



3M Safety Solutions for
Healthcare and Emergency Preparedness



**A Partner in
Preparedness**

Personal Protective Solutions to help support...

Management of Patients with Confirmed Infection or Persons Under Investigation (PUI)

Healthcare Workers (i.e. Nurses, Doctors)
Infection Control/Prevention Managers

Management of Hazardous Drug Handling Concerns within Healthcare

Employee Health Managers, Pharmacy Managers, Industrial Hygienists
All personnel who handle the receipt, storage, compounding, repackaging, dispensing, administration, neutralization and disposing of HDs

Natural Disaster Recovery & Cleanup

Offices of Emergency Management
Healthcare Coalition Committees
Search and Rescue Teams
Public Health and Safety
Medical Examiners – Coroner

Patient Decontamination/First Receiver Programs

First Receivers
Decontamination Managers
Emergency Managers

On-Site Hazardous Material Incident Management and Response

HAZMAT technicians and Emergency Managers that are responsible for detecting, containing, and removing any release or potential release of hazardous substances in order to control or stabilize hazardous material incidents

Through decades of global emergencies,
3M has been there.

	Health Epidemics	Natural Disasters	Accidents	Terrorism
2001	Swine Flu Ebola (filovirus)			9/11 World Trade Center Anthrax
2003	Chicken Flu SARs (CoV)	Forest Fire (France)		Iraq War
2004		Typhoons & Floods (SE Asia) Earthquakes (Japan)	Coal Mine Explosions (China) Train Explosion (North Korea)	Madrid Train Bombings (Spain) Besian School Hostages
2005	Avian Flu (H5N1)	Pakistan (Kashmi) Earthquake Hurricane Katrina	Chemical Plant Explosions (China)	London Transport Bombings
2006	Avian Flu (H5N1)	Equador Volcano Indonesia Earthquake/Tsunami	Nigerian Oil Blast	
2007	Avian Flu (H5N1)		Korean Oil Spill	
2008		Hurricane Ike California Wildfires		Iraq/Afghan War
2009	Pandemic H1N1/09 Virus			
2010	Pandemic H1N1/09 Virus			
2011		Christchurch Earthquake, NZ Hurricane Irene Japan Tsunami		
2012		Japan Tsunami Super Storm Sandy		
2013	Avian Flu (H7N1) MERS	Moore Oklahoma Tornado	SEA Haze (SE Asia)	
2014	Ebola (filovirus)			Rising ISIS Conflict
2015	MERS			Charlie Hebdo Shooting (Paris) San Bernardino Shooting (CA)
2016	Zika	Baton Rouge Flooding Hurricane Matthew		Orlando Nightclub Shooting (FL) Bastille Day Attack (Nice, France)
2017	Influenza A (H3N2)	Hurricanes Irma and Harvey California Wildfires		Las Vegas Harvest Musical Texas First Baptist Church



3M emergency preparedness
specialists are here to help
before, during, and after
a crisis breaks.

Examples of Recent Incidents Requiring Emergency Response

From consulting with government agencies to providing personal protective products, 3M continues to be a global safety leader during domestic and international crises.

www.3M.com/PPEforEP

3M can help identify your risk and assist in your PPE demand planning

High Probability Low Consequence	High Probability High Consequence
Low Probability Low Consequence	Low Probability High Consequence



The hardest category to prepare for, and the category where most emergency management plans fail.



A dedicated national team of 3M Emergency & Healthcare Preparedness Specialists are ready to provide support for your PPE management:

- Demand Planning
- Help Meet Your Readiness Levels
- Personal Protective Equipment Education
- Technical Support
- Product/Part Selection Guidance and Identification
- Train-the-Trainer
- Inventory Audits
- Test & Evaluation

www.3M.com/PPEforEP

Other Resources

[CDC: PPE Calculator For Hospitals](#)

[OSHA – Proposal Guidance on Stockpile of Respirators](#)

Are you in compliance with the new Centers for Medicare (CMS) Rule?

On September 8, 2016 the Federal Register posted the final rule Emergency Preparedness Requirements for Medicare and Medicaid Participating Providers and Suppliers. Health care providers and suppliers affected by this rule must comply and implement all regulations one year after the effective date, on November 16, 2017.

Purpose: To establish national emergency preparedness requirements to ensure adequate planning for both natural and man-made disasters, and coordination with federal, state, tribal, regional and local emergency preparedness systems. The following information will apply upon publication of the final rule:

- Requirements will apply to all 17 provider and supplier types.
- Each provider and supplier will have its own set of Emergency Preparedness regulations incorporated into its set of conditions or requirements for certification.
- Must be in compliance with Emergency Preparedness regulations to participate in the Medicare or Medicaid program.

The Rule includes emergency preparedness Conditions of Participation and Conditions for Coverage (CoPs and CfCs) for 17 healthcare provider and supplier types identified within the Rule. CoPs and CfCs are the minimum health and safety standards that must be met in order for providers and suppliers to obtain a Certification of Compliance from CMS - which is necessary to bill the Nation's largest insurance company, Medicare.

3M can provide protective equipment you need before, during, and after a crisis.

<https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertEmergPrep/Emergency-Prep-Rule.html>

Hazard Assessment and Insights for Protective Solutions

3M provides online information that identifies some of the hazards experienced by healthcare personnel, first receivers, first responders, and workers involved in post-disaster recovery & cleanup.



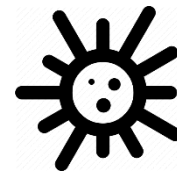
[Hazards: Hurricanes, Floods, and Personal Protective Equipment](#)



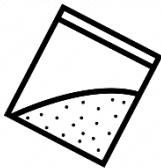
[Hazards: Wildfires](#)



[Hazards: Ebola](#)



[Influenza \(Flu\) Virus Information and Personal Protective Equipment](#)



[Facing the Fears of Fentanyl Exposure: Protecting Law Enforcement](#)



[Respiratory Protection Guidance for Hazardous Drug Handling in Healthcare](#)



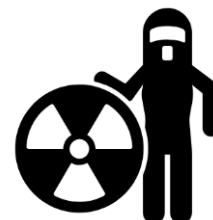
[Law Enforcement Industry PPE Safety](#)



[3M | Scott Insights on Fire Safety and Solutions](#)



[CBRN PAPR: Be Prepared, Breathe Easy](#)



[Personal protective equipment for hazardous materials incidents - CDC](#)



Science.
Applied to Life.™



3M™ Health Care Particulate Respirators and Surgical Masks

**Help protect your
patients and yourself**

Your respiratory protection program

Our 3M Center for Respiratory Protection and a 3M Emergency and Healthcare Specialist can help provide you with the information and details you need.

General steps to set up an OSHA respiratory protection program



[1. Exposure Assessment](#)



[2. Written Program](#)



[3. Respirator Selection](#)



[4. Medical Evaluation](#)



[5. Fit Testing](#)



[6. Training & Maintenance](#)

[3M Center for Respiratory Protection](#)

Other Resources

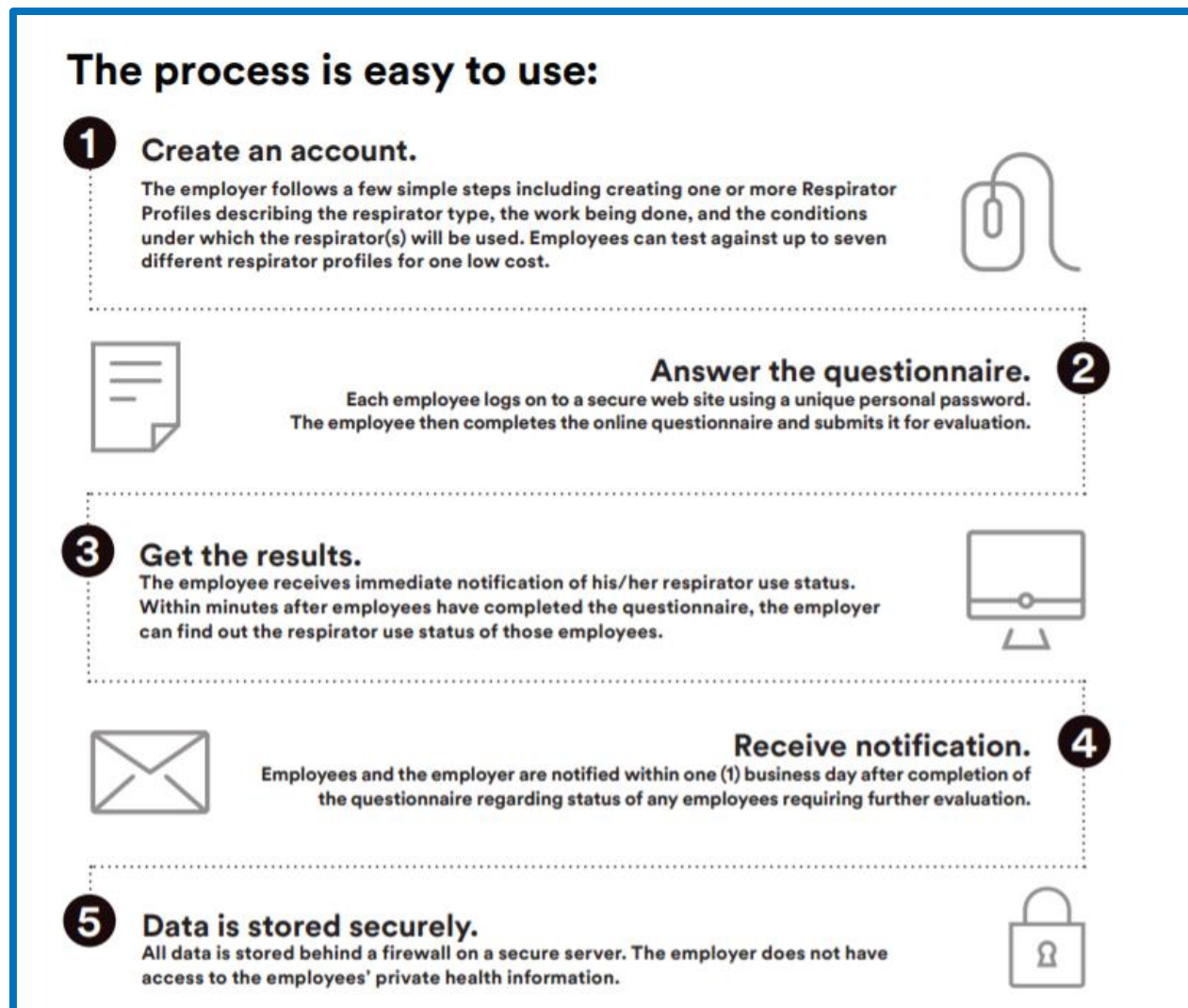
[OSHA: Respiratory Protection](#)

[OSHA NIOSH CDC - Hospital Respiratory Protection Program Toolkit](#)

[Joint Commission – Implementing Hospital Respiratory Protection Programs: Strategies from the Field](#)

3M™ Online Medical Evaluations

To save you time, money, and the hassle of coordinating clinic appointments, 3M facilitates a convenient, online process for employers to obtain medical evaluation of respirator wearers as required by the OSHA Respiratory Protection Standard (29 CFR 1910.134**). The Online Respirator Medical Evaluation has a web-based, interactive questionnaire, which gives you immediate notification of the results.



Convenience

- Respirator medical evaluations for all brands and types of respirators
- Most employees do not need to leave the work site
- Questionnaires available in both English and Spanish
- Evaluations can be taken 24 hours/day, 7 days/week from any computer with internet access

Speed

- It takes most employees only 15 to 30 minutes to complete the questionnaire

Consistency

- All employees are evaluated using the same expanded OSHA Respirator Medical Evaluation Questionnaire

Quality

- The expanded OSHA Respirator Medical Evaluation Questionnaire incorporates work conditions and respirator types
- Board-certified occupational medicine physicians complete the reviews and, when necessary, make recommendations for medical follow-up

Mask or Respirator

“What’s right for me?”



Helps reduce the risk of large particles expelled by the wearer—such as spit and mucous—from reaching patients.

Often fits loosely, leaving gaps between the mask and your face. Does not require fit testing or user seal checks.

Helps protect the sterile surgical field from contamination by exhaled particles. Fluid-resistant surgical masks help reduce your exposure to blood and body fluids.

Can be cleared for sale by the Food and Drug Administration (FDA).

Can be tested for Particle Filtration Efficiency (PFE) and Bacterial Filtration Efficiency (BFE), plus fluid resistance, differential pressure and flammability.

Intended Use

Fit

Applications

Approvals

Testing



Helps reduce wearer exposure to certain airborne particles.

Designed to fit tightly, creating a seal between your face and the respirator. Requires fit testing and user seal checks.

Designed to help reduce your exposure to certain airborne particles, including those generated by electrocautery, laser surgery and other powered medical instruments. CDC guidelines state N95 respirators may be used for M. tuberculosis exposure control.* **NOTE:** No safe levels of exposure to TB have been defined.

* Centers for Disease Control and Prevention. 2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings.

Can be tested and certified by NIOSH. Cleared by the FDA as a surgical mask.

Must meet stringent test criteria stated in 42 CFR Part 84. Also tested for fluid resistance and flammability. Additional tests can include PFE, BFE and differential pressure.

3M™ Health Care Particulate Respirator and Surgical Masks

Proprietary filter media enhances performance and comfort

3M™ Health Care Particulate Respirator and Surgical Masks are scientifically designed to help make breathing easier and more comfortable. Our unique manufacturing process injects a powerful electrostatic charge into an open formation material, improving the efficiency of particle removal while allowing more air to pass through. The result is a highly effective respirator, so you can focus on caring for your patients.

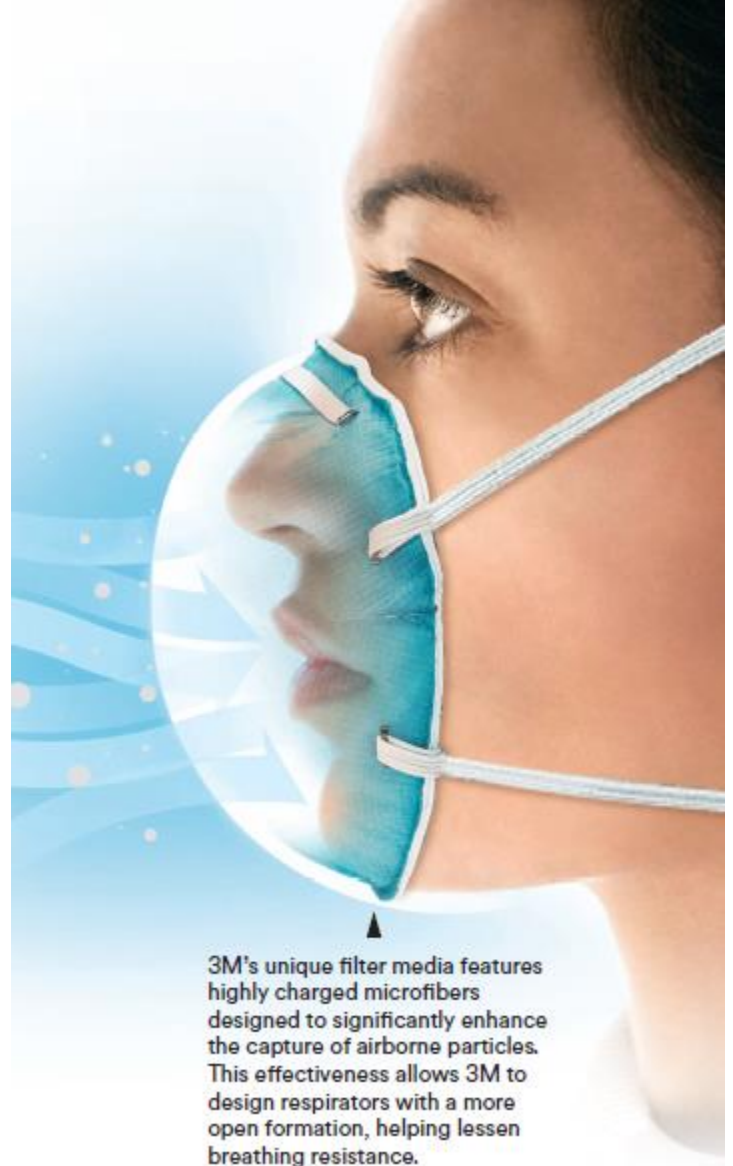
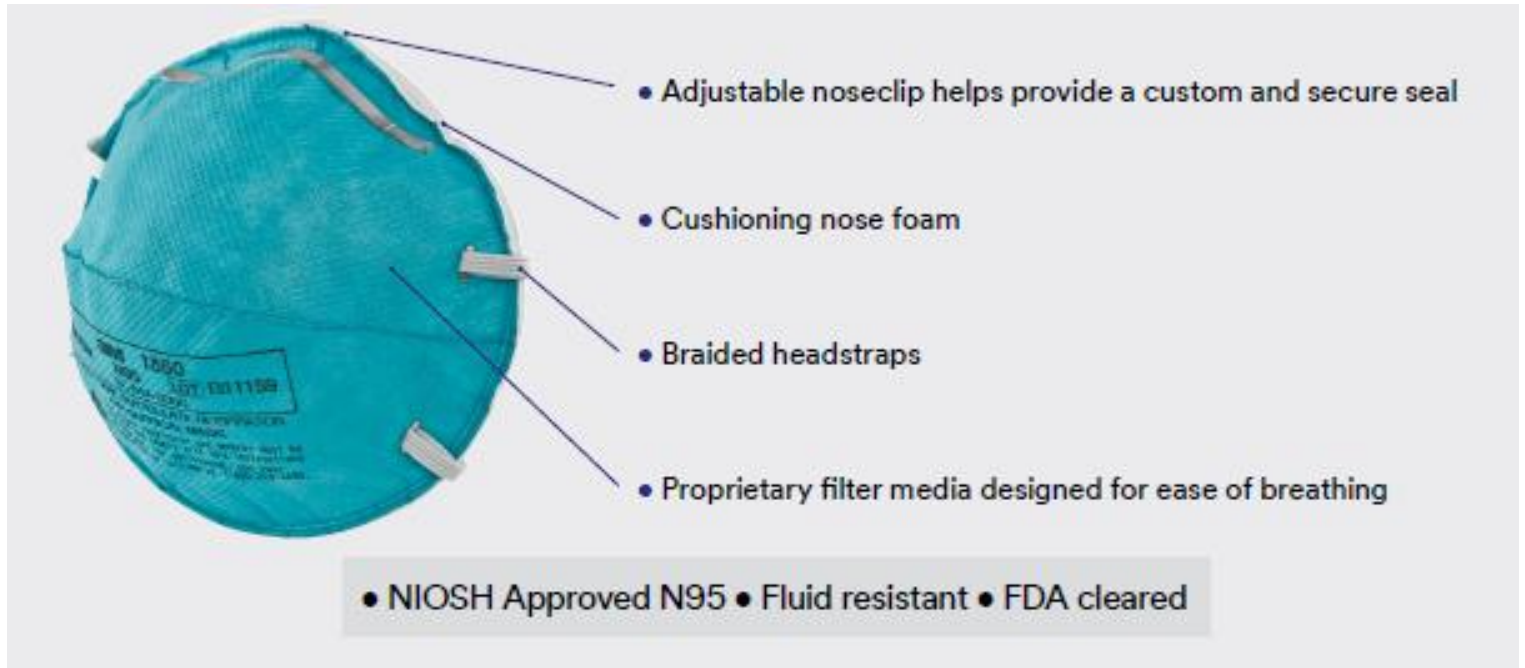


Illustration of how 3M's electrostatically charged microfibers—magnified 10,000 times—attract and capture particles from the air.

3M™ Health Care Particulate Respirator and Surgical Masks 1860/1860S



Patient safety is your first priority. But it's just as important to take care of yourself so you can continue to care for others. The 1860 and 1860S respirators help provide respiratory protection that have been trusted for years.

- Collapse-resistant cup-shape design
- Braided head straps for comfort
- Available in two sizes
- Fits a broad range of faces

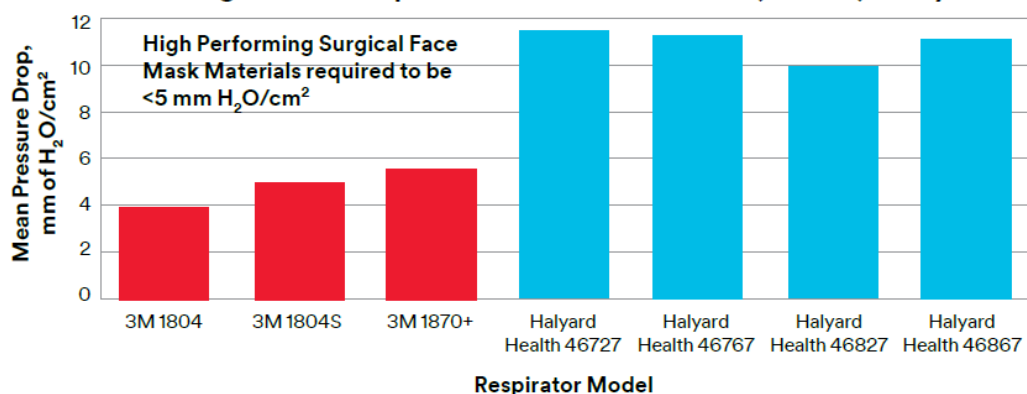
3M™ Health Care Particulate Respirator and Surgical Mask 1860

Learn more at: www.3M.com/healthcaremasks

3M™ Health Care Particulate Respirator and Surgical Masks

- NIOSH-Approved N95 • Fluid Resistant • FDA Cleared

Surgical N95 Respirator Differential Pressure (Delta-P) Study



Compared to the Halyard Health models shown, VFlex™ 1804/1804S is a NIOSH-approved surgical N95 respirator that more closely approaches the material breathability of a traditional surgical mask.^{†*}

[†]Testing per MIL-SPEC 36945C 4.4.1.2 using 4.9cm² sample at 8L/min. Source: Representative pressure drop performance from internal testing of multiple lots of all models, November 2017. Selection of respirator models, testing protocol, data generation and conclusions were reviewed and approved by an expert from the University of Illinois at Chicago. Statistically different per T-tests (P-value <0.0001).

*Performance requirement ASTM F2100-11 medical facemask materials classification.



[3M™ Aura™ Health Care Particulate Respirator and Surgical Mask 1870+, N95](#)



[3M™ VFlex™ Health Care Particulate Respirator and Surgical Mask 1804](#)

Learn more at: www.3M.com/healthcaremasks

Other Resources

[CDC Guidance for selection and use of PPE in healthcare settings](#)

3M can help you meet your required OSHA annual respiratory protection fit testing

Overview of the Fit Testing Process

Tight-fitting respirators must seal to the wearer's face in order to provide expected protection. This includes disposable respirators. Therefore, fit testing is required in the US by the Occupational Safety and Health Administration (OSHA) before a user wears a mandatory respirator on the job, and must be assessed at least annually. In addition, fit tests should be performed:

- Whenever a different size, style, model or make of respirator is used.
- When any facial changes occur that could affect fit, such as significant weight fluctuation or dental work.

See 29 CFR 1910.134 for more information.

3M Emergency & Healthcare Specialists provide “Train-the-trainer” education, resources and products help you meet your fit testing requirement and can facilitate transition to new 3M respiratory products from legacy systems.

[3M Center for Respiratory Protection: Fit Testing](#)



[3M™ Qualitative Fit Test Apparatus FT-10, Sweet](#)

[3M™ Qualitative Fit Test Apparatus FT-30, Bitter](#)

- Fit test kit for respirators
- Kit includes: hood, collar, 2 nebulizers, sensitivity solution, fit test solution and laminated user instructions
- FT-10 uses a sensitivity and test solution of sodium saccharin that produces a sweet-tasting aerosol
- FT-30 uses a sensitivity and test solution of denatonium benzoate to produce a very bitter taste

Other Resources

[OSHA Respirator Fit Testing](#)

3M supports sustainable, convenient, and cost-effective options for disposing your expired 3M N95 Respirators

Option 1: Donation

Aging product with at least 12 months of shelf life remaining can be put in the hands of groups in need. We'll help you identify donation options for your N95 stockpile.

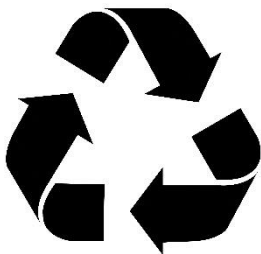
3Mgives

3Mgives improves lives and builds sustainable communities through social investments and thoughtful engagement of 3Mers worldwide. 3M was one of the first companies to establish a foundation in 1953, and since that time the company has contributed \$1.45 billion in cash and in-kind gifts to community partners.

3Mgives continues to support initiatives that have a real impact in communities and that provide solutions to some of the world's most pressing challenges. Our investments are more impactful as a result of partnerships with organizations with a proven track record for delivering results



[Learn more about 3Mgives](#)



Option 2: Recycling

Expired/aging product can be recycled into new plastic products. Deltco Plastics is one provider with experience on recycling disposable respirators. Contact Deltco or your recycling provider to confirm eligible products, quantities and fees (if any).

Deltco Plastics: Ashland, Wisconsin. 715-682-9007

Note: The options on this page are not exclusive, and other options or partners may be available. The above content merely presents sustainable options that your organization may wish to consider, and (with the exception of 3Mgives), **3M takes no ownership or responsibility, and makes no representations or warranties**, for outcomes or actions associated with the listed organizations.

5 Reasons

To consider a Powered Air Purifying Respirator (PAPR) for healthcare

1. Emerging Disease

In the event of a new or re-emerging highly infectious diseases, are you adequately prepared with your current respirators?

2. Contact Precautions ⁺

Do you have contact precautions used along with standard precautions as an additional effort to prevent the spread of infection?

3. Hazardous Drug Handling

Have you considered skin and face protection along with respiratory protection for particulates and chemicals for the various tasks and interactions with hazardous drugs?

4. Facial Hair & Fit Testing

Do your employees have facial hair that interferes with tight-fitting respirators, or are for other reasons unable to meet the fit testing requirements?

5. Comfort & Interpersonal Communication

Will your healthcare professionals benefit from a respirator designed to help make breathing easier?

Will you help your patients feel at ease by fully seeing your face and facial expressions?



Other Resources

[+CDC Guidance for selection and use of PPE in healthcare settings](#)

Key Benefits of 3M™ Versaflo™ PAPR Systems



Easy to assemble, disassemble, and troubleshoot



Lightweight, and compact



Low battery and low flow alarms



Intuitive User Interface (Blue components represent user touch points)



Lightweight hoods may help minimize neck strain or fatigue compared to head mounted PAPR



3M™ Versaflo™ TR-300+ Powered Air Purifying Respirators



3M™ Versaflo™ TR-600 Powered Air Purifying Respirators

Are you ready for USP 800?

What is USP 800?

USP 800 was published on February 1, 2016 with an implementation date of December 2019.

The purpose of the chapter is to describe practice and quality standards for handling hazardous drugs in health care settings and help promote patient safety, worker safety, and environmental protection. Chapter <800> was written to protect all workers, patients and the general public who may be accessing facilities where hazardous drugs (HDs) are prepared. This includes but is not limited to pharmacists, technicians, nurses, physicians, physician assistants, home healthcare workers, veterinarians, and veterinary technicians.

The chapter applies to all health care personnel who handle HD preparations and all entities that store, prepare, transport, or administer HDs, such as pharmacies, hospitals and other health care institutions, patient treatment clinics, physicians' practice facilities, or veterinarians' offices.



Spills, Cleaning, and Disposal

All personnel who perform deactivation, decontamination, cleaning, and disinfection activities in HD handling areas must be trained in appropriate procedures to protect themselves and the environment from contamination. All personnel performing these activities must don appropriate PPE resistant to the cleaning agents used, including two pairs of chemotherapy gloves and impermeable disposable gowns. Additionally, eye protection and face shields must be used if splashing is likely. If warranted by the activity, respiratory protection must be used.

[3M Guidance for Hazardous Drugs Handling in Healthcare Settings](#)

3M™ Versaflo™ TR-300+ Healthcare PAPR Kits

User-friendly interface

Color-indicated, interactive touch points

Monitor the operating status of your filter and battery

Headtop Options

Wide selection of disposable and reusable head-covers and hoods

2 Alarms

Audible and visual alarms for filter load and low battery

Connect quickly

Our innovative Quick Release Swivel (QRS) connects quickly

Constant airflow

Even as the battery discharges, or the filter becomes loaded with particulates, the unit delivers a steady flow of air

IP53 rating

Suitable for use in decontamination showers



TR-300N+ HKS (Small) TR-300N+ HKL (Medium-to-Large)

The 3M Versaflo-TR-300+ healthcare kits are complete, ready-to-use PAPR systems with a high efficiency particulate (HEPA) filter and disposable headcover:

- S-133S or S-133L Head-cover
- BT-30 Length Adjusting Breathing Tube
- TR-991 Carrying Bag
- TR-302N PAPR Unit
- TR-327 Easy Clean Belt
- TR-332 High Capacity Battery
- TR-341N Battery Charger Kit
- TR-3712N HEPA Filter
- TR-3600 Pre-filter
- TR-971 Airflow Indicator

[3M™ Versaflo™ Healthcare PAPR Kit TR-300N+ HKS, Small - Medium](#)

[3M™ Versaflo™ Healthcare PAPR Kit TR-300N+ HKL, Medium - Large](#)

[Upgrade to Versaflo](#)

3M™ Versaflo™ TR-600 Healthcare PAPR Kits

Filtration options

Option to add cartridges to protect against certain gases and vapors, including certain organic vapors, combined with high efficiency filters for protection against particulates.

Longer run time

Higher battery capacity with charge-level indicator to keep you prepared and informed.



IP-67*

*Fully submersible product with cleaning & storage kit in place (with optional cleaning plugs [sold separately] installed) for quick and easy decontamination. *IP-54 Rating while in use.*

Three alarms

Visual – Audible – Vibratory

TR-600N-HKS (Small) TR-600N-HKL (Medium-to-Large)

The 3M Versaflo TR-600 healthcare kits are a complete, ready-to-use PAPR systems with a high efficiency particulate (HEPA) filter and disposable headcover:

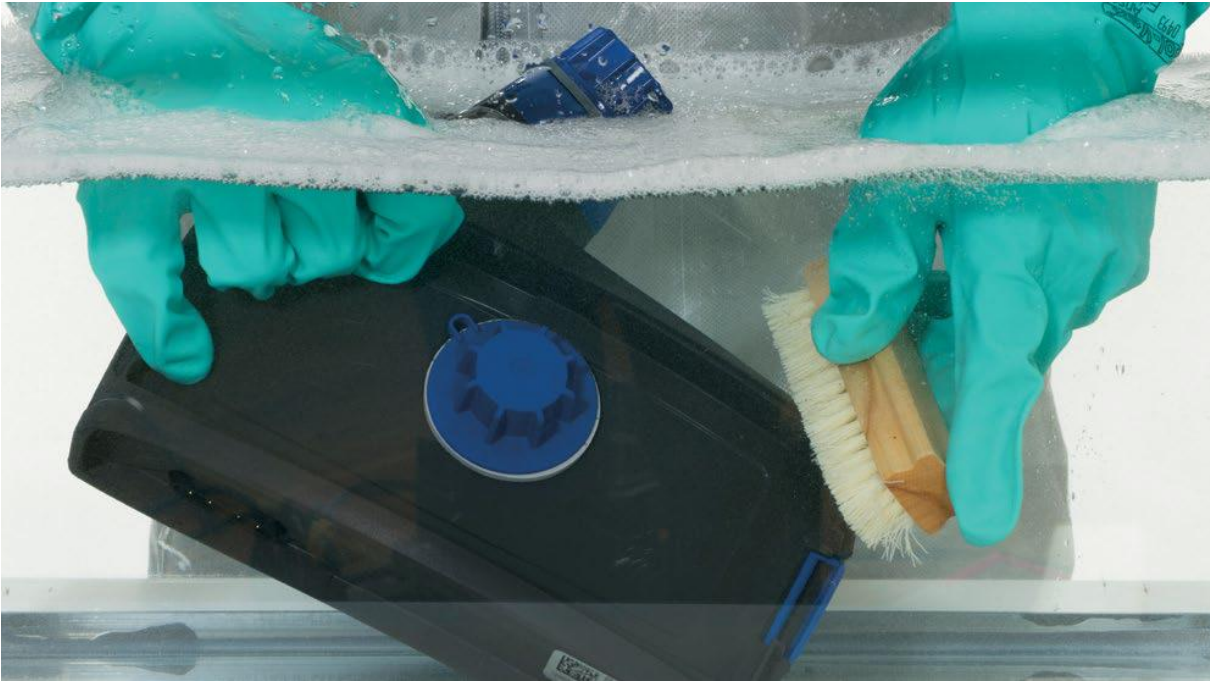
- TR-602N PAPR Unit
- TR-630 Standard Battery
- TR-6710N HEPA Filter
- TR-6700FC Filter Cover
- BT-30 Length Adjusting Breathing Tube
- TR-641N Single Station Battery Charger
- TR-627 Easy Clean Belt
- TR-971 Airflow Indicator
- TR-653 Cleaning and Storage Kit
- TR-991 Carrying Bag
- S-133 Soft Headcover

[3M™ Versaflo™ Healthcare PAPR Kit TR-600-HKS](#)

[3M™ Versaflo™ Healthcare PAPR Kit TR-600-HKL](#)

[**Upgrade to Versaflo**](#)

Make your 3M™ Versaflo™ TR-600 PAPR fully submersible for easier decontamination.



The 3M™ Versaflo™ TR-653 Cleaning & Storage Kit provides inlet and outlet plugs to seal the components during cleaning and storage. The 3M™ Versaflo™ TR-600 blower and batteries are fully submersible when used with the 3M™ Versaflo™ TR-653 Cleaning & Storage Kit.

Each kit contains

- 1 inlet plug and 2 seals
- 1 outlet plug and 2 seals
- 1 battery connector cover



Other Resources

[CDC Guidance on Personal Protective Equipment \(PPE\) To Be Used By Healthcare Workers during Management of Patients with Confirmed Ebola or Persons under Investigation \(PUIs\) for Ebola](#)

3M™ Versaflo™ TR-300+, TR-600 and Air-Mate™ Reference Table

Compare the system that works best for your environment.

Feature	Air-Mate (no longer offered by 3M)	TR-300+	TR-600
NIOSH Approved Configurations Available	Yes	Yes	Yes
HE Filter	Yes	Yes	Yes
Combination Cartridges	No	No	Yes
Battery Run Time	007-00-15R01 – up to 8 hours	TR-330 Standard Battery: 4-6 hours* TR-332 High Capacity Battery: 8-12 hours*	TR-630 Standard Battery: 7-12.5 hours* TR-632 High Capacity Battery: 10.5-19 hours*
Battery Charge Time	007-00-15R01 – 8-16 hours	TR-330 Standard Battery: <3.0 hours TR-332 High Capacity Battery: <3.5 hours	TR-630 Standard Battery: <4 hours TR-632 High Capacity Battery: <4 hours
Approximate Airflow (loose fitting)	Greater than 6 cfm	Standard: 6.5 cfm (185 lpm) High: 7.2 cfm (205 lpm)	Standard: 6.7 cfm (190 lpm) Medium: 7.2 cfm (205 lpm) High: 7.8 cfm (220 lpm)
Cleaning (blower only)	Wipe down only	Wipe down only	Wipe down or rinse/submerge with use of TR-653 Cleaning & Storage Kit
Ingress Protection	N/A	IP53 Rating in use**	IP54 Rating in use*** IP67 with cleaning & storage kit in place***
Elevation Limits	N/A	-100m (328 ft) to 4300m (14107 ft)	-100m (-328 ft) to 5000m (16404 ft)
Blower Alarms	None	Visual/Audible	Visual/Audible/Vibratory
User Interface	None	Battery charge, filter loading & airflow status alarm indicators	Battery charge, filter loading & airflow status alarm indicators
Batteries	1 standard battery option	2 batteries, Standard and High Capacity, both include On-Board battery gauge	2 batteries, Standard and High Capacity, both include On-Board battery gauge
Battery Cycles	Up to 500 charge/discharge cycles	Approx. 250 – Full charge/discharge cycles	Approx. 250 – Full charge/discharge cycles
Battery Type	Nickel Cadmium	Lithium Ion	Lithium Ion
Headtops	BE-10, BE-12	M-Series, S-Series, H-Series, L-Series SG, BE-Series	M-Series, S-Series, H-Series, L-Series SG, BE-Series
Approximate Motor Blower Weight	1.1lbs	0.85lbs	1.4 lbs
Approximate Battery Weight	1.7 lbs	TR-330 Standard Battery: 0.5 lbs. TR-332 High Capacity Battery: 0.8 lbs.	TR-630 Standard Battery: 1 lb. TR-632 High Capacity Battery: 1.3 lbs.
Approximate Blower Dimensions With HE filter and cover	8" w x 7" h x 4" d	8" w x 7" h x 3" d	10" w x 8" h x 3" d

* Estimated system run time based on testing with a new battery and a new clean filter at 68°F (20°C). Actual system run time may be extended or shortened depending on system configuration and environment.

** Suitable for use in a decontamination shower with a spray angle of up to 60 degrees from vertical

*** The IP54 rating indicates the unit is protected against infiltration of dusts and water splash that would interfere with normal operation

3M™ S-Series Hoods and Head-covers

Help improve patient contact and see more with a wide field of vision, thanks to enhanced visor designs



3M™ Versaflo™ Economy Headcover, S-103

3M™ Versaflo™ Headcover with Integrated Head Suspension, S-133

3M S-Series headcovers are conveniently disposable and allow easy access to ears for use with stethoscope. 3M S-Series headcovers have an Assigned Protection Factor (APF) of 25.



3M™ Versaflo™ Economy Hood, S-403

3M™ Versaflo™ Hood with Integrated Head Suspension, S-433

3M S-Series hoods provide greater protection than Headcovers by increasing skin coverage and have an APF of 1,000

Your choice of ready-to-use integrated suspension models or premium reusable suspension hoods for quick, cost-effective replacement of outer fabrics.



3M™ Hood Assembly with Sealed Seams Inner Collar & Premium Head Suspension S-855

3M™ Hood Assembly with Sealed Seams Inner Shroud and Premium Head Suspension S-857

The S-855 and S-857 are made with Kappler® Zytron® 200, a polypropylene fabric with a multi-layer barrier film. Features sealed seams –tested to ASTM F1670 and ASTM F1671 (at the seam)

Zytron is a registered trademark of Kappler, Inc.

3M™ Filters and Cartridges

Know your exposure.

Make your choice.

Filters and cartridge elements are suitable for different tasks. Filters help protect against particles such as dust, while cartridges work to protect against certain gases and vapors. Making the right cartridge choice depends upon understanding the hazards in the work environment

TR-3712N	High Efficiency (HE) (TR300+)
TR-6710N	High Efficiency (HE) (TR600)
TR-6820N	HE and Nuisance OV/AG (TR600)
TR-6510N	Organic Vapor/HE (TR600)
TR-6530N	Organic Vapor/Acid Gas/HE (TR600)
TR-6320N	Acid Gas/HE (TR600)
TR-6360N	Ammonia/Methylamine/HEPA (TR600)
TR-6350N	Formaldehyde/HE (TR600)
TR-6590N	Multi-Gas/HE (TR600)

3M™ Versaflo™ TR-300+ PAPR



TR-3712N Versaflo™ (HE) Particulate Filter

- **TR-3712N-5**
3M™ Versaflo™ (HE) particulate filter – Case of 5
- **TR-3712N-40**
3M™ Versaflo™ (HE) particulate filter – Case of 40

3M™ Versaflo™ TR-600 PAPR



Filters capture particulates



Combination cartridges filter particulates and certain gases and vapors.

3M™ Barrier Protection Solutions

These 3M Coveralls are certified to **Type 3/4/5/6 levels of protection**, making them suitable to help protect against certain hazardous dusts and light liquid splashes. Made from lightweight fabrics with taped seams, these protective coverall solutions offer a barrier to certain hazardous particles (including certain powders) and certain biological contaminants. Both coveralls are available in sizes M-4XL.



[**3M Protective Coverall 4565**](#)



[**3M Protective Coverall 4570**](#)

Tests for Protection Against Microorganisms	4565	4570
ASTM F1671 Bloodborne pathogen penetration resistance	Does not Pass	Pass
ASTM F1670 Synthetic blood penetration resistance	Pass	Pass
ISO 16603 Assesses resistances to penetration under pressure by synthetic blood (visual assessment)	Class 6 of 6*	Class 6 of 6*
ISO 16604 Models resistance to viral penetration under pressure (biological assay)	Unclassified	Class 6 of 6*
ISO 22611 Determines resistance to penetration by aerosols containing bacteria	Class 3 of 3*	Class 3 of 3*
ISO 22612 Assesses resistance to dry microbial penetration using talc contaminated with spores	Class 3 of 3*	Class 3 of 3*

* Please refer to product user instructions and packaging for more information.
An "*" denotes highest level of performance according to test method.

3M™ Protective Coverall 4570

The 3M protective coverall 4570 is certified to type 3/4/5/6 level of protection making it suitable to protect against certain hazardous dusts, light liquid splashes, low pressure liquid sprays, and high pressure liquid jets.

Design features include taped seams with a multi-layer co-extruded clear tape, large ring-pull zippers for easy donning and doffing, and elasticated wrists and ankles for convenience and freedom of movement.



Three-panel hood design with chin flap for a better fit and compatibility with other PPE



Two stormflaps combined with double color-coded zips to create a double



Thumb loops for secure fit during overhead work

3M Protective Coverall 4570



Type 3 EN 14605: 2005
+A1: 2009
Protective performance
against liquid chemicals



Type 4 EN 14605: 2005
+A1: 2009
Protective performance
against liquid chemicals



Type 5
EN ISO 13982-1: 2004
Protective clothing for use
against solid particulates



Type 6 EN 13034: 2005
+A1: 2009
Protective clothing
against liquid chemicals



Type 3-B, 4-B, 5-B, 6-B
EN 14126: 2003
ASTM F1671:2013
Biohazard



EN 1073-2:2002
TIL Class 2
Protection against nuclear
particles



EN 1149-1: 2006
EN 1149-5: 2008
Anti-static

Fabric Material

The 3M protective coverall 4570 uses heavy-duty material blending of soft anti-static treated inner layer of spun bond fibers with multiple outer layers of a high-performance polyethylene laminate, to offer liquid protection.

Seam Technology

Seams are stitched and over taped with a clear heat applied 5-layer chemically protective tape to offer increased strength and an effective barrier to liquids and particulates.

3M™ Protective Eyewear

3M™ Splash Goggles

- Meets the requirements of ANSI Z87.1-2015 Standard as an Impact Rated Goggle
- Anti-Fog Coating • Indirect Venting

3M splash rated goggles with indirect venting is design to circulate air and help minimize fogging while keeping liquids from directly entering the eye. Larger flat goggles may fit over-the-glass.

454AF

334

2891



3M™ SecureFit™ Protective Eyewear Series

- Meets the requirements of ANSI Z87.1-2015 Standard as an Impact Rated Spectacle

SecureFit™ Protective Eyewear, 400 Series features the proprietary self-adjusting 3M™ Pressure Diffusion Temple Technology – a scientific advancement that helps diffuse pressure over the ear, enhancing frame temple comfort while not compromising the security of fit.



Options include:

- Magnification Diopters (up to +1.5)
- Coatings (Anti-Fog, Anti-Scratch)
- Colors
- Removable Foam Gasket

www.3m.com/SecureFit

Other Resources

[CDC Guidance for Infectious Eye Protection](#)

[AST Guidelines for Best Practices in Use of Eye Protection During Surgical Procedures](#)



Science.
Applied to Life.™

3M™ Solutions for Chemical, Biological,
Radiological, Nuclear (CBRN) Protection

**Be prepared.
Stay protected.**

Supporting First Receivers

3M™ Breathe Easy™ (RBE) for Responders Powered Air Purifying Respirator (PAPR) Systems

Hospital systems across the nation are a top choice for emergency response programs in both civilian and military hospitals. In addition to being a time-tested product, this broad-based distribution helps hospital coalitions and public health agencies support mutual aid. The ability to provide and receive emergency aid beyond local resources is critical to maintaining a strong emergency response program.



- Approved to NIOSH CBRN Loose-Fitting PAPR Standard
- 3M™ Cartridge RBE-57 meets NIOSH CBRN “Cap 1” requirements against stringent test chemical agents; high efficiency particulate filtration (99.97%)

What do CAP ratings mean?

For more information, see 3M Technical Data Bulletin #191 — NIOSH CBRN Cartridge/Canister Capacity Ratings

Click Here

3M™ Breathe Easy™ PAPR systems help workers move around easily in challenging environments while providing protection they need.

Some key benefits of these systems are:

- Wide field of vision, for clarity while managing an event or during training.
- The one-size butyl rubber hood does not require a fit test.
- Can be used with eyeglasses and limited facial hair.
- Continuous filtered air flow provides respiratory protection and lasting comfort, which allows you to focus on the task at hand.
- System has both a non-rechargeable and rechargeable battery option
- The hands-free vinyl holster and belt allow for easy decontamination.

www.3M.com/EMPrepPAPR

3M™ Breathe Easy™ (RBE) for Responders Powered Air Purifying Respirator (PAPR) System and Upgrade Kits



[3M™ Breathe Easy™ Complete PAPR Assembly RBE-10BR](#)



[3M™ Hood Powered Air Purifying Respirator \(PAPR\) System RBE-L10, with Lithium Battery](#)



[RBE-600 Upgrade Battery Kit \(includes 1 ea: TR-630 battery, TR-659 adapter, TR-657 easy clean holster, TR-641N battery charger kit\)](#)



[3M™ Breathe Easy™ Butyl Rubber Hood Respirator Conversion Kit RBE-HUP](#)



[3M™ Breathe Easy™ 12 Bio Conversion Kit, Regular BE-12-BIOKIT](#)

Other Resources

[OSHA Best Practices for HOSPITAL-BASED FIRST RECEIVERS OF VICTIMS Involving the Release of Hazardous Substances](#)



As One.

3M offers a wide array of solutions for specialized operations such as HAZMAT, confined space, and EMS. Together with our newest acquisition of Scott Safety, we will help ensure you are more than ready to take on these operations with 3M | Scott Fire & Safety solutions.

Top Down Convertibility

3M | Scott's Top Down Convertibility allows a single facepiece, thus a single fit test, to be used for Air Purifying Respirator (APR), Powered Air Purifying Respirator (PAPR), and Self Contained Breathing Apparatus (SCBA); helping reduce overall cost of ownership.



- 3M | Scott AV3000 HT Facepiece for negative pressure, positive pressure and self contained breathing apparatus configurations
- 3M | Scott NIOSH CBRN CAP 1 Canister approved with the AV3000 HT Respirator and the C420 Plus PAPR
- 3M | Scott Air-Pak self contained breathing apparatus with AV3000 HT Facepiece offered in several configurations, including NFPA approved (most recent edition)

Other Resources

[Personal protective equipment for hazardous materials incidents - CDC](#)



AV-3000 HT Facepiece

The AV-3000 HT is a Full Facepiece approved to NIOSH Chemical Biological Radiological Nuclear (CBRN) requirements – designed for first responder applications commonly found in emergency response environments.

Salient Features

- Single solution for all of your NIOSH, CBRN and NFPA–approved applications
- NIOSH CBRN approved with Cap 1 Canister for APR and PAPR
- Approved to the challenging requirements set forth in NFPA 1981, (most recent edition)

The AV-3000 HT has a five-point head harness coupled with patented reverse reflex technology. Reverse reflex technology utilizes a u-shaped seal that allows the respirator to flex with the user's movements. A positioning tab assists with proper and quick donning. This all promotes a comfortable and reliable face seal.



[AV-3000 HT Facepiece](#)

C420 Plus CBRN Powered Air Purifying Respirator (PAPR)

The C420 PAPR is designed for use in demanding CBRN environments that require a dependable, powered air purifying respirator. The PAPR blower is EMI shielded to Mil-STD-461C to help prevent interference with radio communications. It is protected from water and dust damage, and can be easily decontaminated. The C420 Plus PAPR is suitable for law enforcement agencies and first responders who require respiratory protection over an extended period of time.

Salient Features

- NIOSH CBRN approved with 3M | Scott AV-3000 HT comes standard with a lithium sulfur dioxide (LiSO₂) BA 5800 battery pack. Run time of up to eight hours and a 10-year shelf life. A rechargeable, NIOSH approved, nickel metal hydride (NiMH) battery is also available
- Flexible breathing tube does not restrict head movement
- Simple, easy-to-use, on/off toggle switch
- Uses two 40mm Connection filters



[C420 Plus PAPR](#)



Air-Pak™ Self Contained Breathing Apparatus (SCBA)



[3M | Scott SCBA Solutions](#)

With a record of reliable performance and rugged dependability, 3M | Scott Air-Pak SCBAs have earned the confidence and trust of first responders.

Comfort

Backframes are constructed of a lightweight, durable aluminum alloy designed to follow the back's contour and places the bulk of the SCBA's weight on the hips, where the fully-padded waist belt provides comfortable support to the user.

Redundancy

The Air-Pak features a unique, dual-redundant pressure reducer. Unlike all other SCBAs, the Air-Pak provides two pressure reducers in one, interconnected through an automatic transfer valve. A reduction in primary pressure would trigger an automatic transfer to the secondary circuit.

Breathability

The breathing circuit responds rapidly and efficiently to the user's demand for air, enabling easy breathing, especially during periods of peak physical performance by reducing inhalation and exhalation resistance to minimize user fatigue.

Ease of Use

Simple-to-use and easy-to-understand SCBA designed with operational efficiencies and ease of training in mind.

Low Cost of Ownership

Rugged design, assembly and warranty policy reduces long-term maintenance costs.

Important Notice

This guide is only an outline. It should not be used as the only means for selecting protective clothing. Before using any protective clothing, the wearer must read and understand the user instructions for each product. Specific country legislation must be observed. If in doubt, contact a safety professional. Selection of the most appropriate PPE will depend on the particular situation and should only be made by a competent person knowledgeable of the actual working conditions and the limitations of PPE.

Final determination as to the suitability of these products for a particular situation is the employer's responsibility. This information is subject to revision at any time. Always read and follow all User Instructions supplied with your 3M™ Protective Coveralls in order to ensure correct operation. If you have questions contact 3M Technical Service.

LIMITATION OF LIABILITY: Except as provided above, 3M shall not be liable or responsible for any loss or damage, whether direct, indirect, incidental, special or consequential arising out of the sale, use or misuse of 3M PSD products, or the user's inability to use such products. **THESE REMEDIES SET FORTH HEREIN ARE EXCLUSIVE.**

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⚠ WARNING

These respirators help reduce exposures to certain airborne particulates. Before use, the wearer must read and understand the User Instructions provided as a part of the product packaging. A written respiratory protection program must be implemented meeting all the requirements of OSHA 1910.134 including training, fit testing and medical evaluation. In Canada, CSA standards Z94.4 requirements must be met and/or requirements of the applicable jurisdiction, as appropriate. Misuse may result in injury, illness or death. For correct use, consult supervisor and User Instruction, or call 3M PSD Technical Service in USA at 1-800-243-4630 and in Canada at 1-800-267-4414.

⚠ WARNING

These eye and face protection products help provide limited eye and face protection. **Misuse or failure to follow warnings and User Instructions may result in serious potential injury, including blindness or death.** For proper use, selection and applications against flying particles, optical radiation and/or splash, see supervisor, read *User Instructions* and warnings on the package or call 3M PSD Technical Service in the USA at 800-243-4630. In Canada, call Technical Service at 800-267-4114.

**3M Company
Personal Safety Division
3M Center
Building 235-2W-70
St. Paul, MN 55144-1000
3M.com**

For more information visit
3M.com/PPESafety or call
1-800-328-1667. Or call 3M PSD
Technical Service at 1-800-243-4630

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