



Australian Government

Department of Education, Employment and Workplace Relations

CPCPRF3016A Install composite roof systems

Release: 1

CPCPRF3016A Install composite roof systems

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit of competency specifies the outcomes required to install roof sheets for composite roof systems.

Application of the Unit

Application of the unit Site location for work application may be either domestic or commercial and may be a new work site or an existing structure being renovated, extended, restored or maintained.

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units

CPCPCM2023A

Carry out OHS requirements

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. Prepare for work.	<p>1.1. Drawings and specifications are obtained and confirmed by site inspection.</p> <p>1.2. Safety (OHS) requirements associated with installing composite roof systems, and workplace environmental requirements, are adhered to throughout the work.</p> <p>1.3. Quality assurance requirements are identified and adhered to in accordance with workplace requirements.</p> <p>1.4. Tasks are planned and sequenced in conjunction with others involved in or affected by the work and statutory and regulatory authority requirements.</p> <p>1.5. Tools and equipment, including personal protective equipment, are selected and checked for serviceability.</p> <p>1.6. Work area is prepared to support efficient installation of the composite roof system.</p>
2. Select composite roof system.	<p>2.1. Composite roof system is identified for installation, including shape and type of roofing and materials required.</p> <p>2.2. Quantity and type of materials and/or fittings required are calculated from design drawings and specifications in compliance with local authorities' requirements and relevant information.</p> <p>2.3. Sustainability principles and concepts are applied to work preparation and application.</p>
3. Manufacture roofing materials.	<p>3.1. Materials are marked out from drawings and/or patterns to fabricate roof coverings and components.</p> <p>3.2. Roof components are fabricated in accordance with plans and specifications.</p>
4. Prepare for installation.	<p>4.1. Quantity and type of manufactured roof covering and fittings required are calculated from design drawings and specifications in compliance with relevant Australian standards and regulatory requirements.</p> <p>4.2. Proposed sealant, fixing materials, and roofing and flashing materials are selected and checked for compatibility.</p> <p>4.3. Materials and equipment are identified, ordered and collected in accordance with workplace procedures.</p> <p>4.4. Materials and equipment are checked for</p>

ELEMENT	PERFORMANCE CRITERIA
5. Install roof covering and components.	<p>compliance with docket and order form and for acceptable condition, and <i>faults are reported</i>.</p> <p>5.1. Safety mesh and thermal insulation are fixed in accordance with relevant Australian standards, job plans and specifications, and manufacturer requirements.</p> <p>5.2. Required rainwater goods are installed in accordance with relevant Australian standards, plans and specifications.</p> <p>5.3. Sheets are marked and trimmed prior to fixing and cut edges are treated according to manufacturer specifications.</p> <p>5.4. Sheets are fixed in compliance with relevant Australian standards and manufacturer specifications.</p>
6. Clean up.	<p>6.1. Work area is cleared and materials disposed of, reused or recycled according to legislation, regulations, codes of practice and job specification.</p> <p>6.2. Tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturer recommendations and workplace procedures.</p> <p>6.3. Documentation is completed in accordance with workplace requirements.</p>

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:
 - access information
 - complete workplace documentation
 - determine requirements
 - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand

REQUIRED SKILLS AND KNOWLEDGE

- follow instructions
- plan and sequence tasks with others
- 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
- identifying and accurately reporting to appropriate personnel any faults in tools, equipment or materials
- numeracy skills to apply measurements and calculations
- organisational skills, including the ability to plan and set out work
- 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:
 - access and understand site-specific instructions in a variety of media
 - use mobile communication technology.

Required knowledge

Required knowledge for this unit is:

- capillary action, thermal expansion and fabrication techniques to prevent leaking installations
- corrosion prevention treatment requirements of cut sheets
- electrolysis and problems associated with the use of dissimilar metals
- job safety analysis (JSA) and safe work method statements (SWMS)
- processes of manufacturing and installing composite roof systems
- relevant OHS regulations and fall protection codes and requirements
- relevant statutory and authority requirements related to installing composite roof systems
- SI system of measurement
- types of fasteners, fixings and sealants and their application to the fabrication and installation of roof coverings.

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 providing that simulated or project-based assessment techniques fully replicate plumbing and services 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:

- locating, interpreting and applying relevant information, relevant Australian standards and specifications to install composite roof systems
- applying safety requirements throughout the work sequence, including electrical requirements and the use of personal protective clothing and equipment
- as a minimum the ability to, given the plans and specifications, calculate the requirements and select, fabricate and install a composite roof system (i.e. gable, Dutch gable, skillion or hip), including insulation and rainwater goods, ensuring:
 - application of sustainability principles and concepts
 - correct identification of requirements and details of proposed installation
 - correct selection and use of appropriate processes, tools and equipment
 - completing all work to specification
 - compliance with regulations, relevant Australian standards and organisational quality procedures and processes
 - communicating and working effectively and safely with others.

Context of and specific resources for assessment

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

EVIDENCE GUIDE

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:

- an induction procedure and requirement
- realistic tasks or simulated tasks covering the minimum task requirements
- relevant specifications and work instructions
- tools and equipment appropriate to applying safe work practices
- support materials appropriate to activity
- workplace instructions relating to safe working practices and addressing hazards and emergencies
- material safety data sheets
- research resources, including industry related systems information.

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.

Safety (OHS) is to be in accordance with commonwealth, state and territory legislation and regulations and may include:

- handling of materials
- hazard control
- personal protective clothing and equipment prescribed under legislation, regulations and

RANGE STATEMENT

- workplace policies and practices
 - safe operating procedures, including recognising and preventing hazards associated with:
 - electricity
 - hazardous materials and substances
 - service lines
 - surrounding structures and facilities
 - trip hazards
 - use of tools and equipment
 - work site visitors and the public
 - working at heights
 - working in proximity to others
 - use of firefighting equipment
 - use of first aid equipment
 - workplace environment and safety.
- Environmental requirements*** may include:
- clean-up protection
 - stormwater protection
 - waste management.
- Quality assurance*** requirements may include:
- Environment Protection Authority (EPA)
 - environment policy
 - internal company quality assurance policy and risk management strategy
 - International Standards Organisation
 - site safety plan
 - workplace operations and procedures.
- Statutory and regulatory authorities*** include:
- commonwealth, state and local authorities administering applicable Acts, regulations and codes of practice.
- Tools and equipment*** may include:
- fall protection equipment
 - hand and power tools
 - ladders
 - levelling equipment
 - lifting and load shifting equipment, including:
 - chain blocks
 - cranes
 - elevated work platforms
 - forklifts
 - hand trolleys

RANGE STATEMENT

Installation may include the fitting of:

- hoists and jacks
- restricted height scaffolds
- rollers
- measuring equipment.
- insulation
- rainwater fittings
- safety mesh.

Composite roofs include a combination of:

- Dutch gable
- gables
- hip
- skillion.

Information may include:

- charts and hand drawings
- diagrams or sketches
- instructions issued by authorised organisational or external personnel
- manufacturer specifications and instructions
- material safety data sheets (MSDS)
- memos
- organisation work specifications and requirements
- regulatory and legislative requirements, particularly those pertaining to:
 - building codes
 - OHS and environmental requirements
 - plumbing regulations
- relevant Australian standards
- safe work procedures relating to installing composite roofs
- signage
- verbal, written and graphical instructions
- work bulletins
- work schedules, plans and specifications.
- cover the current and future social, economic and environmental use of resources
- may include:
 - appropriate component selection that has minimal environmental impact
 - efficient energy use
 - rainwater harvesting
 - efficient use and recycling of material

Sustainability principles and concepts:

RANGE STATEMENT

- correct handling of hazardous materials
 - thermal heat reflection and retention
 - disposal of waste material to ensure minimal environmental impact.
- Materials* for installing roof composite roofs may include:
- metal roof covers of concealed or pierce fixed types
 - metal self drilling and tapping screws
 - plastic building sheets for walls and roofs
 - rain water goods
 - rivets and sealants
 - thermal insulation of reflective foil laminate, fibreglass, polyethylene, straw or wool
 - other approved materials.
- Fault reporting:*
- may be written or verbal
 - is to be in accordance with company's workplace procedures.

Unit Sector(s)

Unit sector Plumbing and services

Co-requisite units

Co-requisite units Nil

Functional area

Functional area