

Selection and use of RFS Respiratory Protection PPE

The ACT Rural Fire Service Chief Officer has issued this Guideline under Section 38(1) of the *Emergency Act 2004* – A Chief Officer may determine standards and protocols.

Purpose

This Guideline is to inform members of the ACT Rural Fire Service (ACTRFS), both volunteer and staff, of the correct use of Respiratory Protection personal protective equipment (PPE) in conjunction with, and as a part of, the overall PPE issued to ACTRFS brigades and members.

Scope

This Guideline is applicable to all personnel from the ACTRFS, including staff and volunteer members.

Background

The ACTRFS has procured a range of Respiratory Protection PPE, including a selection of disposable P2 masks and a re-useable half face respirator.

The disposable P2 masks come in three styles to accommodate a range of preferences and face types.

The half face respirators are individual issue and are supplied in a kit with a selection of P2 and cartridge filters.

There are two ACTRFS Guidelines dealing with the use and fit of RFS Respiratory Protection PPE:

- Guideline 1.3.2: Selection and use of RFS Respiratory Protection PPE.
- Guideline 1.3.3: Fitting and use of re-useable Respiratory Protection masks.

This Guideline outlines the selection and use of the Respiratory Protection provided to members of the ACTRFS undertaking fire suppression and hazard reduction activities.

Responsibilities

The ACTRFS is providing Respiratory Protection PPE to all members in the form of disposable P2 masks and re-useable half face respirators. It is an individual member's responsibility to choose which of these masks to use in each situation, where and when most appropriate. All Respiratory Protection PPE is to be used in conjunction with other ACTRFS PPE.

Disposable P2 masks are readily available to members through your brigade equipment officer. Members should ensure their P2 masks remain clean and dry and should be replaced if broken, dirty, or clogged.

The re-useable half face respirators are individual issue and, as such, are the individual members responsibility to clean and maintain. Information on cleaning and maintaining the half face respirator is included in ACTRFS Guideline 1.3.3: Fitting and use of re-useable Respiratory Protection masks.

Should the member leave the RFS, the respirator remains the property of the RFS and must be returned along with all other operational PPE, as per ACTRFS SOP 1.2.1: Using PPE and PPC.

Awareness

Bushfire smoke has the potential to cause both short-term harm and long-term illness. It is essential that you avoid smoke wherever and whenever you can.

However, as a fire fighter this will not always be possible.

Note: Neither disposable P2 and N95 masks will provide protection against,

- hazardous volatile organic compounds found in heavy bushfire smoke,
- carbon monoxide or carbon dioxide.

It is the responsibility of the individual to sum up the situation and use the most appropriate Respiratory Protection for the task being undertaken.

1. Smoke Avoidance

The first level of protection is to avoid smoke whenever possible, even when wearing Respiratory Protection PPE. Move out of the smoke, move up wind, or seek the protection in the vehicle. Always make smoke avoidance your first priority.

2. Disposable P2 masks

The second level of protection is to use the disposable P2 masks provided by the ACTRFS. Use P2 masks as a minimum when on the fire ground, including when blacking out or working in dusty environments where light smoke and/or dust is unavoidable, or where mobility is key to the operation. P2 masks may also offer a level of protection against microorganisms and allergens such as pollen.

All ACTRFS disposable P2 masks meet the appropriate standard:

- AS/NZS 1716:2012 Respiratory protective devices.

When worn correctly, these masks will filter out 94% of particulates found in smoke, which include silica, carbon, and dust.

Fitting a disposable P2 mask.

1. Fitting some P2 masks will require you to remove your helmet.
2. Tie back long hair to avoid tangling.
3. Put the mask on your face, ensuring the nose piece is at the top of the mask.
4. Place the headband or ties over the head and at the base of the neck.
5. Compress the mask against the face to ensure a seal across the bridge of the nose.
6. Compress the mask to ensure a seal across the cheeks and the face.
7. To conduct a fit check; check the seal of the mask by gently inhaling. If the mask is not drawn in towards the face, or air leaks around the face seal, readjust the mask and repeat process or check for defects in the mask.

If the mask is not comfortable you may need to try a different size or style of mask. There are three different styles of disposable P2 masks available to ACTRFS volunteers to assist members find the most appropriate and comfortable fit.

Be aware that members with beards may not be able to achieve the best seal between the mask and their face regardless of mask style.

3. Re-usable Respirators.

The third level of respiratory protection for heavier or unavoidable smoke is to use your half face respirator.

You should wear a respirator if you are unable to remove yourself from bushfire smoke and may experience irritation to the eyes, nose, and throat, accompanied by coughing. This is caused by chemical vapors which may be hazardous and should be avoided as much as possible.

The half face respirator provided by the ACTRFS comes in a kit and includes both P2 particle filters and ABEK1-P2 cartridge gas filters with optional P2 particle pre-filters.

ABEK1-P2 cartridge filters: A = organic vapors; B = Acid Gases; E = Sulphur Dioxide, K = ammonia, plus P2 = particulates.

The respirator filters will not provide protection against carbon monoxide or carbon dioxide.

Correct fitting of half face respirator masks is outlined in ACTRFS Guideline 1.3.3: Fitting and use of re-usable Respiratory Protection masks.

Caution: Research has shown that people using respirator style masks may become overconfident working in smoke, which can prolong their exposure to chemicals and carbon monoxide.

When working in heavy smoke you can also absorb chemicals in your PPC, which will out-gas over time and increase the risk of exposure when in confined spaces such as the vehicle cabins.

Members using respirator style masks should also be aware that while these masks are made from silicon and are resistant to heat from bushfires, they are not designed or intended to provide protection against radiant heat.

Members (including volunteer and staff members)	<p>Must comply with instructions on use of ACTRFS property and equipment.</p> <p>Regularly check serviceability of ACTRFS PPE and equipment before use.</p> <p>May not use ACTRFS resources for non-official use, unless approved by the ACTRFS CO or delegate.</p>
Equipment Manager	Report all faulty, lost, or damaged equipment to ACTRFS HQ.
Brigade Executives	<p>Ensure only authorised use is made of all ACTRFS resources, including property, firefighting and station equipment, clothing, PPE, PPC, and vehicles.</p> <p>Ensure appropriate PPC is used for all active incidents, training, and fire suppression activities.</p>
ACTRFS Manager, Operations	Ensure appropriate claims are made for damaged, lost or faulty equipment and replacements organised.
ACTRFS Chief Officer (CO) ACTRFS Duty Officer (DO)	<p>Approve non-official use of ACTRFS resources where appropriate.</p> <p>Approve use of ACTRFS resources outside the ACT where appropriate.</p>

Standard


Personal use

ACTRFS equipment, resources, or property **are not to be used** by members for personal use.

Version history

Author	Version	Version Approval Date	Summary of Changes
Dave Pennock	1.0	10/11/2022	Version 1

Approved by

Name	Title/Role	Signature	Date
Rohan Scott	CO ACT RFS		08/02/2024

Document Owner

Position	Section
RFS Director	Operations

Next review due: 01/02/2027

Related documents

Document name
1.2.1 Using PPE and PPC Standard Operating Procedure
1.3.3 Fitting and use of re-useable Respiratory Protection masks Guideline.

Signed documents will be scanned and filed in TRIM.