



Australian Government

MEM13004 Work safely with molten metals/glass

Release: 1

MEM13004 Work safely with molten metals/glass

Modification History

Supersedes and is equivalent to MEM13004B Work safely with molten metals/glass

Application

This unit of competency defines the skills and knowledge required to work safely in a heavy engineering environment in which there are molten metals or glass, for example, in foundries, die casting operations, glass or molten glass operations and explosives manufacture.

Evidence of competency is to encompass the satisfactory application of any current state/territory work health and safety (WHS) legislation, standards and codes of practice, and the hierarchy of hazard control measures.

Where the selection and use of engineering measurement is required unit MEM12023 Perform engineering measurements should also be selected.

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

Band: A

Unit Weight: 2

Pre-requisite Unit

MEM11011	Undertake manual handling
MEM13015	Work safely and effectively in manufacturing and engineering
MEM16006	Organise and communicate information

Competency Field

Work health and safety

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	Determine job requirements	1.1	Follow standard operating procedures (SOPs)
		1.2	Comply with work health and safety (WHS)

Elements describe the essential outcomes.		Performance criteria describe the performance needed to demonstrate achievement of the element.	
		requirements at all times	
		1.3	Identify job requirements from specifications, job sheets or work instructions
2	Use personal protective equipment (PPE)	2.1	Select correct and appropriate PPE and use correctly based on WHS information relating to specific hazards
3	Adhere to emergency procedures	3.1	Locate emergency equipment and use in accordance with workplace policies and SOPs
		3.2	Demonstrate responses to emergency procedures as detailed in approved safety procedures and instructions
4	Identify, assess and control hazardous conditions	4.1	Identify and report hazards and undertake planning to maintain a healthy and safe work environment
		4.2	Follow workplace procedures and work instructions for controlling risks
5	Observe safe working practices	5.1	Identify hazardous areas and materials associated with molten metals or glass and identify potential risks
		5.2	Identify and understand safety signs and symbols
		5.3	Inspect PPE and maintain in good order and store for reuse
		5.4	Identify, remove, assess and control hazardous items associated with task from hot material area, if required
		5.5	Perform housekeeping duties to maintain a safe working environment 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.

Hierarchy of control measures include the following:

The application of the hierarchy of control follows the six-step preference of control measures to manage and control risk:

1. elimination
2. substitution
3. isolation
4. engineering control measures
5. using safe work practices
6. personal protective equipment (PPE)

PPE includes one (1) or more of the following:

- face protection
- eye protection
- respiratory protection
- hearing protection
- hand protection
- clothing and footwear protection

Hazardous material includes one (1) or more of the following:

- hot material
- molten metals
- molten glass and associated products
- explosive materials

Unit Mapping Information

Supersedes and is equivalent to MEM13004B Work safely with molten metals/glass

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 MEM13004 Work safely with molten metals/glass

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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
- using appropriate personal protective equipment (PPE) as specified in work health and safety (WHS) requirements and SOPs
- responding to emergency procedures for incidents, including fires, accidents and spillage
- handling hazardous materials and equipment in accordance with procedures
- following workplace procedures to control risks that includes the likelihood and consequences of injury or damage and identifying and reporting hazardous conditions and taking actions to rectify hazards
- interpreting text and numerical (e.g. quantities, units of measurement) information on safety data sheets (SDS), safety signs, symbols and labels
- using appropriate manual handling techniques and equipment in accordance with procedures.

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)
- procedures relevant to raising WHS issues
- rights and responsibilities of workplace parties under WHS Acts, regulations and codes of practice
- designated personnel responsible for WHS
- emergency procedures, safety signs, symbols and labels
- procedures for correct inspection and service of equipment, including PPE
- routine maintenance procedures for equipment
- workplace procedures for working in hazardous areas
- consequences of not maintaining a clean and safe working environment
- specific hazards associated with the work environment/industry
- safe manual handling procedures
- location of emergency equipment, including first aid facilities

- hierarchy of controls.

Assessment Conditions

- Assessors must:
 - have vocational competency in working safely with molten metals/glass 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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