

Title	Demonstrate knowledge of and prepare surfaces for protective coating application		
Level	2	Credits	4

Purpose	People credited with this unit standard are able to: demonstrate knowledge of surface contaminants and preparation; demonstrate knowledge of protective coating material, coating process, and surface preparation equipment; prepare surfaces for protective coating application; clean up job and document surface preparation; and maintain and store surface preparation tools and equipment.
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Classification	Manufacturing Skills > Manufacturing Processes
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Available grade	Achieved
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Prerequisites	Unit 17547, <i>Demonstrate knowledge of health and safety for blaster coating operations</i> , or demonstrate equivalent knowledge and skills.
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Guidance Information

- 1 Legislation relevant to this unit standard includes:
Health and Safety at Work Act 2015.
- 2 Definitions

Accepted industry practice refers to codes of practice and standardised procedures accepted by the wider industry as examples of best practice.

Job requirements refer to specific requirements for the job at hand. These requirements may or may not be covered in the job documentation and may include special instructions, quality requirements expected by the customer, and/or production standards as set down by the workplace.

Workplace procedures refer to the procedures used by the organisation carrying out the work and applicable to the tasks being carried out. Examples are – standard operating procedures, safety procedures, equipment operating procedures, codes of practice, quality management practices and standards, and procedures to comply with legislative and local body requirements.
- 3 Assessment information
All activities and evidence must be in accordance with workplace procedures.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of surface contaminants and preparation.

Performance criteria

1.1 Surface contaminants are identified.

Range four contaminants.

1.2 Incorrect surface preparation is described in terms of potential coating failures.

1.3 Surface conditions are described in terms of types of corrosion and level of surface contaminants common to surfaces to be coated.

Range may include but is not limited to – zinc, steel, aluminium, stainless steel, concrete, galvanised surfaces.

Outcome 2

Demonstrate knowledge of protective coating material, coating process, and surface preparation equipment.

Range two applications.

Performance criteria

2.1 Surface preparation process is selected in accordance with existing surface conditions and job requirements.

2.2 Protective coating material is identified, confirmed, and matched to surface preparation in accordance with job requirements.

2.3 Supervisor is notified of need to grind welds and edges.

2.4 Blasting equipment is selected in accordance with the job requirements, and accepted industry practice.

2.5 Power tool equipment is selected in accordance with confirmed surface preparation.

Outcome 3

Prepare surfaces for protective coating application.

Range two applications.

Performance criteria

- 3.1 Personal protective clothing and equipment for surface preparation are fitted and worn in accordance with manufacturer's instructions.
- 3.2 Blasting area is sealed off and extraction system is activated prior to commencement of operations in accordance with accepted industry practice.
- 3.3 Pre-treatment processes are undertaken in sequence in accordance with accepted industry practice.
- Range pre-treatment processes may include but are not limited to – waterblast, degrease, abrasive blast, removal of preparation debris.
- 3.4 Surface is inspected visually and any non-complying area is marked and reblasted in accordance with accepted industry practice.
- Range abrasion and preparation of substrate matches job requirements.

Outcome 4

Clean up job and document surface preparation.

Performance criteria

- 4.1 Substrate is dusted down ready for surface coating.
- 4.2 Completed surface preparation is documented.

Outcome 5

Maintain and store surface preparation tools and equipment.

Performance criteria

- 5.1 Blasting equipment is maintained in accordance with manufacturer's instructions.
- Range operator maintenance at end of task or day, reporting those repairs to be made by specialist.
- 5.2 Power tool equipment is maintained in accordance with manufacturer's instructions.
- Range operator maintenance at end of task or day, reporting repairs to be made by a specialist.
- 5.3 Surface preparation tools and equipment are stored in accordance with manufacturer's instructions.

Planned review date	31 December 2025
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	28 August 2000	31 December 2012
Review	2	20 November 2006	31 December 2013
Review	3	18 October 2012	31 December 2016
Review	4	16 April 2015	31 December 2021
Rollover and Revision	5	13 December 2018	31 December 2023
Review	6	26 August 2021	N/A

Consent and Moderation Requirements (CMR) reference	0013
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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 Competenz qualifications@competenz.org.nz if you wish to suggest changes to the content of this unit standard.