

Title	Describe and apply protective coatings to electricity structures		
Level	4	Credits	20

Purpose	People credited with this unit standard are able to: describe, compare, and determine quantities of protective coatings applied to electricity structures; prepare and mix components for protective coatings; apply protective coating to a range of surfaces on electricity structures; and maintain, clean and store protective coating application equipment.
----------------	---

Classification	Electricity Supply > Electricity Supply - Transmission Networks
-----------------------	---

Available grade	Achieved
------------------------	----------

Guidance Information

- 1 Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with applicable legislative and industry requirements.
- 2 Legislation, regulations, and /or industry standards relevant to this unit standard include but are not limited to:
 - Electricity Act 1992
 - Health and Safety at Work Act 2015
 - Electricity supply industry codes of practice and documented enterprise procedures, including *Safety Manual – Electricity Industry* (SM-EI) and relevant EEA guides available at www.eea.co.nz and any subsequent amendments and replacements.
- 3 Definitions

Asset owner refers to a participant who owns or operates assets used for generating or conveying electricity.

Industry requirements include all asset owner requirements; manufacturers' specifications; and enterprise requirements which cover the documented workplace policies, procedures, specifications, and business and quality management requirements relevant to the workplace in which assessment is carried out.
- 4 Assessment of practical skills against the outcomes in this standard requires three practical observations from three different workplace activities in an electricity supply environment.

Outcomes and performance criteria

Outcome 1

Describe, compare and determine quantities of protective coatings applied to electricity structures.

Performance criteria

- 1.1 Protective coatings are described and compared in terms of their properties and characteristics.
- 1.2 Protective coating products are described in terms of their potential harmful effects on the human body in accordance with the Safety Data Sheets and product data sheets.
- 1.3 The incompatibility and compatibility of protective coatings with different structure substrates is determined and explained.
- 1.4 Surface preparation limitations for coatings, and testing requirements, are described in accordance with manufacturer's specifications.
- 1.5 The quantity of protective coating required for a given job is estimated in accordance with job specification and product data sheet.
- 1.6 The quantity of product is calculated from given mixing or thinning ratios and application rates to achieve prescribed thickness in accordance with job specification.

Outcome 2

Prepare and mix components for protective coatings.

Performance criteria

- 2.1 Personal protective clothing is fitted and worn in accordance with industry requirements and product requirements.
- 2.2 Mixing procedures for protective coatings are described in accordance with product data sheet and safety data sheet.
- 2.3 Protective coatings are mixed and/or thinned in accordance with job specification.

Outcome 3

Apply protective coating to a range of surfaces on electricity structures.

Range surfaces may include but are not limited to – steel, galvanised surfaces, aluminium, concrete, timber.

Performance criteria

- 3.1 Job specifications, including products and equipment to be used, are confirmed in accordance with industry and/or enterprise procedures.
- 3.2 Personal protective clothing and climbing equipment for applying protective coatings are fitted and worn in accordance with industry and/or enterprise procedures for working at heights on structures.
- 3.3 Route for application of protection coating is planned according to requirements of product application method, drying and/or curing times and structure design.
- 3.4 Damaged or flawed protective coating is touched up to meet job specifications or requirements identified during inspection.
- 3.5 Apply a range of protective coating products to structures.
- Range evidence of three different types of protective coating products on three different structures.

Outcome 4

Maintain, clean and store protective coating application equipment.

Performance criteria

- 4.1 Coating equipment is cleaned, checked for maintenance, and stored in accordance with manufacturer's instructions and enterprise procedures.
- Range equipment may include but is not limited to – brushes, rollers, spray equipment.

Planned review date	31 December 2025
----------------------------	------------------

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	20 August 2015	1 December 2020
Review	2	28 September 2017	N/A
Rollover and Revision	3	2 March 2023	N/A

Consent and Moderation Requirements (CMR) reference	0120
--	------

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

Comments on this unit standard

Please contact Waihanga Ara Rau Construction and Infrastructure Workforce Development Council at qualifications@WaihangaAraRau.nz if you wish to suggest changes to the content of this unit standard.