



Australian Government

Department of Education, Employment and Workplace Relations

CPPFES2004A Identify types of installed fire safety equipment and systems

Release: 1

CPPFES2004A Identify types of installed fire safety equipment and systems

Modification History

Revised unit

Element structure and performance criteria expanded to reflect workplace requirements

Skills and knowledge requirements and range statement updated

Unit based on PRMPFES04B Identify fire protection equipment

Unit Descriptor

This unit of competency specifies the outcomes required to accurately identify fire safety equipment and systems and their function.

Application of the Unit

This unit of competency supports individuals responsible for interacting with customers as a representative of their organisation, discussing fire protection service needs for a variety of equipment and systems and referring customers to senior staff in the organisation for further consultation if necessary.

Licensing/Regulatory Information

Work in the area of identification must be completed according to relevant legislative, industry, customer and organisational requirements, including occupational health and safety (OHS) policies and procedures.

Different states and territories may have regulatory mechanisms that apply to this unit.

Candidates are advised to check for regulatory limitations.

Pre-Requisites

Not applicable.

Employability Skills Information

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

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| 1 | Identify range of first response equipment. | 1.1 | Range of <i>portable fire extinguishers</i> is identified according to types, <i>extinguishants</i> , <i>expellants</i> , colour-coding requirements, labelling and location signs. |
| | | 1.2 | Range of <i>wheeled fire extinguishers</i> is identified according to types, extinguishants, expellants, standardised colour code and labelling requirements. |
| | | 1.3 | Types of <i>fire hose reels</i> are identified according to function and location signs. |
| | | 1.4 | Types of <i>delivery lay flat fire hoses</i> are identified according to class, size and construction. |
| | | 1.5 | Types of <i>delivery lay flat fire hose couplings</i> are identified according to type and construction. |
| | | 1.6 | Fire blankets and <i>fire blanket containers</i> are identified according to function and location signs. |
| 2 | Identify fire hydrant systems. | 2.1 | <i>Major components of fire hydrant systems</i> are identified according to function. |
| 3 | Identify passive products and systems. | 3.1 | <i>Fire</i> and <i>smoke door sets</i> are identified according to function and tags. |
| | | 3.2 | <i>Service penetration products</i> are identified according to function and tags. |

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| 4 | Identify fire pumpsets. | 4.1 | <i>Fire pumpsets</i> are identified according to function. |
| 5 | Identify automatic fire-suppression systems. | 5.1 | <i>Automatic sprinkler alarm systems</i> are identified according to function. |
| | | 5.2 | <i>Pre-engineered fire-suppression systems</i> are identified according to function. |
| | | 5.3 | <i>Gaseous fire-suppression systems</i> are identified according to function. |
| 6 | Identify electrical life safety equipment and systems. | 6.1 | <i>Automatic fire detection and alarm systems</i> are identified according to function. |
| | | 6.2 | <i>Smoke alarms and heat alarms</i> are identified according to function. |
| | | 6.3 | <i>Sound systems for emergency purposes</i> are identified according to function. |
| | | 6.4 | <i>Intercom systems for emergency purposes</i> are identified according to function. |
| | | 6.5 | <i>Emergency exits and lighting</i> units are identified. |
| 7 | Recognise and report on installed fire safety equipment and systems. | 7.1 | Fire safety equipment and systems are recognised at work sites and discussed with customers and colleagues. |
| | | 7.2 | Information about installed equipment and systems is <i>communicated to relevant persons</i> . |

Required Skills and Knowledge

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

Required skills

- language, literacy and numeracy skills to:
 - communicate with others clearly and concisely, verbally and in writing
 - read and comply with work instructions and specifications
 - use effective questioning and listening techniques
- recognising installed fire safety equipment and systems

Required knowledge

- purpose and range of Australian colour-coding system for portable and wheeled fire extinguishers, including pictographs
- purpose and types of:
 - automatic fire detection and alarm systems
 - automatic sprinkler alarm systems
 - delivery lay flat fire hoses
 - emergency exits and lighting units and system
 - fire and smoke door sets
 - fire blankets
 - fire hose reels
 - fire pumpsets
 - gaseous fire-suppression systems
 - intercom systems for emergency purposes
 - major components of fire hydrant systems
 - portable and wheeled fire extinguishers
 - pre-engineered fire-suppression systems
 - service penetration products
 - smoke and heat alarms
 - sound systems for emergency purposes

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 by observation of practical demonstration of the ability to identify the fire equipment and systems outlined in the range statement at customers' premises.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>A person who demonstrates competency in this unit must be able to provide evidence of the required skills and knowledge specified in this unit.</p> <p>In particular the person should demonstrate the ability to:</p> <ul style="list-style-type: none"> • identify a range of fire safety equipment and systems, including: <ul style="list-style-type: none"> • automatic fire-suppression systems • electrical life safety equipment and systems • fire hydrant systems • fire pumpsets • first attack equipment • passive products and systems • report on fire safety equipment and systems installed at customers' premises.
Context of and specific resources for assessment	<p>Assessment of essential underpinning knowledge may be conducted in an off-site context. It is to comply with relevant regulatory or Australian standards' requirements.</p> <p>Resource implications for assessment include:</p> <ul style="list-style-type: none"> • actual or simulated work environment • product examples or clear photographs/drawings of relevant products • assessment documentation • training and assessment record book.
Method of assessment	<p>Assessment methods must:</p> <ul style="list-style-type: none"> • satisfy the endorsed Assessment Guidelines of the Property 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.

Guidance information for assessment	<p>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.</p> <p>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.</p> <p>This unit could be assessed on its own or in combination with other units relevant to the job function, for example:</p> <ul style="list-style-type: none">• CPPFES2005A Demonstrate first attack firefighting equipment• CPPFES2006A Prepare for installation and servicing operations.
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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.

<i>Portable fire extinguisher</i> types include:	<ul style="list-style-type: none"> • cartridge • rechargeable and non-rechargeable • reversible • stored pressure.
<i>Extinguishants</i> may include:	<ul style="list-style-type: none"> • carbon dioxide • foam • powder • vaporising liquid • water • wet chemical.
<i>Expellants</i> may include:	<ul style="list-style-type: none"> • carbon dioxide • dry air • nitrogen.
<i>Wheeled fire extinguisher</i> types include:	<ul style="list-style-type: none"> • cartridge • stored pressure.
<i>Fire hose reel</i> types may include:	<ul style="list-style-type: none"> • swing-hinged • vehicle-mounted • wall-mounted.
<i>Delivery lay flat fire hoses</i> may include:	<ul style="list-style-type: none"> • percolating and non-percolating • low, medium and high classes • range of different hose diameters.
<i>Delivery lay flat fire hose couplings</i> may include:	<ul style="list-style-type: none"> • British instantaneous couplings (BIC) • Storz system couplings • threaded.
<i>Fire blanket containers</i> may include:	<ul style="list-style-type: none"> • metal tubes • plastic and vinyl covers.
<i>Major components of fire hydrant systems</i> may include:	<ul style="list-style-type: none"> • backflow prevention valves • external hydrant valves • fire brigade booster connections • internal hydrant valves: <ul style="list-style-type: none"> • points • landing valves • outlets

	<ul style="list-style-type: none">• pressure reducing valves (ratio valves)• reticulating pipework• town main reticulated hydrant ‘street’ valves• water supply system, including:<ul style="list-style-type: none">• tanks• pumpsets.
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<i>Fire door sets</i> may include:	<ul style="list-style-type: none"> • automatic closing • one-hour or two-hour fire rated assemblies • self-closing or sliding.
<i>Smoke door sets</i> may include:	<ul style="list-style-type: none"> • automatic closing • self-closing or sliding • solid core or fire-resistance rated.
<i>Service penetration products</i> may include:	<ul style="list-style-type: none"> • fire-rated gap-fillers, such as: <ul style="list-style-type: none"> • mortars • grouts • sealants • caulks • putties • fire-rated pillows • fire stop collars.
<i>Fire pumpsets</i> may include:	<ul style="list-style-type: none"> • dedicated pumpset driven by an electric or diesel motor • combination of both motors that supply fire systems, such as hydrants and sprinklers.
<i>Automatic sprinkler alarm systems</i> may include:	<ul style="list-style-type: none"> • standard sprinkler systems that use: <ul style="list-style-type: none"> • concealed sprinklers • conventional sprinklers • dry pendant, dry sidewall and dry upright sprinklers • enlarged orifice sprinklers • fast response sprinklers • flush sprinklers • large, extra large and very large orifice sprinklers • recessed sprinklers • sidewall sprinklers • spray or pendant sprinklers • special sprinkler systems that use: <ul style="list-style-type: none"> • early suppression fast response (ESFR) sprinklers • extended coverage sprinklers, including enhanced protection extended coverage (EPEC) sprinklers • large drop sprinklers • residential sprinklers • sealed water mist nozzles.
<i>Pre-engineered fire-suppression systems</i> may include:	<ul style="list-style-type: none"> • ducting used for extraction of fumes or particles • electrical equipment installed in a cabinet • exhaust ducting • large mining vehicles • mobile and transportable equipment, such as systems installed

	<p>for the protection of cooking equipment</p> <ul style="list-style-type: none">• major components, including:<ul style="list-style-type: none">• alarm system devices• automatic fire detection devices linked to automatic release mechanism• containers of extinguishant agent• manual release mechanism• nozzles connected to pipework or tubing• pipework or tubing connected to extinguishant containers.
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<p><i>Gaseous fire-suppression systems</i> may include:</p>	<ul style="list-style-type: none"> • total flood systems using a variety of extinguishing agents: <ul style="list-style-type: none"> • inert gaseous fire-extinguishing agents • local application systems using mainly carbon dioxide • synthetic gaseous fire-extinguishing agents – extinguishing agent handling licences (EAHL) required • major components, including: <ul style="list-style-type: none"> • alarm system devices • automatic fire detection devices • containers of extinguishant agent • local control stations • nozzles connected to pipework • pipework connected to extinguishant containers • warning devices and signs at entry points to protected space.
<p><i>Automatic fire detection and alarm systems</i> may include:</p>	<ul style="list-style-type: none"> • flame detectors, including: <ul style="list-style-type: none"> • infra-red • ultraviolet • combination of both • gas sensing fire detectors, including semiconductor and catalytic element types • heat detectors, including point and linear types • smoke detectors, including ionisation, photoelectric and air sampling • warning devices, such as bells, speakers and lights.
<p><i>Smoke alarms and heat alarms</i> may include:</p>	<ul style="list-style-type: none"> • fixed temperature • ionisation • photoelectric.
<p><i>Sound systems for emergency purposes</i> may include:</p>	<ul style="list-style-type: none"> • warning devices, such as speakers and lights independently operated by control and indicating equipment (CIE) fit for purpose.
<p><i>Intercom systems for emergency purposes</i> may include:</p>	<ul style="list-style-type: none"> • warden intercommunication points, such as telephones, distributed throughout a building and independently operated by CIE fit for purpose and separate from all other communication equipment.
<p><i>Emergency exits and lighting</i> may include:</p>	<ul style="list-style-type: none"> • central systems consisting of emergency luminaires powered by a battery bank with battery charger supply • self-contained emergency luminaires • combination of self-contained emergency luminaires and house artificial lighting • emergency exit luminaire signs.
<p><i>Communication</i> may</p>	<ul style="list-style-type: none"> • email messages • facsimiles

include:	<ul style="list-style-type: none">• multimedia messages (MMS)• online reporting system• pager messages• SMS text messages• verbal reports• written reports.
<i>Relevant persons</i> may include:	<ul style="list-style-type: none">• colleagues, including those in other organisations• customers• licensing and regulatory bodies• managers• supervisors• system and component manufacturers and suppliers• team leaders• trades people and contractors.

Unit Sector(s)

Fire protection equipment

Custom Content Section

Not applicable.