

Title	Demonstrate knowledge of substrate preparation for marine painting		
Level	3	Credits	5

Purpose	People credited with this unit standard are able to: describe substrate characteristics for marine painting applications; describe factors affecting the repainting of existing painted surfaces; explain surface preparation factors; and explain methods of surface preparation.
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Classification	Boating Industries > Boatbuilding
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Available grade	Achieved
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Guidance Information

Definitions

Paint systems are either chemical systems that are available from several manufacturers and/or systems as specified by manufacturers that include specification for preparation and coating.

Workplace policies and procedures refer to the standard requirements of the job being undertaken. This typically includes relevant health and safety policies to manage risk in the workplace.

Outcomes and performance criteria

Outcome 1

Describe substrate characteristics for marine painting applications.

Performance criteria

1.1 Substrates are described in terms of suitability for paint coating and the preparation considerations for various paint systems.

Range substrates include – aluminium alloy, steel, composite, timber, bronzes, brasses, lead.

Outcome 2

Describe factors affecting the repainting of existing painted surfaces.

Performance criteria

2.1 Existing paint surface characteristics and suitability for re-painting are described in accordance with manufacturers over coating specifications.

Range surface characteristics and suitability include – soundness of base, over-painting compatibility, adhesion, substrate type.

Outcome 3

Explain surface preparation factors.

Performance criteria

3.1 Factors affecting adhesion of paint are explained in terms of the surfaces to be painted.

Range factors include – primary bonding, secondary bonding, mechanical bonding, surface tension.

3.2 Surface contamination is explained in terms of painting preparation.

Range surface contamination may include – metal oxides (rust and mill), grease, water, dust and dirt, existing coatings, organisms, salt; evidence of five surface contamination types is required.

Outcome 4

Explain methods of surface preparation.

Range use and function of materials, tools, and equipment.

Performance criteria

4.1 Methods for preparing a marine surface are explained in accordance with workplace policies and procedures, and paint manufacturer specifications.

Range methods may include – solvent cleaning, manual sanding, power grinding, abrasive blasting, water cleaning, acid washing, etch priming, chromate treatment; evidence of five surface preparation methods is required.

Planned review date	31 December 2026
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	14 December 2007	31 December 2017
Review	2	8 December 2016	31 December 2023
Review	3	26 August 2021	N/A

Consent and Moderation Requirements (CMR) reference	0136
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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 NZ Marine and Composites ITO training@nzmarine.com if you wish to suggest changes to the content of this unit standard.