



Australian Government

Department of Education, Employment and Workplace Relations

CPCCPB3015A Install acoustic and thermal environmental protection systems

Release: 1

CPCCPB3015A Install acoustic and thermal environmental protection systems

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit of competency specifies the outcomes required to install wall and ceiling systems that satisfy environmental requirements in terms of acoustic ratings and energy efficiency ratings in accordance with sustainable building practices.

It includes planning and preparation for work, installation of insulation to wall cavities and plenum, installation of acoustic systems and completion of post work clean-up activities.

Application of the Unit

Application of the unit

This unit supports the attainment of skills and knowledge to safely and efficiently install acoustic and thermal environmental protection systems while working with others as a member of a team.

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units

CPCCOHS2001A

Apply OHS requirements, policies and procedures in the construction industry

Employability Skills Information

Employability skills 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.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare.	1.1. Work instructions and operational details are obtained using relevant information, confirmed and applied for planning and preparation purposes. 1.2. Safety (OHS) requirements are followed in accordance with safety plans and policies. 1.3. Signage and barricade requirements are identified and implemented. 1.4. 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. 1.5. Material quantity requirements are calculated in accordance with plans and specifications and quality requirements. 1.6. Materials appropriate to the work application are identified, obtained, prepared, safely handled and located ready for use. 1.7. Environmental requirements are identified for the project in accordance with environmental plans and regulatory obligations and applied.
2. Install blanket insulation to walls.	2.1. Stud configuration is identified for installation processes. 2.2. Safety wire mesh is installed to plans and specifications. 2.3. Insulating blanket is installed in full length runs where practicable or, if joined, joints are made at centre of frame member, according to plans and specifications. 2.4. Adjacent runs of blanket insulation is abutted with closed joints.
3. Install acoustic systems.	3.1. Acoustic materials are selected to manufacturer specifications for the walls and ceiling. 3.2. Sheeting or ceiling tile material is selected for use in buildings requiring acoustic properties in accordance with manufacturers' weighted sound reduction index (RW rating). 3.3. Plaster sheeting and acoustic tile materials are fixed to walls and ceiling in accordance with specifications. 3.4. Sealant is selected and used to manufacturer specifications.
4. Clean up.	4.1. Work area is cleared and materials disposed of, reused or recycled in accordance with legislation,

ELEMENT**PERFORMANCE CRITERIA**

regulations, codes of practice and job specification.
4.2. Tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturer recommendations and standard work practices.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

Required skills for this unit are:

- communication skills to:
 - follow instructions
 - read and interpret:
 - documentation from a variety of sources
 - drawings and specifications
 - recognise procedures
 - report faults
 - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
 - use language and concepts appropriate to cultural differences
 - use and interpret non-verbal communication, such as hand signals
 - written skills to record results of checks and tests and relevant work completion procedures
- evaluate own actions and make 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
- respond to change and contribute to workplace responsibilities, such as current work site environmental and sustainability frameworks and management systems
- teamwork skills to 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

REQUIRED SKILLS AND KNOWLEDGE

- voice and hand signals to access and understand site-specific instructions.

REQUIRED SKILLS AND KNOWLEDGE

Required knowledge

Required knowledge for this unit is:

- acoustic and thermal protection systems materials and terminology
- acoustic systems installation techniques
- basic acoustic theory
- installation tools and equipment types, characteristics, uses and limitations
- job safety analysis (JSA) and safe work method statements
- material safety data sheets (MSDS)
- materials storage and environmentally friendly waste management
- plans, drawings and specifications
- processes for the calculation of material requirements
- quality requirements
- regulation and building codes related to acoustic and thermal protection requirements and systems
- thermal system installation techniques
- thermal theory related to heat loss
- types of acoustic protection systems available for wall and ceiling application and their characteristics, strengths and limitations
- types of thermal protection systems available for wall and ceiling application and their characteristics, strengths and limitations
- workplace and equipment safety requirements.

Evidence Guide

EVIDENCE GUIDE

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

This unit of competency could be assessed in the workplace or a close simulation of the workplace environment, provided that simulated or project-based assessment techniques fully replicate construction workplace conditions, materials, activities, responsibilities and procedures.

Critical aspects for assessment and evidence required to demonstrate competency in this

A person who demonstrates competency in this unit must be able to provide evidence of the ability to:

EVIDENCE GUIDE

unit

- locate, interpret and apply relevant information, standards and specifications
- comply with site safety plan and OHS legislation, regulations and codes of practice applicable to workplace operations
- comply with organisational policies and procedures, including quality requirements
- safely and effectively operate and use tools, plant and equipment
- communicate and work effectively and safely with others
- complete not less than three installation tasks which cover acoustic and thermal protection systems, in accordance with regulatory requirements and related specifications.

EVIDENCE GUIDE

Context of and specific resources for assessment

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

- workplace location or simulated workplace
- materials relevant to the installation of acoustic and thermal protection systems
- hand and power tools and equipment appropriate to the installation of acoustic and thermal protection systems
- realistic activities covering the mandatory task requirements
- specifications and work instructions.

Assessment of this unit of competency may be in conjunction with assessment of other units commonly performed at the same time in normal job roles.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

Method of assessment

Assessment methods must:

- satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package
- include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- reinforce the integration of employability skills with workplace tasks and job roles
- confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

EVIDENCE GUIDE

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

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.

Information includes:

- diagrams or sketches
- instructions issued by authorised organisational or external personnel
- manufacturer specifications and instructions, where specified

RANGE STATEMENT

- MSDS
- memos
- regulatory and legislative requirements pertaining to installing acoustic and thermal environmental protection systems
- relevant Australian standards
- safe work procedures relating to installing acoustic and thermal environmental protection systems
- signage
- verbal, written and graphical instructions
- work bulletins
- work schedules, plans and specifications.

RANGE STATEMENT

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
- hazard control
- hazardous materials and substances
- 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:
 - cutting tools
 - lighting
 - manual handling
 - traffic control
 - restricted access barriers
 - trip hazards
 - power sources and leads
 - power tools
 - 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:
 - broad knives
 - caulking guns
 - electric screw guns
 - etting boxes
 - hammers
 - manual levelling devices
 - measuring tapes and rules

RANGE STATEMENT

- nail bags
- power drills
- power leads
- power saws
- screwguns
- spanners
- spirit levels
- squares
- tin snips
- trestles
- trowels
- may include:
 - C clamps
 - air compressors and hoses
 - docking saw and drop saws
 - laser levelling devices
 - masonry drills
 - nail guns
 - pop riveters
 - saw stools
 - system scaffolding and planks.

RANGE STATEMENT

Quality requirements include relevant regulations, including:

- Australian standards
- internal company quality policy and standards
- manufacturer specifications
- workplace operations and procedures.

Materials include:

- acoustic ceiling products
- adhesive
- fibrous plaster
- insulation blankets
- jointing tape
- loose fill insulation
- metal and aluminium type products
- nails
- plasterboard
- polystyrene sheets
- rigid sheet insulation
- screws
- sealants
- staples
- steel safety mesh.

Environmental requirements include:

- clean-up management
- dust and noise
- vibration
- waste management.

Installation includes:

- acoustic and energy insulation materials
- acoustic ceiling tiles and sheets
- fibre cement sheeting
- fixing of plasterboard
- metal pan type ceiling cladding
- plaster products.

Unit Sector(s)

Unit sector

Construction

Functional area

Functional area