

# R3

## COSHH essentials: Respiratory protective equipment (RPE)



This information will help employers comply with the **Control of Substances Hazardous to Health Regulations 2002 (COSHH)**, as amended, to control exposure to chemicals and protect workers' health.

It is also useful for trade union safety representatives.

The sheet covers how to select and use RPE with a UK APF of 20.

It is important to follow all the points, or use equally effective measures.

RPE is not a substitute for engineering controls. It is difficult to use, expensive in the longer run, and always fails to danger.

If you are using the right controls, RPE is not normally needed. However, some processes always need RPE.

# UK Standard Assigned Protection Factor 20 (APF 20)

## Control approach R Supplementary advice

### You should use RPE:

- while you are planning to install engineering control;
- clearing up a spillage;
- maintenance;
- emergencies;
- cleaning, eg pressure washing;
- a short term one-off procedure; and
- whenever required for safe working.

### Selection of RPE with an APF of 20 or more

- ✓ RPE is designed to help protect workers from dusts, fumes, vapours or gases. This sheet describes respirators (including 'dust masks') that filter contaminated air, and breathing apparatus (BA) that supplies clean air. Fill in the selection table on page three and show it, with safety data sheets, to your RPE supplier.

### Types of RPE available are:

- filtering half-mask, EN 149;
- filtering half-mask without inhalation valves EN 1827;
- half mask EN 140 and filter;
- any of the above devices incorporating a high efficiency P3 particulate filter;
- full face mask EN136 and gas filter;
- powered hood model TH2 EN 146 / EN 12941; and
- power-assisted mask model TM2 EN 147/EN 12942.

**Caution: These are not suitable for use in confined spaces.**

### Types of BA available are:

- compressed airline BA LDM1 or LDM2 mask EN 12419;
- compressed airline BA LDH2 hood/helmet/visor EN 1835; and
- constant flow airline BA half-mask EN 139.

### Planning and preparation

- ✓ Plan for and practice emergency procedures.
- ✓ Get up-to-date safety data sheets for all chemicals and products.
- ✓ Make sure you get initial fit testing done. Ask the supplier for help in fit testing and arranging training, or contact BOHS - see 'Further information'.

### Using RPE

- ✓ Wearers must be medically fit to wear RPE – seek medical advice if you are not sure.
- ✓ All types of RPE restrict what the wearer can do. It is uncomfortable to wear, particularly for long periods of time.
- ✓ The RPE has to be worn all the time, and until the wearer is away from the contaminated air.
- ✓ The RPE needs to fit the person. If the RPE depends on a face seal, it won't work if the worker has face hair or stubble.
- ✓ Users should check the fit every time they put on RPE.
- ✓ Change the filters on respirators regularly – your supplier may be able to advise you.
- ✓ Make sure the air supplied to breathing apparatus is fit to breathe, free of oil, water, carbon monoxide and other fumes. Take care not to trip over BA air hoses.

### Maintenance

- ✓ Keep RPE clean and in good working order – follow the manufacturers' instructions.
- ✓ Maintain RPE at least once every three months. Replace valves, face seals and worn or damaged parts on respirators. The valves need changing frequently if substances such as paint sprays land on them.
- ✓ Store RPE in a safe place, away from contamination.
- ✓ Keep a small stock of replaceable parts.
- ✓ Remember to check the expiry dates on RPE and filters.
- ✓ Check the air quality to air-fed RPE at least once every three months, or before use, and check the air flow every time. Make sure compressors (including mobile compressors) take in only clean air.

**Caution: Make sure the correct filter is fitted.**

### Training

- ✓ Make sure that RPE users know how to check their equipment is working properly before they put it on, how to check face fit, how to replace worn or defective parts, and know about the RPE's limitations.
- ✓ Instruct users to throw away disposable RPE after one use.
- ✓ Tell workers to stop work and leave the area if they think their RPE isn't working properly.
- ✓ Your RPE supplier may be able to advise you on training.

### Further Information

- *Respiratory protective equipment at work: A practical guide* HSG53 (Third edition) HSE Books 2005 ISBN 0 7176 2904 X
- Contact the British Occupational Hygiene Society (BOHS) on 01332 298101 or at [www.bohs.org](http://www.bohs.org) for lists of qualified hygienists who can help you.

This guidance is issued by the Health and Safety Executive. Following the guidance is not compulsory and you are free to take other action. But if you do follow the guidance you will normally be doing enough to comply with the law. Health and safety inspectors seek to secure compliance with the law and may refer to this guidance as illustrating good practice.



## Selection of RPE

Fill in the selection table below and show it, with safety data sheets, to your RPE supplier.

<b>Information to help your RPE supplier</b>	
<b>Task / Job name</b>	
<b>Chemicals used</b> (Section 2 of safety data sheet)	
<b>Physical form</b>	<input type="checkbox"/> Gas <input type="checkbox"/> Fume <input type="checkbox"/> Mist <input type="checkbox"/> Vapour <input type="checkbox"/> Dust
<b>If a liquid, water or solvent based?</b>	<input type="checkbox"/> Water <input type="checkbox"/> Solvent <input type="checkbox"/> Not sure
<b>Is the humidity high?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not sure
<b>How long does the task take?</b>	___ hours                      ___ minutes
<b>Confined space?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not sure
<b>Explosive / flammable in air</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not sure
<b>Work rate</b>	<input type="checkbox"/> Heavy <input type="checkbox"/> Medium <input type="checkbox"/> Light
<b>Space to do task</b>	<input type="checkbox"/> Restricted <input type="checkbox"/> Unrestricted
<b>Amount of moving around</b>	<input type="checkbox"/> One place <input type="checkbox"/> Many places
<b>Vision requirement</b>	<input type="checkbox"/> All round <input type="checkbox"/> Not relevant
<b>Spoken communication</b>	<input type="checkbox"/> Necessary <input type="checkbox"/> Not relevant
<b>Wearer's physical fitness</b>	<input type="checkbox"/> OK <input type="checkbox"/> Not sure (ask a doctor)
<b>Wearer's aspect</b>	<input type="checkbox"/> Face hair <input type="checkbox"/> Spectacles <input type="checkbox"/> Turban
<b>What other PPE worn?</b>	<input type="checkbox"/> Hard hat <input type="checkbox"/> Ear muffs <input type="checkbox"/> Visor <input type="checkbox"/> Goggles