



**Australian Government**

# **PUAFIR202 Use Class A foam in wildfire operations and non-structural applications**

**Release: 1**

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## **Modification History**

**Release 1.** This is the first release of this unit of competency in the PUA Public Safety Training Package.

## **Application**

This unit of competency involves the skills and knowledge required to use Class A foam to extinguish Class A carbonaceous solid fires in wildfire operations, secure against ignition or extinguish Class B shallow hydrocarbon fuel spills and to operate and maintain foam equipment required for its production.

Class A foam is a liquid foam solution used mostly to extinguish fires in ordinary combustible solids such as wood, fabric, paper or organic material. The foam blanket adheres to fuels and gradually releases the water in the foam to wet fuels for a longer period than water alone.

Class B shallow hydrocarbon fuel spills includes incidents such as at road crashes where fuel tanks may have been ruptured or begun leaking, service station fuel pump area spills or machinery refuelling trailers have occurred.

The unit applies to personnel on the fire ground responsible for preparing, handling and applying Class A foam during wildfire and non-structural firefighting operations.

The fire sector is those sections of government departments, statutory authorities or organisations that have responsibility under jurisdictional arrangements for the delivery of firefighting and fire management services.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

## **Pre-requisite Unit**

It is essential that the prerequisite units listed below are obtained prior to the issuance of this unit to individuals within the fire sector or the units contributing to the attainment of a fire qualification.

PUAFIR204 Respond to wildfire

## **Competency Field**

Fire

## Unit Sector

Fire

## Elements and Performance Criteria

### ELEMENTS

Elements describe the essential outcomes.

#### 1 Prepare Class A foam for use

### PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1 Type of foam for application in a wildfire or on non-structural object is selected depending on the required effect of foam on components of the fire triangle and fuel
- 1.2 Decision to apply Class A foam to Class A fuels at wildfire or non-structural incident is received from Incident Controller
- 1.3 Foam proportioning or induction rate is selected, in accordance with manufacturers' recommendations, organisational procedures and guidelines, to produce the solution strength required to achieve operational objectives with the decision communicated to the crew preparing the foam
- 1.4 Foam expansion or aspiration ratio is confirmed, based on fuel type, operational requirements and need to achieve maximum operational benefit
- 1.5 Class A foam concentrate and equipment is prepared for use, in accordance with organisational procedures and safe work practices with consideration of potential environmental impact and required precautions to be complied with
- 1.6 Correct personal protective clothing and equipment required for working with Class A foam is donned for handling concentrate and solution

#### 2 Operate Class A foam system and equipment

- 2.1 Type of Class A foam system is confirmed through chain of command
- 2.2 Predetermined amount of foam concentrate is added to water flow using appropriate equipment, as directed
- 2.3 Foam system available is operated using predetermined

proportioning or induction method

**2.4** Where system is manually regulated, proportioning percentage rate and flow is monitored and achievement of operational objectives is confirmed

### **3 Apply Class A foam**

**3.1** Foam system and equipment is operated to produce required solution strength suitable for its intended application as non-aspirated or aspirated foam and for the type of fuel to which it is to be applied

**3.2** Class A foam is applied as a direct attack to extinguish the edge of the fire using non-aspirated or low expansion foam nozzles

**3.3** Class A foam is used to wet fuels to construct a control line adjacent to the fire edge, using required foam proportion rate to contribute to fuel reduction burning, burning out and back burning

**3.4** Foam is applied to conduct mop up/blacking out operations by regulating flow to suit application type and rate

**3.5** Class A foam is applied to non-structural objects, in accordance with organisational operating procedures for these types of fires

**3.6** Direct and indirect application of Class A foam is demonstrated, in accordance with organisational operating procedures

**3.7** Environmental contamination from application of Class A foam is considered and preventative measures are implemented

### **4 Store and handle Class A foam and prevent damage to equipment and the environment**

**4.1** Class A foam is stored on tankers and appliances in designated storage drums, racks or tanks, in accordance with Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements

**4.2** Storage arrangements in workplace and other locations for Class A drum stocks of foam concentrate are implemented and adhered to, in accordance with Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements

**4.3** Measures to control foam leaks or spills are followed, in accordance with organisational procedures

- 4.4 Class A foam tanks are refilled using personal protective clothing and equipment and approved foam concentrate transfer equipment, in accordance with organisational procedures and environmental requirements
- 4.5 Cleaning and safe disposal of any foam spills is undertaken, in accordance with relevant Safety Data Sheets (SDS)
- 4.6 Foam compatibility is considered when using Class A foam solutions from different vehicles on the same fire particularly when mixing one manufacturer's brand of Class A foam with another's
- 4.7 Environmental regulations, as specified in organisational procedures, are adhered to when using foam and cleaning spills or foam equipment
- 4.8 Procedures for foam storage, mixing and filling sites are implemented, in accordance with organisational procedures and industry guidelines
- 4.9 Practices that do not contaminate water bodies, storm water drains or agricultural areas are implemented and adhered to when cleaning equipment at an incident or other location where Class A foam is used

## Foundation Skills

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

## Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

non-structural objects must include two or more of the following

- coal fires
- hydrocarbon fuels
- machinery fire dozers and graders
- motor vehicles
- small and shallow hydrocarbon fuel spills
- tyre dumps

measures to control leaks or spills must include

- exercising care to avoid spills at mixing and

loading areas

## **Unit Mapping Information**

This unit replaces and is equivalent to PUAFIR214 Use Class A foam in wildfire operations and non-structural applications.

## **Links**

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>