

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		
	Concrete, Stone	FFP1		
	Cement, Wood, Steel	FFP2	FFP3 When Silica is present	
	Paints/Varnish/Anti-rust coating Steel, Stainless Steel Anti-Fouling Varnish		FFP2	
			FFP2	FFP3 When Chromates are present
			FFP3	Speciality respirator may be required
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		
	Grain dust	FFP2		
Contact with:	Mold/Fungus	FFP2	FFP3 With Tuberculosis or high consequence infectious microorganisms	
	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

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™ 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

