

3M Science.
Applied to Life.™

3M Personal Safety Division

European Product Catalogue 2019/2020.



3M is an innovative, global science-based company that is focused on developing products that improve people's lives in a multitude of ways. 3M technologies developed can be found all around you. From in your home and office to in hospitals, doctor and dentist offices, your computer, your car and even in your phone, 3M helps people and business in hundreds of ways every day. Our inventions can be found in the roads, trains, and airplanes.

Our company is centered around a culture of innovation. We foster an atmosphere that provides our employees the freedom to create, the responsibility to deliver and the opportunity to connect ideas and technologies in unexpected ways. From concept to creation, we manufacture our products to exacting quality standards, while looking after our people, our communities and our planet.

Founded in 1902, we have a proud history as a company that strives to be ethical and innovative. From science that works behind the scenes in products you use every day and technology embedded in processes that help industries thrive to tangible products we use every day, the science provided by 3M can be found in many aspects of our lives.

We live our motto every day.
3M. Science. Applied to life.

3M Personal Safety Division

The 3M Worker Health and Safety Academy

The flexible way to discover and learn throughout your busy day

Join us online any time of the day to expand your knowledge on our current range of personal protective equipment for the workplace. Learn what you want, when you want, where you want... and at a pace that's right for you.



3M offers you engaging interactive training on topics relevant to you

- Workplace hazards and health effects
- Industry standards and regulations
- The approach to protection
- 3M Personal Safety Solutions

Why e-learning?

Conventional training can often be difficult to manage. It can also be expensive, not simply in monetary terms, but in the time that people are kept away from their job. Time may be limited to cover content, whilst finding a convenient time for both trainer and staff may also be difficult.

- User-friendly site with online help
- Convenient – learn whenever and wherever you want
- Flexible – learn at a pace that's comfortable
- Personalised completion certificates
- Structured curriculum deployed training
- Managers customised employee training reports



3M Personal Safety Division

Services

We believe that with a quality product, it is important that the customer also receives quality services. Not only do we provide different varieties of training and education, but we also have many other tools available to our customers.

Fit testing is key

In order to be fully protected, it is essential that PPE fits correctly. We provide fit testing for respirators (and fit testing guidelines online) as well as E-A-Rfit Validation testing for earplugs and earmuffs. We know that everyone is different and in order to get the best protection it is crucial that they know how to correctly fit and wear their personal protective equipment.

3M™ Respiratory Fit Testing System

3M Respiratory Protection offers a wide range of disposable and reusable respirators, as well as Powered and Supplied Air Respiratory Systems. However, even high quality products need a secure fit in order to protect the wearer. One model of respirator may not fit everyone. When choosing a respirator users should be fit tested in accordance with national requirements. For information on fit testing procedures, contact your safety officer or 3M. Even after a user has had a fit test, a fit check should be carried out before each use. A Respiratory Fit Check guide is available on **page 23** of this catalogue.



3M™ E-A-Rfit Dual-Ear Validation System

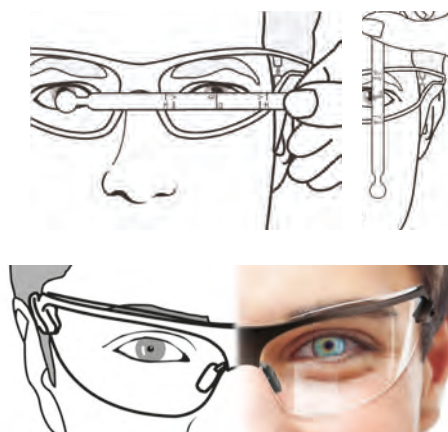
As the leader in hearing protection, 3M offers a complete solution, with dual-ear and earmuff testing capabilities plus a user-friendly interface. The 3M™ E-A-Rfit Dual-Ear Validation System is the fast and easy way to find your employees' PAR, because we know how important it is to make your hearing conservation program fit seamlessly into your operation.

Get results you can trust. The 3M™ E-A-Rfit Dual-Ear Validation System measure the effectiveness of the earplug or earmuff inside the employee's ear providing accurate, quantitative results. Because you can simultaneously test both ears, you have more to focus on education including the importance of fit and protection.



3M™ Eyewear Fit System

When it comes to eyewear, a comfortable, well-fitted workforce is likely to be more effective. Current standards suggest careful consideration should be given to eyewear fit, however there is no specific guidance on how to evaluate eyewear fit on an individual. In view of this, 3M have developed the Eyewear Fit System, a simple 6 step method, designed to help select the best fitting eyewear for an individual.



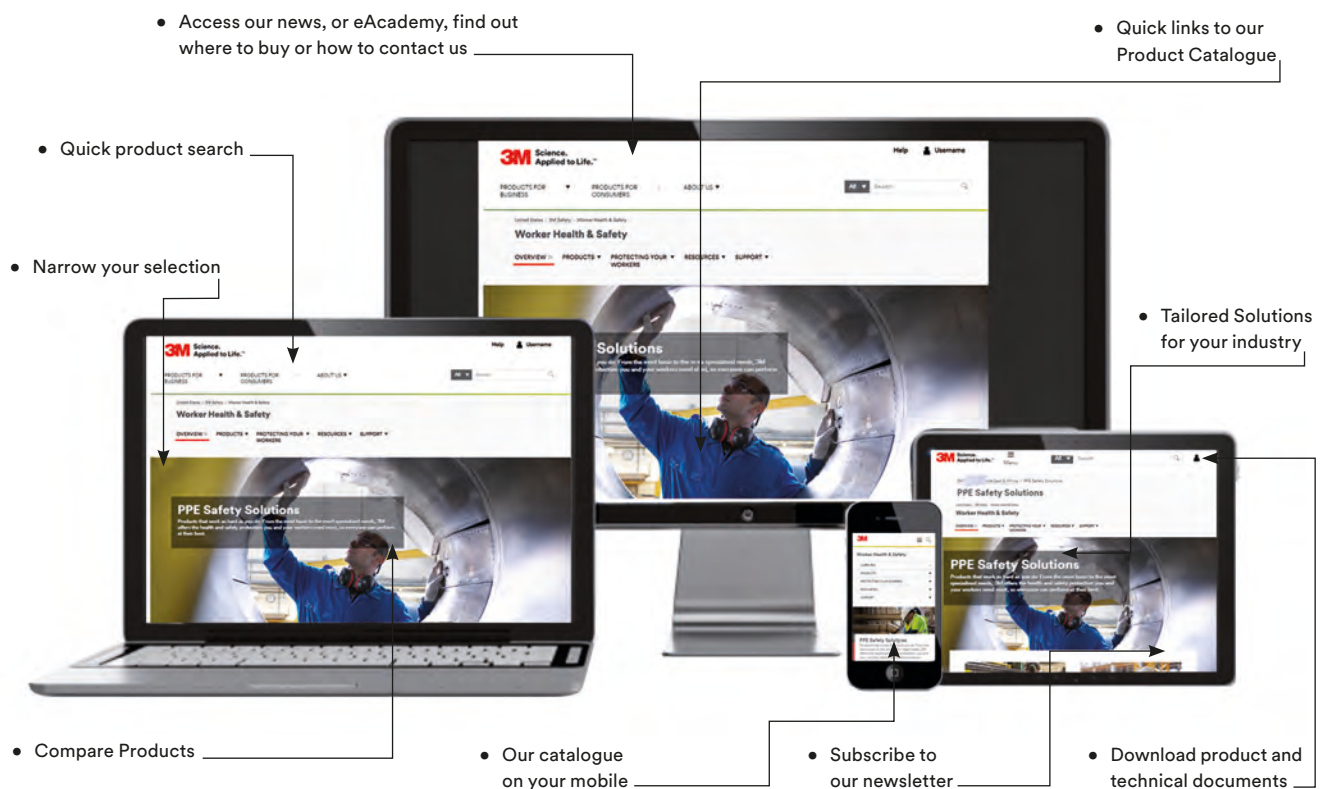
Find out more by contacting your 3M Personal Safety Sales Representative.

3M Personal Safety Division

3M Online

A selection of downloadable and printable documents are available online, such as selection tools, fit test guides, and guidance on the importance of protection. From our website you will be able to access product information, with market area specifications, to help select the right personal protective equipment for the right environment. You will also be able to discover webinars by experts concerning health and safety in the workplace as well as our own eAcademy.

Everything in one place, on your computer, laptop, tablet or mobile.



3M PPE Safety Solutions

Subscribe to our channel on YouTube to watch customer testimonials, technical support or product information videos.

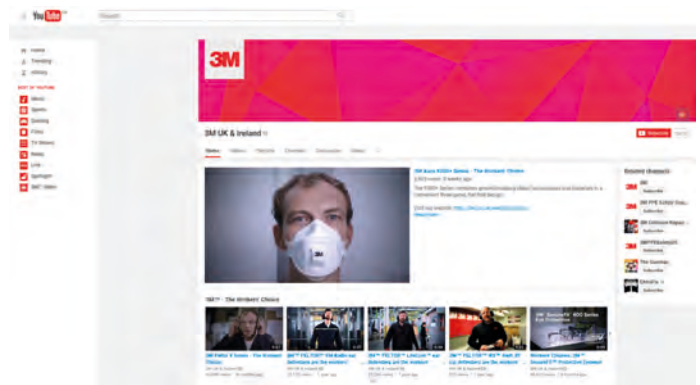
Visit www.youtube.com/user/3MPPESafetySolutions

You can also:

Find us on Facebook



or Follow us on Twitter



3M Personal Safety Division

Science of Safety

3M's new Science of Safety approach can support you with guidance on:



Selection



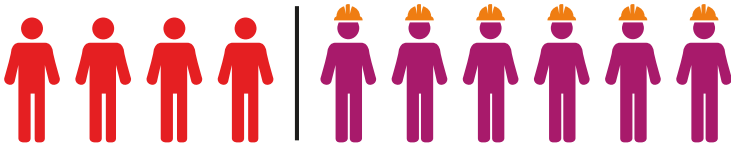
Training



Fit validation

3M delivers consistent quality around the world helping you select the correct PPE for your workers, helping to ensure your workers are educated on the correct use of PPE and raising awareness of how important fit and comfort are to the health and wellbeing of your workforce.

For more information visit www.3M.eu/SoS

40%  **of employees incorrectly select or use PPE**

Source: HSE Research Report RR720 'Real world use and performance of hearing protection'

H&S officials

and employers have a duty to provide the correct safety equipment and training.

Maintaining consistency in this arena can prove difficult, hindering the health and safety process.

Many companies don't have the ability to test whether PPE fits the employee properly.

Employees are at risk of damaging their health long term which may lead to an increase in liability for employers.



3M Personal Safety Division



Why partner with 3M for your health and safety?

3M can deliver consistent quality around the world

Our industry-leading approach embraces best practice on a global level



Selection



Training

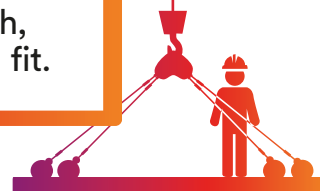


Fit validation

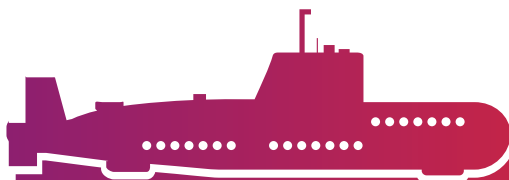


3M PPE equipment

industry-leading breadth and depth, helping to optimise protection and fit.



3M can give local support and advice wherever you do business



www.3M.eu/SoS

#3MScienceOfSafety

3M Personal Safety Division

Productivity

We don't only aim to improve the safety of our customers, we also want to help them keep costs down. Our products are designed to last and to provide more efficient protection, but they can bring efficiencies in other ways.

PELTOR™

As many supervisors know, efficient on-site communication can save a lot of time throughout the duration of a project. Recently, a study by Lund University Faculty of Engineering in Sweden showed that downtime and interruptions were reduced by 19% when two-way radio communication headsets were used. A single construction worker gained 380 minutes of productive time per week.

The study was conducted by Victoria Joang and Aidin Sakikovic, two researchers from Lund's graduate program in civil engineering. They compared two work weeks on one of Skanska's major water main projects in Sweden, analysing similar work activities during each week. In the first week, the workers did not use two-way radios. In the second week, they were equipped with 3M™ PELTOR™ WS™ LiteCom Headsets, which have a built-in two-way radio and a Bluetooth® wireless technology mobile phone connection.

Detailed follow-up interviews showed that the big advantage was being able to quickly relay and receive messages on the job, especially on large construction sites where eye contact is not possible. Improved team spirit was another reported benefit.

Speedglas™

Another example of efficiency can be seen in our Welding portfolio, where, by using a 3M™ Speedglas™ Welding Helmet with auto-darkening filters, companies can save up to 1€ per hour.

We have created a Return on Investment calculator for the welding portfolio, where you can input all your numbers to see how much your company would save by using these auto-darkening filters. From this we have calculated that a company with low salary costs who have previously not used an auto-darkening filter, would be able to save 75 euro cents per hour per worker by using almost any auto-darkening filter. So if they had 100 workers, all wearing an auto-darkening filter, 5 days a week, for 8 hours they would make a weekly company saving of 3000 euros.





Respiratory protection

3M™ Respiratory Protection Equipment

Types of Protection Equipment from 3M

3M offers you a wide range of disposable, reusable, powered and supplied air respirators for protection against gases, vapours and particulates allowing you to choose the level and type of protection, comfort, style and maintenance requirements you need to work safely, comfortably and effectively.

There are three main types of RPE available from 3M on the following pages:

Filtering Facepiece Respirators

- Ideal for most industries and applications where wearers require particulate protection e.g. dusts and mists
- A choice of cup-shape or flat-fold, valved or unvalved and also the option to protect against ozone and nuisance levels of organic vapours and acid gases
- Available in two types to satisfy single shift use (NR) and reusable (R) requirements
- Lightweight and maintenance free
- Comfortable, convenient and easy to use



Reusable Half and Full Face Respirators

- Offer protection against particulates, gases and vapours and combinations of the two
- These respirators have integrated or replaceable filters and parts. They may be cleaned, stored and reused provided they are in good condition
- Full face respirators also offer integrated eye and face protection
- Many models are fully maintainable



Powered Air & Supplied Air Systems

- Offer protection against dusts, mists, fumes, gases, vapours and combination hazards e.g. paint spray
- Can offer integrated eye, face, head, neck and hearing protection in one system avoiding incompatibility issues between items of PPE
- Modular system allows you to mix and match parts as your environment or application changes giving you the ultimate in flexibility and ease of use
- No increase in breathing resistance means more comfortable and longer wear time
- Usable by a wide range of users regardless of facial characteristics; shape, size etc.



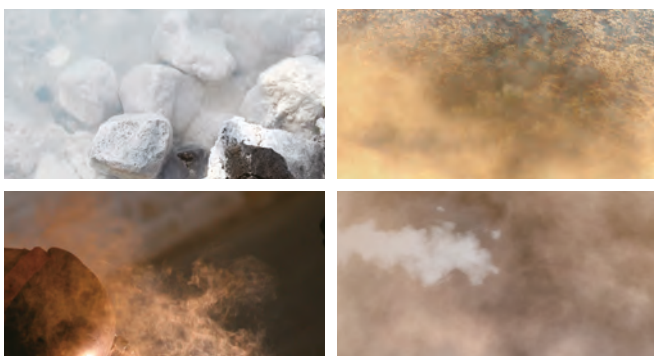
3M™ Respiratory Protection Equipment

The 4-Step Method

Selecting and specifying the appropriate respiratory protective equipment may appear daunting with so many factors to consider and so many options to choose from. With our simple 4-step method it's easy to choose the correct level of protection and comfort required to optimise respiratory protection:

1. Identify the hazards

Respiratory: dust, metal fume, gas, vapour etc.
Other neck-up: head, eye, face, hearing etc.



2. Assess the risk

Assess the hazard levels against safety standards and consider other protection e.g. skin, eye, face, head and body



3M™ Organic Vapour Monitor Badges measure personal exposure to hazards

3. Select the right respirator

Disposable, reusable, half mask, full face, powered air, supplied air and the right filter if appropriate



4. Train in fitting and use

Make sure you know how to use and maintain your RPE to ensure effective respiratory protection. 3M sales and technical professionals can help you to define your training needs and can provide training and on-site consultations on all aspects of respiratory protection tailored to your individual needs. You'll also find easy to use training on our website:

www.3M.eu/PPESafety







Filtering Facepiece 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™ Filtering Facepiece Respirators using science to increase comfort, breathability and protection.

In combination with ergonomic design, a wide range of technologies including the new 3M™ Cool Flow™ Comfort Valve help to deliver comfortable protection with easier breathing and reduced heat build-up.

3M™ Filtering Facepiece Respirators

The 4-Step Method

1. Identify the Hazards

Application		Suggested Minimum Performance Level	Important Information
Sanding, Cutting, Drilling	Rust, Metal Particles, Filler	FFP1	FFP3 When Silica is present
	Concrete, Stone	FFP1	
	Cement, Wood, Steel	FFP2	
	Paints/Varnish/Anti-rust coating	FFP2	FFP3 When Chromates are present Speciality respirator may be required
	Steel, Stainless Steel	FFP3	
	Anti-Fouling Varnish	FFP3	
Low temp. oil spray		FFP2	
Welding	Mild Steel, Zinc (Autogen, MIG/MIK)	FFP2	3M™ 9928 or 3M™ 9925 for Ozone protection FFP3 May be required in some countries - see national regulations
	Stainless Steel (Electrodes)	FFP2	3M™ 9928 or 3M™ 9925 for Ozone protection FFP3 May be required in some countries - see national regulations
	Soldering	FFP2	FFP3 May be required in some countries - see national regulations
Work with Asbestos	Small amounts infrequent exposure	FFP3	
Work with Glass and Mineral fibres		FFP2	
Waste Sorting		FFP2	Speciality Respirator may be preferred May need gas and vapour respirator
Spraying	Paint spray	FFP2	May need gas & vapour respirator
	Pesticides (water based)	FFP2	
Utility maintenance (e.g. filter change)		FFP3	
Allergies	Pollen, Animal dander	FFP1	FFP3 With Tuberculosis or high consequence infectious microorganisms
	Grain dust	FFP2	
Contact with:	Mold/Fungus	FFP2	
	Bacteria/Virus	FFP2	
	Diesel exhaust/Smoke	FFP2	

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

	EN 149:2001+A1:2009 FFP1 Respirators	EN 149:2001+A1:2009 FFP2 Respirators	EN 149:2001+A1:2009 FFP3 Respirators	EN 149:2001+A1:2009 Welding Respirators
Nominal Protection Factor (NPF)	NPF 4	NPF 12	NPF 50	NPF 10
Typical Applications	Low levels of fine dust particles and oil or water based mist typically found during hand sanding, drilling and cutting	Moderate levels of fine dust particles and oil or water based mist typically found during plastering, cement, sanding and wood dust	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	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

Nominal Protection Factor (NPF): The theoretical protection level of a respirator based on laboratory measured performance data.

3M™ Filtering Facepiece Respirators

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™ Buckle Strap Respirators

- Robust and durable design provides multishift capability and secure feel
- Adjustable braided headbands
- Soft inner face-seal improves comfort



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™ 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 recognise potential hazards, suggest what measures to take and help explain how to choose the appropriate protective equipment for each particular situation.

EN 149:2001+A1:2009 Standard

3M™ Filtering Facepiece 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

3M™ Filtering Facepiece Respirators

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.



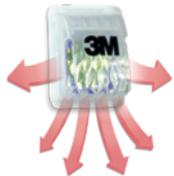
Face and head comfort

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.



Lightweight

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



Breathing ease

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



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.

3M™ Filtering Facepiece Respirators

The importance of fit

Particulate respirators and reusable half face masks 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
- Respirator should be correctly positioned on your face and head
- Lower strap should be positioned below the ears. Strap should not be twisted
- Care must always be taken to ensure other safety equipment is compatible with your respirator and does not interfere with its fit, for example, straps should always be fitted underneath safety eyewear and hoods



- Before fitting your respirator, make sure that your face is clean shaven. Respirators must not be worn with stubble, beards or other facial hair under the area of the face seal as these can prevent a good seal to the face



- For flat fold respirators make sure the panels are fully unfolded
- Noseclip should be moulded around nose and cheeks to give a good seal. Using both hands, mould noseclip to the shape of the lower part of the nose to ensure a close fit and good seal. Do not pinch the noseclip with only one hand as this may not give a good fit



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.

3M™ Filtering Facepiece Respirators

Comfort Series: 3M™ Aura™ Particulate Respirators 9300+Gen3 Series

Safety and comfort are a top priority at 3M. The third generation of Aura™ respirator brings a number of improvements, combining impressive new technology with ergonomic design.

The new Cool Flow™ Comfort Valve opens easier to help reduce heat inside the respirator, delivering a more comfortable wearer experience.

Typical Applications

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

Features and benefits:

Convenience of use

- New upper and lower tabs
- Simplified positioning and adjustment on the face with new 'grip' feature on the valve

New 3M™ Cool Flow™ Comfort Valve

- Updated, modern and stylish design with clear cover lets you see new technology in action
- Allows more hot air out to reduce heat buildup and increase comfort
- Helps to minimise the risk of eyewear fogging from heat exiting through the media (certain models only)

Engineered for comfort

- New braided headbands for enhanced durability
- Colour coded for easy identification (yellow for FFP1, blue for FFP2, red for FFP3)
- 3-panel flat-fold design

Clear vision

- Embossed top panel helps re-direct exhaled air, reducing fogging of eyewear
- Curved, low profile design conforms well to nose and eye contours – helps provide a good field of vision
- Designed to be compatible with safety eyewear from 3M

Cooler breathing – 3M™ Advanced

Electret (Filter) Media (AEM)

- High charge on filter fibres attracts particles from a wider capture area, enabling less filter media to be needed
- Low initial breathing resistance



	Classification	Protection	Nominal Protection Factor	
3M™ Aura™ 9310+Gen3	EN 149:2001+A1:2009 FFP1 NR D	Dust/Mist	4	FFP1
3M™ Aura™ 9312+Gen3 (valved)	EN 149:2001+A1:2009 FFP1 NR D	Dust/Mist	4	FFP1
3M™ Aura™ 9320+Gen3	EN 149:2001+A1:2009 FFP2 NR D	Dust/Mist	12	FFP2
3M™ Aura™ 9322+Gen3 (valved)	EN 149:2001+A1:2009 FFP2 NR D	Dust/Mist	12	FFP2
3M™ Aura™ 9330+Gen3	EN 149:2001+A1:2009 FFP3 NR D	Dust/Mist	50	FFP3
3M™ Aura™ 9332+Gen3 (valved)	EN 149:2001+A1:2009 FFP3 NR D	Dust/Mist	50	FFP3

3M™ Filtering Facepiece Respirators

3M™ Particulate Cup Shaped Respirator 8825+ and 8835+

The 3M™ Cup Shaped Respirators 8825+ and 8835+ have been engineered to help improve fit to wearer's individual face shape and size. With their robust shell and cup design, these respirators meet the particular requirements of the clogging test for FFP (filtering face piece) respirators and are EN 149 'R' rated which means that they may be used for more than one shift.

Features and benefits:

Proprietary soft inner face seal

- Flexible material helps form comfortably onto a wide range of face shapes and sizes
- Innovative contoured design engineered to help provide a more secure seal around the nose
- Comfortable feel on the skin
- Easy to clean for wearer hygiene using the 3M™ Face Seal Cleaning Wipe 105 (as per EN 149+A1)
- Designed to help reduce eyewear fogging

Innovative design

- Engineered to help improve fit to wearer's individual face shape and size
- EN 149 'R' Rated. Reusable – this mask can be used for more than one shift
- Collapse resistant: works well in hot humid environments
- Modern and stylish
- Easy to don and doff

3M™ Advanced Electret Filter Media (AEM)

- High performance filter material that's easy to breathe through
- Meets the clogging test requirements of EN 149:2001+A1:2009
- Consistent high quality performance

3M™ Cool Flow™ Valve

- Effective exit of heat build up provides a cooler and more comfortable wear and helps to minimise the risk of fogging eyewear

Adjustable braided headbands

- 4-point adjustment helps to provide a more secure feel
- Comfortable on the head and neck

Materials

This product does not contain components made from:

- natural rubber latex
- metal
- PVC



	Classification	Protection	Nominal Protection Factor	
3M™ Particulate Respirator 8825+	EN 149:2001+A1:2009 FFP2 NR D	Dust / Mist / Metal Fume	12	FFP2
3M™ Particulate Respirator 8835+	EN 149:2001+A1:2009 FFP3 NR D	Dust / Mist / Metal Fume	50	FFP3

3M™ Filtering Facepiece Respirators

Comfort Series: 3M™ Aura™ Flat Fold 9300+ Series

Features and benefits:

Embossed top panel

- Helps reduce fogging of eyewear

Foldable – proprietary 3-panel design

- Ingenious 3-panel design fits a wide range of face shapes and sizes
- 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

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

Chin tab

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



	Classification	Protection	Nominal Protection Factor	
3M™ Aura™ Particulate Respirator 9310+	EN 149:2001+A1:2009 FFP1 NR D	Dust/Mist	4	FFP1
3M™ Aura™ Particulate Respirator 9312+ (valved)	EN 149:2001+A1:2009 FFP1 NR D	Dust/Mist	4	FFP1
3M™ Aura™ Particulate Respirator 9320+	EN 149:2001+A1:2009 FFP2 NR D	Dust/Mist	12	FFP2
3M™ Aura™ Particulate Respirator 9322+ (valved)	EN 149:2001+A1:2009 FFP2 NR D	Dust/Mist	12	FFP2
3M™ Aura™ Particulate Respirator 9330+	EN 149:2001+A1:2009 FFP3 NR D	Dust/Mist	50	FFP3
3M™ Aura™ Particulate Respirator 9332+ (valved)	EN 149:2001+A1:2009 FFP3 NR D	Dust/Mist	50	FFP3

3M™ VFlex™ Flat Fold 9100 Series

Features and benefits:

Adjustable noseclip

- Helps provide a custom 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

3M™ Cool Flow™ Valve

- Increased comfort and breathability thanks to 3M™ Cool Flow™ valve

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
- Fits a broad range of faces



	Classification	Protection	Nominal Protection Factor	
3M™ VFlex™ Particulate Respirator 9101E	EN 149:2001+A1:2009 FFP1 NR D	Dust/Mist	4	FFP1
3M™ VFlex™ Particulate Respirator 9101ES (Small size)	EN 149:2001+A1:2009 FFP1 NR D	Dust/Mist	4	FFP1
3M™ VFlex™ Particulate Respirator 9152E	EN 149:2001+A1:2009 FFP2 NR D	Dust/Mist	12	FFP2
3M™ VFlex™ Particulate Respirator 9152ES (Small size)	EN 149:2001+A1:2009 FFP2 NR D	Dust/Mist	12	FFP2
3M™ VFlex™ Particulate Respirator 9161E	EN 149:2001+A1:2009 FFP1 NR D	Dust/Mist	4	FFP1
3M™ VFlex™ Particulate Respirator 9161ES (Small size)	EN 149:2001+A1:2009 FFP1 NR D	Dust/Mist	4	FFP1
3M™ VFlex™ Particulate Respirator 9162E	EN 149:2001+A1:2009 FFP2 NR D	Dust/Mist	12	FFP2
3M™ VFlex™ Particulate Respirator 9162ES (Small size)	EN 149:2001+A1:2009 FFP2 NR D	Dust/Mist	12	FFP2
3M™ VFlex™ Particulate Respirator 9163E	EN 149:2001+A1:2009 FFP3 NR D	Dust/Mist	50	FFP3
3M™ VFlex™ Particulate Respirator 9163ES (Small size)	EN 149:2001+A1:2009 FFP3 NR D	Dust/Mist	50	FFP3



3M™ Filtering Facepiece Respirators

Comfort Series: 3M™ Cup Shaped 8300 Series

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

Features and benefits:

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



	Classification	Protection	Nominal Protection Factor
3M™ Particulate Respirator 8310	EN 149:2001+A1:2009 FFP1 NR D	Dust / Mist	4 FFP1
3M™ Particulate Respirator 8312 Valved	EN 149:2001+A1:2009 FFP1 NR D	Dust / Mist	4 FFP1
3M™ Particulate Respirator 8320	EN 149:2001+A1:2009 FFP2 NR D	Dust / Mist	12 FFP2
3M™ Particulate Respirator 8322 Valved	EN 149:2001+A1:2009 FFP2 NR D	Dust / Mist	12 FFP2
3M™ Particulate Respirator 8833 Valved	EN 149:2001+A1:2009 FFP3 NR D	Dust / Mist	50 FFP3

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

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



	Classification	Protection	Nominal Protection Factor
3M™ Particulate Respirator 8812 (valved)	EN 149:2001+A1:2009 FFP1 NR D	Dust / Mist	4 FFP1
3M™ Particulate Respirator 8710E	EN 149:2001+A1:2009 FFP1 NR D	Dust / Mist	4 FFP1
3M™ Particulate Respirator 8822 (valved)	EN 149:2001+A1:2009 FFP2 NR D	Dust / Mist	12 FFP2
3M™ Particulate Respirator 8810	EN 149:2001+A1:2009 FFP2 NR D	Dust / Mist	12 FFP2
3M™ Particulate Respirator 8832	EN 149:2001+A1:2009 FFP3 NR D	Dust / Mist	50 FFP3



3M™ Filtering Facepiece Respirators

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 minimising 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.

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

Distinguishable non-food colour

- Bright blue for quick search recognition

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

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

Individual packaging

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



	Classification	Protection	Nominal Protection Factor	
3M™ Aura™ Particulate Respirator 9422+	EN 149:2001+A1:2009 FFP2 NR D	Dust/Mist	12	FFP2
3M™ Aura™ Particulate Respirator 9432+	EN 149:2001+A1:2009 FFP3 NR D	Dust/Mist	50	FFP3

Welding Fume Respirators

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.

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™ Faceseal 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



	Classification	Protection	Nominal Protection Factor	
3M™ Welding Particulate Respirator 9928	EN 149:2001+A1:2009 FFP2 R D	Dust/Mist/Ozone/ Nuisance level odours	10 for Ozone and particulates Below NPF for Nuisance Odours	FFP2
3M™ Welding Particulate Respirator 9925	EN 149:2001+A1:2009 FFP2 NR D	Dust/Mist/Ozone/ Nuisance level odours	10 for Ozone and particulates	FFP2

3M™ Filtering Facepiece Respirators

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



	Classification	Protection	Nominal Protection Factor
3M™ Speciality Particulate Respirator 9906	EN 149:2001+A1:2009 FFP1 NR D	Dust/Mist/Nuisance Level Hydrogen Fluoride	4 for Particulates Below NPF for Hydrogen Fluoride FFP1
3M™ Speciality Particulate Respirator 9913	EN 149:2001+A1:2009 FFP1 NR D	Dust/Mist/Nuisance Level Organic Vapour	4 for Particulates Below NPF for Organic Vapors FFP1
3M™ Speciality Particulate Respirator 9914	EN 149:2001+A1:2009 FFP1 NR D	Dust/Mist/Nuisance Level Organic Vapour	4 for Particulates Below NPF for Organic Vapors FFP1
3M™ Speciality Particulate Respirator 9915	EN 149:2001+A1:2009 FFP1 NR D	Dust/Mist/Nuisance Level Acid Gas	4 for Particulates Below NPF for Acid Gases FFP1
3M™ Speciality Particulate Respirator 9921	EN 149:2001+A1:2009 FFP2 NR D	Dust/Mist/Nuisance Level Acid Gas	12 for Particulates Below NPF for Acid Gases FFP2
3M™ Speciality Particulate Respirator 9922	EN 149:2001+A1:2009 FFP2 NR D	Dust/Mist/Nuisance Level Ozone	10 for Particulates and Ozone Below NPF for Organic Vapors FFP2
3M™ Speciality Particulate Respirator 9926	EN 149:2001+A1:2009 FFP2 NR D	Dust/Mist/Nuisance Level Acid Gas	12 for Particulates Below NPF for Acid Gases FFP2
3M™ Speciality Particulate Respirator 9936	EN 149:2001+A1:2009 FFP3 R D	Dust/Mist/Nuisance Level Acid Gas	50 for Particulates Below NPF for Acid Gases FFP3



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