



Australian Government

Assessment Requirements for MEM48004 Interpret basic binary phase diagrams

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to MSATCM304A Interpret basic binary phase diagrams.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- identifying and interpreting the microstructures from an equilibrium and non-equilibrium cooling phase diagrams criteria on at least two occasions
- producing a basic cooling phase diagram from supplied data criteria on at least two occasions
- estimating composition from the structure of a phase diagram
- predicting structure from the composition from a phase diagram.

Note: Where a volume and/or frequency is not specified, demonstration must be provided at least once.

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
- scientific techniques and principles of cooling phase diagrams
- methods of construction of phase diagrams for binary alloys
- phase changes that occur in binary alloy systems as recorded by the appropriate phase diagrams
- equilibrium and non-equilibrium cooling of binary alloys and the resulting microstructures in cast and heat-treated material.
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Assessment Conditions

- Assessors must:
 - have vocational competency in interpreting basic binary phase diagrams 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 that 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>