



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **BCGCM2007B Use explosive power tools (EPT)**

**Release: 1**

## **BCGCM2007B Use explosive power tools (EPT)**

### **Modification History**

Not applicable.

### **Unit Descriptor**

This unit specifies the competency required to apply safe and effective operation of explosive power tools used to fasten materials or fix fasteners to bases of concrete, masonry or steel. The unit includes both direct action and indirect action explosive powered fastening tools. This unit specifies the competency required to apply safe and effective operation of explosive power tools used to fasten materials or fix fasteners to bases of concrete, masonry or steel. The unit includes both direct action and indirect action explosive powered fastening tools.

### **Application of the Unit**

Not applicable.

### **Licensing/Regulatory Information**

Not applicable.

### **Pre-Requisites**

Not applicable.

### **Employability Skills Information**

Not applicable.

### **Elements and Performance Criteria Pre-Content**

Not applicable.

# Elements and Performance Criteria

## Elements and Performance Criteria

<b>Element</b>	<b>Performance Criteria</b>
1 Plan and prepare	<ul style="list-style-type: none"><li>1.1 Work instructions, including plans, specifications, quality requirements and operational details are obtained, confirmed and applied</li><li>1.2 Safety requirements are followed in accordance with safety plans and policies</li><li>1.3 Signage/barricade requirements are identified and implemented</li><li>1.4 Plant, tools and equipment selected to carry out tasks are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported prior to commencement</li><li>1.5 Material quantity requirements are calculated in accordance with plans and/or specifications</li><li>1.6 Materials appropriate to the work application are identified, obtained, prepared, safely handled and located ready for use</li><li>1.7 Environmental protection requirements are identified for the project in accordance with environmental plans and regulatory obligations and applied</li></ul>
2 Set out fasteners	<ul style="list-style-type: none"><li>2.1 Minimum distances from edge of substrate material are adhered to in accordance with legislation/regulations/codes of practice</li><li>2.2 Material is located and temporarily held or fixed into designed position according to detailed drawings</li></ul>
3 Use explosive power tools	<ul style="list-style-type: none"><li>3.1 Explosive power tool is checked for operation to manufacturers' specifications and safety requirements</li><li>3.2 Fastener is selected to requirements of job</li><li>3.3 Charge is selected to assessed requirements for material, base and penetration</li></ul>

- 3.4 Attachments and/or accessories are installed to explosive power tool in accordance with manufacturers' specifications and safety requirements
  - 3.5 Fastener and charge in explosive power tool are located to manufacturers' specification
  - 3.6 Explosive power tool operation is carried out and fastener fixed into place in accordance with manufacturers' recommendations, legislation/regulations/codes of practice
  - 3.7 Fastening penetration is checked and appropriate depth into material applied
  - 3.8 Power regulating device is adjusted for conditions
  - 3.9 Misfire procedures is carried out to manufacturers' recommendations and legislation/regulations/codes of practice
  - 3.1 Temporary holding/fixings are removed without damage to material
- 4 Secure and store equipment and charges
    - 4.1 Charges are stored in designated container in accordance with legislation/regulations/codes of practice and used charges recorded
    - 4.2 Unused fasteners, the EPT and attachments are stored in a carry case to manufacturers recommendations
    - 4.3 Log book is checked and maintenance recorded to manufacturers recommendations
- 5 Maintain EPT and kit
    - 5.1 Safety features of the tool are checked for serviceability in accordance with manufacturers operating manual
    - 5.2 Tool is cleaned and lubricated to manufacturers recommendations
    - 5.3 Periodic maintenance service is carried out to manufacturers specifications
    - 5.4 Diminished stocks of charges and fasteners are replenished to designed effectiveness of power tool kit

- 6 Clean up
  - 6.1 Work area is cleared and materials disposed of, reused or recycled in accordance with legislation/regulations/codes of practice and job specification
  - 6.2 Plant, tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturers' recommendations and standard work practices

## **Required Skills and Knowledge**

Not applicable.

## Evidence Guide

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Performance Criteria, the Range Statement, and the Assessment Guidelines of the Training Package.

### **Critical aspects of evidence required to demonstrate competency in this unit**

Location, interpretation and application of relevant information, standards and specifications

Compliance with site safety plan and OH&S legislation/regulations/codes of practice applicable to workplace operations

Compliance with organisational policies and procedures including quality requirements

Safe and effective operational use of tools and equipment

Communication and working effectively and safely with others

The fixing of metal or timber to a steel, concrete or masonry base on one project of each to job specifications including completion of all activities listed in the fourth dot point of the Unit Scope

### **Relationship to other units**

Pre-requisite units are:

BCGCM1001B - Follow OH&S policies and procedures

Competency in this unit may be assessed in conjunction with other functional units which together form part of the holistic work role.

### **Specific knowledge required to achieve the performance criteria**

A knowledge of:

Workplace and equipment safety requirements

Quality requirements

General Construction terminology

Plant, tools and equipment types, characteristics, uses and limitations

Explosive power tools, charges and fasteners

EPT materials

Processes for the calculation of material requirements

Material Safety Data Sheets

Plans, drawings and specifications

Materials handling, storage and environmentally friendly waste management

Relevant acts, regulations and codes of practice

Equipment safety manuals and instructions

Security and storage procedures for equipment and charges

JSA's/Safe work method statements

### **Specific key competencies, underpinning and employability skills required to achieve the performance criteria**

These include a number of processes that are learned throughout work and life, which are required in most jobs. Some of these are covered by the national key competencies, although others may be added. The details below highlight how these competencies are to be applied in the attainment of this unit.

Application of the key competencies in this unit are to satisfy the nominated level in which:

Level 1 - relates to working effectively within set conditions and processes;

Level 2 - relates to the management or facilitation of conditions or processes; and

Level 3 - relates to the design, development and evaluation of conditions or process.

How will the candidate apply the following key competency in this unit? **The candidate will need to:**

**Collect, analyse and organise information**

Collect, organise, interpret and understand the information required for using EPT equipment, including work instructions, plans/sketches/diagrams, safety instructions, signage, labels, quality procedures, manufacturers' instructions, material safety data sheets and equipment instructions **Level 1**

**Communicate ideas and information**

Communicate ideas and information orally and in writing, in simple English to enable confirmation of work requirements, passage of information and requests to other workers during operations and the reporting and recording of work outcomes **Level 1**

**Plan and organise activities**

Conduct activities associated with using EPT equipment, including the coordination and use of equipment, materials and tools to avoid backtracking and rework **Level 2**

**Work with others and in a team**

Work with others and in a team by recognising dependencies and using co-operative approaches to optimise satisfaction and productivity **Level 1**

**Solve problems**

Establish safe and effective work processes which anticipate likely problems and blockages and systematically work around these to avoid or minimise reworking and avoid wastage **Level 2**

**Use mathematical ideas and techniques**

Use mathematical ideas and techniques to correctly calculate time to complete tasks, estimate measurements, distances, calculate material requirements and establish quality checks **Level 1**

**Use technology**

Use workplace technology related to using EPT equipment, including the use of calculators, explosive charged equipment, the use of communication devices and the reporting/recording of results **Level 2**

**The context of assessment**

The application of competency is to be assessed in the workplace or realistically simulated construction site

Assessment is to occur using standard and authorised work practices, safety requirements and environmental constraints

Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context

Assessment is to comply with relevant regulatory requirements including specified Australian Standards

**Methods of assessment**

Assessment must satisfy the endorsed assessment guidelines of the Building and Construction industry's General Construction Training Package and relevant NOHSC standards where they apply

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment must be by direct observation of tasks, with questioning on underpinning knowledge and it must also reinforce the integration of key competencies

Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency, including those listed above

### **Specific resource requirements for this unit**

The following resources should be made available:

- workplace location or simulated workplace
- materials relevant to using EPT equipment
- EPT equipment
- realistic activities covering the mandatory task requirements
- specifications and work instructions

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Performance Criteria, the Range Statement, and the Assessment Guidelines of the Training Package.

### **Critical aspects of evidence required to demonstrate competency in this unit**

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A knowledge of:

- Workplace and equipment safety requirements
- Quality requirements
- General Construction terminology
- Plant, tools and equipment types, characteristics, uses and limitations
- Explosive power tools, charges and fasteners
- EPT materials
- Processes for the calculation of material requirements
- Material Safety Data Sheets
- Plans, drawings and specifications
- Materials handling, storage and environmentally friendly waste management
- Relevant acts, regulations and codes of practice



Equipment safety manuals and instructions  
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#### **Level 2**

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## Range Statement

The Range Statement provides advice to interpret the scope and context of this unit of competency allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment. The following variables relate to this particular unit:

### Unit scope

Planning and preparation is to include but not be limited to worksite inspection, equipment defect identification, assessment of conditions and hazards and determination of work requirements

Minimum distance for set out of fasteners are to be in accordance with regulated minimum distances

Bases may include concrete, masonry or steel

Use of explosive power tools is to include stripping and assembly of the tool, completing the log of serviceability, maintaining and cleaning, selecting charges and fasteners applicable to the base material and material being fixed, misfire procedures, using attachments, complying with storage and security regulations, OH&S requirements for the working environment, selection of signage and test fire

Types of EPT are to include direct action and indirect action

Attachments may include channel, rebate and other manufacturers attachments

Selection of charge is to include a test shot

Misfire procedure is to include the regulated safety procedure for misfire

### Safety (OH&S)

OH&S requirements are to be in accordance with legislation/regulations/codes of practice, organisational safety policies and procedures and project safety plan. This may include protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, organisational first aid, hazard control and hazardous materials and substances

Personal protective equipment is to include that prescribed under legislation/regulation/codes of practice and workplace policies and practices

Safe operating procedures are to include but not be limited to the conduct of operational risk assessment and treatments associated with power cables (including overhead service trays, cables and conduits), lighting, earth leakage boxes, trip hazards, working with dangerous materials, working in confined spaces, surrounding structures, restricted access barriers, traffic control, working at heights, working in proximity to others, worksite visitors and the public

Emergency procedures related to this unit are to include but may not be limited to extinguishing fires, organisational first aid requirements and evacuation

### Environmental requirements

Environmental requirements are to include but are not limited to waste management, noise, dust, vibration and clean-up management.

### Quality requirements

Quality requirements are to include but not be limited to relevant regulations including Australian Standards, internal company quality policy and standards, workplace operations and procedures and manufacturers specifications where specified.

### Statutory/regulatory authorities

Statutory/regulatory authorities may include Federal, State and Local Authorities administering the applicable acts, regulations and codes of practice.

**Tools and Equipment**

Tools and equipment are to include a direct action EPT and an indirect action EPT and may include clamps and levels.

**Materials**

Materials may include timber, metals and patented fasteners.

**Communications**

Communications are to include but not limited to verbal and visual instructions and fault reporting and may include mobile phone, site specific instructions, written instructions, plans or instructions related to job/task, two way radio and hand signals

On site meeting processes may include notification/ scheduling (time, place, purpose), task discussions and local coordination of procedural and operational issues

**Information**

Information sources may include but not be limited to verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, memos, material safety data sheets (MSDS), diagrams or sketches

Safe work procedures related to using EPT

Regulatory/legislative requirements pertaining to using EPT

Manufacturers' specifications and instructions where specified

Organisation work specifications and requirements

Instructions issued by authorised organisational or external personnel

Relevant Australian Standards

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Organisation work specifications and requirements

Instructions issued by authorised organisational or external personnel

Relevant Australian Standards

## **Unit Sector(s)**

Not applicable.