<table>
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<tr>
<th>Training Package</th>
<th>Metal and Engineering (MEM05)</th>
<th>HSC Requirements and Advice</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Title</strong></td>
<td><strong>Work safely on marine craft</strong></td>
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<tr>
<td><strong>Unit code</strong></td>
<td>MEM50002B</td>
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<tr>
<td><strong>Unit descriptor</strong></td>
<td>This unit covers identifying risks and safely working on and moving around vessels – for sales, service or repair – on and out of the water.</td>
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<tr>
<td><strong>Prerequisites</strong></td>
<td>None</td>
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<tr>
<td><strong>Application of the competency</strong></td>
<td>This unit applies to recreational vessels in both land and water environments. It also applies to workplaces in which vessels are built, repaired, stored, sold and transported. These workplaces may involve the use of dangerous goods and hazardous materials and may produce noxious waste products. The unit includes skills and knowledge that are particular to a marine environment and are in addition to those safety requirements normally applied in the workplace. All work and work practices are undertaken to regulatory and legislative requirements.</td>
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<tr>
<td><strong>Related units</strong></td>
<td>This unit could be assessed in conjunction with Unit MEM13002B (Undertake occupational health and safety activities in the workplace) and Unit MEM13003B (Work safely with industrial chemicals and materials).</td>
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</table>

### Evidence Guide

The evidence guide specifies the evidence required to demonstrate achievement in the unit of competency as a whole. It must be read in conjunction with the unit descriptor, performance criteria, range statement and the assessment guidelines for the Metal and Engineering Training Package.

**Overview of assessment requirements**
A person who demonstrates competency in this unit must be able to work safely in and on marine craft by identifying any risks, moving and working safely and following emergency procedures.

**Context of assessment**
This unit may be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, i.e. the candidate is not in productive work, 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.

**Interdependent assessment**
This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling associated with a marine environment, or other units requiring the exercise of the skills and knowledge covered by this unit.

**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 should not require language, literacy and numeracy skills beyond those required in this unit. 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.
### Evidence Guide cont'd

<table>
<thead>
<tr>
<th>Consistency of performance</th>
<th>Required skills</th>
<th>Required knowledge</th>
<th>HSC Requirements and Advice</th>
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</table>
| 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. | Look for evidence that confirms skills in:  
• undertaking risk assessment  
• communicating with others  
• performing proper manual handling techniques  
• interpreting safety signage, labelling and placarding. | Look for evidence that confirms knowledge of marine environment-specific:  
• dangerous goods classification and labelling/placarding  
• testing, use and maintenance of PPE  
• inherent hazardous properties of the chemicals used  
• interpretation of the relevant MSDS  
• basic fire fighting procedures  
• site-specific emergency plan procedures  
• spill confinement procedures  
• dangerous occurrence (near miss) reporting procedures  
• hierarchy of control. | Key Terms and Concepts  
• access method  
• accident  
• communication systems/methods to convey emergency messages  
• correct manual handling techniques  
• dangerous goods classification and labelling  
• drills  
• emergency plans and procedures  
• engineering controls  
• hazardous and non-hazardous materials  
• hazards  
• hierarchy of risk-control measures  
• housekeeping  
• incident  
• marine craft  
• Material Safety Data Sheet (MSDS)  
• minimisation, control and disposal of work residues  
• occupational health and safety (OHS)  
• planning and preparation  
• recreational vessel  
• reporting and recording  
• risk management  
• safe work practices and procedures  
• selection of work methods and tools and equipment  
• selection, use, maintenance and storage of personal protection equipment (PPE)  
• spill procedures  
• standard operating procedures (SOP)  
• warning signs and signals  
• waste management  
• work instructions and procedures  
• work platforms. |
<table>
<thead>
<tr>
<th>Elements</th>
<th>Performance criteria</th>
<th>Range Statement</th>
<th>HSC Requirements and Advice</th>
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<tbody>
<tr>
<td>1 Identify safe access methods and working platforms</td>
<td>1.1 Appropriate access methods are used to gain access to the work location.</td>
<td>The range statement provides information about the context in which the unit of competency is carried out. The variables [in bold] and scope [dot points] cater for different work requirements, work practices and knowledge between States, Territories and the Commonwealth, and between organisations and workplaces. The range statement relates to the unit as a whole and provides a focus for assessment. Text in italics in the performance criteria is explained here. The following variables may be present and may include, but are not limited to, the examples listed under the scope. All work is undertaken to relevant legislative requirements, where applicable. <strong>Access to the work location</strong> • includes: - gang planks - hatches - access ladders - bosun’s chairs - rigging.</td>
<td><strong>Learning experiences for the HSC must address:</strong> A basic awareness of occupational health and safety (OHS) legislation and regulations relevant to the boating industry. Safe work practices and procedures. A range of means to provide access to the work location (recreational vessel). Benefits and limitations of each type of access when recreational vessel is: • on water • out of water.</td>
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<tr>
<td>1.2 Work platforms are inspected to confirm that they are appropriate for the purpose, are correctly located and comply with any regulatory controls.</td>
<td>Work platforms • work platforms include: - purpose built work platforms - mobile and prefabricated scaffold - elevated work platforms.</td>
<td><strong>Learning experiences for the HSC must address:</strong> A range of work platforms including: • purpose • benefits • limitations • regulatory requirements.</td>
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<tr>
<td>2 Move around vessels safely</td>
<td>2.1 Risks and hazards are identified from observation, including confined spaces, and workplace approved risk controls are identified.</td>
<td><strong>Learning experiences for the HSC must address:</strong> A basic understanding of risk management: • identify hazards • assess associated risks • use appropriate control measures to eliminate/minimise risks • monitor and review the control measures.</td>
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<td>Elements</td>
<td>Performance criteria</td>
<td>Range Statement</td>
<td>HSC Requirements and Advice</td>
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| 2.2      | Appropriate *engineering controls* and *personal protection equipment* for work with recreational vessels are used. | **Engineering controls**  
• these include:  
  - ventilation and extraction systems  
  - dust control devices  
  - screens.  

**Personal protection equipment (PPE)**  
• PPE includes:  
  - goggles/face shields  
  - masks or respirators  
  - air supplied or self-contained helmets  
  - appropriate footwear, gloves and | Identification of hazards in a range of workplaces including where recreational vessels are:  
• built  
• repaired  
• stored  
• berthed  
• sold  
• transported  
• sailed/operated.  

A basic awareness of the hierarchy of risk control measures:  
• Level 1 – eliminate the risk (such as discontinue the activity or not use the equipment)  
• Level 2 – minimise the risk by:  
  - substituting the system of work/equipment (with something safer)  
  - modifying the system of work/equipment (to make it safer)  
  - isolating the hazard (such as introducing a restrictive work area)  
  - introducing engineering control (such as guarding, fencing or safety screens)  
• Level 3 – other controls:  
  - adopt administrative controls and safe work practices  
  - use personal protective equipment (PPE).  

An awareness of dangerous occurrence reporting/recording procedures. |  

learning experiences for the HSC must address:  
General features, benefits, limitations and purpose of a range of engineering controls when working with recreational vessels including when:  
• moving around vessels  
• working safely on vessels  
  - afloat  
  - ashore.  

Application and testing of a range of PPE including:  
• footwear |
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</table>
|          |                      | - appropriate garments  
|          |                      | - hearing protection  
|          |                      | - fall arrest devices  
|          |                      | - UV protection. | • head protection  
|          |                      |                 | • gloves  
|          |                      |                 | • protective clothing  
|          |                      |                 | • respirator  
|          |                      |                 | • face mask/shield  
|          |                      |                 | • hearing protection  
|          |                      |                 | • eye protection  
|          |                      |                 | • air supplied or self-contained helmets  
|          |                      |                 | • fall arrest devices  
|          |                      |                 | • UV protection.  

Importance of correct fitting PPE.
Selection, use, maintenance and storage of PPE appropriate to work task.

2.3 Appropriate warning signs and signals are used.

| 3       | Work safely on recreational vessels | 3.1 Work methods and tools are selected appropriate for the task. | Learning experiences for the HSC must address:  
|         |                                     |                 | Selection and use of standard warning signs and signals in the boating industry/marine environment:  
|         |                                     |                 | • legislative requirements  
|         |                                     |                 | • meaning of colour and shape  
|         |                                     |                 | • appropriate placement and positioning.  

Learning experiences for the HSC must address:
A range of sources for work instructions and procedures including:
• work schedules  
• job card/sheet/plans/specifications  
• standard operating procedures (SOP)  
• standard operation sheets  
• Material Safety Data Sheets (MSDS)  
• diagrams/sketches  
• regulations/legislation  
• manufacturer/workplace guidelines, policies and procedures  
• Australian Standards.  

General features, purpose, maintenance, storage and working knowledge of a range of tools and equipment appropriate to work tasks.
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<tr>
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<td></td>
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<td>Planning and preparation for a range of tasks of varying degree of difficulty.</td>
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<td>An awareness of correct manual handling techniques when:</td>
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<td>• bending</td>
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<td>• lifting/carrying items</td>
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<td>- individually</td>
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<td>- in pairs</td>
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<td>- with a team</td>
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<td>• placing items down</td>
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<td>• loading/unloading</td>
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<td>- into general storage</td>
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<td>- in/out of transport</td>
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<td>- to/from raised work area</td>
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<td>• using hand and power tools</td>
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<td>• undertaking repetitive tasks</td>
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<td>• transferring hazardous materials</td>
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<td>• using mechanical aids.</td>
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<td>Learning experiences for the HSC must address:</td>
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<td>Awareness of a range of hazardous and non-hazardous materials used in the boating industry.</td>
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<td>An awareness of information provided in MSDS:</td>
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<td>• manufacturer/supplier’s details</td>
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<td>• physical description and properties</td>
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<td>• identification of substance</td>
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<td>• ingredients</td>
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<td>• health hazard information</td>
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<td>• precautions for use</td>
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<td>• safe-handling information</td>
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<td>• control point.</td>
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<td>How and where to obtain required MSDS.</td>
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<td>3.2</td>
<td>Appropriate engineering controls and personal protection equipment are identified from workplace procedures, and are selected and used.</td>
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<tr>
<td>3.3</td>
<td>Work residues are minimised, controlled and disposed of following approved procedures.</td>
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</tbody>
</table>
### Elements

<table>
<thead>
<tr>
<th>Performance criteria</th>
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</thead>
</table>
| 3.4 Work site is maintained in a clean and tidy state, following approved workplace housekeeping methods. | **Workplace housekeeping methods**  
- Relevant housekeeping methods include:  
  - covering/protecting surfaces prior to starting work  
  - returning materials/equipment to storage area  
  - sweeping and cleaning  
- containment and mopping of spills  
- appropriate disposal of waste products. | **Learning experiences for the HSC must address:**  
Housekeeping procedures with due consideration to the environment and OHS.  
An awareness of housekeeping procedures including:  
- maintenance and storage of tools and equipment  
- removal and disposal of non-reusable materials in a responsible manner:  
  - work materials |

A basic awareness of dangerous goods classification and labelling.  
An awareness of a range of hazardous/noxious waste residues that may occur as a result of work performed on a recreational vessel including:  
- fuel/oil  
- solvent  
- gas  
- bilge waste.  
Site-specific emergency plans and procedures.  
Spill procedures including:  
- use of PPE  
- isolation of the spill  
- containment of the spill  
- identification of the material  
- decontamination of the spill  
- notification of appropriate authorities  
  - NSW Department of Environment and Conservation [incorporating Environment Protection Authority (EPA)]  
  - emergency services  
- clean up and disposal of the spill in an approved manner  
- procedures set out by MSDS  
- first aid if necessary.  
Reporting procedures including:  
- verbal/non-verbal  
- formal/informal.
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</table>
| 4 Follow emergency procedures for incidents in the marine environment | 4.1 Appropriate responses are used in reaction to incidents and accidents. | | - waste products  
- chemicals  
• safe storage of reusable materials in accordance with company policy  
• containment of loose materials on site (such as dust, litter and waste material)  
• control of run-off/spills  
• clean-up of work site.  
Environmental requirements for dealing with waste including:  
• recycling  
  - paper-based products  
  - plastic  
  - worn components  
  - metal components  
  - construction components  
• approved disposal of  
  - hazardous material  
  - non-hazardous material.  
A range of cleaning techniques including:  
• wiping  
• washing  
• brushing  
• sweeping  
• use of chemical agents (chemicals, solvents & detergents).  
**Learning experiences for the HSC must address:**  
Procedures to deal with a range of emergencies in the boating industry/marine environment including:  
• fire  
• explosion  
• toxic/dangerous  
  - leakages  
  - spills  
• personal injury or illness  
• man overboard  
• collision  
• vessel damage  
• flooding  
• sinking. |
<table>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Correct use of fire fighting equipment</td>
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<td></td>
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<td>• fire blanket</td>
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<td>• fire extinguishers</td>
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<td>- class and type of fire</td>
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<td>- type of extinguisher and identifying colour</td>
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<td></td>
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<td></td>
<td>• fire hydrant and hose.</td>
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<td>4.2</td>
<td>Communication systems and methods are used to convey emergency messages.</td>
<td>Communication systems and methods</td>
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<td>• These include:</td>
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<td>- direct voice</td>
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<td>- megaphone</td>
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<td>- hand signals</td>
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<td>- telephone</td>
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<td>- flags</td>
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<td>- computer</td>
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<td>- EPIRB.</td>
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<tr>
<td>4.3</td>
<td>Drills are followed for fire, explosion, toxic/dangerous spills and leakage, personal illness or injury, man overboard, collision or vessel damage.</td>
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<td>Learning experiences for the HSC must address:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Terminology, signals and communication systems/methods commonly used in the boating industry/marine environment to convey emergency messages.</td>
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</tbody>
</table>