# Data Sheet for Speciality Respirators

**Data Sheet**

## Main Features

The 3M Speciality range provides lightweight, effective, comfortable and hygienic respiratory protection against dusts and mists. It also provides additional relief from low levels of organic vapours or acid gases such as sulphur dioxide and hydrogen fluoride (depending on the product type).
The convex shape, twin strap design, foam nose seal and aluminium nose clip ensures a good face seal over a range of face sizes. The patented 3M™ Cool Flow™ valve on the 9914 and 9926 and collapse resistant shell featured in all products offer both durable and comfortable protection particularly in hot and humid conditions.
These respirators do not require costly and time consuming maintenance.

## Approvals

These Speciality respirators have been shown to meet the Basic Safety requirements under Article 10 and 11B of European Community Directive 89/686.
EC-Type examination certificates are in force issued by the British Standards Institution. The product is CE marked.

## Materials

The following materials are used in the production of these products:

- Straps - Polyisoprene
- Nose Clip - Aluminium
- Filter - Polypropylene
- Nose foam - Polyurethane
- Valve - Polypropylene
- Valve diaphragm - Polyisoprene

Weight : 18g

| | Assigned Protection Factor for Fine Particulate* | Additional gas and vapour relief | Application |
|---|---|---|---|
| 9906 | 4 | Hydrogen fluoride only below WEL | Aluminium refining, stone cleaning, Acid cleaning and etching processes. |
| 9915 | 4 | Acid gases including Hydrogen fluoride Sulphur Dioxide, Chlorine, all below WEL | Same as 9906 plus Paper mills, Food processing, Coal power stations, Battery manufacturers, Smog in Cities. |
| 9926 | 10 | Same as 9915 | Same as 9915 |
| 9913 and 9914 | 4 | Organic vapours below WEL | Inks and dyes, Cosmetic manufacture, Electronics, Furniture manufacture, Food processing, Decorating/ Refurbishing, Hospitals and Forensic laboratories. |

* Assigned Protection Factor (APF) as detailed in EN529

WEL: Workplace Exposure Limit

## Standards

The product has been tested to the European Norm EN149:2001 and has met the requirements of categories shown below.

| Product number | EN149 performance category |
|---|---|
| 9906, 9913, 9914, 9915 | FFP1 |
| 9926 | FFP2 |

The main performance tests in this standard are:

• Total Inward Leakage
Ten test subjects perform a series of exercises while walking on a tread-mill. The amount of contamination leaking into the respirator through the filter, face seal and valve in measured. For category FFP1 the leakage must not exceed 22% and for FFP2 the leakage must not exceed 8% for eight of the ten results.

• Filter Penetration
The filter efficiency of twelve respirators is tested against a sodium chloride aerosol and a paraffin oil aerosol. For the FFP1 category both aerosol penetrations must be below 20%. For the FFP2 category sodium chloride penetration must not exceed 6%.

(3M has also tested the filter against Hexane, Sulphur dioxide, Hydrogen fluoride and Chlorine gases although this is not a requirement of the EN149:2001 standard).

• Flammability
Four respirators are individually passed through a flame at 800°C +/- 50°C at a speed of 5cm/sec.The respirators shall not continue to burn after removal from the flame.

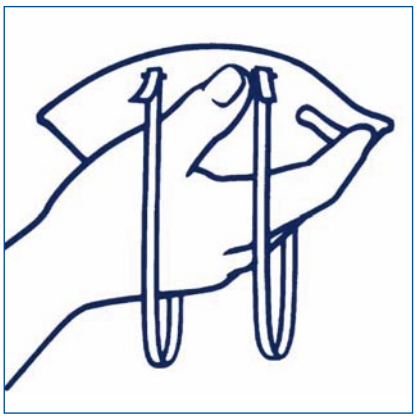
• Breathing resistance
The resistance created by the respirator filter to an airflow of 30 l/m and 95 l/m are evaluated.
For an FFP1 device this must not exceed 0.6mbar and 2.1mbar at the respective flows.
For an FFP2 device this must not exceed 0.7mbar and 2.4mbar at the respective flows.

• Information
A range of information, specified in this standard, must be provided on the packaging of the product. A full copy of EN149:2001 can be purchased from your national standards body.

## Correct Usage

The respirator may be used in concentrations of solid, water based and non-volatile liquid based aerosols up to 4 times the Workplace Exposure Limit for an FFP1 device and up to 10 times the Workplace Exposure Limit for an FFP2 device.
It may also be used to remove the irritation caused by acid gases or organic vapours as specified in the Applications table at levels below the Workplace Exposure Limit.

## Fitting instructions for valved & unvalved respirators

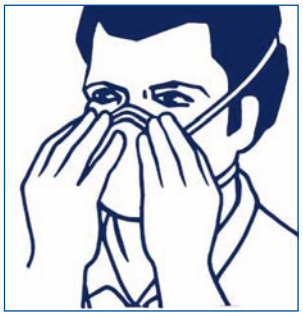


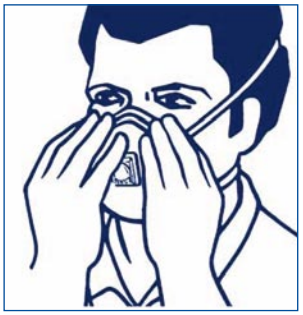
1. Cup the respirator in your hand with the nosepiece at your fingertips allowing the headbands to hang freely below your hand.

2. Position the respirator under your chin with the nosepiece up.

3. Pull the top strap over your head resting high at the top back of the head. Pull the bottom strap over your head and position it around the neck below the ears.

4. Place the finger tips of both hands at the top of the metal nosepiece. Mould the nosepiece to shape of your nose by pushing inwards while moving your fingertips down both sides of the nosepiece. Pinching the nosepiece using one hand may result in less effective respirator performance.





5. The seal of the respirator on the face should be fitchecked prior to wearing in the work area.

a) Cover the front of the respirator with both hands, being careful not to disturb the position of the respirator.

b) Inhale sharply. A negative pressure should be felt inside the respirator. If any leakage is detected adjust the position of the respirator and/or tension of the strap.

Retest the seal. Repeat the procedure until the respirator is sealed properly.

## Warnings

- As with the use of any respiratory device, the wearer must first be trained in the proper use of the product.
- This product does not protect the wearer against gases, vapours, solvents from paint spray operations or atmospheres containing less than 19.5% oxygen.
- Use only in adequately ventilated areas containing sufficient oxygen to support life.
- Do not use when concentrations of contaminants are immediately dangerous to life or health.
- Leave the area immediately if:
  * breathing becomes difficult
  * dizziness or other distress occurs
- Discard and replace the respirator if it becomes damaged,
- breathing resistance becomes excessive, or at the end of one shift.
- Never alter or modify the device.

Respiratory protection is only effective if it is correctly selected, fitted and worn throughout the time when the wearer is exposed to hazards.

3M offers advice on the selection of and training in the correct fitting and usage of this product.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