



Australian Government

Department of Education, Employment and Workplace Relations

PMBPROD249B Apply liquid surface coatings

Revision Number: 1

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Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This competency covers the application of surface coatings by hand, spray gun or immersion and the resolving of routine problems to procedure.

Application of the Unit

Application of this unit

This competency applies to operators who are required to apply surface coatings to products by hand, spray gun or immersion. It is typically performed by operators working either independently or as part of a work team. The operator will:

- check the surface of products to be coated for imperfections or contamination
- check materials for conformity to job requirements
- apply the surface coating material
- notice any problems and take required actions (eg reporting)
- deal with non-conforming products, waste and scrap
- complete logs and reports

They may record key variables such as machine conditions and production rate and reasons for interruptions.

This unit does not include:

- packing of product - see *MSASUP204A Pack products or materials*
- finishing of product - see *PMBFIN201 Finish products and components*.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisites

This unit has **no** prerequisites.

Employability Skills Information

Employability Skills

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

ELEMENT	PERFORMANCE CRITERIA
Elements describe the essential outcomes of a unit of competency	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT ELEMENT	PERFORMANCE CRITERIA Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the Evidence Guide.
1. Check work requirements.	1.1 Identify work requirements from production plan or request. 1.2 Select and check appropriate equipment or tool/s, techniques and materials to be used. 1.3 Recognise requirements which may not be in accordance with usual practice. 1.4 Ask questions of appropriate person to confirm non standard job specifications. 1.5 Ensure housekeeping is to requirements. 1.6 Identify hazards associated with the job and take appropriate action. 1.7 Perform other pre-operational checks in accordance with procedures
2. Start up surface coating equipment to procedures.	2.1 Conduct pre-start check on equipment. 2.2 Start coating equipment to procedures.
3. Apply surface coating.	3.1 Check process is operating within required limits. 3.2 Check coating is in specification and to required quality standard. 3.3 Maintain supply of material(s) as required. 3.4 Collect and segregate scrap, waste and other materials as required. 3.5 Complete logs and records as required. 3.6 Keep equipment and work area clean. 3.7 Shut down equipment as required.
4. Respond to routine problems in accordance with procedures.	4.1 Recognise known faults that occur during the operation. 4.2 Identify and take action on causes of routine faults. 4.3 Log problems as required. 4.4 Identify non-routine problems and report to designated person.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level required for this unit.

Application of knowledge of the materials, equipment and process sufficient to recognise out of specification products, process problems and materials faults.

Knowledge of organization procedures, quality requirements and relevant regulatory requirements along with the ability to implement them within appropriate time constraints and work standards.

Application of the knowledge of managing risk using the hierarchy of controls applied to the coating process. Application of approved hazard control and safety procedures and the use of PPE in relation to handling materials, equipment operation and cleanup

Knowledge and skills in the operation of the surface coating process and equipment sufficient for consistent production of quality products, including:

- production workflow sequences and materials demand
- correct selection and use of equipment or tool/s, materials, processes and procedures
- accurately monitoring equipment operation and product quality
- reasons for checking process control panels and reporting readings which are outside of the normal range of process variability
- identifying factors which may affect product quality or production output and appropriate remedies
- potential effects of variations in materials and equipment operation in relation to quality of product
- processing behaviour of polymers and the role of additives
- effect of unauthorised or emergency work stoppage in relation to safety and production requirements
- waste management and knowing the importance of reusing non-conforming products wherever possible
- basic pre-blending of materials
- application of coatings.

Competence also includes the ability to:

- plan own work, including predicting consequences and identifying improvements
- identify when the operator is able to rectify faults, when assistance is required and who is the appropriate source for assistance
- identify and describe own role and role of others involved directly in the coating process.

Language, literacy and numeracy requirements

This unit requires the ability to read and interpret typical product specifications, job sheets, procedures, material labels and safety information as provided to operators.

Writing is required to the level of completing workplace forms.

Basic numeracy is required, eg to determine that two 25 kg bags are needed to make up a requirement for 50 kg.

Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, required skills and knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Overview of assessment

A holistic approach should be taken to the assessment.

Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria and skills and knowledge.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

It is essential that competence is demonstrated in the knowledge and skills defined in this unit. These may include the ability to:

- apply the required skills and knowledge to operate surface coating equipment
- apply approved procedures.

Consistent performance should be demonstrated. For example, look to see that:

- surface coating production standards are met consistently
- all safety procedures are followed.

Assessment method and context

Assessment will occur using industrial surface coating equipment and will be undertaken in a work-like environment

Competence in this unit may be assessed:

- using appropriate surface coating equipment or tool/s requiring demonstration of operation and emergency stop procedures
- in a situation allowing for the generation of evidence of the ability to respond to problems
- by using suitable simulation and/or a range of case studies/scenarios
- through a combination of these techniques.

In all cases it is expected that practical assessment will be combined with targeted questioning to assess the underpinning knowledge and theoretical assessment will be combined with appropriate practical/simulation or similar assessment. Assessors need to be aware of any cultural issues that may affect responses to questions.

Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the assessee and the work being performed.

Specific resources for assessment

This section should be read in conjunction with the Range Statement for this unit of competency. Resources required include suitable access to an operating plant or equipment that allows for appropriate and realistic simulation. A bank of case studies/scenarios and questions will also be required to the extent that they form part of the assessment method. Questioning may take place either in the workplace, or in an adjacent, quiet facility such as an office or lunchroom. No other special resources are required.

Access must be provided to appropriate learning and/or assessment support when required. Where applicable, physical resources should include equipment modified for people with disabilities.

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Where reference is made to industry codes of practice, and/or Australian/international standards, the latest version must be used.

Context

This competency applies to all surface coating operations using liquid coatings. It includes the operation of all relevant additional equipment where that equipment is integral to the coating process.

Procedures

All operations are performed in accordance with procedures.

Procedures include all relevant workplace procedures, work instructions, temporary instructions and relevant industry and government codes and standards.

Tools and equipment

This competency includes use of equipment and tools such as:

- coating equipment (such as brushes, spray guns film coaters, immersion equipment)
- additional equipment (such as vapour extraction, application booths)
- manual handling aids (such as hand carts, trolleys)
- hoists/lifting equipment not requiring any special permits or licences
- relevant personal protective equipment.

Hazards

Typical hazards include:

- spills and splashes
- toxic fumes or vapours
- hazardous materials
- manual handling hazards
- flammable vapours.

Problems

'Respond to routine problems' means apply known solutions to a limited range of predictable problems. Typical process and product problems may include:

- incorrect selection of materials
- variations in materials
- contamination of materials or product surface
- inappropriate application of coatings
- dust and other contamination
- drying rates
- film thickness variation
- film application rates
- coverage and opacity
- products with surface or other faults.

Appropriate action for non-routine problems may be reporting to designated person or other action specified in the procedures.

Variables

Key variables to be monitored include:

- spray patterns
- materials consistency
- finished colour
- surface finish
- product integrity and general conformance to specifications
- coating viscosity
- solvent/thinner blend ratios.
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Unit Sector(s)

Not applicable.