



**AUSTRALASIAN FIRE AUTHORITIES
COUNCIL**

SPECIFICATION

**WILDLAND FIREFIGHTING
PROTECTIVE CLOTHING**

PROTECTIVE OVERALLS

V4 – 05/03/2006

1. SCOPE

This specification determines the minimum requirements for wildland firefighting protective overalls for use by Australasian Fire Authorities Council (AFAC) Members.

2. OBJECTIVE

This specification is intended to provide a common approach to firefighter safety and the design and procurement of personal protective clothing.

MANDATORY REQUIREMENTS

3. APPLICATION

Firefighters protective clothing must meet or exceed AS 4824:2006 (or other relevant equivalent Standard) for protective clothing worn during firefighting and associated activities.

It covers the general design of the protective overalls, the minimum level of performance of the materials employed and the methods of tests to determine these levels.

This specification is predicated on the use of a risk assessment process.

4. PRODUCT CERTIFICATION

The final selected protective clothing will be required to be certified to the Australian Standard AS 4824:2006 (or other relevant equivalent Standard) and display a certified product mark as per the following examples. The product certification body must be accredited under the Joint Accreditation System of Australia and New Zealand.



Examples : CERTIFIED PRODUCT AS 4824:2006

The test certificates provided must be from an approved certified testing laboratory for the tests referred to in AS 4824:2006 (or other relevant equivalent Standard).

A continuing process of batch testing and auditing in accordance with the AFAC Technical Schedules shall be carried out by the Certification Authority as part of continual certification to AS 4824:2006 (or other relevant equivalent Standard).

5. DESIGN

5.1 General

Protective clothing shall be designed to be loose fitting and constructed so as to maximise the rate of dissipation of metabolic heat from the wearer.

5.1.1 Outer Shell

At least 50% of the garment outer shell shall be of a light or high visibility colour with full colour retention/fastness.

Where unique agency requirements dictate agencies may depart from this clause subject to a risk assessment.

5.1.2 Cleaning, Maintenance and Repair

The protective clothing shall be designed for ease of cleaning, maintenance and repair. The methodology of the cleaning of the garment shall be clearly provided on the garment and provided to the agency by the supplier.

5.1.3 Neck Collar

The collar must be capable of standing up independently and folding down for the life of the overalls.

In its stand-up position the collar shall provide for full coverage of the wearers neck and throat.

To enhance protection in this area the collar should be made out of two layers of the shell fabric.

A throat cover that can be secured in both the open and closed positions shall have an effective closure system.

5.1.4 Closure Systems

Additional closure systems shall be fitted to the sleeves and leg cuffs.

Closure systems shall not adversely affect the performance of the protective clothing.

5.1.5 Opening

An opening shall be provided on the front of the overalls.

The opening shall have a closure system.

5.1.6 Retro Reflective/Fluorescent Trim

3

This trim shall be in accordance with the Standard AS 4824 and may be positioned horizontally around the arms (1 band per forearm) and around the waist (1 band).

The trim may also be positioned horizontally around each leg as required.

The trim is to be backed.

5.1.7 Leg Openings

The bottom leg openings shall be designed to enable the garment to be donned over firefighters boots.

OPTIONAL REQUIREMENTS

5.1.8 Drain Vents

External drain vents should be fitted to all pockets.

5.1.9 External Pockets

External flap pockets may be fitted to the overalls and meet the functional requirements of the agency.

They shall have a bellows action and be of a size to meet the functional requirements of the agency.

Flaps shall be provided to external pockets and have a method of securing the flap.

5.1.10 Side Vents

There may be a vent on each side of the overalls.

The vent shall be fitted with a closure system.

5.1.11 Agency and Identification

Agency and other forms of identification may be affixed. If fitted these must meet the performance requirements of the Standard.

5.1.12 Microphone/Radio Holder

Microphone/radio clip holder may be fitted to the overalls.

5.1.13 Knee Protection

Additional knee protection, by the placement of an extra layer of fabric in the knee area, may be provided to improve durability and comfort when kneeling.

6. SIZING

The protective overalls are to be loose fitting in their cut and design.

Sizing/Style and functionality will be required to cover both male and female firefighters.

Some special sizes may be required.

The sizing matrix is as follows;

**AFAC WILDLAND FIREFIGHTERS OVERALLS
MEASUREMENT CHART**

SIZE	77R	82R	87R	92R	97R	102R	107R	112R	117R	122R				
To Fit Chest	87	92	97	102	107	112	117	122	127	132				
To Fit Waist	77	82	87	92	97	102	107	112	117	122				
TO Fit Inleg	74	77	79	82	83	84	85	85	86	86				
SIZE	92S	97S	102S	107S	112S	117S	122S	127S	132S		79L	84L	89L	94L
To Fit Chest	97	102	107	112	117	122	127	132	137		92	97	102	107
To Fit Waist	92	97	102	107	112	117	122	127	132		79	84	89	94
To Fit Inleg	72	74	77	79	80	80	82	83	83		80	83	85	87

- NOTES:
1. All measurements are in centimetres
 2. Size Code: R = Regular
S = Stout
L = Long

7. ADDITIONAL GARMENT TESTING

The complete garment assembly may be additionally tested in accordance with ISO DIS 13506 to:

Table 1 – Additional Testing

Conditions	Exposure Time	Temperature	Heat Flux Density
Emergency	4 s	800° C	80 KW/m ²

8. TRACKING

Information on a proposed means of tracking individual garments for the purpose of identification, user, cleaning, repairs and maintenance may be provided.

A master sample of the garment shall be sealed and retained by the agency for the duration of the contract.

9. DEPARTURES

The use of materials, components or manufacturing techniques different from those specified, must in all cases be fully documented and will only be accepted if considered to be of superior design, material component, advanced fabrication or technique. In each case, documentation will be submitted which may require samples, or a complete item to be supplied before permission to proceed or acceptance in given.

10 Selection, Use, Care And Maintenance

- 10.1. An instruction manual and wearer guidelines shall be attached to the packaged PPC, detailing all information relating to the safe use, wearing, adjustment, assembly and cleaning of the PPC.