



Australian Government

Assessment Requirements for PMBTECH301E Optimise polymer processing operations

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 PMBTECH301 Use materials and process knowledge to solve problems.

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:

- optimise polymer processing operations at least once to achieve required production outputs.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- the principles of polymer processing operations, and functions of associated equipment
- production workflow sequences and materials demand
- types and application of common polymer materials and additives, including the effects of using the incorrect amount or type of additive
- structure of common polymers
- commonly accepted diagrammatic representations of polymer molecular shape and arrangement
- polymer properties related to flow, including:
 - molecular weight
 - molecular structure
 - factors effecting apparent viscosity
- polymer properties related to common polymer types and grades
- impact of common impurities on process and product
- the impact of temperature and heating or cooling rate on processing and properties
- characteristics of materials and their behaviour in relation to process conditions and stages of production
- key variables that may affect product quality and production output
- other typical and atypical process and product problems, including early warning signs, possible causes and corrective actions
- the distinguishing characteristics of causes of problems, and the application of problem analysis and problem-solving methods to polymer processing and polymer products
- organisational procedures relevant to the work environment or job role.

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.

Links

Companion Volume implementation guides are found in VETNet –

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