

Title	Apply protective coatings to electronic products		
Level	3	Credits	10

Purpose	<p>This unit standard covers preparation and application of a specified range of protective coatings to electronic products during electronic manufacturing.</p> <p>People credited with this unit standard are able to:</p> <ul style="list-style-type: none"> –set up the protective coatings work environment; –apply protective coatings to electronic products; and –check protective coatings on electronic products.
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Classification	Electronic Engineering > Electronic Manufacturing
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Available grade	Achieved
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Recommended entry information	Unit 20402, <i>Identify and follow safety practices and procedures in an electronic manufacturing environment.</i>
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Guidance Information

- 1 Definition

protective coatings are materials that are applied to electronic products to provide some form of sealing or protection. This includes conformal coatings, epoxy resins, and varnishes.
- 2 Range
 - a types of protective coatings – one or more of conformal coatings, epoxy resins, varnishes, or other specified materials;
 - b application methods – one or more of – spray, brush, dip, or potting; applied manually or by machine.
- 3 References

Hazardous Substances and New Organisms Act 1996;
 Health and Safety in Employment Act 1992;
 IPC-A-610D, *Acceptability of Electronic Assemblies*, 2005, published by IPC – Association Connecting Electronics Industries.

- 4 The following apply to all outcomes of this unit standard:
- a all activities are to be completed and reported within agreed timeframes;
 - b all work practices must meet worksite's documented quality management requirements;
 - c all activities must comply with policies, procedures and requirements of the enterprises involved, and any relevant legislative and/or regulatory requirements, which include, but are not limited to, the Health and Safety in Employment Act 1992 and the Hazardous Substances and New Organisms Act 1996.
- 5 People who are registered as physically disabled may achieve this unit standard with exemption from the requirements of outcome 1 only.

Outcomes and performance criteria

Outcome 1

Set up the protective coatings work environment.

Performance criteria

- 1.1 The selection of all jigs, tools and protective coating materials matches the job instructions.
- 1.2 The workplace layout conforms to enterprise safety standards and presents no uncontrolled hazards to any person.
- 1.3 All protective coating materials are handled and stored in accordance with a given procedure.

Range examples of procedures could include – enterprise, health and safety, material supplier procedures, or their combination.

Outcome 2

Apply protective coatings to electronic products.

Performance criteria

- 2.1 The protective coating material preparation complies with job instructions.

Range preparation includes – composition, handling, storage for use, other specified requirements.

- 2.2 Electronic product integrity is not affected by setup or coating operation.

Range integrity includes – structure, electrostatic discharge (ESD), other specified build requirements.

- 2.3 All coating operations are completed to enterprise quality standards and may include use of specified jigs, tools and equipment.

Outcome 3

Check protective coatings on electronic products.

Performance criteria

3.1 Checking confirms that coating work meets enterprise quality standards.

Range IPC standards, coating placement, uniformity, visual appearance.

This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	24 February 1998	31 December 2021
Review	2	28 June 1999	31 December 2021
Revision	3	3 April 2001	31 December 2021
Review	4	23 November 2003	31 December 2021
Rollover and Revision	5	19 March 2010	31 December 2021
Review	6	26 July 2018	31 December 2021

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>.