



Australian Government

PMBPROD242E Bond polymers to surfaces

Release: 1

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Modification History

Release 1. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed. Supersedes and is equivalent to PMBPROD242 Bond polymers to surfaces.

Application

This unit covers the skills and knowledge required to join a solid polymer to a surface using adhesives, cohesives, solvents or similar joining technology.

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

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 – Generic

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. Prepare materials for joining substrates	2.1 Check substrate for suitability to commence bonding process 2.2 Clean and activate substrates in preparation for joining materials to be applied 2.3 Prepare joining materials according to job requirements
3. Apply joining materials	3.1 Apply joining materials to substrates according to job requirements 3.2 Monitor drying or setting to ensure result meets job requirements

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	3.3 Apply subsequent material or coats according to job requirements to meet quality standards
4. Join polymers	4.1 Set up equipment for joining materials according to job requirements 4.2 Bring surfaces together, ensuring intimate and continuous contact between surfaces, according to job requirements 4.3 Apply required conditions to join until joining process is complete and meets expected quality standards 4.4 Accurately complete logs, records and quality documentation 4.5 Clean equipment and work area according to workplace procedures
5. Respond to process control variances	5.1 Recognise and log process control variances and their causes 5.2 Determine, prioritise and implement remedial and preventative actions based on identified issues and causes

Foundation Skills

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

- Numeracy skills to interpret technical specifications.
- Reading skills to interpret specifications and workplace procedures.
- Writing and oral communication skills to record and report on polymer bonding 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 PMBPROD242 Bond polymers to surfaces.

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 PMBPROD242E Bond polymers to surfaces

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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:

- bond polymers to surfaces at least once to meet job specifications, and:
 - check substrate suitability, including:
 - surface soundness
 - surface preparation
 - substrate porosity
 - surface pits, protrusions or other irregularities
 - prepare joining material, including one or more of:
 - mixing chemicals or solutions
 - blending two (or more) pot-material components
 - thinning (e.g. with solvent) if required
 - measuring components for blends

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- principles of polymer bonding
- production workflow sequences and materials demand
- types of adhesives, cohesives, solvents and their differences and range of applications
- joining behaviour of polymers to relevant substrates and the role of adhesives, cohesives, solvents and other materials
- criteria for confirming pre-operational checks
- types and application of common joining processes
- types of tools and equipment typically used, including one or more of the following:
 - brushes
 - syringes
 - application scrapers
- expected quality standards resulting from the bonding process
- key variables that may affect product quality and production output, including:

- application patterns
- adhesive consistency
- adhesive viscosity
- solvent/thinner blend ratios
- drying/setting times
- pressure/contact between surfaces
- typical process problems, including early warning signs, possible causes and corrective actions
- organisational procedures relevant to the work environment and 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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