



Australian Government

Assessment Requirements for MEM26011 Determine materials and techniques for a composite component or product

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to MEM26011A Determine materials and techniques for a composite component or product

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, batch sheets, product drawings and customer requests for determining materials and techniques for a composite component or product
- considering all reasonably available combinations of resin systems, reinforcing and cores
- fabricating a sample and conducting/organising relevant test and evaluating the test results and making any required changes, as appropriate
- fabricating the final product using selected process and minimising waste as per specifications
- identifying areas for improvement and taking appropriate action
- 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 and use of personal protective equipment (PPE)
- current state/territory work health and safety (WHS) legislation, standards and codes of practice relevant to using materials and techniques for a composite component or product
- cost against known processes, including labour and machine output
- principles of adhesion and substrate/resin interactions
- bonding within and between composites, including:
 - inter-laminar delamination
 - secondary bonding delamination
- resin/reinforcement compatibility
- resin penetration
- permeability of reinforcement
- sustainability considerations

- Darcy's Law and its application to the flow of resins through porous media (e.g. reinforcing and cores).

Assessment Conditions

- Assessors must:
 - have vocational competency in determining materials and techniques for a composite component or product 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.

Links

Companion Volume implementation guides are found in VETNet -

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