane application stages.
- Range penetrations, junctions, edges.
- 4.3 Describe the function of reinforcement for roof membrane installation.

- 4.4 Describe the function of substrate primer.
- 4.5 Describe adhesive application procedure.
- 4.6 Describe the placement of the membrane.
- 4.7 Describe lap bonding process.
Range for roofs with >5 degree slope, for roofs with <5 degree slope.
- 4.8 Describe the drainage options available for low slope roofs.
- 4.9 Describe the application process for single layer roof membrane.
- 4.10 Describe mixing and application process for liquid membrane.
Range includes – distribution of membrane, application of reinforcement, use of application tools.
- 4.11 Describe the application process for torch on roof membrane.

Outcome 5

Demonstrate knowledge of the process of taping and flashing roof membrane joints and penetrations in accordance with the New Zealand Building Code.

Performance criteria

- 5.1 Describe external corner flashing details.
- 5.2 Describe pipe penetration flashing.
Range new, existing pipes.
- 5.3 Describe membrane to concrete wall junctions.
- 5.4 Describe membrane gutter details.
- 5.5 Describe the water test process.

Replacement information	This unit standard replaced unit standards 25293 and 25296.
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Planned review date	31 December 2023
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	16 March 2017	N/A
Rollover	2	25 August 2022	N/A

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

Comments on this unit standard

Please contact the 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.