



Australian Government

PMBPROD251E Apply gel coat or other polymer surface finish

Release: 1

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Modification History

Release 1. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed. Supersedes and is equivalent to PMBPROD251 Apply gel coat or other polymer surface finish.

Application

This unit describes the skills and knowledge required to apply gel coat, flow coat or other similar surface finishes using manual application or spray equipment.

This unit applies to an individual working alone or as part of a team.

The unit principally refers to the skill level required in applying the polymer surface finish and that this skill level is associated with a good understanding of the characteristics of the gel coat or polymer material.

No licensing or certification requirements exist at the time of publication. Relevant legislation, industry standards and codes of practice within Australia must be applied.

Pre-requisite Unit

Nil

Competency Field

Production – Composites

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Check work requirements	1.1 Identify requirements from job specifications 1.2 Perform housekeeping tasks to prepare for work to be undertaken 1.3 Perform pre-operational checks including checking for and acting on hazards
2. Conduct pre-production checks	2.1 Check mould or surface for cracks, chips and cleanliness 2.2 Undertake other pre-production set-up checks, including verification of raw materials
3. Apply coat	3.1 Measure and mix materials based on job specifications

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	3.2 Apply materials according to job specifications 3.3 Ensure output meets job specifications and quality standards 3.4 Accurately complete logs and records 3.5 Apply waste management strategies to collect and segregate waste and other materials according to workplace procedures 3.6 Clean equipment and work area according to operational and workplace procedures 3.7 Pause or stop equipment in an emergency according to workplace and emergency procedures
4. Respond to process control variances	4.1 Recognise and log process control variances and their causes 4.2 Determine, prioritise and implement remedial and preventative actions based on identified issues and causes 4.3 Accurately maintain records and logbooks

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

- Numeracy skills to interpret technical information.
- Reading skills to interpret specifications and workplace procedures.
- Writing and oral communication skills to record and report on surface finishing operations.

Other foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent to PMBPROD251 Apply gel coat or other polymer surface finish.

Links

Companion Volume implementation guides are found in VETNet – -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=932aacef-7947-4c80-acc6-593719fe4090>

Assessment Requirements for PMBPROD251E Apply gel coat or other polymer surface finish

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Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and demonstrated the ability to:

- apply gel coat or other polymer surface finish at least once to meet job specifications.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- the function of gel coat in the composite products being manufactured
- the importance of gel coat application to the standard of the finished work
- the common types of coatings, their differences and range of applications
- equipment commonly used in the application of polymer surface finishes, including:
 - measurement devices including depth gauges, containers, weighing machines, scales and meters
 - hand application equipment including brushes
 - spray equipment
- the methods of application of coatings
- processing behaviour and the role of additives
- the criteria for overall process/equipment readiness for the process or equipment being used
- polymer surface finish workflow sequences and materials demand
- key variables that may affect product quality and production output, including:
 - thickness
 - temperature
 - air pressure
 - surface finish
 - condition of mould/surface
 - product integrity and general conformance to specification
- the potential effects of variations in raw materials, conditions and equipment in relation to quality of product
- typical process and product problems, as listed below, including early warning signs, possible causes and corrective actions:

- wrinkles and pinholes
- slow gel coat cure
- sagging of the gel coat
- porosity
- separation of colour
- discolouration
- spray blockage, build-up, wear or breakage
- mixing problems
- temperature variation
- catalysation
- incomplete cure
- organisational procedures relevant to the work environment or job role
- hazards that may arise in the job or work environment, and:
 - their possible causes
 - potential consequences
 - appropriate risk controls.

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

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