

3M Respiratory Protection

3M™ Reusable Respirators



Comfort, Trust,
Versatility

Respirators For Your Workplace





The Power to Protect Your WorldSM

We live in a world where people don't always make the right choice. Health and safety professionals have a challenging job convincing people to wear protective equipment for their own safety. You must combine compliance to standards and regulations and employee safety, comfort, and even style. Everyone wants to look good, but they don't always want to wear protective equipment. We know this and it is why we continue to listen, test and add innovations to improve our products so people wear them longer.

We provide solutions for work situations requiring basic Personal Protective Equipment (PPE) through to environments that call for the most sophisticated and comprehensive protection. Whether the customer is a single tradesperson, medium sized business or an organisation employing thousands of workers, 3M has a workplace safety solution to meet your needs.

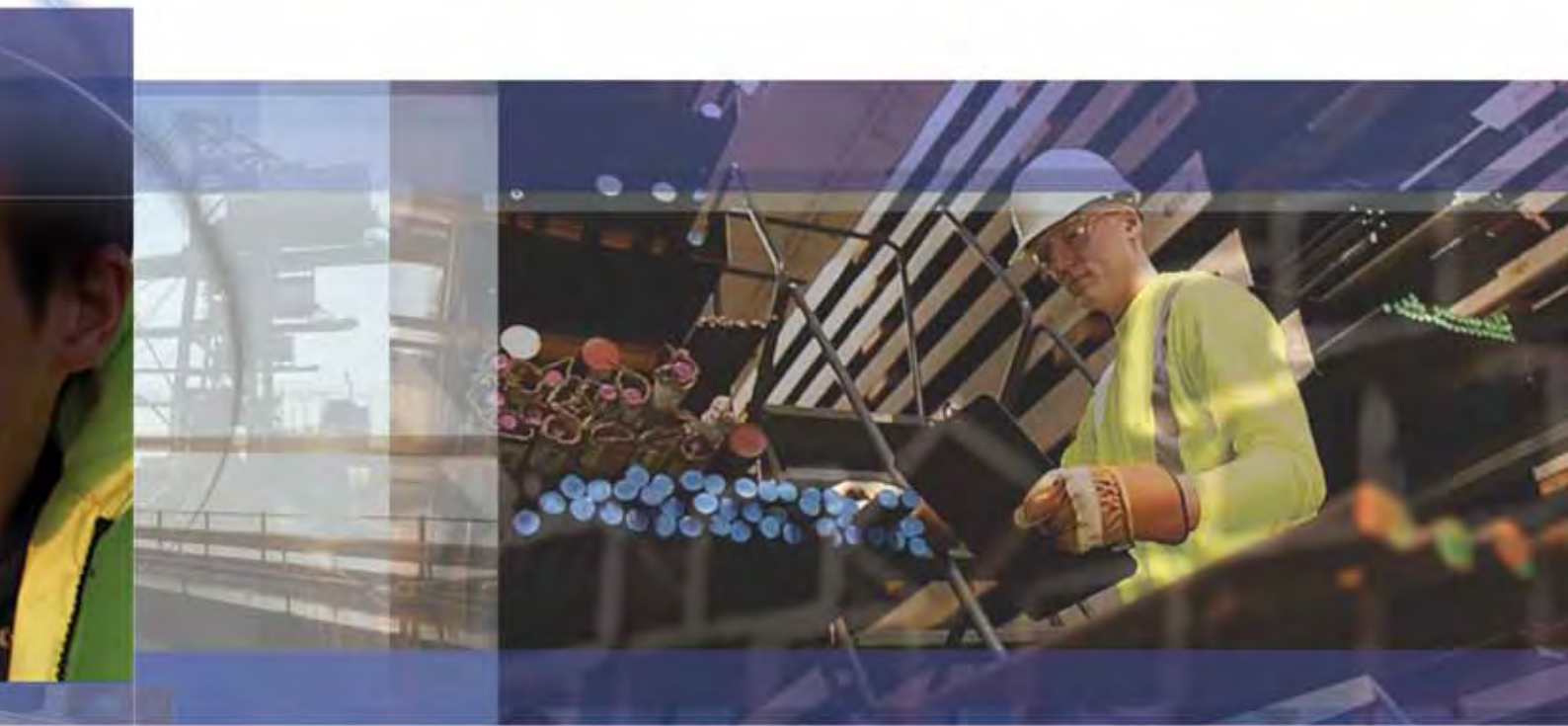
When job requirements call for special problem solving expertise, you can rely on 3M to use its diverse industry knowledge and history of innovation to give you the confidence and power to protect your world.

The 3M range of solutions for worker safety includes:

- Respiratory Protection
- Hearing Protection
- Communications
- Head, Eye & Face Protection
- Welding Protection
- Spill Management
- Worker Visibility
- Detection & Monitoring
- Body Protection

3M Safety brands you can trust:





Training and Support

3M's team of Specialist Representatives are available nationally, to provide support and training that meet the needs of our customers.

Furthermore, our qualified and highly experienced team are able to assist customers by:

- Conducting initial and ongoing assessments of the workplace
- Recommending appropriate respiratory, hearing, eye protection, communication and spill management solutions required to maintain a safe work environment
- Providing technical advice about the correct use and maintenance of the solution that has been selected
- Facilitate on-site fit testing for both respiratory and hearing protection solutions, as required

No matter how effective a piece of Personal Protective Equipment (PPE) is, it will offer little or no protection if it is not fitted and/or worn correctly. Proper inspection, cleaning and storage is vital for safety equipment that protects a worker's health and well-being.

That is why we offer training programs that explain the correct way to fit, inspect, clean and store the PPE designed and manufactured by 3M.

Technical Assistance

3M TechAssist is the ideal point of contact for your questions, especially when you require a prompt answer. Supported by trained staff, TechAssist is an immediate link to the worldwide resources of 3M.

Customers can contact TechAssist to answer questions on product information, technical advice, guidance with product selection, Australia/New Zealand Standards and other important information they need to know on a day-to-day basis.

See back cover for Technical Assistance contact details.

ANZ Distributor Network

3M distributes our wide range of workplace safety products through a distributor network which includes over 400 stores and branches throughout Australia and New Zealand.

3M™ Reusable Respirators



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4 Steps in Respiratory Protection

1. Identify & Assess the Hazard

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Identifying and assessing hazards in the workplace is the first step in establishing respiratory protection.



2. Understand the Effects on the Body

p8

Workers may be exposed to a variety of airborne substances which may be capable of causing harm e.g. gases, vapour, dust, mists, fume and smoke.



3. Product Selection

p9–19

- a. Select Respirator
- b. Select Cartridge/Filter or Combination



4. Fit Testing, Care & Maintenance

p20–23

Fit testing is considered industry best practice, as well as a requirement to comply with AS/NZS 1715:2009.

Regular care and maintenance of reusable respirators will help to achieve optimum performance and protection for the wearer.





Guide to Identify and Assess Hazards

To identify all respiratory hazards review your workplace by:

Task / Area / Process

Respiratory hazards can be categorised as follows:

Oxygen Deficiency

Less than 19.5 % oxygen
E.g. Confined space

Gases/Vapours

E.g. Organic vapours, inorganic gas, acid gas, ammonia

Particulates

Mechanically generated = P1
Thermally generated = P2
E.g. Dust/mist, metal fume, fibre, micro organisms

Particulates

Toxic = P3
E.g. Beryllium

Risk Assessment

Assess: Contaminants / Exposure Levels / Workplace Exposure Standard

Match Cartridge/Filter type to the hazard

Oxygen Deficiency

Seek advice from your safety supplier for airline, built-in air or SCBA options

Gases/Vapours

Refer to page 16 of catalogue for 3M Cartridge options

Particulates

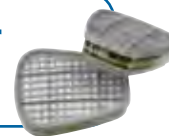
Mechanically generated = P1
Thermally generated = P2
Refer to page 17 of catalogue for 3M Filter options

Particulates

Toxic = P3
Refer to page 16 & 17 of catalogue for 3M Cartridge/Filter options

Match the Reusable Respirator to the Cartridge/Filter

Refer to the protection factor table on page 15 to determine the best respirator for your hazard



This is a guide only. Selection of the most appropriate personal protective equipment (PPE) will depend on the particular situation and exposure levels and should be made only by a competent person knowledgeable of the assessed risks, actual working conditions and limitations of PPE. Details regarding performance and limitations are set out on the product packaging and user information. If in doubt, contact a safety professional or 3M.

For respiratory training and advice please contact your local 3M representative.



Identify the Hazards

Industry	Application	Hazard	Recommended Protection
Construction	Painting, spraying, varnishing, coating	Solvent-based paint	A1P2
		Solvents, resins, synthetic resins	
		Latex-paint, residual solvents	
		Spray-on glue, foam, varnish, adhesive	
Metal Fabrication	Welding, metal cutting, metal pouring, soldering, brazing	Metal fumes	P2
	Welding - TIG, MIG and other	Metal fumes, ozone gas Nuisance levels of organic vapours	GP2
Agriculture	Spraying low vapour pressure*** pesticides, herbicides or fungicides	Organic vapour, mist, dust	GP2
	Mixing pesticide, herbicide or fungicide or spraying organic vapours	Organic vapour, mist, dust	A1P2
Automotive	Cleaning or using organic solvents, degreasing, paint thinners and glues	Organic vapour	A1
	Brush or roller applicaton* of 2-pack type paints	Isocyanates*	A1
Fibreglass	Laying up	Epoxy and polyester resin, amine & anhydride hardner Methy ethyl ketone peroxide (MEKP), styrene vapour	A1P2
	Using a chopper gun	Glass fibre, dust, resin and styrene vapour	
	Spray painting & cleaning moulds	Organic vapour and mist	
Maintenance	Disinfection, cleaning	Organic vapour, mist, dust	A1P2
		Organic vapour, formaldehyde, mist, dust	ABE1P2
Other	Handling:	Ammonia (NH3)**	K
		Bacteria, spores, odours	GP2
		Hydrochloric acid vapour or mist**	ABEP2
		Petroleum solvents	A2
		Sulphur dioxide **	ABE
		Sulphuric acid (H2SO4)**	P2
		Hazardous goods storage/transport	ABEKP3

* For protection from Isocyanates when spraying polyurethanes/2 pack, please contact the 3M TechAssist Helpline

** Also need to consider eye/face/skin protection

*** Low vapour pressure < 1.3Pa @ 25°C

P3 protection is only achieved on a full face respirator.

Application limits for Gas & Vapour respirators (AS/NZS1715):

- Half face respirators can be used up to 10 times the relevant Workplace Exposure Standards (WES) or up to 1000 ppm, whichever limit is reached first.
- Full face respirators can be used up to 100 times the WES with a Class 2 filter or up to 5000 ppm, whichever limit is reached first.
- A1 and A2 Cartridges are designed for use with organic vapours with a boiling point above 65°C.
- AX Cartridges are used for organic vapours with a boiling point under 65°C. Note: 3M™ AX Cartridges are single use and can only be fitted to 3M™ Full Face respirators.

This selection guide is only an outline designed to focus on products which may be appropriate for typical applications - it should not be used as the only means of selecting a product. Selection of the most appropriate personal protective equipment (PPE) will depend on the particular situation and exposure levels and should be made only by a competent person knowledgeable of the assessed risks, actual working conditions and limitations of PPE. Details regarding performance and limitations are set out on the product packaging and user information. If in doubt, contact a safety professional or 3M.

For respiratory training and advice please contact your local 3M representative.

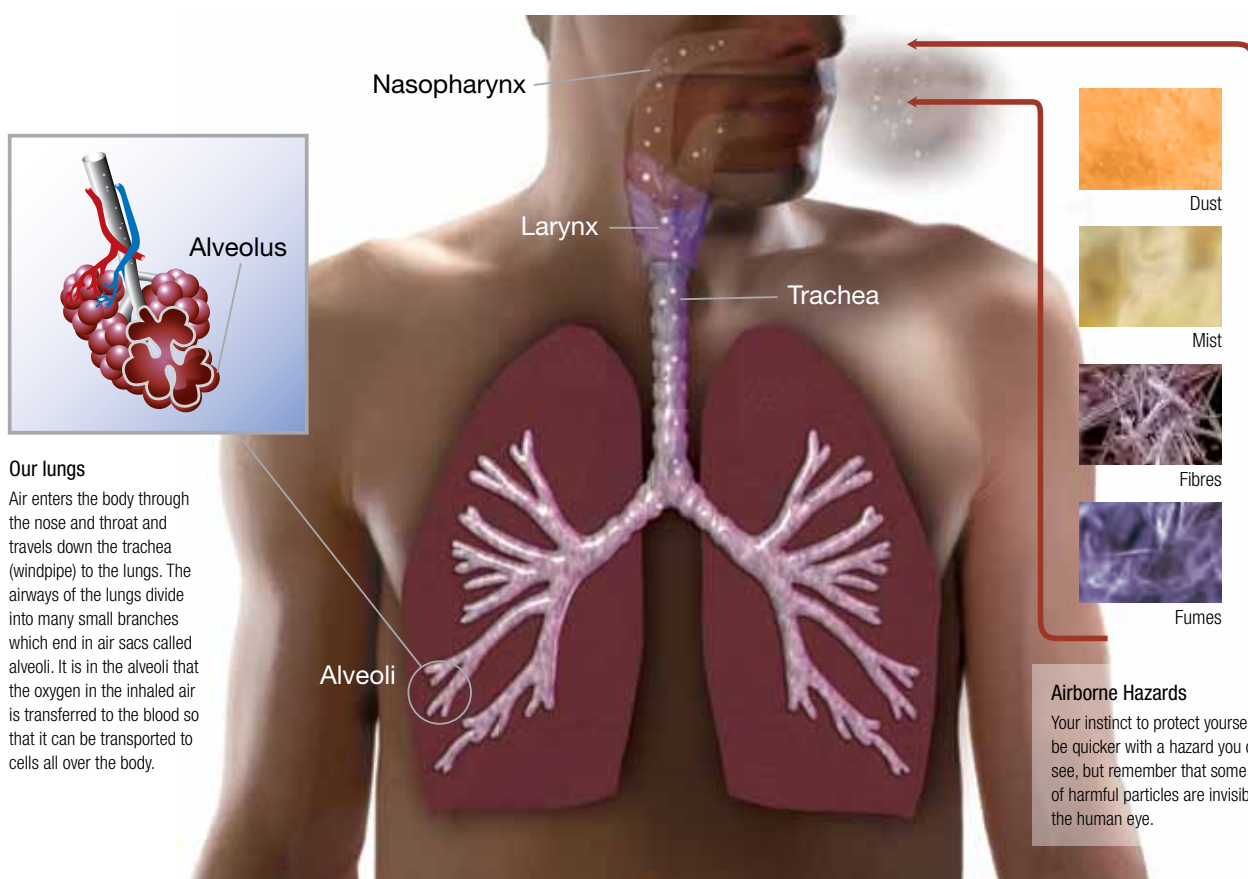
3M™ Reusable Respirators



Understanding Respiratory Hazards on your Body

Your lungs are vital to your health – if hazardous particles reach the lungs they can damage the delicate tissue and cause illness. Your body has some natural defences against airborne particulate hazards but if the contaminant is in a large enough quantity and/or made up

of very small particles, these defences may be overcome, resulting in ill health and increased risk of diseases such as occupational asthma, pulmonary fibrosis and cancer.



Our lungs

Air enters the body through the nose and throat and travels down the trachea (windpipe) to the lungs. The airways of the lungs divide into many small branches which end in air sacs called alveoli. It is in the alveoli that the oxygen in the inhaled air is transferred to the blood so that it can be transported to cells all over the body.

Airborne Hazards

Your instinct to protect yourself will be quicker with a hazard you can see, but remember that some types of harmful particles are invisible to the human eye.

Dusts	Solid particles suspended in the air as a result of the disintegration of matter. Dust may be generated by mechanical means e.g. drilling, sawing and sandblasting.
Sprays and Mists	Airborne droplets – the droplets may carry substances in solution or particles in suspension. Mists are usually formed by condensation of a vapour or by atomisation of a liquid.
Smoke	Particles of low vapour pressure suspended in the air. Smoke is made up from the solid and liquid products of combustion. Smoke particles settle slowly under gravity.
Fume	Particles forming an airborne suspension. Fuming is usually caused by the heating of a solid to such an extent that it vapourises and condenses into small particles in the surrounding air. May be termed a thermally generated particulate.
Gas	A substance which is like air – it is neither a solid or liquid at room temperature.
Vapour	The gaseous form of a substance which is solid or liquid at room temperature.



Select the Right Respirator and Cartridge/Filter

	<p>6035 P3 2125 P2 2135 P3</p> <p>Particulate Protection</p>
	<p>6038 P3(HF) 2128 GP2 2138 GP3</p> <p>Particulate Protection + Nuisance Level* Organic Vapour and Acid Gas</p>
	<p>6051 A1 6057 ABE1 6055 A2 6059 ABEK1 6054 K1 6075 A1+Form</p> <p>Gas & Vapour Protection only</p>
	<p>6051 A1 6057 ABE1 5925 P2 501 6055 A2 6059 ABEK1 5935 P3**^ 6054 K1 6075 A1+Form</p> <p>Combined Particulate + Gas & Vapour Protection</p> <p>6096 A1HgP3 6098 AXP3** 6099 ABEK2P3**</p>
	<p>4251 A1P2 4277 ABE1P2 4255 A2P2 4279 ABEK1P2</p> <p>Combined Particulate + Gas & Vapour Protection</p> <p>Ready to use, Maintenance free</p>

* Nuisance Levels are those levels below the Workplace Exposure Standard (WES)

** P3 protection achieved only when worn with a 3M Full Face Respirator

^ Available in Australia only

3M™ Reusable Respirators



3M™ Half Face Respirator 6000 Series

3M Half Face Reusable Respirators 6000 Series are low-maintenance, lightweight and simple to handle.

Available in three sizes, all respirators have the 3M™ Bayonet Connection System which fit 3M's broad range of twin, lightweight, cartridges and filters. These provide protection against gases, vapours

and particulates (depending on your needs). The twin filter design has a low profile and is well balanced. The 6000 Series Half Face Respirators can also be used with 3M™ Supplied-Air Systems.

Meets the performance requirements of AS/NZS 1716:2012.

Features and Benefits:

Simple and Lightweight

- + Easy to use
- + Contoured face seal design
- + Thermoplastic Elastomer (TPE) facepiece

Convenience

- + Drop down head harness option available for added convenience during breaks

Flexibility

- + Optional supplied air connection (SA-2000 or SA-2100)

Spare parts

A range of spare parts or components are available. Below are the most common spare parts.



3M™ Half Face Respirator 6000 Series

3M 6100 – small (light grey)

3M 6200 – medium (grey)

3M 6300 – large (dark grey)





3M™ Drop Down Half Face Respirator 6000 Series

6200DD – medium

6300DD – large



Ideal for workers who wear a hardhat or welding shield and need to frequently remove the respirator without removing the hardhat or welding shield.

	Product Code	Description
	6889	Exhalation Valve - Blue
	6893	Inhalation Valve - White
	6895	Inhalation Gasket - Orange
	6281	Head Harness Assembly



3M™ Half Face Respirator 7500 Series

3M's Half Face Reusable Respirators 7500 Series have set a high standard in comfort. The 3M™ Cool Flow™ Exhalation valve reduces breathing resistance, helping to minimise heat build-up in the respirator, increasing your comfort.

Available in three sizes, all respirators have the 3M™ Bayonet Connection System which fits 3M's range of twin, lightweight,

cartridges and filters. These provide protection against gases, vapours and particulates (depending on your needs). The twin filter design has a low profile and is well balanced. These half face respirators can also be used with 3M™ Supplied-Air Systems.

Meets the performance requirements of AS/NZS 1716:2012.

Features and Benefits:

Comfort

- + Soft silicon face seal for extra comfort and durability
- + Proprietary 3M™ Cool Flow™ Exhalation valve provides low breathing resistance and minimises heat build-up in the respirator
- + Ideal for working in hot and humid conditions or during prolonged use
- + Thin nose bridge area for reduced pressure and improved comfort



Convenience





- + Drop down harness feature for added convenience during breaks
- + Fits well with 3M Head and Eye Protection
- + Respirator design helps reduce fogging when wearing eye protection
- + Unique valve design reduces dust and dirt build-up improving hygiene and reliability

Flexibility

- + Optional supplied air connection (SA-2000 or SA-2100)

Spare parts

A range of spare parts or components are available. Below are the most common spare parts.

	Product Code	Description
	7582	Inhalation Valve - Blue
	7583	Exhalation Valve - Blue
	7580	Replacement Harness Straps
	7581	Head Harness Assembly

3M™ Half Face Respirator 7500 Series

- 3M 7501 – small (light blue)
- 3M 7502 – medium (blue)
- 3M 7503 – large (dark blue)



3M™ Respirator Cleaning Wipe 504



The 504 Cleaning Wipes are alcohol-free pre-moistened towelettes for cleaning all reusable respirators without damaging them.

3M™ Reusable Respirators



3M™ Full Face Respirator 6000 Series

The 3M Full Face Respirator 6000 Series is simple to use and comfortable to wear. It offers a wide field of vision and is well balanced.

Available in three sizes, all respirators have the 3M™ Bayonet Connection System which fit 3M's broad range of twin, lightweight, cartridges and filters. These provide protection against gases, vapours

and particulates (depending on your needs). The twin filter design has a low profile and is well balanced. These full face respirators can also be used with 3M™ Supplied-Air Systems.

Meets the performance requirements of AS/NZS 1716:2012.

Features and Benefits:

Comfort

- + Soft, non-allergenic silicon face seal
- + Lightweight and well balanced
- + Simple and easy to use
- + Proprietary 3M™ Cool Flow™ Exhalation valve provides low breathing resistance and minimises heat build-up in the respirator

Convenience and Performance

- + Four strap head suspension - easy to put on and take off
- + Wide field of vision
- + Polycarbonate lens has molten metal and high impact resistance to AS/NZS 1337

Flexibility

- + Optional supplied air connection (SA-2000 or SA-2100)

Spare parts

A range of spare parts or components are available. Below are the most common spare parts.

3M™ Full Face Respirator 6000 Series





3M 6700 – small (light grey)

3M 6800 – medium (grey)

3M 6900 – large (dark grey)



	Product Code	Description
	6893	Inhalation Valve - White
	6895	Inhalation Gasket - Orange
	6896	Centre Adaptor Gasket
	7583	Exhalation Valve - Blue

	Product Code	Description
	6885	Lens Cover - Clear
	6897	Head Harness Assembly
	6898	Lens Assembly
	6878	Spectacle Kit



3M™ Half Face Respirator 4000 Series

The 4000 Series Respirators are a unique range of ready-to-use, maintenance-free half face respirators. The built-in filters are integral to the mould providing comfortable protection against a combination of many gases, vapours and particulate hazards. Utilising the unique filter technology enables a low-profile, well balanced design for an undisturbed field of view.

Meets the performance requirements of AS/NZS 1716:2012.

Features and Benefits:

Comfort

- + Lightweight, well balanced design
- + Soft, non-allergenic face seal
- + Textured face seal to minimise slippage and improve comfort

Built-in filters

- + No cartridge or filter replacement required
- + Four versions available, each offering protection against different hazards
- + One piece, maintenance-free design
- + Unique wrap around design provides an undisturbed field of view

Convenience

- + Use until damaged, particulate filters clog or gas filters become saturated
- + Re-sealable bag provides convenient and clean storage between uses
- + Ideal for contractors, plant shutdowns and spill response (eliminates need for separate respirator, cartridge/filter or carrying out respirator maintenance)



3M™ Half Face Respirator 4000 Series



3M™ 4251 (A1P2)
Organic vapour +
Particulate respirator



3M™ 4255 (A2P2)
Organic vapour + Particulate
respirator



3M™ 4277 (A1B1E1P2)
Organic vapour / Inorganic + Acid
gas / Particulate respirator



3M™ 4279 (A1B1E1K1P2)
Organic vapour / Inorganic +
Acid gas / Ammonia / Particulate
respirator

3M™ Reusable Respirators Cartridges & Filters



Organic Vapours

3M makes organic vapour respirator cartridges to help reduce user exposure to many different organic vapours. Organic vapours are compounds primarily derived from fossil fuels such as oil or coal. For example, solvents or petrol release organic vapours.

How organic cartridges are made

Respirator cartridges are filled with a material called activated carbon. Activated carbon is typically made from coal or renewable resources like wood or coconut shells. It is “activated” by heating the material in nitrogen or steam at approximate temperatures of 800 – 900°C.

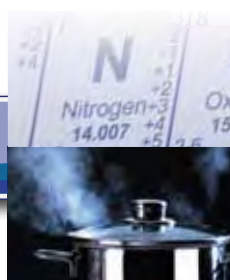
The resulting material has a significant number of micropores that help adsorb various organic vapours. These micropores can be measured and optimised for specific product needs and performance.



Coal or renewable resources, such as coconut shells



Coal or renewable resources are heated without oxygen



High-temperature steam or nitrogen activation



High-grade activated carbon



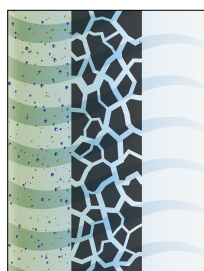
Electron micrographs of activated carbon pores

How organic cartridges work

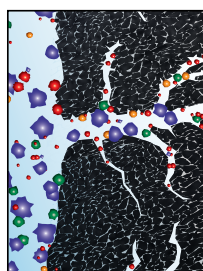
When organic vapours are drawn through an organic vapour cartridge, the air is filtered as vapours condense into the carbon pores. Vapours move through the cartridge from one pore to the next. This occurs more quickly for small volatile vapours with lower boiling points (e.g. acetone). Some migration of organic vapours can even occur during storage, so care must be taken before reusing the cartridge. The effective service life is the time until vapours begin to exit the cartridge.

Unlike particle filters, service life is not indicated by change in breathing resistance. Instead, cartridges must be changed according to local regulations; taste, smell, or irritation from the contaminant; or according to 3M™ Service Life Software calculation, whichever comes first.

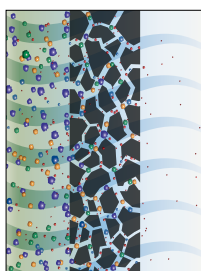
Activated carbon by itself cannot adsorb other types of gases or vapours such as acid gases, ammonia, formaldehyde, etc. In some cases, additional metals and salts are added to the carbon to enable it to selectively remove these compounds. For this reason, 3M offers a variety of cartridges and reusable respirators to help protect workers in different environments and satisfy personal preferences.



Unfiltered organic vapours are drawn into the cartridge.



Activated carbon adsorbs organic vapours on molecular level.









Service life continues until vapours begin to escape the cartridge.



Cartridge & Filter Classification System

3M™ Gas & Vapour Cartridges

AS/NZS 1716 uses a classification system to identify the different types of contaminants these treated carbon will capture (as mentioned on the previous page). 3M Cartridges follow this marking and colour coding system.

A	Organic Vapours (boiling point > 65°C)	
AX	Organic Vapours (boiling point < 65°C)	
B	Inorganic Gases	
E	Acid Gases	
K	Ammonia	
Hg	Mercury	
G	Organic Compounds with low vapour pressure	

3M™ Particulate Filters

These filters are enhanced with electrostatically charged fibres to trap particulates within the filter media. As particulate filters load up with the contaminant, they typically become more efficient; however, they also become harder to breathe through.

AS/NZS 1716 uses a classification system to identify the different types of particulate protection required.

P1	Particles generated by mechanical processes e.g. grinding, sanding
P2	Particles generated by mechanical and thermal processes e.g. welding
P3	All Particles including highly toxic materials

Protection Factors

Depending on the combination of cartridge/filter and respirator, different levels of protection may be achieved.

Protection factor is the reduction in exposure expected with correct use of a respirator. E.g. A protection factor of 10 means the wearer can expect a 10 times reduction in exposure to the airborne concentration of contaminants.

The higher the protection factor, the greater the reduction in exposure to airborne contaminants for the wearer.

Gas/Vapour Protection

Respirator	Filter	Protection Factor
Half Face Respirator	Class 1	Up to 10
Half Face Respirator	Class 2	Up to 10
Full Face Respirator	Class 1	Up to 50
Full Face Respirator	Class 2	Up to 100
No 3M offering	Class 3	-

Particulate Protection

Respirator	Filter	Protection Factor
Half Face Respirator	P2 Filter	Up to 10
Half Face Respirator	P3 Filter	Up to 10
Full Face Respirator	P2 Filter	Up to 50
Full Face Respirator	P3 Filter	Up to 100

3M™ Reusable Respirators Cartridges & Filters











3M™ Gas & Vapour Cartridges

The 3M Cartridges 6000 Series attach to the 3M™ Half and Full face Respirators to provide gas and vapour protection. These cartridges are lightweight and well balanced when fitted to the respirator.

Meets the performance requirements of AS/NZS 1716:2012.



The 3M™ Bayonet Connection System ensures precise and secure locking.

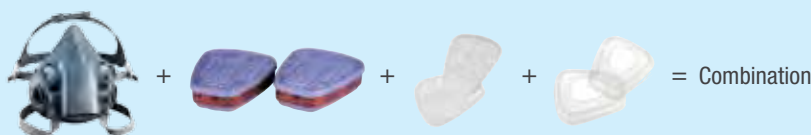
Product Code	Description	Filter/Class Rating	When You Are: (Application/Hazard)
6051 6055	 Organic Vapours (boiling point > 65°C)	A1 (6051) A2 (6055)	Using or cleaning with organic solvents e.g. toluene, xylene and MEK. Also degreasing, mixing, using paint thinners, lacquers and glues. For paint and pesticide spraying* a particulate filter must be used to capture mist droplets (5925).
6057	 Organic Vapours (boiling point > 65°C), Inorganic and Acid Gases	A1B1E1	Working with solvents and/or acid gases such as toluene, chlorine, hydrogen chloride and sulfur dioxide. Degreasing, using paint thinners, acid cleaning, etching and electroplating, acid and fertiliser manufacturing.
6054	 Ammonia and Methylamine	K1	Working with ammonia and methylamine used in the manufacture of fertilisers, refrigeration systems, synthetic fibres and dyes.
6075	 Organic Vapours (boiling point > 65°C) and Formaldehyde	A1 Form	Working with solvents and formaldehyde such as chemical processing, plastic production, fibreboard manufacturing, fighting bush fires, healthcare and laboratory work.
6059	 Multi-Gas: Organic Vapours (boiling point > 65°C), Inorganic and Acid Gases, Ammonia and Methylamine	A1B1E1K1	Working with a variety of chemicals such as solvents (boiling point > 65°C), chlorine, hydrogen chloride, sulfur dioxide, hydrogen fluoride, hydrogen sulfide and ammonia.
6096	 Organic Vapours (boiling point > 65°C), Mercury Vapours and Toxic Particulates	A1HgP3**	Oil and gas refining, healthcare when removing amalgam or wherever mercury vapours may exist e.g. spillages.
6098	 Low Boiling Point Organic Vapours (boiling point <65°C) and Toxic Particulates	AXP3**	Working with highly volatile solvents such as methanol, 1,3-Butadiene or Acetaldehyde in chemical plants, composites manufacturing or coatings. Filter is single use only and must be worn with a 3M Full Face Respirator.
6099	 Multi-Gas and Particulates: Organic Vapours (boiling point > 65°C), Inorganic and Acid Gases, Ammonia, Methylamine and Particulates	A2B2E2K2P3** Multi-Gas Class 2	Exposed to higher concentrations where Class 2 protection is required. Working with a variety of chemicals (refer to 6059) as well as particulates. Must be worn with a 3M Full Face Respirator.

* Not to be used when spraying isocyanate based paints

** P3 Filters used when a higher protection factor is required. P3 Protection achieved only when worn with a 3M Full Face Respirator

For protection against a combination of gases, vapours and particulates, a combination is required.

Use the 3M™ 501 retainer to attach the particulate filter to the cartridge as shown:














3M™ Particulate Filters

The 3M™ 2000, 5000 and 6000 Series Particulate Filters attach to the 3M™ Half and Full Face Respirators to provide particulate protection. These filters are lightweight and provide low breathing resistance. They are made from 3M high performance filter media for effective filtration efficiency.

Meets the performance requirements of AS/NZS 1716:2012.



The 3M™ Bayonet Connection System ensures precise and secure locking.

Product Code	Description	Filter/Class Rating	When You Are: (Application/Hazard)
2125	 Particulates	P2	Creating certain dusts, mists and fumes such as sanding, grinding, cutting, drilling metal, masonry, wood and concrete.
2128	 Particulates, Ozone and Nuisance Level* Acid Gas and Organic Vapours with Low Vapour Gases	GP2	Creating welding fume, ozone, polishing and grinding particles when welding or fabricating. Also for spraying pesticides or herbicides with vapour pressure < 1.3 Pa @ 25°C.
2135	 Toxic Particulates	P2/P3**	Working with toxic particulates such as asbestos (refer to Government guidelines***) and beryllium.
2138	 Toxic Particulates, Nuisance Level* Acid Gases and Organic Vapours with Low Vapour Pressure	GP2/GP3**	Working with toxic particulates such as mould remediation. Also for nuisance level* acid gases and spraying pesticides or herbicides with vapour pressure < 1.3 Pa @ 25°C.
2076	 Particulates and Hydrogen Fluoride	P2(HF)	Working with hydrogen fluoride and creating particulates such as dust and mist. Applications include working in certain chemical and fertiliser plants.
6035	 Toxic Particulates	P2/P3**	Carrying out lead or mould remediation. Also for certain asbestos tasks (refer to Government guidelines***). Ideal if requiring a protective casing to deflect sparks and splashes.
6038	 Toxic Particulates and Hydrogen Fluoride, Nuisance Level* Organic Vapour and Acid Gas	P3(HF)**	Working with hydrogen fluoride and creating toxic particulates. Applications include working in certain chemical and fertiliser plants. Ideal if requiring a protective casing to deflect sparks and splashes.
5925 5935	 Particulates	P2 P3***^	Needing protection against dusts, mists (including oil based particles) and fumes when fitted to 6000 series cartridge with the 501 retainer.
501	 Particulate Filter Retainer	-	Attaching 5925 or 5935 filter to 6000 series cartridges.

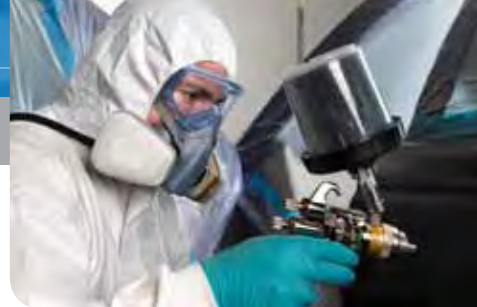
* Nuisance Levels are those levels below the Workplace Exposure Standard (WES)

** P3 Filters used when a higher protection factor is required. P3 Protection achieved only when worn with a 3M Full Face Respirator

*** Refer to Australia State OHS guidelines or New Zealand Ministry of Business, Innovation & Employment Guidelines (previously known as Department of Labour)

^ Available in Australia only

3M™ Reusable Respirators Starter Kits



3M™ Reusable Respirator Starter Kits

These kits are designed to offer respiratory protection in a convenient and easy way – an ideal solution to get you started. The kits provide protection for a range of applications, from paint spraying to sanding or welding.

All kits include a pair of 3M™ Earplugs, 3M™ Respirator Cleaning Wipes and a 3M Respiratory Protection Guide. To avoid moisture and contaminant exposure, store the respirator in the handy, sealable storage container.



3M™ Welding Respirator Kit 7528, GP2

Includes a 3M™ Half Face 7500 Series Respirator with special Cool Flow™ valve and soft silicon material. Ideal for working in hot and humid conditions or during prolonged use.

Applications/Hazards:

- + Welding - Fume/ozone
- + Soldering/Brazing - Fume
- + Grinding/Polishing - Metal dust and particles
- + Drilling - Metal particles
- + Metal Pouring - Fume
- + Machining - Oil mist

Kit Includes:

- + 1 x 3M™ Half Face Respirator 7500 Series - Medium
- + 1 x pair of 3M™ Particle & Metal Fume Filters 2128, GP2
- + 4 x 3M™ Respirator Cleaning Wipes 504
- + 1 x 3M™ Skull Screws™ Earplugs P1300, Class 5
- + 1 x 3M™ Respiratory Protection Guide
- + 1 x Handy Storage Container



3M™ Welding Respirator Kit 6228, GP2

Includes a 3M™ Half Face 6000 Series Respirator that is simple and lightweight.

Applications/Hazards:

- + Welding - Fume/ozone
- + Soldering/Brazing - Fume
- + Grinding/Polishing - Metal dust and particles
- + Drilling - Metal particles
- + Metal Pouring - Fume
- + Machining - Oil mist

Note: Currently available in Australia only

Kit Includes:

- + 1 x 3M™ Half Face Respirator 6000 Series - Medium
- + 1 x pair of 3M™ Particle & Metal Fume Filters 2128, GP2
- + 4 x 3M™ Respirator Cleaning Wipes 504
- + 1 x 3M™ Skull Screws™ Earplugs P1300, Class 5
- + 1 x 3M™ Respiratory Protection Guide
- + 1 x Handy Storage Container



3M™ Spraying Respirator Kit 7551, A1P2

Includes a 3M™ Half Face 7500 Series Respirator with special Cool Flow™ valve and soft silicon material. Ideal for working in hot and humid conditions or during prolonged use.

Applications/Hazards:

- + Paint Spray - Solvent vapours/mist
- + Pesticide Spray - Organic vapours/mist
- + Chemical Handling - Organic vapours from thinners, adhesives
- + Fibreglassing - Solvent vapours
- + Printing - Solvent vapours
- + Degreasing - Solvent vapours

Kit Includes:

- + 1 x 3M™ Half Face Respirator 7500 Series – Medium
- + 1 x pair of 3M™ Organic Vapour Cartridges 6051, A1
- + 1 x box (5 pairs) of 3M™ Particulate Filters 5925, P2
- + 1 x pair of 3M™ Filter Retainers 501
- + 4 x 3M™ Respirator Cleaning Wipes 504
- + 1 x 3M™ No-Touch™ Foam Earplugs P2000, Class 4
- + 1 x 3M™ Respiratory Protection Guide
- + 1 x Handy Storage Container



3M™ Spraying Respirator Kit 6251, A1P2

Includes a 3M™ Half Face 6000 Series Respirator that is simple and lightweight.

Applications/Hazards:

- + Paint Spray - Solvent vapours/mist
- + Pesticide Spray - Organic vapours/mist
- + Chemical Handling - Organic vapours from thinners, adhesives
- + Fibreglassing - Solvent vapours
- + Printing - Solvent vapours
- + Degreasing - Solvent vapours

Kit Includes:

- + 1 x 3M™ Half Face Respirator 6000 Series – Medium
- + 1 x pair of 3M™ Organic Vapour Cartridges 6051, A1
- + 1 x pair of 3M™ Particulate Filters 5925, P2
- + 1 x pair of 3M™ Filter Retainers 501
- + 4 x 3M™ Respirator Cleaning Wipes 504
- + 1 x 3M™ No-Touch™ Foam Earplugs P2000, Class 4
- + 1 x 3M™ Respiratory Protection Guide
- + 1 x Handy Storage Container



3M™ Multi-Gas Respirator Kit 6259, A1B1E1K1P2

Includes a 3M™ Half Face 6000 Series Respirator that is simple and lightweight.

Applications/Hazards:

Range of vapours and gases including (but not limited to):

- + Chlorine
- + Sulphur Dioxide
- + Solvents (boiling points >65°C)
- + Hydrogen Sulphide
- + Ammonia
- + Hydrogen Chloride

Kit Includes:

- + 1 x 3M™ Half Face Respirator 6000 Series – Medium
- + 1 x pair of 3M™ Multi-Gas Cartridges 6059, A1B1E1K1
- + 1 x pair of 3M™ Particulate Filters 5925, P2
- + 1 x pair of 3M™ Filter Retainers 501
- + 4 x 3M™ Respirator Cleaning Wipes 504
- + 1 x 3M™ No-Touch™ Foam Earplugs P2000, Class 4
- + 1 x 3M™ Respiratory Protection Guide
- + 1 x Handy Storage Container



3M™ Dust/Particle Respirator Kit 6225, P2

Includes a 3M™ Half Face 6000 Series Respirator that is simple and lightweight.

Applications/Hazards:

- + Sanding/Sawing - Wood/plaster dust
- + Lead Paint Removal - Metal fume and/or particles
- + Food Manufacturing - Fine food powders
- + Insulation - Fibreglass particles
- + Drilling/Cutting - Metal/wood/plastic particles
- + Masonry - Stone particles
- + Grinding - Metal dust and particles
- + Powder Coating - Dust

Kit Includes:

- + 1 x 3M™ Half Face Respirator 6000 Series - Medium
- + 1 x pair of 3M™ Particulate Filters 2125, P2
- + 4 x 3M™ Respirator Cleaning Wipes 504
- + 1 x 3M™ No-Touch™ Foam Earplugs P2000, Class 4
- + 1 x 3M™ Respiratory Protection Guide
- + 1 x Handy storage container

3M™ Reusable Respirators

Fit Testing



Why is Fit Testing so important?

The biggest contributor to reduced respiratory protection is poor fit. Checking that a respirator, with a tight fitting facepiece provides an adequate seal to the wearer's face has long been considered best practice as part of a general Respiratory Protection Program. Reflecting this, a fit test for wearers tight fitting facepieces is required for compliance to AS/NZS 1715:2009.

Respirators with tight fitting facepieces include disposable respirators, half and full-face respirators, including those that form part of a powered or air-fed respirator.

When to Fit Test

Fit testing should be carried out:

- + Before the respirator is issued
- + On all wearers of respirators with tight fitting facepieces where fit testing has previously not been performed

Fit testing should be repeated at appropriate times such as:

- + If the wearer significantly loses or gains weight, has major dental work or sustains a major facial injury
- + If a different size or model of Respiratory Protective Equipment (RPE) is specified
- + At least annually or when specified by the company policy e.g. during a health surveillance check
- + Fit testing is in addition to performing a self fit check prior to each use as a determination of suitable fit

Prior to entering the contaminated area, at each use, the wearer should carry out a self-fit check to test the respirator fit.

There are two main methods of fit testing available:

- + Qualitative fit testing
- + Quantitative fit testing

Contact 3M for qualitative and quantitative fit testing advice.

During both methods of testing, it is essential that the person is free from facial hair and other items that may interfere with the face seal. Wearers with facial hair or stubble (even a day's growth) must not wear a respirator which has a tight fitting facepiece.

All tests require a series of exercises to be performed during the fit test. Manufacturers' instructions for the test equipment should be followed at all times.

A record of the result of the test should be generated and retained for at least 5 years. Some schools of thought consider these records to be identifiable to an individual and related to health controls; in which case records may need to be kept for 40 years. Check with your local regulatory authorities to determine their requirements.

For more information on the requirements of Fit Testing, refer to the AS/NZS 1715:2009

Refer to the following page for 3M Qualitative Fit Test products.



3M™ Qualitative Fit Test Kits

Conduct a fit test to ensure that a respirator with a tight fitting facepiece provides an adequate seal to the wearer's face.

The 3M Qualitative Fit Test apparatus FT-10 and FT-30 are designed for fit testing disposable and half face reusable respirators fitted with particulate or combination gas/vapour and particulate filters.

Features and Benefits:

- + Offers a fast and easy method for performing qualitative fit testing
- + No calibration of equipment required
- + No modification of facepiece required
- + Training resources available, please contact your local 3M representative for more information
- + Each kit contains a hood and collar assembly, two nebulisers, sensitivity solution, test solution and detailed instructions
- + Replacement solutions and accessories can be purchased separately
- + Available with Sweet (FT-10) or Bitter (FT-30) solutions



3M™ Qualitative Fit Test Apparatus

FT-10 Qualitative Fit Test Apparatus Kit - Sweet (Saccharin)
FT-30 Qualitative Fit Test Apparatus Kit - Bitter (Bitrex)

Sensitivity & Fit Test Solutions

FT-11 Sensitivity Solution (sweet)
FT-12 Fit Test Solution (sweet)
FT-31 Sensitivity Solution (bitter)
FT-32 Fit Test Solution (bitter)

Packaging for all solution: 55ml bottle

Accessories

FT-13 Nebuliser
FT-14 Test Hood
FT-15 Collar

3M™ Reusable Respirators Monitoring



The Importance of Monitoring

Knowing the specific contaminant and exposure levels is important to determine the appropriate respirator, and cartridge or filter for your work environment. This information will also help in estimating the life of selected 3M™ Gas and Vapour Cartridges.

If exposure levels are not known, advice and monitoring is required. While 3M does not carry out exposure assessments or monitoring, we do offer 3M™ Gas Diffusion Monitors (below) which can be a useful starting point.

3M™ Gas Diffusion Monitors

3M™ Gas Diffusion Monitors are simple and effective devices that collect certain airborne contaminants using the principle of diffusion.

Contact the 3M TechAssist Helpline for further information on chemicals which can be captured and approved laboratories for monitor analysis.

They assist in the assessment of exposure to workplace contaminants, both personal and background. These monitors are easy to use and simply clip onto the shirt, collar or pocket.

3M™ Organic Vapour Monitor

Uses a single wafer carbon sorbent for collecting organic vapours. The 3500 can be used for most applications, particularly suited to routine sampling of exposures to common solvents such as Toluene, Xylenes, Styrene, Naptha and White Spirits.

3M™ Organic Vapour Monitor with Backup Section

Uses a dual layer carbon sorbent for collecting organic vapours. Especially suited for monitoring compounds such as vinyl chloride, acrylonitrile, methylene chloride and butadiene for which activated carbon shows limited capacity. The 3520 has 2 layers for increased sampling capacity. Increased capacity may be necessary when sampling volatile compounds (compounds with low boiling points), high or unknown concentrations, complex mixtures or when sampling in high humidity.

3M™ Formaldehyde Monitor

Designed for measuring exposures to Formaldehyde such as those in the chemical, pulp and paper, foundry and textiles industries. The 3721 uses an impregnated filter to convert formaldehyde to a stable bisulfite addition product.

3M™ Ethylene Oxide Monitor

Designed for measuring exposures to Ethylene Oxide such as those in the pharmaceutical, health care and chemical industries. The 3351 utilises brominated carbon to collect and convert reactive ethylene oxide to a more stable derivative called 2-bromoethanol. They can be used for 15 minute STEL sampling.



Product Code: 3500



Product Code: 3520



Product Code: 3721



Product Code: 3351

3M™ Reusable Respirators Care & Maintenance



Why is Care & Maintenance so Important?

To optimise the effective lifetime of your reusable respirators and avoid the additional cost of replacement, regular maintenance is important.

3M™ Reusable Respirators require regular checks and maintenance to ensure optimum performance and protection for the wearer. In addition to potentially reducing protection levels, poor maintenance can also

reduce the effective lifetime of equipment, resulting in the additional cost of replacement. Guidance on the appropriate checks is provided in user instructions with each new product.

When should 3M™ Gas & Vapour Cartridges be replaced?

The service life (i.e. how long it will last) of any gas and vapour cartridges depends on a number of factors including: the type, volatility and concentration of contaminants in the air, breathing rate, humidity, temperature, exposure time and how the respirator is stored.

Replace both 3M Gas & Vapour Cartridges:

- + When the expiry date stamped on the sealed packet has elapsed.
- + Once opened, maximum use time is 6 months, even if not used (as per AS/NZS 1715:2009). The carbon will absorb contaminants from the general environment.
- + When the contaminant can be detected by smell or taste (as per AS/NZS 1715:2009).
- + In accordance with your established Cartridge Change Schedule (as per AS/NZS 1715:2009).
- + As per manufacturer guidelines (6098 AXP3 Cartridge)

3M™ Select and Service Life Software

3M have designed software to help you estimate how frequently certain 3M™ Gas and Vapour Cartridges should be replaced. You can then use this information to establish a cartridge change schedule. You will firstly need information on the chemical contaminants and exposure level in your working environment.

For more information contact your 3M representative, the TechAssist Helpline or visit our website. See back cover for contact details.

You can also ask for a copy of the 3M Select and Service Life Software Information Sheet.



When should 3M™ Particulate Filters be replaced?

The service life of a particulate filter is different to a gas and vapour cartridge.

Replace both 3M Particulate Filters:

- + When the expiry date stamped on the sealed packet has elapsed.
- + When breathing resistance becomes difficult (this will vary by wearer) As more particulates are collected in the filter, they take up space that air would usually flow through, therefore increasing breathing resistance.
- + When the filter becomes unacceptably dirty or physical damage occurs.

Cleaning Reusable Respirators

Proper cleaning and maintenance of respirators is an important area that is commonly overlooked. All respiratory protection equipment needs to be in good condition to work effectively and safely. A quick guide to cleaning 3M™ Reusable Respirators can be found in the Reusable Protection Guide below.

Reusable Respiratory Protection Guide

This small booklet has been designed to provide customers with a guide on cartridge and filter selection, how to clean a reusable respirator, when to change common spare parts, and frequently asked questions.



For more information about 3M Safety products or solutions please contact us:

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TechAssist Email techassist@mmm.com
Customer Service 1300 363 565
Website www.3m.com/au/PPESafety

NEW ZEALAND

TechAssist Helpline 0800 364 357
Customer Service 0800 252 627
Website www.3m.com/nz/PPESafety



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