

**3M** Science.  
Applied to Life.™

# 3M Solutions for the Scientific Research Facilities



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Available from:

 **fisher scientific**  
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# Health and Safety Solutions for the Pharmaceutical Industry.

## Top Pharmaceutical Manufacturing Processes and Tasks

### Active Pharmaceutical Ingredient

Helping health and safety leaders with the latest advancements in personal protection equipment when tackling the challenging occupational workplace hazards of API including highly potent APIs with an OEL lower than  $1\mu\text{g}/\text{m}^3$ .

### Formulation and Packaging

Leveraging personal protective equipment innovations when addressing occupational health and safety hazards for drug substance formulation and packaging.

### Maintenance and Cleaning

Delivering PPE solutions for potential occupational hazards with ongoing maintenance activities including decontamination or cleaning of cleanrooms or production suites with challenging cleaning agents such as peracetic acid and hydrogen peroxide.

## MOST COMMON HAZARDS IN PHARMACEUTICAL MANUFACTURING



RESPIRATORY



EXPOSURE TO NOISE



SKIN EXPOSURE



EYE AND FACE INJURIES



WORKING AT HEIGHTS



IGNITION



# Personal Safety Solutions

## RESPIRATORY PROTECTION EQUIPMENT



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### DISPOSABLE RESPIRATORS

#### 3M™ Aura™ Disposable Respirators 9300+ Series



The 3M™ Aura™ Disposable Respirator 9330+ provides comfort and style without compromising performance. With the aid of 3M's innovative low breathing resistance filter technology, you can breathe through the respirator with less effort. The 3M™ Aura™ 9330+ also features an embossed top panel that helps reduce the fogging of eyewear from warm, moist exhaled air.



### REUSABLE RESPIRATORS

#### 3M™ Secure Click™ Reusable Half Mask HF-800 Series



Designed with smart and intuitive features 3M™ Secure Click™ Reusable Respirator HF-800 Series is simple, comfortable and reliable. The new 3M™ Secure Click™ Series features a quick, simple cartridge/filter connection. It works just like a seat belt. Simply align the connections and push until you hear a click and feel confident that filters and cartridges are installed properly.



### POWERED AIR RESPIRATORS

#### 3M™ Versaflo™ Powered Air Turbo TR-800



TR-800 is an intrinsically safe powered air turbo from the 3M™ Versaflo™ range. When coupled with the Versaflo™ family of headtops, filters and accessories, TR-800 provides protection against a variety of gases and particulate hazards. Comfort is maximised with three user selectable flow rates and controlled airflow.



#### 3M™ Versaflo™ Powered Air Turbo TR-600



With user-selectable airflow rates, rugged construction and a comfortable design that will see you through the entire shift, the 3M™ Versaflo™ Powered Air Turbo TR-600 helps provide durable protection in harsh environments.



#### 3M™ Versaflo™ S-Series Hoods & Headcovers



3M™ Versaflo™ S-Series Hoods & Headcovers is a range of hoods and headcovers that can be used in many 3M™ powered air turbo and supplied air respirator combinations. They have been designed for a comfortable, stable fit and feature the innovative 3M™ Quick Release Swivel connection.



### APPLICATIONS

#### API production/(bio-) synthesis

- ▶ Synthesis / reaction
- ▶ Fermentation

#### Solid pharma production

- ▶ Raw material control
- ▶ Repackaging
- ▶ Raw material proportioning
- ▶ Granulation, mixing, sifting, drying
- ▶ Tablet compression / Capsule filling
- ▶ Tablet coating
- ▶ Primary packaging (blister pack)

#### Liquid/semi-solid Pharma Production

- ▶ Raw material proportioning
- ▶ Preparation of liquid / semi-solid
- ▶ Primary packaging (bottle / tube filling)
- ▶ Raw material control

#### Clean down and maintenance

- ▶ Reprocessing equipment for reuse
- ▶ Cleaning and maintenance of machinery
- ▶ Manual clean and disinfection

\*Product supply may be affected due to COVID-19 restrictions. Please contact 3M for latest product availability



# Personal Safety Solutions

## PROTECTIVE APPAREL



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## PROTECTIVE COVERALLS

### 3M™ Protective Coverall 4510



3M™ Protective Coverall 4510 offers economic protection against biological agents, hazardous dusts and limited liquid splashes. Our PE laminate includes micro pores which allow heat and moisture to evaporate from the skin and out through the suit offering a light and comfortable yet protective solution. Type 5/6.

### 3M™ Protective Coverall 4520



3M™ Protective Coverall 4520 has been engineered to offer multiple layers of SMMMS for effective hold out and strength at a lightweight 43gsm. Superbly breathable and soft with a cloth like feel it can be worn for extended periods comfortably and protects against static discharge, hazardous particulates and liquid splash Type 5/6.

\*A collared (non-hooded) version, 4520CS is also available.

### 3M™ Protective Coverall 4565



3M™ Protective Coverall 4565 has desirable comfort features and provides a strong barrier to certain chemicals, liquid sprays and particles. 3M protective coverall 4565 is non-microporous to offers chemical protection with permeation tested resistance and is certified to EN 14126 biological agents. Type 4/5/6.

## APPLICATIONS

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- ▶ Granulation, mixing, sifting, drying
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- ▶ Tablet coating
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### Liquid/semi-solid Pharma Production

- ▶ Raw material control
- ▶ Raw material proportioning
- ▶ Preparation of liquid / semi-solid
- ▶ Primary packaging (bottle / tube filling)
- ▶ Secondary packaging (card pack)

### Clean down and maintenance

- ▶ Cleaning and maintenance of machinery
- ▶ Manual clean and disinfection
- ▶ Reprocessing equipment for reuse

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EXPOSURE TO NOISE

# Personal Safety Solutions

## HEARING PROTECTION



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### PASSIVE HEARING

#### 3M™ PELTOR™ Earmuffs X Series



X series earmuffs combine 3M™ Peltors™ legendary hearing protection knowledge with our most advanced technologies, creating our most comfortable, durable earmuff. A broad range of protection in colour coded SNRs they make finding the correct protection level easier.



#### 3M™ E-A-R™ Express™ Earplugs



3M™ E-A-R™ Express™ Earplugs are our recognisable yellow and blue earplugs with a foam tip that's shaped and sized for a comfortable fit. They can reduce noise levels by 28 dB and have a hygienic insertion grip.



#### 3M™ E-A-R™ UltraFit™ 20 Earplugs



3M™ E-A-R™ UltraFit™ 20 Earplugs are our corded, reusable and silicone low attenuating earplugs. Protecting up to 20 dB, when matched to the noise level they allow conversation whilst protecting against hearing loss.



### COMMUNICATIONS SOLUTIONS

#### 3M™ PELTOR™ LiteCom Headsets



3M™ PELTOR™ LiteCom Headsets are our hearing protectors with a built-in pre-programmed two-way communication radio and an integrated noise cancelling microphone. They're built for demanding environments to help you communicate efficiently over hazardous noise.



### APPLICATIONS

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#### Solid pharma production

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- ▶ Tablet compression / Capsule filling
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- ▶ Primary packaging (blister pack)
- ▶ Secondary packaging (card pack)

#### Liquid/semi-solid Pharma Production

- ▶ Raw material proportioning
- ▶ Preparation of liquid / semi-solid
- ▶ Primary packaging (bottle / tube filling)
- ▶ Raw material control
- ▶ Secondary packaging (card pack)

#### Clean down and maintenance

- ▶ Reprocessing equipment for reuse
- ▶ Cleaning and maintenance of machinery
- ▶ Manual clean and disinfection

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# Personal Safety Solutions

## EYE PROTECTION



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### SAFETY GLASSES

#### 3M™ SecureFit™ Safety Glasses 400 Series



3M™ SecureFit™ Safety Glasses 400 Series comprise of a rimless lens and wide flexible temple arms for solid side protection and popular to be used in combination with Ear Muffs. Temples also feature 3M™ Pressure Diffusion Temple Technology (PDT) which allows the safety spectacle temples to naturally adjust to individuals head sizes giving wearers a secure and comfortable fit. Reduces slippage from head movements. Contoured brow guard rests comfortably against forehead and helps provide additional coverage from flying particles. Soft nose bridge for a comfortable fit. They are available in 7 lens options.



#### 3M™ Solus™ 1000 Series Safety Glasses



A fogged lens can be frustrating and challenging. Removing eyewear to wipe away fog can expose eyes to potentially dangerous workplace impact hazards and debris. 3M™ Solus™ 1000 series protective eyewear features Scotchgard™ Anti-Fog lens coating which helps workers see clearly, longer – providing longer lasting fog resistance than traditional anti-fog coatings. The 3M™ Scotchgard™ Protector Anti-Fog Coating resists fogging longer than traditional antifog coatings, up to 25 washings with water. Based on 3M internal testing of tap water wash cycles followed by anti-fog testing per EN168 test method.



### OVERSPECTACLES

#### 3M™ SecureFit™ Overspectacles 3700 Series



3M™ SecureFit™ Overspectacles 3700 Series are our safety overspectacles designed for people with prescription glasses. They feature adjustable ratchet temples with Pressure Diffusion Temple (PDT) technology to ensure a close fit and a soft touch nose piece to help provide comfort. The polycarbonate lens is available with 3M™ Scotchgard™ Anti-Fog and anti-scratch coatings for increased durability and improved vision. Available in three temple arm colours and four lens options.



### SAFETY GOGGLES

#### 3M™ GoggleGear™ Safety Goggles 500 Series



3M™ Goggle Gear 500 Series features a low-profile design with an adjustable strap, indirect ventilation and 3M™ Scotchgard™ Protector Anti-Fog/Anti-Scratch Coating. Can be disinfected with diluted bleach soaking or alcohol wipes and sterilised by autoclave without losing its mechanical or anti-fog performance - please refer to Note.



\*Note: Sterilisation by autoclaving - internal testing has been carried out on GG501NSGAF-EU samples subjected to 10x, 20x, 30x and 40x automatic cleaning and disinfection and sterilisation by autoclaving at 121°C. Testing was then carried out on the following properties:  
 • mechanical performance (BT) / • the anti-fog properties (K)  
 • the anti-scratch properties (N) / • optical performance (Class 1)  
 Based on the internal testing the claims remain valid.

### APPLICATIONS

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- ▶ Synthesis / reaction
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#### Solid pharma production

- ▶ Raw material control
- ▶ Repacking
- ▶ Raw material proportioning
- ▶ Granulation, mixing, sifting, drying
- ▶ Tablet compression / Capsule filling
- ▶ Tablet coating
- ▶ Primary packaging (blister pack)
- ▶ Secondary packaging (card pack)

#### Liquid/semi-solid Pharma Production

- ▶ Raw material proportioning
- ▶ Preparation of liquid / semi-solid
- ▶ Primary packaging (bottle / tube filling)
- ▶ Raw material control
- ▶ Secondary packaging (card pack)

#### Clean down and maintenance

- ▶ Reprocessing equipment for reuse
- ▶ Cleaning and maintenance of machinery
- ▶ Manual clean and disinfection



# Personal Safety Solutions

## HEAD & FACE PROTECTION



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### HEAD PROTECTION

#### 3M™ SecureFit™ X5500 Safety Helmet



3M™ SecureFit™ Safety Helmet X5500 Series provides secure, comfortable and adjustable head protection for workers in a variety of situations. Our helmets feature adjustable positioning and easy-turning, 4-point ratchet suspension systems that features the exclusive 3M™ Pressure Diffusion Technology. X5500 Series safety helmets have 3M™ UVicator™ Sensors that indicates damaging levels of ultraviolet (UV) light.

They meet the EN397 standard for general industrial use and are available in a variety of colours with or without vents.



#### MAINTENANCE TASKS

##### API production/(bio-) synthesis

- ▶ Synthesis / reaction
- ▶ Fermentation

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### FACE PROTECTION

#### 3M™ U5B-CE Faceshield Holder for SecureFit™ Safety Helmet



The U5B-CE Faceshield Holder connects a variety of 3M faceshields to the 3M™ SecureFit™ Safety Helmets X5000 and X5500.



#### 3M™ 5F-11 Face Shields



3M™ Faceshield, 5F-11 is our optical class 1, clear curved polycarbonate faceshield with anti-fog and anti-scratch coating. It's compatible with 3M™ V5 Faceshield System for mounting on 3M™ SecureFit™ X5500 Safety Helmet.



#### 3M™ WP Series Clear Visors



3M™ W-Series Faceshields offer optical clarity and high-performance durability in unpredictable environments that involve exposure to impact hazards and flying debris.



#### 3M™ Helmet Integrated Safety Glasses V9C



3M™ Hard Hat Integrated Safety Glasses, V9C, are our clear lens safety glasses designed to attach to 3M™ Hard Hats for protection from particles and UV.



# Pharmaceutical Industry product range



Page	Product Description	Product Code	Product in website
3	3M™ Versaflo™ S-Series Hood, Large, S-433L	10450180	<a href="#">+</a>
3	3M™ Versaflo™ S-Series Hood, Small, S-433S	10357839	<a href="#">+</a>
3	3M™ Aura™ Disposable Respirator, FFP2, Valved, 9322+	10116544	<a href="#">+</a>
3	3M™ Aura™ Disposable Respirator, FFP2, Unvalved, 9320+	10583051	<a href="#">+</a>
3	3M™ Aura™ Disposable Respirator, FFP1, Valved, 9312+	12672545	<a href="#">+</a>
3	3M™ Aura™ Disposable Respirator, FFP1, Unvalved, 9310+	11717574	<a href="#">+</a>
3	3M™ Aura™ Disposable Respirator, FFP3, Valved, 9332+	11346974	<a href="#">+</a>
3	3M™ Aura™ Disposable Respirator, FFP3, Unvalved, 9330+	12602555	<a href="#">+</a>
3	3M™ Versaflo™ Powered Air Turbo Starter Kit, TR-619E	15559255	<a href="#">+</a>
3	3M™ Versaflo™ Powered Air Turbo Starter Kit, TR-619UK	15710088	<a href="#">+</a>
3	3M™ Versaflo™ Powered Air Purifying Respirator Starter Kit, Intrinsically Safe, TR-819E, 1 EA/Case	16358981	<a href="#">+</a>
3	3M™ Versaflo™ Intrinsically Safe Powered Air Turbo Starter Kit TR-819UK	16426370	<a href="#">+</a>
3	3M™ Secure Click™ Half Facepiece Reusable Respirator with Speaking Diaphragm HF-802SD Medium	16446370	<a href="#">+</a>
3	3M™ Secure Click™ Half Facepiece Reusable Respirator with Speaking Diaphragm HF-803SD Large	16476370	<a href="#">+</a>
3	3M™ Secure Click™ Half Facepiece Reusable Respirator with Speaking Diaphragm HF-801SD Small	16486370	<a href="#">+</a>
4	3M™ Protective Coverall, 4520- L	12642565	<a href="#">+</a>
4	3M™ Protective Coverall, 4520- XL	12642595	<a href="#">+</a>
4	3M™ Protective Coverall, 4520-2XL	12652595	<a href="#">+</a>
4	3M™ Protective Coverall, 4565-L	13473336	<a href="#">+</a>
4	3M™ Protective Coverall, 4565-XL	12682595	<a href="#">+</a>
4	3M™ Protective Coverall, 4565-2XL	12692595	<a href="#">+</a>
4	3M™ Protective Coverall, 4510-L	12962315	<a href="#">+</a>
4	3M™ Protective Coverall, 4510-XL	12972315	<a href="#">+</a>
4	3M™ Protective Coverall, 4510-2XL	12982315	<a href="#">+</a>
4	3M™ Protective Coverall 4520CS, XL	15700068	<a href="#">+</a>
4	3M™ Protective Coverall 4520CS, L	15720068	<a href="#">+</a>
4	3M™ Protective Coverall 4520CS, 2XL	15730068	<a href="#">+</a>



# Pharmaceutical Industry product range



Page	Product Description	Product Code	Product in website
5	EX-01-001 EXPRESS CORDED CEN 400 PR/CASE	15729047	<a href="#">+</a>
5	EX-01-002 EXPRESS - UNCRDD CEN 400 PR/CS	12394749	<a href="#">+</a>
5	3M™ E-A-R™ Ultrafit™ 20 Earplugs	11709315	<a href="#">+</a>
5	X1A EU EARMUFF HEADBAND 3M PELTOR	13479918	<a href="#">+</a>
5	X2A EU EARMUFF HEADBAND 3M PELTOR	13489918	<a href="#">+</a>
5	MT53H7A4400-EU LiteCom PMR 446 MHz headb	15749997	<a href="#">+</a>
5	MT53H7P3E4400-EU LiteCom PMR 446 MHz	15759997	<a href="#">+</a>
5	MT53H7B4400-EU LiteCom PMR 446 MHz neckb	15769997	<a href="#">+</a>
6	3M™ Goggle Gear™ 500 Safety Goggles, neoprene headband, Scotchgard™ Anti-Fog / Anti-Scratch Coating (K&N), Clear Lens, GG501NSGAF-EU	17227680	<a href="#">+</a>
6	3M™ Goggle Gear™ 500 Safety Goggles, Scotchgard™ Anti-Fog / Anti-Scratch Coating (K&N), GG501SGAF-EU	15603074	<a href="#">+</a>
6	3M™ Solus™ 1000 Safety Glasses, Green/Black frame, Scotchgard™ Anti-Fog / Anti-Scratch Coating (K&N), Clear Lens, S1201SGAF-EU	15707717	<a href="#">+</a>
6	3M™ Solus™ 1000 Safety Glasses, Blue/Black frame, Scotchgard™ Anti-Fog / Anti-Scratch Coating (K&N), Clear Lens, S1101SGAF-EU	15767717	<a href="#">+</a>
6	3M™ SecureFit™ 400 Safety Glasses, Red/Grey frame, Scotchgard™ Anti-Fog / Anti-Scratch Coating (K&N), Clear Lens, SF401SGAF-RED-EU	17267660	<a href="#">+</a>
6	3M™ SecureFit™ 400 Safety Glasses, Blue/Grey frame, Scotchgard™ Anti-Fog / Anti-Scratch Coating (K&N), Clear Lens, SF401SGAF-BLU-EU	17207670	<a href="#">+</a>
6	3M™ SecureFit™ 400X Safety Glasses, Green/Clear frame, Scotchgard™ Anti-Fog / Anti-Scratch Coating (K&N), Clear Lens, SF401XSGAF-GRN-EU	16416380	<a href="#">+</a>
6	3M™ SecureFit™ 400X Safety Glasses, Blue/Grey frame, Scotchgard™ Anti-Fog / Anti-Scratch Coating (K&N), Clear Lens, SF401XSGAF-BLU-EU	16426380	<a href="#">+</a>
6	3M™ SecureFit™ 3700 Overspectacles, Blue Frame, Scotchgard™ Anti-Fog / Anti-Scratch Coating (K&N), Clear Lens, SF3701SGAF-BLU-EU	16863563	<a href="#">+</a>
6	3M™ SecureFit™ 3700 Overspectacles, Lime Green Frame, Scotchgard™ Anti-Fog / Anti-Scratch Coating (K&N), Clear Lens, SF3701SGAF-GRN-EU	16893563	<a href="#">+</a>
6	3M™ SecureFit™ 3700 Overspectacles, Blue Frame, Brow Guard, Scotchgard™ Anti-Fog / Anti-Scratch Coating (K&N), Clear Lens, SF3701XSGAF-BLU-EU	17237710	<a href="#">+</a>
6	3M™ SecureFit™ 3700 Overspectacles, Orange Frame, Scotchgard™ Anti-Fog / Anti-Scratch Coating (K&N), Clear Lens, SF3701SGAF-ORG-EU	16833573	<a href="#">+</a>
7	3M™ WP98 Series Visor, Acetate, Clear, 71340-00000CP	15709847	<a href="#">+</a>
7	5F-11, FACE SHIELD, PC, CLEAR	15170229	<a href="#">+</a>
7	3M™ Helmet Integrated Safety Glasses, Clear, V9C	17237640	<a href="#">+</a>
7	X5501V-CE SF HELMET WHT VENT 4/CS	17297670	<a href="#">+</a>
7	U5B-CE FACESHIELD HOLDER 10/CS	17207680	<a href="#">+</a>

## DISCLAIMER

This guide is only an outline. It should not be used as the only means for selecting a personal protective equipment (PPE). Details regarding performance and limitations are set out on the PPE packaging and user instructions. Before using any item of PPE, 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 PPE 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 PPE.

Specific country legislation must be observed. The use of Isocyanates may require use of supplied air respiratory protective equipment. The use of solvent based paints and chemicals may require use of ATEX approved or other suitable personal protective equipment.



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