

Introduction to Respiratory Protection

Unlike head or foot injuries respiratory injuries are not readily apparent in the workplace. In some cases it may not be until after workers retire that symptoms occur. It is therefore important that all staff that are, or may be at risk have access to Respiratory Protective Equipment.

To help you meet Health & Safety Executive demands for personal protection, the SCAN respiratory range offers an extensive range of disposable masks, respirators and powered respirators.

Occupational Exposure Limit

The OEL is the 'Safety' line decided upon by the Health and Safety Executive



Dust

Formed by the breaking down of solid materials, normally when materials are altered. For example, sanding, cutting, grinding and brushing. In general the smaller the dust particle the greater hazard that it represents. Fibres from materials should also be treated as dusts.

Vapour

A gaseous state formed by evaporation from substances that are normally either solid or liquid at room temperature (e.g. petrol, methylated spirits), many industrial processes used in degreasing vapourise particularly quickly once heated.

Fumes

Formed by the vapourisation of a solid material by the application of intense heat. Extremely fine particles are formed as fumes cool and condense. Many processes form fumes; such as smelting, pouring metals and many welding applications.

Mist

Formed by processes that involve atomisation (such as spraying, cleaning and cutting/grinding using coolants) and consist of tiny liquid droplets rather like steam in a bathroom.

DISPOSABLE MASK PROTECTION LEVELS

FFP1	Dusts Fumes Aqueous mists Oil based mists	FFP2	Fine dusts Fibres Aqueous mists Oil based mists	FFP3	Very fine dusts Fibres Aqueous mists Oil based mists
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For a more detailed information please see pages 46-50 SCAN Respiratory Application Charts

Understanding the Standards

EN149 Filtering Face Piece for Particulates

Designed to cover the nose, mouth and chin. The construction is made of the filter material itself. To be disposed of after each period of work or 8 hour shift.

EN Number	Filter/Class	Allowable Penetration	APF	NPF
EN149	FFP1	20%	4 x OEL	4
	FFP2	6%	10 x OEL	12
	FFP3	1%	20 x OEL	50

- FFP1** Particles larger than 5 microns.
- FFP2** Particles between 2 & 5 microns.
- FFP3** Particles less than 2 microns.

APF - Assigned Protection Factor

Level of respiratory protection that can be expected to be achieved in the workplace by 95% of adequately trained and supervised wearers using a properly fitted and functioning respiratory protective device.

NPF - Nominal Protection Factor

The potential maximum protection factor using the maximum percentage inward leakage permitted for a given standard class of respiratory protective device, expressed as a ratio:
$$= \frac{100\%}{\% \text{ allowable inward leakage}}$$