



Australian Government

Department of Education, Employment and Workplace Relations

MEM13004B Work safely with molten metals/glass

Release: 1

MEM13004B Work safely with molten metals/glass

Modification History

Not Applicable

Unit Descriptor

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| Unit descriptor | This unit covers working safely with molten metals or glass including the appropriate use of personal protective equipment (PPE), identifying and responding to emergency procedures, observing safe work practices, and identifying the hazardous conditions in a heavy engineering environment. |
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Application of the Unit

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| Application of the unit | <p>This unit may be applied in all workplaces in which there is molten metal or molten glass, for example, in foundries, die casting operations, glass or molten glass operations, explosives manufacture.</p> <p>Evidence of competency is to encompass the satisfactory application of any current State/Territory OHS legislation, standards and codes of practice, and the hierarchy of hazard control measures with elimination, substitution, isolation and engineering control measures being selected before safe work practices and personal protective equipment.</p> <p>This competency is to be exhibited in accordance with all relevant OHS legislation.</p> <p>Band: A</p> <p>Unit Weight: 2</p> |
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

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| Prerequisite units | | |
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Employability Skills Information

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| Employability skills | This unit contains employability skills. |
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Elements and Performance Criteria Pre-Content

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| Elements describe the essential outcomes of a unit of competency. | Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide. |
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Elements and Performance Criteria

| ELEMENT | PERFORMANCE CRITERIA |
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| 1. Identify the need for the use of personal protective equipment | 1.1. Appropriate personal protective equipment is identified and used correctly, as specified in standard operating procedures (SOP) and OHS information relating to the specific hazard(s). |
| 2. Adhere to emergency procedures for working with molten metal and glass | 2.1. Emergency equipment is located and used in accordance with workplace policies and procedures. 2.2. Responses to emergency procedures are demonstrated as detailed in approved safety procedures and instructions. |
| 3. Identify, assess and control hazardous conditions operating in a heavy engineering environment | 3.1. Hazards are identified and reported and planning is undertaken to maintain a healthy and safe work environment. 3.2. Workplace procedures and work instructions for controlling risks are followed accurately. |
| 4. Observe good OHS practices | 4.1. Hazardous areas and materials associated with molten metal/glass are identified and potential risks are identified. 4.2. Safety signs and symbols are identified and understood. 4.3. Equipment (including personal protective equipment) is used according to specifications and standard operating procedures. 4.4. Personal protective equipment is inspected and maintained in good order and stored for reuse. 4.5. Hazardous items associated with task are identified and removed from hot material area if required and assessed and controlled. 4.6. Housekeeping duties are performed according to standard operating procedure to maintain a safe working environment and include the safe use, accessibility and maintenance of PPEs. |

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

REQUIRED SKILLS AND KNOWLEDGE**Required skills**

Look for evidence that confirms skills in:

- using appropriate personal protective equipment
- responding to emergency procedures (fires, accidents etc.)
- handling hazardous materials and equipment within the scope of this unit
- maintaining equipment
- housekeeping
- identifying and reporting hazardous conditions and taking actions to rectify hazards
- interpreting text and numerical (e.g. quantities, units of measurement) information on material safety data sheets, safety signs, symbols and labels
- using manual handling techniques

Required knowledge

Look for evidence that confirms knowledge of:

- hazards, hazardous areas and materials and hazard control measures associated with molten metal/glass
- hierarchy of control
- procedures relevant to raising OH&S issues
- rights and responsibilities of workplace parties under OH&S acts, regulations, codes of practice etc.
- designated personnel responsible for OH&S
- applicable personal protective equipment
- emergency procedures
- safety signs, symbols and labels
- procedures for correct inspection and service of equipment including personal protective equipment
- routine maintenance procedures for equipment
- workplace procedures for working in hazardous areas
- the 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

Evidence Guide

| EVIDENCE GUIDE | |
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| The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package. | |
| Overview of assessment | A person who demonstrates competency in this unit must be able to work safely with molten metals/glass. |
| Critical aspects for assessment and evidence required to demonstrate competency in this unit | Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts. |
| Context of and specific resources for assessment | <p>This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.</p> <p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with working safely with molten metals/glass or other units requiring the exercise of the skills and knowledge covered by this unit.</p> |
| Method of assessment | Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials. |
| Guidance information for assessment | |

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

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| Personal protective equipment | <ul style="list-style-type: none"> • Face protection • Eye protection • Respiratory protection • Hearing protection • Hand protection • Clothing and footwear protection |
| Risk | Likelihood and consequences of injury or damage |
| Hazardous material | <ul style="list-style-type: none"> • Hot material • Molten metals • Molten glass and associated products etc. • Explosive materials |

Unit Sector(s)

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| Unit sector | |
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Co-requisite units

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| Co-requisite units | |
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Competency field

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| Competency field | Occupational health and safety |
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