Australian Government

Department of Education, Employment and Workplace Relations

CPCCWC3003A Install dry wall passive fire-rated systems

Release: 1

INDUSTRY SKILLS COUNCILS

Creating Australia's Future

CPCCWC3003A Install dry wall passive fire-rated systems

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit of competency specifies the outcomes required to select and install dry wall fire-rated systems to walls and ceilings.

It includes planning and preparation for installation; installation of approved systems for timber stud walls, steel stud partitions, shaft walls, timber joist and suspended ceilings; and completion of post-installation activities.

Application of the Unit

Application of the unit

This unit of competency supports the attainment of skills and knowledge to install dry wall passive fire-rated 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. Line a timber stud wall using a fire-rated system.	2.1. Structure of the timber wall for load or non-load bearing is established. 2.2. ***Fire-rating*** design is selected for the timber stud wall. 2.3. Materials are set out to manufacturers' fire-rated test. 2.4. ***Fixings*** are spaced in accordance with manufacturer specifications. 2.5. Material is fixed using correct procedures and fixing. 2.6. ***Penetrations*** are completed safely and in accordance with manufacturers' design and job specifications. 2.7. Joints are finished to exposed face layers of sheeting using recommended materials and procedures.
3. Construct steel stud fire-rated partition system.	3.1. Fire-rating design is selected for the steel stud wall. 3.2. Correct fixing requirements are established for the steel stud wall as designated by the manufacturer and in accordance with relevant fire test criteria. 3.3. Deflection heads are secured and sealant is applied in accordance with the fire-rated system design. 3.4. Material is set out in accordance with manufacturers' fire-rated test.

ELEMENT	PERFORMANCE CRITERIA
	3.5. Fixings are spaced in accordance with manufacturer specifications. 3.6. Material is fixed using correct procedures and fixings. 3.7. Penetrations are completed safely and in accordance with manufacturers' design and job specifications. 3.8. Joints are finished to exposed face sheet layers using recommended materials and procedures.
4. Construct a fire-rated shaft wall system.	4.1. Material is selected in accordance with manufacturer specifications. 4.2. Components are fixed to exact clearances to manufacturer specifications. 4.3. Materials are set out in accordance with manufacturers' design and job specifications. 4.4. Penetrations are completed safely and in accordance with specifications. 4.5. Joints are finished to exposed face sheet layers using recommended materials and procedures.
5. Line a timber joist ceiling using fire-rated system.	5.1. Ceiling joist substrate is prepared to be flat and straight to accommodate lining of the required fire-rated system. 5.2. Fixings are selected in accordance with manufacturers' design. 5.3. Lining is applied in accordance with manufacturers' design. 5.4. Fixings are spaced at correct intervals. 5.5. Penetrations are completed safely and in accordance with job specifications.
6. Construct a suspended ceiling with a fire-rating system.	6.1. Materials are selected for required fire-rated ceiling according to manufacturer specifications. 6.2. Fixings are chosen in accordance with manufacturers' design. 6.3. Ceiling is constructed to be flat, true, level and structurally sound. 6.4. Joints are finished to exposed face sheet layers using recommended materials and procedures. 6.5. Penetrations are completed safely and in accordance with specifications.
7. Clean up.	7.1. Work area is cleared and materials disposed of, reused or recycled in accordance with legislation, regulations, codes of practice and job specification.

ELEMENT	PERFORMANCE CRITERIA
	7.2. 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 knowledge

Required knowledge for this unit is:

- basic combustion theory
- dry wall passive fire-rated T-systems installation techniques and processes
- 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
- range of materials commonly used in the installation of dry wall passive fire-rated systems
- regulations and building codes related to dry wall passive fire-rated systems
- tools and equipment used in the installation of dry wall passive fire-rated systems
- types and specifications for dry wall passive fire-rated systems related to steel stud and timber stud walls, shaft walls, timber joists and suspended ceilings
- wall and ceiling terminology
- 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 unit

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

- 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
- install to specification a minimum of three dry wall passive fire-rated systems with:
  - one for a steel stud wall
  - one covering columns and beams
  - one comprising a multiple layer system.

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

EVIDENCE GUIDE

- materials relevant to the installation of dry wall passive fire-rated systems
- hand and power tools and equipment appropriate to the installation of dry wall passive fire-rated 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:

- 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,

EVIDENCE GUIDE

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
- MSDS
- memos
- regulatory and legislative requirements pertaining to the installation of dry wall passive fire-rated systems
- relevant Australian standards
- safe work procedures relating to the installation of dry wall passive fire-rated

RANGE STATEMENT

	systems • 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
	• 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
	  • noise, dust and ventilation
	  • power equipment
	  • power sources and cables
	  • 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:
	  • broad knives
	  • caulking guns

RANGE STATEMENT

	• hammers • measuring tapes and rules • power drills • power leads • screwguns • squares • tin snips • trowels • may include: • C clamps • locking saws and drop saws • masonry drills • saw stools • setting boxes.
Quality requirements include relevant regulations, including:	• Australian standards • internal company quality policy and standards • manufacturer specifications • workplace operations and procedures.
Materials for fire-rated systems include:	• base compound coats • finishing coats • fire grade metal studs and track • fire grade plasterboard sheeting • fire sealants • perforated paper tapes • vermiculite or equivalent product.
Environmental requirements include:	• clean-up management • dust and noise • vibration • waste management.
Dry wall passive ***fire-rated*** systems are to comply with relevant Australian standards and codes and:	• include: • columns and beams • steel stud two-hour system • may include: • shaft walls • suspended ceilings • timber joist ceilings • timber stud walls.
Fixings and fasteners for	• 30 mm S type screws

RANGE STATEMENT

installation of fire-rated systems include:	• 30 mm and 40 mm L type screws • 30 mm and 45 mm W type screws • 30 mm, 40 mm, 50 mm, 60 mm plasterboard nails • metal masonry anchors • wafer head screws.
Penetrations include those related to:	• authorised piping • communications • control joints • electrical power.

Unit Sector(s)

Unit sector Construction

Co-requisite units

Co-requisite units Nil

Functional area

Functional area