

<b>Title</b>	<b>Apply surface coatings for production on a manufacturing site</b>		
<b>Level</b>	<b>2</b>	<b>Credits</b>	<b>6</b>

<b>Purpose</b>	People credited with this unit standard are able to: establish job requirements and prepare materials and equipment for surface coating application; perform surface coating application; and identify and rectify faults in surface coating operation.
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<b>Classification</b>	Mechanical Engineering > Metal Surface Finishing
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<b>Available grade</b>	Achieved
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<b>Entry information</b>	
<b>Recommended skills and knowledge</b>	Unit 21911, <i>Demonstrate knowledge of safety on engineering worksites</i> ; and Unit 21912, <i>Apply safe working practices on an engineering worksite</i> ; or demonstrate equivalent knowledge and skills

## Explanatory notes

### 1 References

Health and Safety at Work Act 2015 and supporting regulations.

Hazardous Substances and New Organisms Act 1996.

Resource Management Act 1991.

WorkSafe New Zealand. *Health and Safety Guidelines on the Management of Hazards in the Metal Casting Industry*. Available at:

<http://www.business.govt.nz/worksafe/information-guidance/all-guidance-items/metal-casting-industry-health-and-safety-guidelines-for-the-management-of-hazards-in/metal-casting-hs-guidelines.pdf>.

### 2 Definitions

*Accepted industry practice* refers to approved codes of practice and standardised procedures accepted by the wider mechanical engineering industry sectors as examples of best practice.

*Equipment*, used in the context of outcomes 2 and 3 of this unit standard, refers to a hand held spray gun used to coat an electrostatically prepared surface with a range of powdered materials.

*Job Breakdown Guide* (JBG) refers to a set of instructions used by the operator to undertake a particular process which includes information on quality and safety related to the process.

*Workplace procedures* refer to procedures used by the organisation carrying out the work and applicable to the tasks being carried out. They may include but are not limited to – standard operating procedures, safety procedures, equipment operating

procedures, codes of practice, quality management practices and standards, procedures to comply with legislative and local body requirements.

### 3 Range

Processes may include – powder coating; wet spraying; anodising. Evidence of three surface coating applications using one or more of these processes is required.

### 4 Assessment information

- a All activities must comply with applicable workplace procedures and must be consistent with accepted industry practice.
- b This unit standard is for operators of surface coating processes for the manufacture of a range of products.
- c The unit standard relates to manual surface coating operations on a manufacturing site where the product surface condition prior to coating is uniform and has been pre-treated.

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## Outcomes and evidence requirements

### Outcome 1

Establish job requirements for surface coating application.

#### Evidence requirements

1.1 Job specifications are obtained and verified.

Range may include but is not limited to – product assembly drawings, JBGs, visual systems such as Kanban, Bill of Materials.

1.2 Safety equipment is used according to the manufacturer's instructions.

Range may include but is not limited to – personal protective equipment, machine guards.

### Outcome 2

Prepare materials and equipment for surface coating application.

#### Evidence requirements

2.1 Correct materials are obtained and verified according to job specifications.

2.2 Equipment is set up ready for surface coating.

2.3 Materials are loaded into the equipment.

2.4 Contamination of material is avoided prior to surface coating operation.

**Outcome 3**

Perform surface coating application.

**Evidence requirements**

3.1 Product is coated in accordance with specifications.

3.2 Equipment is cleaned after use.

**Outcome 4**

Identify and rectify faults in surface coating operation.

**Evidence requirements**

4.1 Product faults are identified.

4.2 Setting adjustments are made to the equipment within the operator's responsibility, and are in accordance with manufacturer guidelines for rectifying out of specification components.

Range coating thickness, contamination, cure.

4.3 Recoating of products is carried out.

4.4 Faults that cannot be rectified by the operator are reported to the supervisor or appropriate support staff.

<b>Planned review date</b>	31 December 2021
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**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	18 December 2002	31 December 2018
Review	2	15 September 2016	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0013
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

**Please note**

Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMRs). The CMR also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

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### **Comments on this unit standard**

Please contact Competenz [qualifications@competenz.org.nz](mailto:qualifications@competenz.org.nz) if you wish to suggest changes to the content of this unit standard.