Respiratory Protection — study guide

Where the air itself is the hazard, a filter or an air supply is the last defence. This guide covers Respiratory Protective Equipment (RPE) and breathing apparatus.[1]

What RPE is

Respiratory Protective Equipment (RPE) is a particular type of Personal Protective Equipment designed to protect the wearer from breathing in harmful substances or from oxygen-deficient atmospheres, when other controls are either not possible or are insufficient on their own.

Filters

A key component of any RPE is the filter. The main types of filter are the **gas and/or vapour filter** and the **particle filter**.

Powered and non-powered

A **non-powered respirator** relies on the user's own breathing to draw air through the filter. Where the atmosphere is oxygen-deficient, or contains a range of hazards, this is not enough.

Breathing apparatus

Breathing apparatus supplies air from an **independent source**, such as a compressed air cylinder, and can be used against a range of airborne hazards and in different atmospheres.

Legal design requirements

The mark that indicates that RPE meets the minimum legal requirements for its design is the **CE marking**.

Key facts to remember

- RPE protects against inhaling harmful substances or oxygen-deficient atmospheres when other controls are impossible or insufficient.
- Filter types: gas and/or vapour filter; particle filter.
- Non-powered respirator: air drawn through the filter by the user's own breathing.
- Breathing apparatus: supplied from an independent source (compressed air cylinder); works across hazards and atmospheres.
- Minimum legal design requirement: CE marking.

Sources

1. Control of Substances Hazardous to Health (COSHH) Regulations 2002 (UK) — selection and use of respiratory protective equipment.

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