3M Occupational Health & Environmental Safety Division
Maintenance Free Particulate Respirator

Work well, stay well

Take your safety personally
State of the art features set 3M apart from conventional respirators in the market. Our 3M™ High Performance Filter Media combines the benefits of mechanical filtration with advanced technology filtration to capture particles and the 3M™ Cool Flow Valve reduces heat build up.

Combined with ergonomic design for superior comfort, our wide range of patented technologies help to deliver easier breathing and comfortable protection against particle hazards. All products featured in this section are exempt from record keeping requirements.

Selecting and specifying the appropriate respiratory protective equipment may appear daunting, with multiple factors to consider – the equipment needs to not only provide appropriate protection for the job, but also be comfortable enough for the individual user to wear during the whole period of exposure.
The Selection of Respiratory Protection Equipment follows a basic 3M four-step method:

1. Identify the Hazards – dust, metal fume, gas, vapour etc.
2. Assess the Risk – assess the hazard levels against safety standards and consider other protection – skin, eye and body
3. Select the right Respirator – disposable, reusable, half mask, full face, powered, supplied-air
4. Train in Fitting and Use – to optimise respiratory protection
## 1. Identify the Hazards

<table>
<thead>
<tr>
<th>Application*</th>
<th>Performance level</th>
<th>Important information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sanding, Cutting, Drilling</td>
<td>Rust, Metal Particles, Filler</td>
<td>P1</td>
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<tr>
<td></td>
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<td>P2</td>
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<tr>
<td></td>
<td>Cement, Wood, Steel</td>
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<tr>
<td></td>
<td>Paints/Varnish/Anti-rust coating</td>
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<td></td>
<td>Steel, Stainless Steel</td>
<td>P3</td>
</tr>
<tr>
<td></td>
<td>Anti-Fouling Varnish</td>
<td>P3</td>
</tr>
<tr>
<td>Low temp. oil spray</td>
<td></td>
<td>P2</td>
</tr>
<tr>
<td>Welding</td>
<td>Mild Steel, Zinc (Autogen, MIG/MIK)</td>
<td>P2</td>
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<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work with Asbestos</td>
<td>Small amounts infrequent exposure</td>
<td>P2</td>
</tr>
<tr>
<td>Work with Glass and Mineral fibres</td>
<td></td>
<td>P2</td>
</tr>
<tr>
<td>Waste Sorting</td>
<td></td>
<td>P3</td>
</tr>
<tr>
<td>Spraying</td>
<td>Paint spray</td>
<td>P2</td>
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<tr>
<td></td>
<td>Pesticides (water based)</td>
<td>P2</td>
</tr>
<tr>
<td>Utility maintenance (e.g. filter change)</td>
<td></td>
<td>P3</td>
</tr>
<tr>
<td>Allergies</td>
<td>Pollen, Animal dander</td>
<td>P1</td>
</tr>
<tr>
<td></td>
<td>Grain dust</td>
<td>P2</td>
</tr>
<tr>
<td>Contact with:</td>
<td>Mold/Fungus</td>
<td>P2</td>
</tr>
<tr>
<td></td>
<td>Bacteria</td>
<td>P2</td>
</tr>
<tr>
<td></td>
<td>Diesel exhaust/Smoke</td>
<td>P2</td>
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</tbody>
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* Warning: This guide is only an outline. It should not be used as the only means for selecting a respirator. Details regarding performance and limitations are set out on the respirator package and user instructions. Before using any of these respirators, the wearer must read and understand the user instructions for each product. Specific country legislation must be observed. Please note that the respirators shown highlight some of the products which may be considered. Selection of the most appropriate respiratory protective equipment (RPE) will depend on the particular situation and should be made only by a competent person knowledgeable of the actual working conditions and the limitations of RPE.

## 2. Assess the Risk

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<tr>
<th>3M™ 4Step Method Application</th>
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Nominal Protection Factor (NPF): The theoretical protection level of a respirator based on laboratory measured performance data.

## 3. Select the Right Respirator

Once you have selected the protection factor you require, you can then consider whether you need a cup-shaped respirator, or a foldable respirator, whether it has buckled straps and whether it is valved or not.

### 3M™ Cup-Shaped Respirators
- Convex shape, nose clip and twin strap design
- Easy to put on
- Durable, collapse resistant inner shell

### 3M™ Foldable Respirators
- Ultra soft, flexible and comfortable fit resulting from the 3 panel design
- Individually packed, foldable design prevents contamination before use and allows easy storage

### 3M™ Buckle Strap Respirators
- Robust and durable design provides multi-shift capability and secure feel
- Adjustable braided headbands
- Soft inner face-seal improves comfort

### 3M™ Cool Flow Valve
- Effective removal of heat and moisture build-up provides a cooler and more comfortable wear
- Provides longer continuous wear time
- Reduces risk of misting of spectacles and eyewear
Advantages of 3M™ Particulate Respirators
Integrating the voice of the customer into product development allowed innovations such as the 3M™ Cool Flow Valve to reduce heat build up in a respirator and the 3M™ High Performance Filter Media which offers protection against hazardous particles and easier breathing. In addition to quality products, 3M continues to provide expert support for proper respirator selection – all leading to satisfied customers worldwide.

3M™ High Performance Filter Media
High Performance Filter Media combines the benefits of traditional mechanical filtration with advanced technology filtration to capture particles.

3M™ Cool Flow Valve
An efficient exhalation valve minimises heat and moisture build up, particularly in hot and humid work conditions.

3M™ Clog-Resistant Welding Respirators
Particles are trapped throughout the lofty outer layer and then by the inner filter. This prolongs respirator life while maintaining ease of breathing.

Face Seal
Soft and secure. The face seal on 3M™ Soft Seal Respirators and sweat absorbent nose foam will provide greater comfort.

Adjustment Buckle Straps
3M™ Universal Buckle adjustment offers a comfortable, and secure feel. Simply pull on the straps to achieve the optimal comfort and security for you.

3M™ Foldable Three-Panel Design
This design offers improved comfort, fit and communication – plus the convenience of a foldable respirator. (9300 series)

Activated Carbon
Layers of carbon in 3M™ Welding and 3M™ Speciality Respirators are designed to offer relief from the irritation of low levels of specific gases and vapours.

4. Train in Fitting and Use
Offered by Qualified 3M Consultants
Correct use and appropriate maintenance of personal protective equipment (PPE) from 3M makes a major contribution towards ensuring that it provides effective protection. Qualified 3M consultants help you make the most of your products.

In compact training units, they will show you and your employees how to recognize potential hazards, suggest what measures to take and help explain how to choose the appropriate protective equipment for each particular situation.
Classic Series

The Classic Respirator Series provides lightweight, comfortable and effective respiratory protection against dust and mist. The convex shape, twin strap design, nose foam and nose clip ensure comfortable wear over a range of face sizes. The unique valve in the 3M™ 8822 and 3M™ 8812 respirators and collapse resistant shell offers durable, comfortable protection particularly in hot and humid conditions. These respirators are exempt from costly, time-consuming maintenance requirements. The Classic Series forms part of your basic equipment for different work environments and complies with EN 149:2001. The patented 3M™ Cool Flow Valve technology ensures higher wearer comfort by allowing exhaled heat and humidity from your breath to escape.

Features and Benefits

Comfort
+ Traditional convex shape, with nose clip and twin strap design
+ Comfortable, lightweight, off-the-face design

Safety
+ Reliable, effective protection against fine particles
+ Durable, collapse resistant inner shell

3M™ Cool Flow Valve
+ Effective removal of heat and moisture build up provides a cooler and more comfortable wear
+ Removes exhaled air and minimises the risk of misting eyewear

Compatible with
+ Eyewear from 3M
+ Hearing Protection from 3M

3M™ 8822 Cup-shaped Particulate Respirator
Classification: EN 149:2001 FFP2
Protection: Dust/Mist
Maximum Usage Level: Up to 12 x TLV

Typical Applications
+ Construction
+ Ship Building/Repair
+ Pharmaceuticals
+ Rubber/Plastics
+ Engineering
+ Iron and Steel Foundries
+ Agrochemicals
+ Pottery/Ceramics
+ Market Gardening
+ Laboratories
+ Agriculture
+ Base Metal Manufacture
+ Foodstuffs
+ Powdered Chemicals
3M™ 8710 Cup-shaped Particulate Respirator
Classification: EN 149:2001 FFP1
Protection: Dust/Mist
Maximum Usage Level: Up to 4 x TLV

3M™ 8810 Cup-shaped Particulate Respirator
Classification: EN 149:2001 FFP2
Protection: Dust/Mist
Maximum Usage Level: Up to 12 x TLV

3M™ 8812 Cup-shaped Particulate Respirator
Classification: EN 149:2001 FFP1
Protection: Dust/Mist
Maximum Usage Level: Up to 4 x TLV

3M offers two qualitative fit test kits FT-10 (sweet) and FT-30 (bitter); FT-10 uses a test solution of sodium saccharin that produces a sweet tasting aerosol and FT-30 uses denatonium benzoate to produce a very bitter taste. Each kit contains a hood and collar assembly, two nebulisers, sensitivity solution, test solution and detailed user instructions. The choice between the bitter and sweet test kit is a personal one, however a small percentage of the population are unable to detect saccharin in which case the bitter test must be used. Spare hoods, nebulisers and solutions are available for the fit test kits.

3M™ Fit Test Kits for all 3M™ Maintenance Free Particulate Respirators

<table>
<thead>
<tr>
<th>3M Part No.</th>
<th>3M Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FT-10</td>
<td>Fit Test Kit - Sweet (includes hood, collar, 2 nebulisers, sensitivity solution, fit test solution and laminated user instructions)</td>
</tr>
<tr>
<td>FT-30</td>
<td>Fit Test Kit – Bitter (includes hood, collar, 2 nebulisers, sensitivity solution, fit test solution and laminated user instructions)</td>
</tr>
<tr>
<td>FT-11</td>
<td>Sensitivity solution 55ml bottle (sweet)</td>
</tr>
<tr>
<td>FT-12</td>
<td>Fit Test solution 55ml bottle (sweet)</td>
</tr>
<tr>
<td>FT-31</td>
<td>Sensitivity solution 55ml bottle (bitter)</td>
</tr>
<tr>
<td>FT-32</td>
<td>Fit Test solution 55ml bottle (bitter)</td>
</tr>
<tr>
<td>FT-13</td>
<td>Nebuliser (1/box)</td>
</tr>
<tr>
<td>FT-14</td>
<td>Hoods (2 hoods/box)</td>
</tr>
<tr>
<td>FT-15</td>
<td>Collar (1 collar/box)</td>
</tr>
</tbody>
</table>
Comfort Series

This respirator series set new benchmarks in wearer comfort. The advanced three-panel design and ultra soft inner cover-web of the 9300 series by 3M provide optimum comfort and easy communication, thus ensuring improved wearer acceptance even during long working hours. Being foldable they offer you more convenience than traditional cup shaped respirators. Its features include a headband material which helps even out strap pressure.

The patented exhalation valve minimises heat build-up and makes breathing easier and cooler.

These respirators are individually packed to avoid contamination during storage and the straps are colour coded, making identification of performance levels easier.

Features and Benefits

Foldable – 3-Panel Design
+ Accommodates greater facial movement during speech so much more comfortable to wear
+ Easy to store when not in use
+ Provides comfort and style without compromising performance

Nose Foam
+ Made of sweat absorbent material
+ Soft on the skin
+ Easy to achieve compatible fit with eyewear to reduce the risk of misting

3M™ Advanced Electret Filter Material
+ Effective filtration combined with low breathing resistance
+ Consistent high quality performance

3M™ Cool Flow Valve
+ Effective removal of heat and moisture build up provides a cooler and more comfortable wear
+ Removes exhaled air and minimises the risk of misting eyewear

Headbands
+ Even strap pressure improves comfort on the neck, face and head with a secure feel
+ Colour coded to indicate performance level

Individual Packaging
+ Hygienic packaging protects the respirator from contamination before use
+ Allows practical storage and dispensing in the workplace

Compatible with
+ Eyewear from 3M
+ Hearing Protection from 3M

3M™ 9322 Particulate Respirator
Classification: EN 149:2001 FFP2
Protection: Dust/Mist
Maximum Usage Level: Up to 12 x TLV

P2
3M™ 9310 Particulate Respirator
Classification: EN 149:2001 FFP1
Protection: Dust/Mist
Maximum Usage Level: Up to 4 x TLV

3M™ 9320 Particulate Respirator
Classification: EN 149:2001 FFP2
Protection: Dust/Mist
Maximum Usage Level: Up to 12 x TLV

3M™ 9312 Particulate Respirator
Classification: EN 149:2001 FFP1
Protection: Dust/Mist
Maximum Usage Level: Up to 4 x TLV

3M™ 9332 Particulate Respirator
Classification: EN 149:2001 FFP3
Protection: Dust/Mist
Maximum Usage Level: Up to 50 x TLV

3M™ 9300 Series Particulate Respirators
Winner of the iF Design Award
During the last few years the iF Design Award has become one of the most prestigious awards for design excellence.
Premium Series

With this premium respirator series 3M offers ultimate safety, meeting the particular requirements of the clogging test for FFP (filtering facepiece) masks which may be used for more than one shift.

The 8835* respirator by 3M has exceptional comfort because of its lightweight, off-the-face design; its advanced soft facepiece sealing ring a large surface area providing maximum filtration but minimising the build-up of hot air inside the facepiece, an exhalation valve to reduce moisture buildup in certain work conditions, and 4-point adjustable straps and adjustable nose clip to ensure a comfortable fit.

Features and Benefits

**Soft Inner Face-Seal Ring**
- Improves face seal and feeling of comfort
- Increases wearer comfort
- Can be hygienically cleaned for improved wearer hygiene if used for longer than one shift (3M™ 105 Face Seal Cleaner)

**Robust Shell and Cup Design**
- Robust and durable design provides multi-shift capability and a secure feel

**3M™ Advanced Electrode Filter Media**
- Increased filter area helps extend the life of the respirator. Higher capacity against dust
- Effective filtration combined with low breathing resistance
- Consistent high quality performance

**Colour Coded Valve Lettering**
- Easy to recognise protection level by colour coding

**3M™ Cool Flow Valve**
- Effective removal of heat and moisture build up provides a cooler and more comfortable wear
- Removes exhaled air and minimises the risk of misting eyewear

**Adjustable Braided Headbands**
- Help achieve a more secure feel and provide comfort to face, head and neck

**Available In Two Sizes**
- Small/Medium
- Medium/Large

**Compatible with**
- Eyewear from 3M
- Hearing Protection from 3M

3M™ 8835 Particulate Respirator
Classification: EN 149:2001 FFP3 D
Protection: Dust/Mist/Metal Fume
Maximum Usage Level: Up to 50 x TLV

Typical Applications
- Construction
- Ship Building/Repair
- Pharmaceuticals
- Welding and Soldering
- Chemical Processing
- Iron and Steel Foundries
- Battery Manufacturing

* The 3M™ 8835 is available in two sizes: small/medium and medium/large.
3M™ 8825 Particulate Respirator
Classification: EN 149:2001 FFP2 D
Protection: Dust/Mist/Metal Fume
Maximum Usage Level: Up to 12 x TLV

3M™ 8835 Particulate Respirator
Classification: EN 149:2001 FFP3 D
Protection: Dust/Mist/Metal Fume
Maximum Usage Level: Up to 50 x TLV

Adjustable wide straps for comfortable fit

Large soft faceseal provides excellent wearer comfort and protection
Welding Fume Respirators

The 3M™ 9925 and 3M™ 9928 Welding Fume Respirators provide lightweight, effective, comfortable and hygienic respiratory protection against dust, mist and metal fumes and resist clogging for extended use against welding fume. Its convex shape enhances wearer comfort; the 3M™ Cool Flow exhalation valve reduces moisture build-up, particularly in hot and humid work conditions. The 4-point adjustable straps and adjustable nose clip help achieve a comfortable fit.

Features and Benefits

**Robust Shell and Cup Design**
- Flame retardant outer surface minimises the effect of welding splatter
- Conforms well to most face shapes and sizes
- Is collapse-resistant

**Soft Inner Face-Seal Ring**
- Provides secure feel
- Improves wearer comfort
- Can be hygienically cleaned (3M™ 105 faceseal cleaner)

**3M™ Cool Flow Valve**
- Effective removal of heat and moisture build up provides a cooler and more comfortable wear
- Removes exhaled air and minimises the risk of misting eyewear

**Colour Coded Valve Lettering**
- Easy to recognise protection level (FFP2) by colour coding

**Carbon Layer**
- Provides protection against ozone gas and relief from nuisance level odours (below TLV)

**Adjustable Braided Headbands**
- Help provide comfort to face, head and neck

**Compatible with**
- Eyewear from 3M
- Hearing Protection from 3M
- 3M™ Speedglas™ Welding Headtop
- Welding shields – low profile design for compatibility with welding shields

The 9925 and 9928 respirators have been designed specifically for welding applications to provide protection against Ozone and welding fumes, plus relief from nuisance odours. The 9925 and 9928 respirators do not require costly and time-consuming maintenance.
The Speciality Respirators by 3M have been developed for particular working environments. These respirators feature an integrated activated carbon layer thus offering relief from nuisance odours below TLV. They can be used for a wide variety of applications ranging from welding to waste sorting.

The Speciality range by 3M provides lightweight, effective, comfortable and hygienic respiratory protection against dust and mist. 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 nose clip ensures comfortable wear over a range of face sizes.

The patented 3M™ Cool Flow Valve on the 3M™ 9914 and 3M™ 9926 respirators 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.

**Robust Shell and Cup Design**
- Conforms well to most face shapes and sizes
- Maintains its shape well during use
- Is collapse-resistant

**3M Advanced Electret Filter Media**
- Effective filtration combined with low breathing resistance
- Consistent high quality performance

**3M™ Cool Flow Valve**
- Effective removal of heat and moisture build up provides a cooler and more comfortable wear
- Removes exhaled air and minimises the risk of misting eyewear

**Carbon Layer**
- Provides protection against nuisance level organic vapours (below TLV)

**Colour Coded Straps**
- Easy to recognise performance level by colour coded straps (yellow = FFP1)

**Compatible with**
- Eyewear from 3M
- Hearing Protection from 3M

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**3M™ 9914 Speciality Particulate Respirator**
Classification: EN 149:2001 FFP1
Protection: Dust/Mist/Nuisance Level Organic Vapour
Maximum Usage Level: Up to 4 x TLV for particulates and below TLV for organic vapours

**3M™ 9906 Speciality Particulate Respirator**
Classification: EN 149:2001 FFP1
Protection: Dust/Mist/Nuisance Level Hydrogen Fluoride
Maximum Usage Level: Up to 4 x TLV for particulates, below TLV for Hydrogen Fluoride

**3M™ 9913 Speciality Particulate Respirator**
Classification: EN 149:2001 FFP1
Protection: Dust/Mist/Nuisance Level Organic Vapour
Maximum Usage Level: Up to 4 x TLV for particulates and below TLV for Organic Vapours

**3M™ 9926 Speciality Particulate Respirator**
Classification: EN 149:2001 FFP2
Protection: Dust/Mist/Nuisance Level Acid Gas
Maximum Usage Level: Up to 12 x TLV for Particulates and below TLV for Acid Gases

**3M™ 9915 Speciality Particulate Respirator**
Classification: EN 149:2001 FFP1
Protection: Dust/Mist/Nuisance Level Acid Gas
Maximum Usage Level: Up to 4 x TLV for Particulates and below TLV for Acid Gases
Have a look at 3M’s product and service offerings – tailored specifically to your industry/applications. We have put together information for you that can help you with the choice of personal protective equipment products, for example, or with finding training programs.

The entire range of Personal Protective Equipment (PPE) by 3M is presented in this catalogue and you also have access to our interactive product catalogue on the web.

We will help you wherever we can – for example, if you are looking for dealers, contacts, or products.

3M – a global, diversified technology company. Every day at 3M, people find new ways to make amazing things happen. Wherever you are, whatever you do, you know you can rely on 3M to help make your lives better. Serving customers in more than 200 countries around the world, we use our expertise, technologies and global strength to lead in major markets. For more general information about 3M, including the latest product and technology news, visit our corporate website www.3M.com
Training and Service

3M’s product training is based on many years of customer research, conducted in the field of occupational health and safety. Experts from throughout the safety world are invited to our customer events to discuss topical issues regarding health and safety in the workplace. This enables us to offer comprehensive support for safety inductions and provide easy-to-use training tools. Our training is designed to meet the individual needs of your company; your safety being at the heart of everything we do.

If you are interested in training and seminars, please contact your local 3M office where we will be more than happy to assist you in your health and safety needs.

3M Takes Responsibility – for Environment, Health and Safety

One of 3M’s declared goals is to develop and use safe products that have minimal impact on people, the environment and the workplace. All 3M subsidiaries and business divisions are highly committed to contribute to that goal in their daily activities. In 3M, we are strongly committed that our processes and products fulfil the regulatory requirements and we practise an open, dedicated communication policy. Wherever and whenever possible, we strive to avoid or reduce the environmental impacts and hazards to which our employees may be subjected. With our Life Cycle Management System, we analyze and optimize the possible effects of our products on the environment before they go to market, as well as throughout their entire life cycle. A priority in production is to use natural resources as sparingly as possible.