



Australian Government

MEM26012 Record and trial work processes for one-off composite products

Release: 1

MEM26012 Record and trial work processes for one-off composite products

Modification History

Release 1. Supersedes and is equivalent to MEM26012A Record and trial work processes for one-off composite products

Application

This unit of competency defines the skills and knowledge required to take a one-off/prototype product or a new product/process from an internal or external developer and turn this into a standard manufacturing process which works and can be used in the plant.

Where the organisation of composite trials is required unit MEM26018 Organise composite trials should also be selected.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Band: A

Unit Weight: 4

Pre-requisite Unit

MEM13015	Work safely and effectively in manufacturing and engineering
MEM16006	Organise and communicate information

Competency Field

Composites

Elements and Performance Criteria

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
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1	Identify proposed benefits/ outcomes of new product/ process	1.1	Follow standard operating procedures (SOPs)
		1.2	Comply with work health and safety (WHS) requirements at all times
		1.3	Confirm deliverables expected by customer

Elements describe the essential outcomes.		Performance criteria describe the performance needed to demonstrate achievement of the element.	
		1.4	Confirm benefits expected by organisation
		1.5	Identify any existing products with similar expectations
		1.6	Note any relevant issues with existing similar products
2	Sketch a process map/flow chart of proposed process	2.1	Determine processes and identify order of process steps to be used
		2.2	Draw process map/flow chart of proposed process
		2.3	Annotate key resources, including materials, labour, time and money to map/flow chart
		2.4	Examine map/flow chart for possible improvements and redraw, as appropriate
3	Compare proposed process with current standard processes	3.1	Identify processes and materials which will be new to/changed from/deleted from existing similar process used by the organisation
		3.2	Identify areas of improvement in the existing similar process
		3.3	Identify hazards and appropriate hazard controls
		3.4	Develop procedures for new/modified steps
4	Draft procedures for new product/process	4.1	Locate appropriate template for procedures
		4.2	Observe and record prototype
		4.3	Draft procedures from successful prototype steps in appropriate format
5	Evaluate draft procedures	5.1	Keep tally of resources used
		5.2	Compare production to procedures

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

5.3 Compare outcomes with expectations

5.4 Identify any required changes and take appropriate action

6 **Draft new procedures and obtain authorisation**

6.1 Draft workable procedures

6.2 Obtain authorisation of new procedures, as required

6.3 Standardise procedures

6.4 Complete any required documentation/reporting according to SOPs

Foundation Skills

This section describes those required skills (reading, writing, oral communication and numeracy) that are essential to workplace performance in this unit of competency.

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

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Deliverables expected by customer include one (1) or more of the following:

- technical specification
- aesthetic requirements
- other quality expectations
- cost/price expectations
- quantity and delivery schedules

Process improvements address one (1) or more of the following:

- over-production
- delay
- transportation
- over-processing
- excess inventory/work in progress (WIP)

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- excess motion
- defects
- untapped human potential

**Required changes
include one (1) or more
of the following:**

- multiple ways of doing the same job
- waste built into procedures
- aligning procedures with good practice

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM26012A Record and trial work processes for one-off composite products

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

Assessment Requirements for MEM26012 Record and trial work processes for one-off composite products

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria on at least two (2) occasions and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- identifying and interpreting specifications, formulas/recipes and batch sheets for determining materials and techniques and customer requests for recording and trialling work processes for one-off composite products
- sketching a process map/flow chart of proposed process and annotating key resources and examining possible improvements
- comparing proposed process with standard processes and identifying any required changes and taking appropriate remedial action
- developing draft procedures taking into account the process mapping and consulting and obtaining authorisation of new set of workable procedures and standardise new procedures
- completing all documentation and reports, including items requiring further action, in accordance with SOPs.

Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- safe work practices and procedures
- formulas/recipes and batch sheets for determining materials and techniques and customer requests for recording and trialling work processes for one-off composite products
- use of production tools (e.g. one-off or multiple products)
- limits of size which suggest easiest/most cost effective way to produce product
- fibre/resin ratio
- process mapping
- resource identification
- evaluation of procedures and outcomes
- resources wastage/savings calculations
- hazards and the hierarchy of hazard control measures
- available resources

- recording procedures for resource usage
- report requirements and procedures.

Assessment Conditions

- Assessors must:
 - have vocational competency in recording and trialling work processes for one-off composite products at least to the level being assessed with relevant industry knowledge and experience
 - satisfy the assessor requirements in the *Standards for Registered Training Organisations 2015* or its replacement and comply with the *National Vocational Education and Training Regulator Act 2011*, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires
- Where possible assessment must occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills
- Conditions for assessment must include access to all tools, equipment, materials and documentation required including relevant workplace procedures, product and manufacturing specifications
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

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