

3M Respiratory Protective Equipment

Selection Simplified

Selecting Respiratory Protective Equipment (RPE) that is both adequate and suitable can at first appear to be a daunting task. With so many options available and so many factors to consider, it may seem difficult to know where to start.

To help make your selection process as simple and effective as possible, 3M have developed a number of online and offline tools. A range of technical information, fact sheets, selection guides, fitting videos, posters and much more can be found at the click of a button, free of charge at www.3m.co.uk/safety.

The process starts here in this general guide to RPE that should help you to evaluate your RPE options and identify which type of equipment is right for your workforce. Once you have made this decision, 3M can help you move on to selecting specific products from whichever range you have deemed most suitable for your situation. We can then provide advice and guidance in terms of training and maintenance right through to validating that the equipment selected is suitable at an individual level.

A general guide to respiratory protection

3M offers a broad range of Respiratory Protective Equipment (RPE) for protection against gases, vapours and particulates.

Two broad types of 3M RPE are available:

Filtering devices Filter contaminants from the air		Supplied air devices Use breathable quality air from a compressor	
Disposable Respirators 	Reusable Respirators 	Powered Respirators 	

Respiratory Protective Equipment (RPE) must be both adequate and suitable for the work to be undertaken. Different types of RPE offer different levels of protection. To be classed as adequate the level of protection selected must be capable of reducing exposure to hazardous substances to an acceptable level. The RPE must also be suitable for both the wearer and the situation, e.g. it must fit the wearer, be comfortable to wear, be robust enough for the environment in which it will be used and be compatible with other PPE. There are disposable and reusable types of RPE. Consideration must be given to the storage and maintenance of reusable types to ensure both workers and the investment in PPE are protected. Maintenance of RPE will involve ensuring that trained personnel are available to conduct the work, spare parts are provided and an administration system exists to keep records.

The broad range of RPE available from 3M offers you the chance to choose the level of protection, comfort, style and maintenance you need to work effectively and safely.

Hazard identification

At a high-level, there are two types of respiratory hazard:

Particulate hazards: e.g. dusts, mists, fumes and fibres.

Gas & Vapour hazards: e.g. solvent vapours and acidic gases.

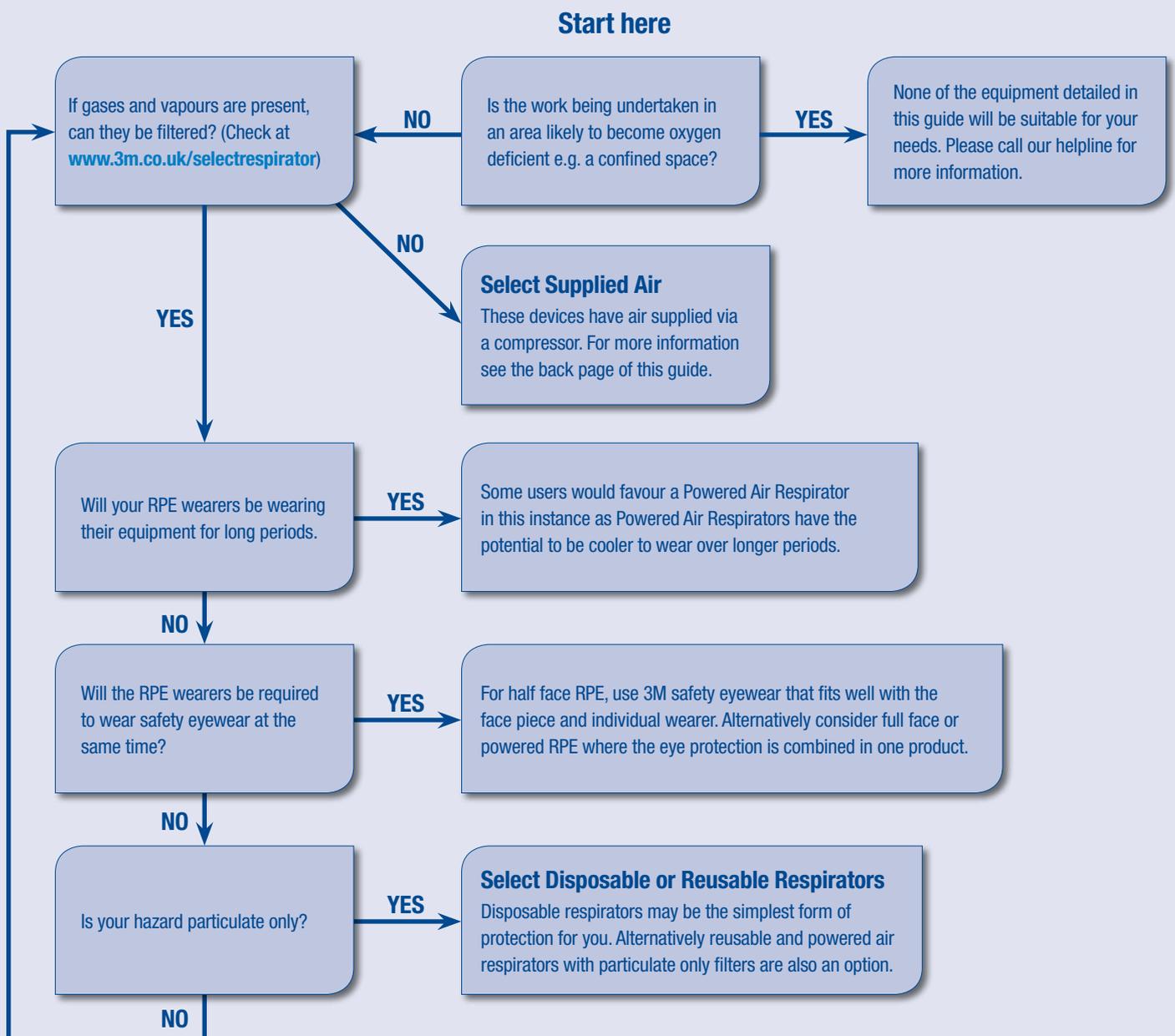
You will need to understand the type(s) of hazard(s) your workers face before you can make a decision as to what type of RPE to use.

Consider the work done and look for:

- ✓ Process generated hazards e.g. wood dust from sanding or gases released during a reaction
- ✓ “Bought-in” hazards e.g. solvents or bottled gases

Use manufacturers’ safety data sheets (MSDS) to understand the hazards linked to bought-in substances and your knowledge of your process and Health & Safety Executive (HSE) guidance to understand process generated hazards.

Simple Selection Checker



Disposable Respirators

3M's range is available in three protection factors and a variety of styles to suit your environment, wearers and budget.

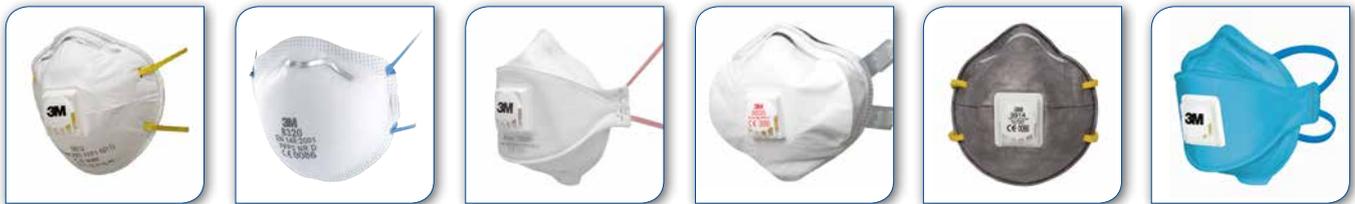
Disposable respirators generally only protect the wearer from particulate hazards although special products are available to deal with nuisance levels of certain gases and vapours.

Features of 3M disposable respiratory products:

- ✓ Choose from our Classic, Comfort or Premium ranges or a Welding or Speciality respirator incorporating nuisance vapour protection for specific applications. The ranges includes traditional cup-shaped, foldable and buckle-strap designs
- ✓ Choose a valved or unvalved option in almost all of our designs. A valved respirator reduces exhalation effort, is cooler to wear and is less likely to lead to eyewear misting up
- ✓ Choose individually wrapped products; available with the majority of our foldable respirators

Benefits of using disposable respirators:

- ✓ Ease of use; no maintenance required
- ✓ Hygienic use; discard after use
- ✓ R rated products can be used for more than one shift if in a reusable condition and cleaned after use



Reusable Respirators

Half and Full Face Respirators have the ability to protect the wearer against particulate and/or gas and vapour hazards depending on the filters selected.

3M Service Life and Select (SLS) Software is available free of charge at www.3M.co.uk/filterservicelife. By entering contaminants and their concentrations, this software will help make the process of selecting 3M respirators and filters faster and easier. The software contains more than 700 different chemicals and provides a record of your choices. It also offers an easy method for estimating service life of 3M Gas & Vapour Filters.

3M™ 4000 Series Respirators are a range of ready-to-use, maintenance-free half masks. They are a highly cost-efficient option for wearers who need gas and vapour protection but don't want the hassle of maintaining their RPE.

The 3M reusable respirator range also consists of three half mask and two full face mask design options to suit a range of requirements. From the Classic **3M™ 3000** and **3M™ 6000 Series** to the Premium **3M™ 7500 Series**, 3M half mask options are light-weight, simple to handle, easy to maintain and available in a range of sizes.

For RPE users who also need to wear protective eyewear, **3M™ 6000** and **3M™ 7000 Series** full face masks are an ideal option as they combine respiratory and eye protection in one item of PPE, avoiding the potential for incompatibility.

All disposable and reusable respirator wearers should be face fit tested as required by the Control of Substances Hazardous to Health Regulations (COSHH). See overleaf for further information, or visit www.3M.co.uk/fittestrespirator.



Powered and Supplied Air Respiratory Protective Systems

There are many benefits associated with using Powered and/or Supplied Air respiratory protective equipment over alternative types of RPE. The main benefits include; not having to fit test the wearers as the products are loose fitting; increased comfort for longer duration wear due to the cooling effect of air circulation; increased compatibility as a number of PPE items are combined in one system.

Powered and Supplied Air Respirators are differentiated as follows:

3M™ Powered Air Turbo units

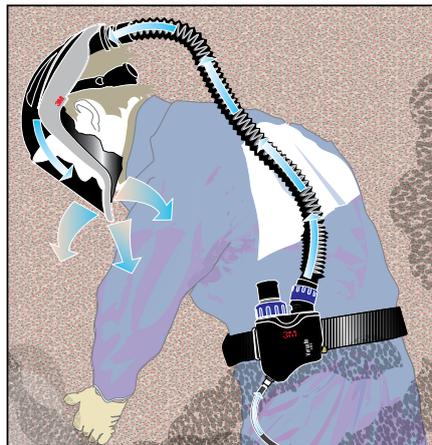
These use a battery powered fan and motor to draw contaminated air through a filter. The filter captures certain contaminants and clean air is fed to the wearer.



- ✓ Suitable for use over long shifts - no increase in breathing resistance
- ✓ Can offer integrated head, eye and face protection
- ✓ Allows the wearer to walk freely around the workshop without any trailing tubes
- ✗ Cannot be used to protect against substances with poor warning properties (taste/smell)
- ✗ Must not be used in conditions that are oxygen deficient or immediately dangerous to life or health (IDLH)

3M™ Supplied Air Regulators

These use breathable quality air supplied from a compressor via a tube. The compressed air is regulated to a gentle flow and fed to the wearer.



- ✓ Can be used to protect against substances with poor warning properties (taste/smell)
- ✓ Can offer integrated head, eye and face protection
- ✓ Suitable for use over long shifts - no increase in breathing resistance
- ✗ Must not be used in conditions that are oxygen deficient or immediately dangerous to life or health (IDLH)

Care and Maintenance

Reusable, Powered and Supplied Air products will all require a certain level of maintenance in order to sustain protection levels, optimise the effective lifetime of the systems and avoid the additional cost of replacement parts. It is also essential for meeting the requirements of COSHH. We can provide comprehensive guidance and support tools to help you maintain your equipment properly and provide its optimum value. For further details on 3M Care and Maintenance Packs (free of charge to 3M customers), visit www.3M.co.uk/maintenancepack.

3M Safety Services

3M offer a range of free of charge and chargeable services which could help you with your RPE needs. Services include: fit testing and training workshops, air quality testing for Supplied Air RPE and airborne contaminant monitoring. For more information on any of these services call our 3M Safety Service Coordinator on **0845 601 2347** or email safetyservices.uk@mmm.com.

For advice on, information and technical support on the selection and use of Personal Protective Equipment by 3M, simply call the 3M Health and Safety Helpline on **0870 60 800 60 (UK)** or **1 800 320 500 (Ireland)**, Monday to Friday, 9am – 5pm.



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