

4000 Series Gas and Vapour Respirators

Data Sheet



Main features

The 3M 4000 Series is a range of respirators which use innovative technology to provide integral construction gas and vapour respirators. The 3M 4000 Series uses twin inhalation valves to reduce breathing resistance, together with bonded carbon filters, which do not require granule containers. This is complemented with a parabolic valve which further reduces breathing resistance whilst preventing heat build-up. The single piece integral construction also avoids operator assembly errors and allows a respirator to be designated to a specific area, making a respirator programme easier to manage. An hermetically sealed foil bag is utilised to extend shelf-life and prevent moisture and other substances contaminating the carbon. An optional overspray guard is also available to prolong the life of the particulate filter when using the 3M 4251 or 3M 4255 respirators for paint spraying.

Applications

MODEL	HAZARD	INDUSTRY
4251/4255 (FFA1P1/ FFA2P2SL)	Organic Vapours and Particulates	- Anywhere conventional paints are used (subject to usage conditions). - Vehicle manufacture - Plant equipment manufacture - Shoe treatment and tanneries - Domestic appliance manufacture - Aircraft manufacture and refurbishment - Boat building - Machinery manufacture - Chemical manufacture and handling - Ink and dye manufacture and usage - Adhesive manufacture and laboratories - Paint and varnish manufacture - Manufacture and use of resins
4277 (FFABE1 P2SL)	Organic Vapours, Inorganic Gases, Acid Gases and Particulates	As 4251 but also: - Electrolytic processes - Acid cleaning - Metal pickling - Metal etching
4279 (FFABEK1 P2SL)	Organic Vapours, Inorganic and Acid Gases plus Ammonia and Particulates	As 4277 but also: - Manufacture and maintenance of refrigeration equipment - Agrochemicals

Approvals

- The 3M 4000 series meet the performance requirements of the European Standard EN 405 for valved filtering half-mask respirators for gases, or gases and particulate combinations.
- Are suitable for use under COSHH, CAW, CLAW and IRR.
- The products are CE marked.

Materials

The following materials are used in the production of the product:

- Face piece - Thermoplastic elastomer
- Head harness - Polypropylene/cotton braided elastic
- Plastic components - Polypropylene
- Gas/Vapour filter - Activated carbon
- Particulate filter - Polypropylene
- Exhale valve - Silicone rubber
- Inhale valve - Natural rubber

Product weight: 300g max.

Standards

The products have been tested to European Standard EN 405 and have met the relevant requirements of the categories shown below. The main performance tests in this standard are:

- Face Fit
- Flammability
- Breathing Resistance
- Filter Performance
 - Within the criteria specified in the standard
 - The 3M 4251 (FFA1P1) provides protection against organic vapours, (boiling above 65°C) up to 10 times the Occupational Exposure Limit (OEL) or 1000 parts per million (ppm), whichever is lower. 4 times OEL for particulates.*
 - The 3M 4255 (FFA2P2SL) provides protection against organic vapours, (boiling above 65°C) up to 10 times OEL or 5000 ppm, whichever is lower. 10 times OEL for particulates.*
 - The 3M 4277 (FFABE1P2SL) provides protection against organic vapours, (boiling above 65°C), inorganic and acid gases, up to 10 times OEL or 1000 ppm, whichever is lower. 10 times OEL for particulates.*
 - The 3M 4279 (FFABEK1P2SL) provides protections against organic vapours (boiling above 65°C), inorganic and acid gases and ammonia, up to 10 times OEL or 1000 ppm, whichever is lower. 10 times OEL for particulates.*

* Assigned Protection Factors according to (British Standard) BS4275: 1997.