Disposable Particulate Respirators

Comfortably breathing clean, safe air is important for workers’ health and workplace morale. With this in mind we have designed a range of 3M™ Disposable Respirators using science to increase comfort, breathability and protection.

In combination with ergonomic design, a wide range of technologies including the 3M™ CoolFlow™ Valve help to deliver comfortable protection with easier breathing and reduced heat build-up.
## The 4-Step Method

### 1. Identify the Hazards

<table>
<thead>
<tr>
<th>Application*</th>
<th>Performance level</th>
<th>Important information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rust, Metal Particles, Filler</td>
<td>FFP1</td>
<td></td>
</tr>
<tr>
<td>Sanding, Concrete, Stone</td>
<td>FFP1</td>
<td></td>
</tr>
<tr>
<td>Cutting, Cement, Wood, Steel</td>
<td>FFP2</td>
<td></td>
</tr>
<tr>
<td>Drilling, Paints/Varnish/Anti-rust coating</td>
<td>FFP2</td>
<td></td>
</tr>
<tr>
<td>Steel, Stainless Steel</td>
<td>FFP3</td>
<td>When Silica is present</td>
</tr>
<tr>
<td>Anti-Fouling Varnish</td>
<td>FFP3</td>
<td>Speciality respirator may be required</td>
</tr>
</tbody>
</table>

- Low temp. oil spray: FFP2
- Welding: Stainless Steel (Electrodes) FFP2, 9928 or 9925 for Ozone protection
- Work with Asbestos: Small amounts infrequent exposure FFP3
- Work with Glass and Mineral fibres: FFP2
- Waste Sorting: Speciality Respirator may be preferred FFP3
- Spraying: Paint spray FFP2, May need gas & vapour respirator
- Utility maintenance (e.g. filter change): FFP3
- Allergies: Pollen, Animal dander FFP1, Grain dust FFP2
- Contact with: Mold/Fungus FFP2, Bacteria FFP2, Diesel exhaust/Smoke FFP2, With Tuberculosis FFP3

*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 applications shown highlight some of the hazards 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

<table>
<thead>
<tr>
<th>Nominal Protection Factor (NPF)</th>
<th>Typical Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN 149:2001+A1:2009 FFP1 Respirators</td>
<td>Low levels of fine dust particles and oil or water based mist typically found during hand sanding, drilling and cutting</td>
</tr>
<tr>
<td>EN 149:2001+A1:2009 FFP2 Respirators</td>
<td>Moderate levels of fine dust particles and oil or water based mist typically found during plastering, cement, sanding and wood dust</td>
</tr>
<tr>
<td>EN 149:2001+A1:2009 FFP3 Respirators</td>
<td>Higher levels of fine dust particles and oil or water based mist typically found when handling hazardous powders found in the pharmaceutical industry or work with biological agents and fibres</td>
</tr>
<tr>
<td>EN 149:2001+A1:2009 Welding Respirators</td>
<td>Moderate levels of fine dust particles, oil and water based mist, metal fume and ozone and organic vapours below exposure limit typically found in welding and soldering</td>
</tr>
</tbody>
</table>

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 fit
- Durable, collapse resistant shell

3M™ Foldable Respirators
- Ultra soft, flexible and comfortable fit resulting from the multiple panel design
- Comfort Series - Flat Fold only: Individually packed, foldable design prevents contamination before use and allows easy storage

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

3M™ Cool Flow™ Valve
- Effective removal of heat build-up provides a cooler and more comfortable wear
- Provides longer continuous wear time
- Reduces risk of fogging of spectacles and eyewear

4. Train in Fitting and Use

Training Offered by 3M
Correct use and appropriate maintenance of personal protective equipment (PPE) from 3M makes a major contribution towards ensuring that it provides effective protection. Our experienced sales and technical teams will 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.

3M™ Disposable Respirators meet the requirements of European Standard EN 149:2001 + A1:2009, filtering facepiece respirators for use against solid and non-volatile liquid particles only. Products are classified by filtering efficiency and maximum total inward leakage performance (FFP1, FFP2 and FFP3), also by usability and clogging resistance.

Performance tests in this standard include:
- filter penetration and extended exposure (loading) test - evaluates the filtration performance when new and over time
- breathing resistance - evaluates the ease of breathing (inhalation and exhalation) through the respirator
- total inward leakage - evaluates the filter penetration, valve leakage (if fitted) and importantly the face seal leakage of the respirator when worn by a panel of different people whilst conducting simulated work exercises
- clogging resistance - evaluates the ability of the respirator to continue to function effectively and provide respiratory protection in very high dust environments

Reusable products are also subjected to a cleaning cycle (specified by the manufacturer) and 24 hour storage to confirm the product performance is not affected by re-use. Clogging resistance testing is a mandatory requirement for reusable products, but is optional for single shift use only (non reusable) products. A full copy of EN 149:2001+A1:2009 can be purchased from your national standards body.

Marking designations:
R = Reusable
NR = Non reusable (single shift use only)
D = Meets the clogging resistance requirements
The importance of comfort

To make sure that the respirator protects you, it must be worn during all periods of exposure. Make sure that you choose a respirator that you can wear comfortably for your entire shift.

Face and head comfort
The respirator's edge should be flexible and the shape and size should cover the nose, mouth and chin without causing excessive pressure. A headband material which provides a good, even tension across the head can ensure a comfortable, secure fit for a range of head sizes.

Skin comfort
Skin comfort will be affected by the smoothness and softness of the inner material in contact with the skin - especially over a long period of time. A soft inner face seal and sweat absorbent nose foam will provide greater comfort. Rough or hard materials, coupled with a high temperature inside the respirator may be itchy and unpleasant.

Coolness
An efficient exhalation valve minimises heat build up, particularly in hot and humid work conditions.

Breathing ease
An efficient exhalation valve and high-efficiency, low breathing resistance filter material will help you to breathe comfortably.

Lightweight
Take advantage of technological innovation and choose a lightweight respirator for optimal comfort.

Compatibility with other PPE
Make sure that the respirator you select fits well with the other PPE required for your work such as eyewear and hearing protection to ensure maximum comfort.
The importance of fit

Disposable respirators are most effective when there is a good seal between the edges of the respirator and your face. The instant this seal is broken, protection is compromised as contaminated air can leak in through any gaps.

Here’s what to look for:

- Upper strap should be positioned on the crown of the head. Strap should not be twisted.
- Noseclip should be moulded around nose and cheeks to give a good seal.
- Respirator should be correctly positioned on your face and head.
- For flat fold respirators make sure the panels are fully unfolded.
- Lower strap should be positioned below the ears. Strap should not be twisted.

Fit Check

- A pre-use fit check must be conducted every time you fit your respirator.
- Cover the front of the respirator with both hands, being careful not to disturb the fit of the respirator.
- Unvalved respirator – exhale sharply, Valved respirator – inhale sharply.
  - If air leaks around the nose, re-adjust the noseclip to eliminate leakage.
  - If air leaks at the respirator edges, work the straps back along the sides of the head or adjust the tension to eliminate leakage.

Repeat the above fit check. If you cannot achieve a proper fit do not enter the hazardous area - see your supervisor.

One model of respirator may not fit everyone. Users should be fit tested in accordance with national requirements. For information on fit testing procedures, contact your safety officer or 3M.
Comfort Series: 3M™ Aura™ Flat Fold 9300+ Series

The 3M™ Aura™ Disposable Respirators 9300+ are the result of 3M’s continuous drive to improve comfort. They are packed with ground-breaking ideas, technologies and materials and have also retained many of the features that helped make the original 9300 series hugely popular.

Features include low breathing resistance filter technology for easier breathing throughout your shift, an embossed top panel to reduce fogging of eyewear, a sculpted edge for improved compatibility with eyewear and a chin tab to improve ease of fitting.

Features and Benefits:

- **Foldable – Proprietary 3-Panel Design**
  - Ingenious 3-panel design fits a wide range of face shapes and sizes
  - Accommodates your facial movements
  - Collapse resistant: ideal for work in hot humid environments

- **Sculpted Nose Panel**
  - Curved, low profile design
  - Conforms well to nose and eye contours
  - Helps provide a good field of vision and improves compatibility with eyewear

- **Low Breathing Resistance Filter Technology**
  - Combines the benefits of 3M’s electret particulate filter material with advanced low breathing resistance filter technology
  - Improved breathing ease and comfort

- **Embossed Top Panel**
  - Helps reduce fogging of eyewear

- **3M™ Cool Flow™ Valve**
  - Effective removal of heat build up provides a cooler and more comfortable wear
  - Removes exhaled air and minimises the risk of fogging eyewear
  - Shrouded valve to remove risk of cross contamination in clinical environments (1883+ only)

- **Chin Tab**
  - Improves ease of donning and adjustment to help achieve a comfortable fit

- **Face and Head Comfort**
  - Large soft nose foam material and smooth inner cover web both feel incredibly soft on the skin and help to create a comfortable environment for the face

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

Typical Applications

- Construction
- Metal working
- Agriculture
- General manufacturing
- Automotive
- Woodworking
- Maintenance
- Chemical / petrochemical
- Pharmaceuticals / laboratory

Individual Packaging

- Hygienic individual packaging helps protect the respirator from contamination before use
- Allows practical storage and dispensing in the workplace

3M™ Aura™ Particulate Respirator 9332+


FFP3 NR D

Protection: Dust/Mist

Nominal Protection Factor: 50

FFP3

3M™ Low Breathing Resistance Filter Technology

Foldable Three-Panel Design

3M™ Cool Flow™ Valve

3M™ Aura™ Particulate Respirators 9312+, 9320+, 9322+ and 9332+ also available in handy packs of 5
3M™ Aura™ Particulate Respirator 9310+
FFP1 NR D
Protection: Dust/Mist
Nominal Protection Factor: 4

3M™ Aura™ Particulate Respirator 9312+
FFP1 NR D
Protection: Dust/Mist
Nominal Protection Factor: 4

3M™ Aura™ Particulate Respirator 9320+
FFP2 NR D
Protection: Dust/Mist
Nominal Protection Factor: 12

3M™ Aura™ Particulate Respirator 9322+
FFP2 NR D
Protection: Dust/Mist
Nominal Protection Factor: 12

3M™ Aura™ Particulate Respirator 9330+
FFP3 NR D
Protection: Dust/Mist
Nominal Protection Factor: 50

3M™ Aura™ Particulate Respirator 1883+ with Shrouded Valve
Classification: Meets the requirements of EN 149:2001+A1:2009 FFP3 NR D and EN14683:2005 Type IIR (Surgical Masks-Requirements and Test Methods)
Protection: Solid and Non-volatile Liquid Particles
Nominal Protection Factor: 50

3M™ Respiratory Protection Equipment
Comfort Series: 3M™ Cup Shaped 8300 Series

The 3M™ Respirators 8300 Series enable you to enjoy a comfortable ‘cushion-fit’, facing hard work from a soft place.

The 8300 Series respirators have been designed with comfort in mind. The super-soft, cushioned lining provides instant yet lasting comfort; whilst the robust design makes the 8300 Series tough and durable – all this helps to increase user wearability. 3M offers a comprehensive range of respiratory protection – you can choose from different protection levels and styles that best suit your needs.

Features and Benefits:

- **3M™ Particulate Respirator 8322**
  - **Classification:** EN 149:2001+A1:2009
  - **FFP2 NR D**
  - **Protection:** Dust/Mist
  - **Nominal Protection Factor:** 12

- **Typical Applications**
  - Construction
  - Quarrying
  - Pottery/Ceramics
  - Engineering
  - Pharmaceuticals
  - Sawmills
  - Iron and steel foundries
  - Shipbuilding
  - Metalworking

- **3M™ Particulate Respirators 8833** are also available in handy packs of 5

- **Braided Headbands**
  - Materials have been selected for extra comfort and durability
  - Colour-coded headbands offer easy protection level identification

- **M-Noseclip**
  - The noseclip is quick and easy for wearers to mould around the nose offering greater comfort

- **Robust Outer Shell**
  - The shell construction offers users added durability

- **3M™ Cool Flow™ Valve**
  - The Cool Flow valve reduces heat build-up to offer workers comfortable protection – even in hot humid conditions

- **3M™ High Performance Filter Material**
  - Effective filtration helps wearers to breathe easily through the respirator for more comfortable protection

- **‘Cushion-Fit’ Lining**
  - The super-soft, cushioned inner lining helps workers stay comfortable

- **Soft Waffle Edge**
  - The flexible, textured edge offers a comfortable and secure feel on the face

- **Soft Inner Face Seal (8833 only)**
  - Gives a secure, conforming fit for added comfort
  - Can be cleaned for wearer hygiene if used for longer than one shift

- **3M™ Disposable Particulate Respirators**
3M™ Respiratory Protection Equipment

3M™ Particulate Respirator 8310
FFP1 NR D
Protection: Dust/Mist
Nominal Protection Factor: 4

3M™ Particulate Respirator 8312
FFP2 NR D
Protection: Dust/Mist
Nominal Protection Factor: 12

3M™ Particulate Respirator 8312
FFP1 NR D
Protection: Dust/Mist
Nominal Protection Factor: 4

3M™ Particulate Respirator 8833
FFP3 R D
Protection: Dust/Mist
Nominal Protection Factor: 50

Braided headbands for extra comfort and durability
With this premium respirator series 3M offers ultimate safety, meeting the particular requirements of the clogging test for FFP (filtering face piece) respirators which may be used for more than one shift.

The 3M™ Respirator 8835 has exceptional comfort because of its lightweight, off-the-face design; a soft inner face-seal ring; a large surface area providing maximum filtration and ease of breathing; an exhalation valve to reduce heat build up in certain work conditions; 4-point adjustable straps and an adjustable nose clip to ensure a comfortable fit.

**Features and Benefits:**

- **Soft Inner Face-Seal Ring**
  - Improves seal to face
  - Increases wearer comfort
  - Can be cleaned for 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™ High Performance Filter Material**
  - Increased filter area helps extend the life of the respirator. Higher capacity against dust
  - Effective filtration with easy breathing
  - Consistent high quality performance

- **Colour Coded Valve Lettering**
  - Easy to recognise protection level by colour coding (red for FFP3 and blue for FFP2 respirators)

- **3M™ Cool Flow™ Valve**
  - Effective removal of heat 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

**Typical Applications**
- Construction
- Ship building/repair
- Pharmaceuticals
- Welding and soldering
- Chemical processing
- Iron and steel foundries
- Battery manufacturing

**3M™ Cup Shaped 8825 and 8835**

**3M™ High Performance Filter Material**

**Face Seal**

**3M™ Cool Flow™ Valve**

**Adjustment Buckle Straps**

**3M™ Particulate Respirator 8835**

**Classification:** EN 149:2001+A1:2009

**FFP3 R D**

**Protection:** Dust/Mist/Metal Fume

**Nominal Protection Factor:** 50

**3M™ Particulate Respirator 8825**

**Classification:** EN 149:2001+A1:2009

**FFP2 R D**

**Protection:** Dust/Mist/Metal Fume

**Nominal Protection Factor:** 12

**Compatible with**
- Eyewear from 3M
- Hearing Protection from 3M
Classic Series: 3M™ Cup Shaped 8000 Series

The 3M™ Respirators 8000 Series provide 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 collapse resistant shell and 3M™ Cool Flow™ Valve in the 8822 and 8812 respirators offer durable, comfortable protection particularly in hot and humid conditions.

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 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

Typical Applications
- Construction
- Ship building/repair
- Pharmaceuticals/ laboratories
- Rubber/plastics
- Iron and steel foundries
- Agrochemicals
- Agriculture
- Base metal manufacture
- Powdered chemicals

3M™ Particulate Respirator 8822
Protection: Dust/Mist
Nominal Protection Factor: 12

Unvalved

3M™ Particulate Respirator 8710E
Protection: Dust/Mist
Nominal Protection Factor: 4

3M™ Particulate Respirator 8810
Protection: Dust/Mist
Nominal Protection Factor: 12

Valved

3M™ Particulate Respirator 8812
Protection: Dust/Mist
Nominal Protection Factor: 4

3M™ Particulate Respirators 8710E, 8810 and 8822, also available in handy packs of 5

3M™ High Performance Filter Material
3M™ Cool Flow™ Valve
Comfort Series: 3M™ Aura™ Flat Fold 9400+ Series

3M™ Aura™ Respirators 9422+ and 9432+ provide reliable and comfortable protection from a range of airborne particulate hazards while minimizing contamination risks to food or pharmaceutical production processes. They are made without staples or small detachable parts and are metal and visually detectable. Built on the innovative 3M™ Aura™ platform, the disposable respirators 9422+ and 9432+ fit a wide range of face shapes and sizes. Comfortable to wear and easy to breathe through they are ideal for use in hot humid environments.

Typical Applications
- Food and beverage
- Pharmaceuticals

Features and Benefits:

- Metal Detectable
  - Embedded metal nose clip kept securely in place within the layers of the respirator to help ensure the safety of your production

- Staple-free
  - To help minimise contamination risks to your production

- Sculpted Nose Panel
  - Curved low profile design helps provide a good field of vision and improves compatibility with eyewear
  - Conforms well to nose and eye contours

- Embossed Top Panel
  - Helps reduce the fogging of eyewear

- Foldable – Proprietary 3-Panel Design
  - Ingenious 3-panel design fits a wide range of face shapes and sizes
  - Accommodates your facial movements
  - Collapse resistant: ideal for work in hot humid environments

- 3M™ Cool Flow™ Valve
  - Effectively removes heat build up provides a cooler and more comfortable wear
  - Removes exhaled air and minimises the risk of fogging eyewear

- Distinguishable Non-Food Colour
  - Bright blue for quick search recognition

- Low Breathing Resistance Filter Technology
  - Combines the benefits of 3M’s electret particulate filter material with advanced low breathing resistance filter technology
  - Improved breathing ease and comfort

- Chin Tab
  - Improves ease of donning and adjustment, to help achieve a comfortable fit
The 3M™ Welding Fume Respirators 9925 and 9928 provide lightweight, effective, comfortable and hygienic respiratory protection against dust, mist and metal fumes and resist clogging for extended use against welding fume. The convex shape enhances wearer comfort; the 3M™ Cool Flow™ Exhalation Valve reduces heat build up, particularly in hot humid work conditions. The 4-point adjustable straps and adjustable nose clip help achieve a comfortable fit. The 3M respirators 9925 and 9928 have been designed specifically for welding applications to provide protection against ozone and welding fumes, plus relief from nuisance odours.

Typical Applications
- Construction
- Base metal manufacture
- Ship building/repair
- Pottery
- Powdered chemicals
- Welding and soldering
- Iron and steel foundries
- Metal manufacture
- Paint manufacture

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
  - Collapse-resistant
- Soft Inner Face-Seal Ring (9928 only)
  - Provides secure feel
  - Improves wearer comfort
  - Can be hygienically cleaned if used for longer than one shift (3M™ Facesal Cleaner 105)
- 3M™ Cool Flow™ Valve
  - Effective removal of heat 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
- 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
- 3M™ High Performance Filter Material
- Face Seal (9928 only)
- 3M™ Cool Flow™ Valve
- Adjustment Buckle Straps
- Activated Carbon

3M™ Welding Particulate Respirator 9928
Protection:
Dust/Mist/Ozone/Nuisance level odours
Nominal Protection Factor: 10 for Ozone and Particulates
Below NPF for Nuisance Odours

3M™ Welding Particulate Respirator 9925
Protection:
Dust/Mist/Ozone/Nuisance level odours
Nominal Protection Factor: 10 for Ozone and Particulates

3M™ Particulate Respirators 9925 are also available in handy packs of 5
Speciality Series Respirators

The Speciality Series by 3M have been developed to provide lightweight, effective, comfortable and hygienic respiratory protection for particular working environments ranging from welding to waste sorting.

These speciality respirators which protect against dust and mist also feature an integrated activated carbon layer, offering relief from nuisance odours below nominal protection factor and, depending on the product type, from low levels of organic vapours or acid gases.

Features and Benefits:

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

3M™ High Performance Filter Material
- Effective filtration with easy breathing
- Consistent high quality performance

3M™ Cool Flow™ Valve
- Effective removal of heat 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 nominal protection factor

Colour Coded Straps
- Easy to recognise performance level by colour coded straps

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

3M™ Speciality Particulate Respirator 9914
Protection: Dust/Mist/Nuisance Level Organic Vapour
Nominal Protection Factor: 4 for Particulates Below NPF for Organic Vapors

Also Available in handy packs of 5

Typical Applications
- Iron and steel foundries
- Powdered chemicals
- Ship building/repair
- Metal manufacture
- Battery manufacture
- Paint manufacture
- Construction
- Welding
- Waste sorting

3M™ Speciality Particulate Respirator 9921 and 9926
Protection: Dust/Mist/Nuisance Level Acid Gas
Nominal Protection Factor: 12 for Particulates Below NPF for Acid Gasses

3M™ Speciality Particulate Respirator 9922
Protection: Dust/Mist/Nuisance Level Ozone
Nominal Protection Factor: 10 for Particulates and Ozone Below NPF for Organic Vapors
Safety is priceless, but it doesn’t have to be expensive. The 3M™ Respirators K100 Series provide comfortable, solid and professional protection at an affordable price.

The K100 series also removes any doubt as to quality when it comes to choosing a value product: fully tested, certified and CE marked, all K100 products are also backed with the kind of responsive support, access to technical personnel, reliable advice as well as dependable quality and supply that only a brand like 3M can offer.

Classic Series: 3M™ Flat Fold K100 Series

Features and Benefits:

Adjustable noseclip
- Easy to check that correct protection is being worn in the workplace
- Yellow: FFP1, blue: FFP2, red: FFP3
- Metal detectable

Synthetic headbands
- Do not contain components made from natural rubber latex
- Reduces risk of allergic reaction

Single loop strap
- Allows easy adjustment for a comfortable fit
- Staple-free

Flat-fold convenience
- Makes the respirator easy to store away when not in use

Classic Exhalation valve
- Reduces heat build up in hot or humid environments, or when work is hard and physical
- Improves breathing comfort over long periods

Diamond-shaped front panel
- Allows the respirator to retain its shape, even in hot or humid environments

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

Typical Applications
- Construction
- Mining
- Agriculture
- General manufacturing
- Woodworking
- Maintenance
- Machine building

3M™ Particulate Respirator K112
Protection: Dust/Mist
Nominal Protection Factor: 12

3M™ Particulate Respirator K101
Protection: Dust/Mist
Nominal Protection Factor: 4

3M™ Particulate Respirator K111
Protection: Dust/Mist
Nominal Protection Factor: 4

3M™ Particulate Respirator K113
Protection: Dust/Mist
Nominal Protection Factor: 50

3M™ Particulate Respirators K100 Series also available individually wrapped in a handy dispenser box
Classics Series: 3M™ VFlex™ Flat Fold 9100 Series

3M™ VFlex™ respirators 9152 and 9152S offer effective protection at incredible value with no compromise on quality. The unique design unfolds into roomy, comfortable space. VFlex™ respirators expand and flex with your face as you breathe, work and talk.

Positioning tabs, adjustable nose clip and a choice of two different sizes help achieve a custom fit across a broad range of faces.

3M™ VFlex™ respirators 9152 and 9152S offer effective protection at incredible value with no compromise on quality. The unique design unfolds into roomy, comfortable space. VFlex™ respirators expand and flex with your face as you breathe, work and talk.

Adjustable Noseclip
- Helps provide a custom fit and secure seal
- Imbedded, metal detectable

Tabs
- Designed for positioning the respirator on the face

Embossed Front Panel
- Helps the respirator retain its shape, away from your mouth
- Helps maintain spacious feel

V-Shaped Pleats
- Flex and expand with mouth movement for easier talking and breathing

Comfortable Inner Layer

3M™ Proprietary Media
- 3M™ high performance filter material provides effective filtration combined with low breathing resistance

Flat-Fold Convenience
- Convenient storage prior to use

Additional Design Features
- Elastic headbands contain no natural rubber latex components
- Spacious feel inside, with minimal impact on field of vision
- Compatible with a variety of eyewear and hearing protection from 3M™
- Available in 2 sizes to fit a broad range of faces

Classic Series: 3M™ VFlex™ Flat Fold 9100 Series

Features and Benefits:

Typical Applications

- Fiberglass manufacturing
- Pharmaceuticals/laboratory
- Maintenance
- Woodworking

3M™ VFlex™ Particulate Respirator 9152
(Standard size)
FFP2 NR D
Protection: Dust/Mist
Nominal Protection Factor: 12

3M™ VFlex™ Particulate Respirator 9152S
(Small size)
FFP2 NR D
Protection: Dust/Mist
Nominal Protection Factor: 12