



Australian Government

PMBPREP206E Prepare polymer materials to specified formulae

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 PMBPREP206 Prepare materials to formulae.

Application

This unit describes the skills and knowledge required to prepare polymer materials to formulae for production or product-finishing operations.

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

The unit principally refers to the practical application of techniques for arranging polymers, colourants, and special additives as an important pre- or post-production operation analogous with similar jobs, in particular in food production sectors.

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

Preparation – Extrusion, Injection Moulding, Polyurethane

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. Identify requirements for handling materials	1.1 Read and interpret specifications for materials to identify appropriate materials 1.2 Identify relevant units of measurement and use equipment specifications to inform selection of matching measuring equipment 1.3 Apply measuring equipment to materials according to materials and equipment specifications 1.4 Identify and control hazards according to operational and workplace procedures 1.5 Read and interpret workplace procedures to plan work sequences

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
2. Prepare for assembly of ingredients	2.1 Calibrate or zero equipment for measurement according to equipment specifications 2.2 Set up and fit required personal protective equipment (PPE) and engineering controls according to workplace procedures 2.3 Assemble emergency equipment according to workplace procedures 2.4 Assess cleanliness of work area and identify sources of contamination risk and take steps to minimise or eliminate risk
3. Assemble ingredients	3.1 Collect and measure ingredients according to standard operating procedures and work health and safety regulations 3.2 Combine ingredients according to standard operating procedures and work and health safety regulations 3.3 Compare colour output of mixture with specifications, and take appropriate action if output does not meet specifications 3.4 Accurately complete records according to workplace 3.5 Store unused ingredients, and clean and store equipment, according to workplace procedures and work health and safety regulations
4. Respond to process control variances	4.1 Recognise process control variances and their causes 4.2 Determine, prioritise and implement remedial and preventative action on causes of process control variances 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 specifications and measure materials.
- Reading skills to interpret specifications and workplace procedures.
- Writing and oral communication skills to record and report on materials preparation and process control variances.

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 PMBPREP206 Prepare materials to formulae.

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 PMBPREP206E Prepare polymer materials to specified formulae

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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:

- prepare polymer materials to a specified formula at least once.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- types, applications and compositions of materials being used in formulae
- types and applications of measuring equipment
- tolerances of measuring equipment, and the impact of those tolerances on production processes and quality in terms of over or under measurement
- sources of contamination, their impacts on preparation of formulae, and procedures to minimise and eradicate these
- safe handling processes for materials and equipment associated with polymer production processes and products
- typical process and product problems, including early warning signs, possible causes and corrective actions
- key variables that may affect the output result, including:
 - use of raw materials
 - contamination of raw materials
 - formulae selection
 - mixing techniques
 - work area cleanliness
 - combining techniques
 - materials variations
 - variations in quality of mixture
- 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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