



Australian Government

Department of Education, Employment and Workplace Relations

RIICRC314 Handle concrete materials

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This unit covers handling of concrete materials. It includes requirements to safely manually handle, store and apply environmental management principles associated with concreting materials and components in preparation for commencement of concreting work. The unit includes the identification and safe handling of hazardous materials and waste in accordance with material safety data sheets (MSDS)

Application of the Unit

This unit is appropriate for those working in an operational role at worksites within:
- Civil construction

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills

Elements and Performance Criteria Pre-Content

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

1. Plan and prepare for operations	1.1 Access, interpret and apply <i>compliance documentation</i> relevant to the work activity 1.2 Obtain and confirm <i>safety requirements</i> from the <i>site</i> safety plan and organisational policies and procedures, and apply to the allotted <i>task</i> 1.3 Identify, obtain and implement signage requirements from the project <i>traffic</i> management plan 1.4 Select <i>plant, tools and equipment</i> to carry out tasks consistent with the requirements of the job, check for serviceability and rectify or report any faults 1.5 Identify <i>environmental protection requirements</i> from the project environmental management plan, and confirm and apply to the allotted task
2. Handle and sort concrete materials and components	2.1 Identify and check on-site delivery of <i>concrete materials and components</i> for conformity to material schedule, plans and specifications. 2.2 Move concrete materials to specified location applying safe manual <i>handling procedures</i> 2.3 Stack and stockpile concrete materials and components for ease of identification and retrieve for task sequence and job location in accordance with job specifications 2.4 Protect concrete materials and components against physical and water damage, and store clear of access ways, for ease of identification, retrieval and distributio 2.5 Handle and position components ready for installation in accordance with manufacturer recommendations, plans and specifications
3. Handle and remove concrete materials and components on	3.1 Handle materials safely according to MSDS and requirements of regulatory authorities

completion	3.2 Identify hazardous material for separate handling 3.3 Use dust suppression procedures to minimise health risk to work personnel and others 3.4 Provide protection of materials in accordance with specific material needs 3.5 Store materials safely and effectively according to MSDS and requirements of <i>statutory and regulatory authorities</i>
4. Clean up	4.1 Clear work area and dispose of, reuse or recycle material in accordance with legislation, regulations, codes of practice and job specification 4.2 Identify hazardous material for separate handling 4.3 Remove non-toxic materials using correct procedures 4.4 Use dust suppression procedures to minimise health risk to work personnel and others 4.5 Clean, check, maintain and store tools and equipment in accordance with manufacturer recommendations and standard work practices

Required Skills and Knowledge

Required skills

Specific knowledge is required to achieve the Performance Criteria of this unit, particularly for its application in the various circumstances in which this unit may be used. This includes knowledge of the following, as required to conduct concrete handling including:

- communication skills to:
- determine requirements
- enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
- follow instructions
- read and interpret:
- documentation from a variety of sources
- drawings and specifications
- report faults
- use language and concepts appropriate to cultural differences
- use and interpret non-verbal communication, such as hand signals
- evaluating own actions and making judgments about performance and necessary improvements
- identifying and accurately reporting to appropriate personnel any faults in tools, equipment or materials
- organisational skills, including the ability to plan and set out work
- recognising procedures, following instructions, responding to change and contributing to workplace responsibilities, such as current work site environmental and sustainability frameworks or management systems
- teamwork skills to coordinate own work with others to action tasks and relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities
- technological skills to:
- use a range of mobile technology, such as two-way radio and mobile phones
- voice and hand signals to access and understand site-specific instructions.

Required knowledge

Specific knowledge is required to achieve the Performance Criteria of this unit, particularly for its application in the various circumstances in which this unit may be used. This includes knowledge of the following, as required to handle concrete including:

- concrete materials handling techniques
- concreting materials
- general construction terminology
- hazardous materials
- job safety analysis (JSA) and safe work method statements
- MSDS
- materials storage and environmentally friendly waste management

- plans, drawings and specifications
- processes for the calculation of material requirements
- quality requirements
- types, characteristics, uses and limitations of tools and equipment
- workplace and equipment safety requirements.

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Evidence Guide

Critical aspects for assessment and evidence required to demonstrate competency in this unit	The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following: • knowledge of the requirements, procedures and instructions for handling concrete materials • implementation of requirements, procedures and techniques for the safe, effective and efficient completion of handling concrete materials • working with others to undertake and complete handling concrete material operations in a way that meets all of the required outcomes • consistent timely completion of handling concrete material operations that safely, effectively and efficiently meets the required outcomes • conduct handling concrete materials
Context of and specific resources for assessment	• This unit must be assessed in the context of the work environment. Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills. • Assessment of this competency requires typical resources normally used in Civil Construction. Selection and use of resources for particular worksites may differ due to the site circumstances. • The assessment environment should not disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those required on the job. • Customisation of assessment and delivery

	environment to sensitively accommodate cultural diversity. • Aboriginal people and other people from a non English speaking background may have second language issues. • Where applicable, physical resources should include equipment modified for people with disabilities. Access must be provided to appropriate learning and/or assessment support when required
Method of assessment	This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment methods: • written and/or oral assessment of the candidate's required knowledge • observed, documented and/or first hand testimonial evidence of the candidate's: • implementation of appropriate requirement, procedures and techniques for the safe, effective and efficient achievement of required outcomes • consistent achievement of required outcomes • first hand testimonial evidence of the candidate's: • working with others to undertake and complete the handling of concrete materials
Guidance information for assessment	Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.

Range Statement

Information includes:	• diagrams or sketches • instructions issued by authorised organisational or external personnel • manufacturer specifications and instructions, where specified • MSDS • memos • regulatory and legislative requirements pertaining to handling concreting materials • relevant Australian standards
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	• safe work procedures relating to handling concreting materials • signage • verbal, written and graphical instructions • work bulletins • work schedules, plans and specifications.
Planning and preparation include:	• assessment of conditions and hazards • determination of work requirements and safety plans and policies • equipment defect identification • work site inspection.
Safety (OHS) is to be in accordance with state and territory legislation and regulations and project safety plan and may include:	• emergency procedures, including extinguishing fires, organisational first aid requirements and evacuation • handling activities that may require the assistance of others or the use of manual or mechanical lifting devices where size, weight or other issues, such as a disability are a factor • hazard control • hazardous materials and substances, including cement and curing agents • organisational first aid • PPE prescribed under legislation, regulations and workplace policies and practices • safe operating procedures, including the conduct of operational risk assessment and treatments associated with: • earth leakage boxes • lighting • power cables, including overhead service trays, cables and conduits • restricted access barriers • surrounding structures • traffic control • trip hazards • work site visitors and the public • working at heights • working in confined spaces • working in proximity to others • use of firefighting equipment • use of tools and equipment • workplace environmental requirements and safety
Tools and equipment include:	• brooms • rakes

	• shovels • tarpaulins and covers • wheelbarrows
Quality requirements include relevant regulations, including:	• Australian standards • internal company quality policy and standards • manufacturer specifications • workplace operations and procedures
Materials:	• include: • aggregates • cement • form release agents • non-toxic materials, including general concreting materials • sand • water • may include: • additives • curing compound • oxides
Environmental requirements includes:	• clean-up management • dust and noise • dust suppression, including: • covering • keeping dust in the air to a minimum • spraying with water • using a vacuum cleaner • stormwater management • vibration • waste management
Concrete materials and components:	• include: • bar chairs • bracing • plastic membrane • reinforcement mesh • spacers • steel and timber formwork • may include: • bar steel • decking • key joints • push-pull props

	• reinforcement bars • scaffolding • support props • tilt panels.
Handling procedures include:	• calculation of quantities • manual handling, including: • carrying materials using correct lifting techniques • control of waste • using pallets • MSDS • protection of materials • stacking and storing of materials
Statutory and regulatory authorities include:	• federal, state and local authorities administering the applicable Acts, regulations and codes of practice

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Unit Sector(s)

Road and Pavements Construction and Maintenance (General)

Custom Content Section

Not applicable.