



Australian Government

PMBTECH302E Modify existing compounds

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 PMBTECH302 Modify existing compounds.

Application

This unit covers the skills and knowledge required to modify the formulae for compounds in specified proportions to achieve different product outcomes.

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

The unit principally refers to the need in the rubber and urethane moulding sectors to produce different compound mixes for production of goods with modified purpose.

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

Technical – Rubber and Urethanes

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. Confirm requirements of modified formula	1.1 Check modified compound specifications for completeness and clarity 1.2 Investigate options for changes in materials or proportions that meet specifications and fall within workplace capability 1.3 Identify tests required on trial compound to demonstrate product outcomes have been
2. Estimate starting formula	2.1 Identify existing compounds with similar specifications as starting formula base 2.2 Estimate required changes to existing compound to achieve desired product outcome

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	2.3 Check production constraints and work health and safety impacts of proposed changes against job specifications and workplace procedures 2.4 Modify proposed starting formulae based on checks and estimates
3. Prepare for trial compound production	3.1 Identify and control hazards for pilot or trial compound mixing according to workplace procedures 3.2 Verify availability of plant and equipment required in job specifications in readiness for trial production 3.3 Obtain and prepare all materials to support compound production
4. Produce trial compound	4.1 Mix trial compound in required proportions, using correct methods, to obtain sample 4.2 Organise or conduct test of trial compound sample according to workplace procedures 4.3 Interpret test results and identify implications for production or further testing 4.4 Modify formula and repeat trials until required specifications achieved
5. Check initial factory trial	5.1 Check availability of required resources and plant availability and obtain required authorities 5.2 Identify and control hazards for factory trial production according to workplace procedures 5.3 Monitor factory trial mixing of compound and obtain sample according to job specifications and workplace procedures 5.4 Interpret factory trial results and interpret implications for production or further testing 5.5 Modify formula and repeat factory trial until required specifications achieved
6. Complete trial	6.1 Accurately complete trial records and reports 6.2 Check that any changes to resources and procedures have been incorporated into workplace documentation 6.3 Ensure that any additional work health and safety or skill requirements have been included in forward planning according to workplace procedures

Foundation Skills

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

- Writing and oral communication skills to record and report on trial results.
- Numeracy skills to read, interpret and modify compound formulae.

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 PMBTECH302E Modify existing compounds.

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 PMBTECH302E Modify existing compounds

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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 of competency, and demonstrated the ability to:

- modify one existing compound to achieve required product outcomes.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- existing compounds, their properties and components
- characteristics of compound components and their impact on compound properties
- unusual or exotic materials not typically used in compounds, and the impact their use has on sampling methods and outcomes
- typical tests for modified compounds and their purpose
- typical sampling methods for compounds
- the ways formulae can be expressed
- methods for monitoring trials and recording and reporting on results.

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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