



Australian Government

Department of Education, Employment and Workplace Relations

PRMPFES39A Inspect and test passive fire and smoke containment products and systems

Release: 1

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Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit of competency covers the inspection and testing of passive fire and smoke containment installations and systems in a variety of settings. This unit also covers the knowledge and skills required to be able to access, interpret and comply with relevant information contained in standards and legislation in order to carry out inspection and testing procedures relating to passive fire and smoke containment.

Adequate knowledge and appropriate use of industry terminology is expected and all preparatory work must be completed in accordance with relevant legislative, industry, and organisational requirements, including occupational health and safety (OHS) policies and procedures.

Note: The passive fire service technician is not permitted to undertake any installation, replacement, maintenance and repair functions that are restricted to licensed trades or occupations (subject to relevant state/territory regulations).

Application of the Unit

Not Applicable

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Not Applicable

Employability Skills Information

Not Applicable

Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Interpret and comply with legal and industry requirements relating to the inspection and testing of passive fire and smoke containment installations and systems	1.1 Apply knowledge and understanding of <i>legislative and industry requirements</i>, including relevant state/territory building codes, to passive fire and smoke containment inspection and testing <i>work procedures</i> 1.2 Confirm or clarify knowledge and understanding of <i>legislative and industry requirements</i>, including state/territory building codes, where necessary, with relevant persons 1.3 Identify <i>potential and actual breaches</i> of <i>legislative and industry requirements</i> relating to passive fire and smoke containment and take action according to <i>organisational requirements</i>
2 Inspect and test passive fire and smoke containment	2.1 Obtain all necessary work permits prior to entering customer premises and discuss <i>customer requirements</i> prior to proceeding to the inspection 2.2 Inspect and test <i>passive fire and smoke containment system</i> according to the relevant maintenance schedule of the relevant Australian Standard and industry requirements 2.3 Check passive fire and smoke containment for appropriate <i>marking and labelling</i> according to the provisions of the <i>legislative and industry requirements</i> 2.4 Identify and report potential and actual impediments to passive fire and smoke containment system performance
3 Complete inspection	3.1 Ensure customer premises are left in a clean and tidy condition on completion of inspection functions 3.3 Report all <i>defects</i> according to <i>organisational, legislative and customer requirements</i> 3.3 Complete <i>documentation</i> and distribute according to <i>organisational and customer requirements</i>

Required Skills and Knowledge

Refer to Evidence Guide

Evidence Guide

EVIDENCE GUIDE

Knowledge needed to achieve the performance criteria

Knowledge and understanding are essential to apply this unit of competency in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this unit are listed below.

- Key features of legislation, Australian Standards, manufacturers' and building code requirements relating to inspection of passive fire and smoke containment.
- Key features of legislation, Australian Standards and building code requirements relating to fire and smoke containment.
- The implications of not applying legislative requirements to job functions.
- The dangers of incorrect installation of passive fire and smoke containment.
- Principles of passive fire protection related to overall fire safety systems.
- Key physical features, definition of, and purpose of, passive fire and smoke containment.
- Technical terms relating to passive fire and smoke containment inspection and testing.
- Passive fire and smoke containment variables including types, products and solutions.
- Operational requirements for inspecting and testing passive fire and smoke containment.
- Procedures for determining fire resistance levels.

Specific skills needed to achieve the performance criteria

To achieve the performance criteria, some complementary skills are required. These relate to the ability to:

- identify, select and comply with appropriate Australian Standard(s) and related legislation
- recognise and identify components of passive fire and smoke containment
- inspect and test a range of passive fire and smoke containment system components that are fixed into or onto building materials to protect services, structural elements and/or openings in or through fire compartments
- plan and organise work according to organisational requirements
- communication skills conducive to developing positive customer relationships
- follow safe work procedures and identify potential and existing risks or hazards
- apply principles of workplace housekeeping
- apply literacy and language skills to:
 - use technical terminology relating to inspection and testing of passive fire and smoke containment
 - access information from manuals
 - communicate technical information to customers and colleagues
 - report on defects and complete and distribute relevant documentation.

Other units of competency that could be assessed with this unit

This unit could be assessed on its own or in combination with other competencies relevant to the job function.

Resources required to assess this unit

The following resources should be available:

- actual or simulated work environment
- access to relevant standards and legislation
- access to a variety of passive fire and smoke containment products, installations and solutions

- assessment documentation
- training and assessment record book.

Gaining evidence to assess this unit

For valid and reliable assessment of this unit, the competency should be demonstrated over a period of time and be observed by the assessor (or assessment team working together to conduct the assessment). The competency is to be demonstrated in a range of situations, which may include customer/workplace interruptions and involvement in related activities normally experienced in the workplace.

Consideration should be given to assessing consistency of outcome over an adequate period of time.

Candidates should also be given the opportunity to practise and undertake self-assessment of performance before requesting formal assessment.

All safety requirements must be adhered to during all practical activities.

Performance and assessment of this unit must be carried out within the relevant requirements of the following legislative and industry framework:

- building Acts/regulations/codes
- Australian Standards identified as relevant to the work procedure
- environmental regulations
- manufacturers' specifications
- organisational requirements, including OHS policies and procedures
- OHS legislation, codes and regulations.

Oral questioning or a written assessment may be used to assess underpinning knowledge. (In assessment situations where the candidate is offered a preference between oral questioning and written assessment, questions are to be identical.)

Assessment of evidence should establish the candidate's ability to perform the job to the standard required in the workplace. Supplementary evidence may be obtained from relevant authenticated correspondence or reports from supervisors or team leaders.

Key competency levels

There are a number of processes learnt throughout work and daily life that are required in all jobs. They are fundamental processes and generally transferable to other work environments. Some of these work processes are covered by the key competencies listed below. Information provided to each question highlights how these processes are applied in this unit of competency.

The number in brackets indicates the level to which the key competency should be demonstrated.

- | | | |
|------------------------------|---|---|
| 1 Perform the process | 2 Perform and administer the process | 3 Perform, administer and design the process |
|------------------------------|---|---|

How can information be collected, analysed and organised (2)?	Collect information from a variety of sources to carry out the inspection and testing process while demonstrating knowledge of legislative and industry requirements and analysing and ensuring compliance.
How can communication of ideas and information (2) be applied?	Discuss the inspection process expressing ideas and concepts with internal and external clients and complete formal documentation where required.
How are activities planned and organised (2)?	Demonstrate organisational skills to carry out inspection and testing work functions while monitoring assignments for time management, safety and legislative requirements.
How can teamwork (1) be applied?	Discuss the inspection process with colleagues and customers.
How can the use of mathematical ideas and techniques (2) be applied?	Apply basic mathematical techniques, including reading and interpreting mathematical information from manufacturers' instructions and relevant standards.
How can problem-solving skills (1) be applied?	Identify possible problems during the inspection and testing process and how defects may be recorded and reported.
How can the use of technology (2) be applied?	Demonstrate understanding of technological principles in the inspection and testing process.

Range Statement

RANGE STATEMENT

The range statement links the required knowledge and organisational and technical requirements to the workplace context. It describes any contextual variables that will be used or encountered when applying the competency in work situations. It allows for different work practices and work and knowledge requirements as well as for differences between organisations and workplaces. The following variables may be present for this particular unit. **Legislative and industry requirements** may include:

- relevant Commonwealth and state/territory building Acts/regulations/codes
- OHS legislation, codes and regulations
- relevant current Australian Standards
- Building Code of Australia
- manufacturers' documentation
- dangerous goods regulations
- licensing arrangements

- environmental regulations
- building surveyor requirements
- other relevant legislation relating to passive fire protection.

Work procedures may include:

- instructions from colleagues/supervisor/manager
- specific customer requirements
- assignment instructions
- equipment manufacturers' requirements
- reporting and documentation requirements
- personal protective equipment requirements.

Relevant persons may include:

- building surveyor
- fire safety engineer
- regulatory authority representative
- building supervisor/manager
- team leaders
- supervisors
- managers
- colleagues
- customers.

Potential and actual breaches of legislative and industry requirements could be identified by:

- direct observation
- as part of workplace quality assurance teams.

Organisational requirements may be located in quality assurance and/or procedures manuals relating to:

- legal and organisational policy/guidelines
- personnel practices and guidelines outlining work roles, responsibilities and delegations
- legislation relevant to the service operation
- OHS policies, procedures and programs
- documentation and information systems and processes
- use of electronic job scheduling and communication devices
- OHS policies and procedures may relate to:
 - employer/employee rights and responsibilities
 - the OHS hierarchy of control
 - assessing the worksite for hazards and risks prior to preparing the worksite for the work procedure
 - displaying signs and/or utilising barriers in the work area
 - hazard and risk identification and reporting
 - risk assessment and control measures
 - incident/accident investigation
 - OHS audits and safety inspections
- safe operating procedures/instructions including:
 - working safely around electrical wiring, cables and overhead powerlines

- working safely around tools and equipment
- working safely on ladders and raised platforms
- risk and hazard recognition
- emergency procedures
- awareness of electrical hazards
- following confined spaces procedures
- utilising personal protective equipment including:
 - safety glasses or goggles
 - safety boots or shoes
 - hard hat
 - ear muffs or plugs
 - appropriate gloves and overalls
 - sun hat
 - dust mask
- equipment maintenance and use
- use and storage of hazardous substances
- First Aid.

Customer requirements may include:

- provision of routine services
- provision of non-routine or urgent services
- confirmation of, or variations to, service instructions
- sighting work permits
- sign-in/out procedures for entry to or exit from premises
- written or verbal confirmation of services provided and/or future maintenance schedule.

Passive fire and smoke containment systems include:

- passive fire and smoke containment products including:
 - fabric and timber protection (impregnated or sprayed)
 - fire rated air transfer grilles
 - mechanical and intumescent fire dampers
 - smoke dampers
 - fire resistant boards (calcium silicate, vermiculite, etc)
 - fire stop collars (cast in, retrofit, wall, etc)
 - fire rated sealants, caulks and putties (acrylic, polyurethane, silicone, etc)
 - linear gaps seals (impregnated foams, tapes, intumescent gaskets, sealants)
 - fire resistant pillows (intumescent, non-intumescent)
 - fire resistant mortars and grouts (load bearing, non-load bearing)
 - intumescent paints and coatings (other than those used for fireproofing structural steel)
- materials into or onto which passive fire and smoke containment products are installed including:
 - masonry
 - concrete
 - timber
 - steel
 - plasterboard
 - UPVC
 - fire resistant board

- passive fire and smoke containment solutions including:
 - structural steel fireproofing/protection
 - duct fireproofing/protection
 - duct/damper penetration protection
 - ceiling and partition systems
 - penetration solutions
 - fire rated sealants
 - UPVC/plumbing penetrations
 - access panels and hatches
 - intumescent dampers and seals
 - protection against spread of flame
 - industrial fire protection
 - openings in structural elements
 - control joints/expansion joints.

Marking and labelling requirements as set out in the relevant legislation or Australian Standard.

Defects may include items that do not comply with the requirements of:

- necessary legislation
- Australian Standards
- manufacturers' instructions.

Documentation may include:

- job card
- customer recommendation form
- service agreements
- equipment recommendation form
- corrective action report
- certificate of inspection
- product documentation/installation instructions
- maintenance record system.

Note: Australian Standards are frequently revised and users must always check for currency.

Unit Sector(s)

Not Applicable