

Appraisal Number: AML0002NZ **Expiry date:** 28 Feb 2021

Version: v1.1

Issue date: 13 Feb 2020

OneCoat and NuSkin Liquid Applied Membrane Systems





1. Certificate holder

Neptune Pacific Limited (NPL)

2B/39 Arrenway Drive, Rosedale Auckland 0632, New Zealand +64 9 600 1273 www.neptunepacific.co.nz

2. Manufacturer

Neptune Pacific Limited

3. Product name

OneCoat and NuSkin - Liquid Applied Membrane Systems

4. Description and intended use

4.1. Description

Neptune Pacific's OneCoat and NuSkin Liquid Applied Membrane Systems are spray or hand applied liquid waterproofing membrane systems suitable for application over new or existing roofing, decks or podiums. The Systems provides durable waterproofing solutions suited to the needs of residential housing and commercial buildings.

OneCoat and NuSkin are available in standard colours of black for NuSkin and grey or white for OneCoat. OneCoat can be provided in any RAL colour as a special order from the factory. Fully cured NuSkin can be painted with an elastomeric paint.

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Suite 3 / 1A - 215 Rosedale Road Albany, Auckland 0632, New Zealand Phone: (NZ) +64 27 452 6354

C2 - 5 Grevillea Place, Brisbane Airport Q 4006, Australia Phone: (AUS) +61 420 408 177

Email: info@accreditmark.org

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4.2. Intended use

OneCoat is limited to above ground only use only, and NuSkin can be used in both above or below ground applications with the intended use as an exterior waterproofing systems for installation over a range of substrates including concrete, fibre cement, timber, existing paint and membranes, metal roofing, bitumen, EPS, XPS and butyl rubber materials.

When fully cured, the OneCoat and NuSkin system tolerates ponding, enabling its use on surfaces having little or no fall.

The OneCoat and NuSkin system is suitable for collection of drinking water after suitable preparation following its application (see limitations in Section 7, below)

4.3. Distribution and sales

OneCoat and NuSkin (and the respective accelerator / catalyst) are stored by NPL in readiness for delivery to regional applicators for use on pre-approved installations.

Other components for use with OneCoat and NuSkin are provided by NPL as required for each job, depending on the specific requirements and or conditions.

5. Components or accessories required for the product

- 5.1. Details of the system components and their use are provided in the OneCoat and NuSkin Technical and Installation Manuals.
- 5.2. Components typically used with the OneCoat and NuSkin system are:
 - 5.2.1. NP Primer.
 - 5.2.2. NP 1.
 - 5.2.3. NP Mesh.
 - 5.2.4. NP 7 Elastomagic cement.
 - 5.2.5. NP21 Walkway system (OneCoat only).
- 5.3. In certain circumstances specified in the technical documentation, NP 1 may be used as the waterproofing topcoat.
- 5.4. Other equipment and tools specified for use include:
 - 5.4.1. OneCoat and NuSkin pump plus compressor.
 - 5.4.2. OneCoat and NuSkin hoses and spray guns.
 - 5.4.3. Calibrator.
 - 5.4.4. Moisture meter.
 - 5.4.5. Cleaning and maintenance products.

6. Scope of use - OneCoat and NuSkin systems

- 6.1. For exterior use only on residential and commercial buildings.
- 6.2. OneCoat is to be applied above ground only.
- 6.3. NuSkin can be applied above and below ground.
- 6.4. For use over new or existing roofs, decks or podiums.





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- 6.5. For application to the following properly prepared substrates and subject to adhesion testing (if required):
 - New or existing concrete and fibre cement products;
 - 6.5.2. New or existing timber (excluding LOSP treated timber);
 - 6.5.3. Existing paint and membranes;
 - Metal steel, aluminium, stainless steel, galvanised steel, painted steel; 6.5.4.
 - 6.5.5. Bitumen waterproofing products such as torch-on, TPO;
 - 6.5.6. EPDM;
 - 6.5.7. PVC;
 - EPS, XPS; 6.5.8.
 - 6.5.9. Existing butyl rubber materials.
- 6.6. Can be applied at a roof pitch from zero degrees fall to +90 degrees.
- 6.7. Tolerate ponding of water when fully cured.

7. Limitations and conditions

- 7.1. Existing substrates with painted or membrane surfaces must comply with the substrate preparation requirements detailed in the OneCoat and NuSkin Technical and Installation Manuals, and flaking or loose material must be removed.
- 7.2. Moisture / humidity trapped under existing paint or membranes must be repaired or removed to provide a solid base that complies with the moisture content requirements in section 7.3.
- 7.3. Moisture content of all substrates must be lower than the following values prior to application, otherwise blistering will occur:
 - 7.3.1. Concrete or fibre cement products < 12-14%
 - 7.3.2. Timber or laminate sheet < 14-15%
 - 7.3.3. Paint or membranes < 14-15%
 - 7.3.4. Metal roofing products < 8-10%
 - XPS and EPS < 4-10% 7.3.5.

If substrates do not reach these target levels, a specific design solution will require written approval by Neptune Pacific Ltd, and the installation will be outside the scope of this certificate.

- 7.4. OneCoat and NuSkin should be applied when the air temperature is 13°C and rising. Application must stop when air or substrate temperatures exceed 35° - 38°C, or fall below 2°C.
- 7.5. When wind conditions adversely affect the correct application of OneCoat and NuSkin the applicator is to confirm with Neptune Pacific Ltd whether to continue or cease application.
- 7.6. When spraying, the maximum length of pump hose and height of the work surface building must be calculated. Refer to the NPL site project plan checklist and Neptune Technical and Installation Manuals.
- 7.7. OneCoat and NuSkin must not be:
 - 7.7.1. Applied to wet substrates.
 - 7.7.2. Used for interior waterproofing of buildings.
 - Applied to LOSP treated timber.
- 7.8. OneCoat is not to be used below ground level.





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- OneCoat and NuSkin system applied in areas from which potable water will be collected must be 7.9. prepared as specified in the OneCoat and NuSkin Technical and Installation Manuals before consumption of the water by humans.
- There must be adequate ventilation in any areas where the OneCoat and NuSkin systems are being 7.10.
- The OneCoat and NuSkin systems must be installed by trained installers using equipment approved by 7.11. NPL, and applied in accordance with the requirements and details found in the OneCoat and NuSkin Technical and Installation Manuals and Neptune Pacific Product Quality Plan.
- Any use of the OneCoat and NuSkin system outside the Scope of Use above, or not in accordance with the 7.12. OneCoat and NuSkin Technical and Installation Manuals will be outside the scope of this certificate.

8. Building Code and performance requirements

- 8.1. Applicable code: NZ Building Code (NZBC)
- 8.2. The OneCoat and NuSkin system complies with the following clauses and provisions of the NZBC:
 - **B1 Structure**
 - General mechanical performance tolerates differential movement and thermal B1.3.2 expansion or contraction, bridges minor cracking, withstands pedestrian trafficking.
 - B1.3.3 (h) Withstands wind loads up to, and including Very High (VH), NZS3604.
 - 8.2.2. **B2** Durability
 - B2.3.1 (b) (c) 15 and 5 year durability requirements, including UV and puncture resistance.
 - All components have the same durability to meet B2.3.1 (b) (c) requirements. B2.3.2 (a)
 - 8.2.3. **D1** Access Routes
 - D1.3.3 (d) Has adequate slip resistance for walking surfaces under conditions of normal use.
 - 8.2.4. **E2** External Moisture
 - E2.3.2 Prevents the penetration of water when used on roofs and exterior walls.
 - 8.2.5. F2 Hazardous Building Materials
 - F2.3.1 OneCoat and NuSkin do not emit harmful quantities of gas, liquid or solid particles.
 - 8.2.6. **G12** Water Supplies
 - When applied to roofs used for the collection of drinking water, OneCoat and NuSkin do not contaminate the water.

9. Assessment against performance requirements

Below is a summary of the sources of information and data used in the assessment of the product against the performance requirements of the NZBC.

- 9.1. In-service use with no reported failures:
 - United States (and world market): NuSkin, 20 years; OneCoat, 7 years 9.1.1.
 - 9.1.2. New Zealand: NuSkin, 6 years; OneCoat, 3 years





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- Laboratory tests conducted by NPL: 9.2.
 - 9.2.1. TR190515-1, UV Exposure, ASTM D6695
 - Intertek 14112000SHJ-BP-1, UV Exposure, ASTM G155 9.2.2.
 - 9.2.3. TR140918-1, Elongation, ASTN D412
 - 9.2.4. TR190404-1, Water Vapour Transmission, ASTM E96
 - 9.2.5. Sliptest Australia Pty Ltd, Slip resistance classification, AS4586
 - 9.2.6. TR141126-1, Impact resistance, ASTM D5635
 - 9.2.7. Ideas Lab, Water resistance, ISO811
 - 9.2.8. TR190403-1, Water resistance, AS/NZS4548.5
 - 9.2.9. TR190228-1, TR140812, Adhesion to various substrates, AS1580.408.5
 - 9.2.10. TR190405-1, Cold Flexibility, AC148 S4.6
 - 9.2.11. TR190408-1, Crack Bridging, AS4654.1
 - 9.2.12. Ideas Lab, Tensile Strength, ASTM D412,
 - 9.2.13. TR190402-1, Tensile strength, ASNZS4858
 - 9.2.14. Ideas Lab, Elongation, ASTM D412
 - 9.2.15. Australian Water Quality Centre, Drinking Water collection, AS/NZS 4020:2005
- 9.3. Test data supplied by NPL:
 - 9.3.1. Hail Resistance, FM4470
 - 9.3.2. UV Exposure, FM4470
 - 9.3.3. Fire Classification, FM4470/ASTM E108
 - 9.3.4. Wind, FM4470
 - 9.3.5. Water Leakage, FM4470
 - 9.3.6. Foot Traffic, FM4470
 - 9.3.7. Accelerated Weathering/ Xenon arc exposure, ASTM G26/ASTM G155
 - 9.3.8. Impact Resistance, ASTM D3746
 - 9.3.9. Water vapour transmission, ASTM E96
 - 9.3.10. Air permeance, ASTM E2178
 - 9.3.11. Air Leakage, ASTM E283
- 9.4. Information provided by NPL:
 - 9.4.1. **Product sheets**
 - 9.4.2. SDS for OneCoat, NuSkin and system components
 - 9.4.3. Manufacturing quality audit
 - 9.4.4. Laboratory test reports
 - 9.4.5. Technical bulletins and notes
- 9.5. Peer review/s and or expert opinions:

The appraisal application information supplied by NPL, and the content of the appraisal certificate, has been reviewed and approved by David Cunningham, Unrestricted Building Certifier (NZ).





NuSkin

10. Physical characteristics

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10.1. Description

Version:

- 10.1.1. OneCoat white or grey liquid
- 10.1.2. NuSkin -black viscous liquid
- 10.1.3. NP Primer clear liquid
- 10.1.4. NP 1 white liquid
- 10.1.5. NP Mesh white polyester fabric
- 10.1.6. NP 7 Elastomagic cement white liquid

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- 10.1.7. NP21 Walkway system – yellow liquid
- 10.2. Colour
 - 10.2.1. OneCoat: White or grey
 - 10.2.2. NuSkin: Black
- Fully cured finish OneCoat and NuSkin 10.3. Smooth, with slight dimples
- 10.4. Relative density - OneCoat and NuSkin 0.95 to 1.05
- 10.5. Coverage - OneCoat and NuSkin

Coverage varies depending on the target minimum cured film thickness.

- Minimum Cured Film Thickness 10.6.
 - 10.6.1. OneCoat: 0.8mm
 - 10.6.2. NuSkin: 1.0 to 2.5mm
- 10.7. Reflectivity

OneCoat: White >83%, grey >80%

- 10.8. Curing time
 - 10.8.1. OneCoat: fully cured - 5 days rain resistant - 3 to 5 minutes, 10.8.2. NuSkin: rain resistant - 30 to 60 seconds, fully cured - 5 days
- 10.9. Water vapour permeability
 - 10.9.1. OneCoat: 0.9 g/h.m² ASTM E96 10.9.2. 0.9 g/m2.day - ASTM F1249
- 10.10. Combustibility
 - 10.10.1. OneCoat: Class A, self-extinguishing 10.10.2. NuSkin: Class A, self-extinguishing
- 10.11. Flammability

OneCoat and NuSkin are non-flammable

11. Structural characteristics

Note: this is presented as general information and is not to be used for design purposes. Detailed design information is provided in the OneCoat and NuSkin Technical and Installation Manuals.





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The OneCoat and NuSkin Liquid Applied Membrane Systems are not a structural building element, although uplift loads from wind action are resisted by the systems. Adhesion strength to substrates and general mechanical performance (differential movement and thermal expansion or contraction, crack bridging, pedestrian trafficking, installation and ballast loads) have been tested to confirm suitable performance is achieved during normal use.

11.1. **Spans**

Not applicable.

11.2. Fixing spacings of substrate

> Detailed information about the fixing spacing and installation of some substrates such as plywood are provided in the OneCoat and NuSkin Technical and Installation Manuals and should be referred to prior to installation.

11.3. Wind capacity

> OneCoat and NuSkin have been assessed as suitable for use in wind zones up to and including Very High (VH), NZS3604.

- 11.4. **Bracing capacity** Not applicable.
- 11.5. **Fasteners** Not applicable.
- 11.6. Fire resistance
 - 11.6.1. Not categorised with a group number
 - 11.6.2. Not assessed for Fire Resistance Rating (FRR)

12. Technical and quality plan documentation

12.1. Website

www.neptunepacific.co.nz provides links to contact, technical, product support and warranty information.

Technical and installation manuals 12.2.

> OneCoat and NuSkin Technical and Installation Manuals set out the design, installation details, warranty and maintenance requirements for OneCoat and NuSkin, and can be accessed on the NPL website.

- 12.2.1. The current version of the OneCoat Technical and Installation Manual is v1, August 2019.
- 12.2.2. The current version of the NuSkin Technical and Installation Manual is v1.1, September 2019.
- NPL is responsible for keeping the OneCoat and NuSkin Technical Information up to date, and 12.2.3. notifying AccreditMark Limited of any changes.
- 12.3. Technical data sheet

OneCoat and NuSkin system product sheets are available on the NPL web site.

12.4.

Safety Data Sheets for the OneCoat and NuSkin system and associated components are available on the NPL website and in the OneCoat and NuSkin Technical and Installation Manuals.

12.5. NPL Product Quality Plan (PQP)

The current version of the OneCoat and NuSkin PQP is v1.00, August 2019.

12.6. Manufacturing Quality Plan (MQP)





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Annual factory audits are carried out at the NPL factory by AccreditMark Ltd.

12.7. Warranty information and conditions of warranty

> This information can be found in the OneCoat and NuSkin Technical and Installation Manuals, or on the NPL website.

13. Other considerations

13.1. Warehousing, ordering and despatch

> OneCoat and NuSkin are stored at a central warehouse. Projects are assessed and pre-approved by NPL and orders are verified before being sent for picking, labelling, checking, packaging and despatch to the applicator or site.

13.2. **Packaging**

> OneCoat and NuSkin and associated components are packaged in 208 litre drums, 19 litre pails, and 4kg packages to suit the material and quantities supplied. Orders are usually transported on pallets, protected with a plastic wrapping.

13.3. Delivery

Identifying marks and product codes are included with each delivery.

13.4.

OneCoat and NuSkin are transported to the applicator or site on a truck, trailer or utility vehicle. Heavy items such as 208 litre drums should be unloaded using suitable lifting equipment.

Care must be taken to avoid damage to the containers during handling for transport and on site.

Spills of liquid materials must be contained using a spill kit and cleaned up in accordance with the SDS requirements and local authority regulations.

13.5. Storage on site:

> When stored on site OneCoat and NuSkin components should be protected from sun, rain and freezing, and kept between the temperatures of 2°C and 40°C.

13.6. Exposure to sun and rain after installation

> When fully cured, OneCoat and NuSkin are UV and weather resistant. Any OneCoat and NuSkin system components used prior to the application of OneCoat and NuSkin should not be left exposed to UV for more than 14 days before being over coated or protected from sun exposure.

13.7. Health and safety

> The OneCoat and NuSkin system components are classified as non-hazardous. When handling any components, personal safety equipment (gloves, eye and respiratory protection) should be used.

Detailed information about safety and treatment for exposure to components is set out in SDS available on the NPL website and in the OneCoat and NuSkin Technical and Installation Manuals.

13.8. Clean up and waste management

> Waste components, materials, empty containers and contaminants must be disposed of in accordance with local and government regulations.





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Conditions of certification 14.

- 14.1. This Appraisal:
 - Relates only to OneCoat and NuSkin Liquid Applied Membrane Systems. 14.1.1.
 - 14.1.2. Must be read, considered and used together with the technical documentation supplied by Neptune Pacific Limited.
 - Does not address any legislation, regulations, codes or standards not mentioned herein. 14.1.3.
 - 14.1.4. Is revalidated annually by AccreditMark Limited.
 - 14.1.5. Is copyright of AccreditMark Limited.
- 14.2. AccreditMark Limited makes no warranty or representation as to:
 - The nature of examples, or batches of, or individual installations of OneCoat and NuSkin Liquid Applied Membrane Systems including methods and workmanship.
 - 14.2.2. The presence or absence of any patent or similar rights subsisting in the product or any other product.
 - 14.2.3. The performance of any paint coating system used with OneCoat and NuSkin Liquid Applied Membrane Systems.
 - 14.2.4. Any guarantee or warranty offered by Neptune Pacific Limited.
- AccreditMark Limited's assessment of OneCoat and NuSkin Liquid Applied Membrane Systems is based on 14.3. the technical evidence and documentation available at the time of assessment. If the technical evidence and or documentation is changed or updated in the future, the validity of this appraisal certificate will be re-assessed.

Neptune Pacific Limited's responsibilities 15.

- Neptune Pacific Limited must:
 - 15.1.1. Notify AccreditMark Limited of any changes to:
 - Their contact or ownership details;
 - OneCoat and NuSkin Liquid Applied Membrane Systems product details, specifications, technical information; installation methodology, components, PQP and marketing information;
 - The OneCoat and NuSkin Liquid Applied Membrane Systems manufacturing process;
 - The OneCoat and NuSkin Liquid Applied Membrane Systems MQP.
 - 15.1.2. Carry out periodic quality control and conformity tests as requested by AccreditMark Limited.
 - Keep OneCoat and NuSkin Technical and Installation Manuals up to date and approved by AML 15.1.3. prior to public release.
 - 15.1.4. Ensure the latest versions of OneCoat and NuSkin Technical and Installation Manuals are used by staff and applicators.
 - Comply with AccreditMark Limited's Terms and Conditions.
- 15.2. To maintain validity of their certificate, Neptune Pacific Limited is subject to annual audits and surveillance by AccreditMark Limited of:
 - 15.2.1. A building site where the OneCoat and NuSkin Liquid Applied Membrane Systems are being
 - 15.2.2. OneCoat and NuSkin Technical and Installation Manuals.
 - The OneCoat and NuSkin systems PQP and MQP.





NuSkin

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For AccreditMark Limited 16.

16.1. Signed:

Greg Richardson, BE (Hons)

Director and Certification Manager

Date of issue: v1.1, 13 February 2020 16.2.

David Cunningham

Unrestricted Building Certifier