

Unit of Competency CPCPFS3037

Install residential life safety sprinkler systems

Application

This unit of competency specifies the skills and knowledge required to install residential life safety fire sprinkler systems.

In some jurisdictions, this unit of competency may form part of accreditation, licensing, legislative, regulatory or certification requirements.

Prerequisite Unit

CPCPCM2043 Carry out WHS requirements

Elements and Performance Criteria

1. Identify installation requirements.	1.1 Obtain, read and apply residential sprinkler systems requirements from relevant job plans and specifications, codes, Australian Standards, manufacturer's specifications and jurisdictional requirements. 1.2 Identify and apply workplace policies and procedures, work health and safety (WHS) and environmental requirements.
2. Prepare for work.	2.1 Create a materials list and collect materials. 2.2 Select and check the serviceability of appropriate tools and equipment including personal protective equipment (PPE). 2.3 Prepare work area.
3. Install and test system components.	3.1 Set out system and apply fixings. 3.2 Connect assemblies, devices, alarms, piping and materials. 3.3 Apply jointing systems to components 3.4 Install relevant fire sprinkler heads according to plans and specifications. 3.5 Undertake a hydrostatic pressure-test to ensure integrity of pipework. 3.6 Record test data in required format. 3.7 Complete documentation according to relevant regulatory requirements.
4. Clean up.	4.1 Clear the work area, and dispose of, reuse or recycle materials in accordance with state and territory legislation and workplace policies and procedures. 4.2 Clean tools and equipment, check for serviceability, report any damage, and store and secure.

Foundation skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent to CPCPFS3037A Install domestic and residential life safety sprinkler systems.

Links

Companion Volume Implementation Guide:

<https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCPFS3037

Install residential life safety sprinkler systems

Performance Evidence

To demonstrate competency, a candidate must meet the performance criteria for this unit by:

- given the floor plan of a residential building of at least five (5) rooms correctly locating the sprinkler heads according to relevant job plans and specifications, codes, Australian Standards, manufacturer's specifications and jurisdictional requirements
- installing and testing a residential life safety sprinkler system in Class 2 and 3 buildings not more than 25 metres in effective height with a rise in storeys of 4 or more, using plans and specifications, incorporating fit off to:
 - one sprinkler head in steel pipe
 - one sprinkler head in chlorinated polyvinyl chloride (CPVC) piping
 - one sprinkler head in copper pipe
- These must include:
 - water supply
 - piping and pipe supports
 - control valves assembly
 - actuating devices
 - alarms
 - three sprinkler heads
 - remote test point.

Knowledge Evidence

To be competent in this unit, a person must demonstrate knowledge of:

- legislation, regulations, codes and standards relating to installing fire sprinkler system
- workplace and safety requirements
- sustainability concepts and principles and environmental requirements relating to water and resource usage
- processes, procedure and techniques of:
 - installation and testing of residential fire sprinkler systems
 - applying fire ratings
 - hydraulic testing
 - pipe jointing including hems, Teflon tape and CPVC solvent
 - roll grooving
 - brazing
 - press fits (copper)

- functional and operational features of tools and equipment used to install life safety fire sprinkler systems
- structural systems, building materials and building services of buildings and structures that require life safety fire sprinkler systems
- operation and function of the following components:
 - o residential sprinkler heads
 - o flow switches
 - o check valves
 - o remote test points
 - o concealed space sprinkler heads
 - o waste, test and drain valves
 - o pipe supports
- characteristics, application and limitations of materials, including:
 - o steel and CPVC pipe used in residential sprinkler systems
- manufacturers' specifications and their purpose in fire sprinkler system installation
- how to access relevant information, including job plans and specifications, codes, Australian Standards, manufacturer's specifications and jurisdictional requirements.
- tools, materials and equipment used for installing residential life safety sprinkler systems
- work health and safety (WHS) requirements for installing residential life safety sprinkler systems
- installation requirements for residential life safety sprinkler systems.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

This unit must be assessed in the workplace or a close simulation using realistic workplace conditions, materials, activities, responsibilities, procedures, safety requirements and environmental considerations.

Links

Companion Volume Implementation Guide:

<https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>