Respiratory Protection

CLAD
WORKWEAR & PPE SPECIALISTS

Maintenance free particulate respirators

These are the most common type of respiratory protection used for particulates as they are simple to use and relatively inexpensive. There are 3 basic levels of protection which may be valved (cooler to wear) and/or contain carbon or other products to remove nuisance levels of certain gases and vapours. A brief summary of protection levels is outlined below.

	FFP1	FFP2	FFP3
Protection	**APF* 4**	**APF 10A**	**PF 20**
Typically used for	Non-toxic dusts, mists and fumes based on water and oil. Working with non-toxc dusts, mists and fumes. Hand sanding, drilling and cutting.	Harmful dusts, fumes and aerosols based on water and oil. Working with softwood, glass fibres, metal and plastics (besides PVC) and oil mists.	Harmful and carcinogenic dusts, fumes and aerosols based on water and oil. Working with highly toxic metals, hardwood, radioactive and biochemical active substances as well as oil mists.

*APF - Assigned Protection Factor

Half Masks and Full Face Masks

In addition to particulates, reusable respirators are commonly used to protect the wearer from gases and vapours. Full face masks provide protection to the eyes and face. A summary of the main gas filter combinations is listed below.

Gas and vapour filters

Type	Colour	Hazard Type	Examples	Maximum Use Level
A1	A 1	Organic gases and vapours, boiling point >65°C	Working with solvents from paints and adhesives	10 x WEL* (half mask) 20 x WEL (full face mask) Or 1000ppm, whichever is lower
A2	A 2	Organic gases and vapours, boiling point >65°C at higher concentrations	As A1 above but at higher concentrations or prolonged use.	10 x WEL (half mask) 20 x WEL (full face mask) Or 5000ppm, whichever is lower
A1B1E1	A 1 B 1 E 1	As A1 plus inorganic gases, vapours and acid gases. (NOT for Carbon Monoxide)	As A1 plus working with chlorine bromine, hydrochloric acid and other acid gases	10 x WEL (half mask) 20 x WEL (full face mask) Or 1000ppm, whichever is lower
A1B1EK1	A 1 B 1 E 1 K 1	As ABE1 plus ammonia and ammonia derivatives.	As ABE1 plus ammonia and its derivatives.	10 x WEL (half mask) 20 x WEL (full face mask) Or 1000ppm, whichever is lower

*WEL - Workplace Exposure Limit

Respiratory Protection

Work activities may result in harmful substances contaminating the air in the form of dust, mist, gas or fumes. For example:

- Cutting a material such as stone, concrete or wood
- Using a liquid containing volatile solvents
- Handling a dusty powder

Summary of the main EN standards:

EN 149 – Filtering facepiece and particulate respirators
EN 405 – Valved filtering half mask respirators for gases and/or particulates
EN 140 – Half mask facepieces and quarter masks
EN 136 – Full facepieces
EN 137 – Self-contained open circuit compressed air breathing apparatus
EN 143 – Particulate filters
EN 146 – Powered respirators – hoods & helmets
EN 147 – Powered respirators – full face, half face or quarter masks
EN 371 – Gas and/or combined filters for use against low boiling point organic compounds.
EN 14387 – Gas & vapour filters

Read more on Clad Safety's Safety Standards Guide **here.**