



Australian Government

Assessment Requirements for MEM04011 Produce polymer patterns

Release: 2

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Modification History

Release 2. Quantum of hours of workplace practice removed. Supersedes and is equivalent to MEM04011 Produce polymer patterns (Release 1).

Release 1. Supersedes and is equivalent to MEM04011B Produce polymer patterns.

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, drawings, technical sketches and customer requirements in producing polymer patterns
- preparing to produce polymer patterns by inspecting patterns and cores for appropriate surface finish, and setting up jointline or flat board to specifications
- undertaking numerical operations, geometry and calculations/formulae, including determination of contraction rates
- selecting and mixing the appropriate polymer materials and hardener to correct ratios and proportions in a safe and effective manner
- applying polymer to specification ensuring air is not trapped, excessive heat is not generated and delamination does not occur in final use
- machining and finishing faces of polymer pattern to specifications
- applying method of location to patterns and core boxes
- carrying out maintenance and repairing of pattern/core box as required.

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)
- machining for patternmaking
- parting agents
- methods of locating patterns and core boxes
- range of surface finishes
- range of polymers and their applications
- mixing ratios and calculations
- characteristics of polymer under exothermic reaction and associated control measures
- methods of stripping

- pattern checking techniques.

Assessment Conditions

- Assessors must:
 - have vocational competency in producing polymer patterns 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.
- Assessment must occur in a functioning workplace. Where assessment in the workplace would be unsafe, impractical or threatens the environment, assessment must occur in a sufficiently rigorous simulated environment that reflects the circumstances that would be experienced in a functioning workplace. Assessment must cover all aspects of workplace performance, including 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

The MEM Metal and Engineering Training Package Companion Volume Implementation Guide is available from VETNet -

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