



Introduction

At 3M we have a select and high quality range of products which help protect against many hazards.

The range of 3M™ Protective Apparel includes a variety of features, from fabrics with specialized treatments for enhanced wear and added protection, to breathable back panels for increased comfort.

Our specialists can work closely with you, to help you identify hazards and support you in protecting your workers against them.

For additional information:

Call Technical Assistance: 1-800-243-4630

▶ Call Customer Care Center: 1-800-328-1667

▶ Visit website: <u>3M.com/protectiveapparel</u>

► View brochure: <u>3M.com/pabrochure</u>



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Selection

There are many tests and standards that apply to 3M™ Protective Coveralls and selection can be a daunting task. The following section outlines the different options available to help you select the right product for your employees.

Protection Types

Depending on the materials and construction, protective coveralls can be designed for either hazardous applications (certified to CE Category III) or non-hazardous applications. Products for hazardous applications can be tested and certified to any of six different "Type" standards, providing guidance on suitability of use.

Category	Symbol	Protection Type	Standard	3M Product Code	
		Type 1 Gas Protection		N/A	нідн
		Type 2 Non-Gas Protection		N/A	
CE Category III	, , , , , , , , , , , , , , , , , , ,	Type 3 Liquid Jet Protection	EN 14605 (EN ISO 17491-3)	4570	PROTECTION
Y		Type 4 Liquid Spray Protection	EN 14605 (EN ISO17491-3)	4570, 4565	
	88.88 P. S.	Type 5 Particle Protection	EN ISO 13982-1	4570, 4565, 4545, 4540+,	
		Type 6 Limited Liquid Splash Protection	EN 13034 (EN ISO 17491-4)	4535, 4530, 4520, 4515, 4510	Low



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Protection against micro-organisms

Additional Standards

Protection against

Some 3M protective coveralls and their materials are approved to additional standards* for specialized applications.



Protection against nuclear particles (EN 1073-2)



Protection against nuclear particles (EN 1073-2) with exception of EN863 puncture resistance



Total Inward Leakage Class 1



Total Inward Leakage Class 2



Anti-static coating (EN 1149-5)



Refer to User Instructions for further information on anti-static compliance

(EN 14126) with exception of ISO 16604 micro-organisms (EN 14126) (see table below) Tests for Protection against 4510 4545 4565 4570 micro-organisms **ASTM 1671** bloodborne pathogen Pass penetration resistance **ASTM 1670** synthetic blood Pass penetration resistance

penetration resistance				
ISO 16603 assesses resistances to penetration under pressure by synthetic blood (visual assessment)	Class 4 of 6	Class 4 of 6	Class 6 of 6*	Class 6 of 6*
ISO 16604 models resistance to viral penetration under pressure (biological assay)	Unclassified	Unclassified	Unclassified	Class 6 of 6*
ISO 22610 assesses resistances to wet bacterial penetration during mechanical contact	Class 6 of 6*			
ISO 22611 determines resistance to penetration by aerosols containing bacteria	Class 3 of 3*			
ISO 22612 assesses resistance to dry microbial penetration using talc contaminated with spores	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.



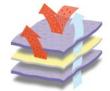
Product features

3M protective coveralls can offer a variety of benefits depending on your needs. The illustration below highlights some of the features available.



Materials

The following is a guide that offers a comparison between the materials used in the 3M™ Protective Coverall range. For full penetration and permeation data please contact Technical Assistance: 1-800-243-4630.



SMS

Spunbound Meltblown Spunbound are robust breathable fabrics, designed to offer a good barrier against hazardous particles and limited liquid splashes.

Protective Coveralls 4515, 4520, 4530 and back panels of Protective Coveralls 4535 and 4540+



Microporous PE Laminate

Polypropylene PE laminate is designed to offer a good barrier against hazardous particles and limited liquid splashes, while the micropores allow for some breathability.

Protective Coveralls 4510 and 4545. Also white material of Protective Coveralls 4535 and 4540+



Non-microporous **PE Laminate**

Designed to offer a very good barrier against hazardous particles and certain liquid splashes and sprays.

Protective Coverall 4565

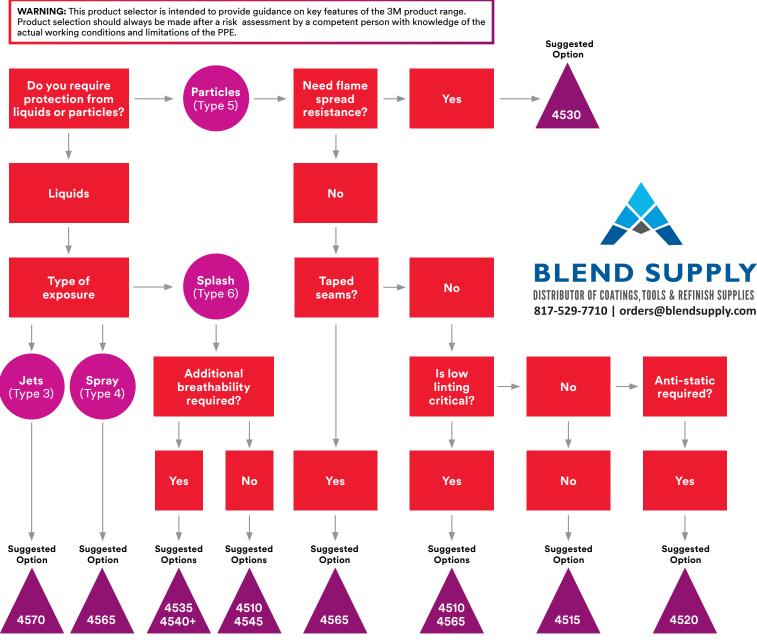


Multi-Layer Non-Microporous **PE Laminate**

Designed to offer an excellent barrier against hazardous particles and certain liquid splashes, sprays and jets.

Protective Coverall 4570

Selection flow chart



^{*}The fabric complies with ISO 14116:2008 for limited flamespread index 1 (must be worn over and index 2 or 3 garment and must not be worn next to skin).

WARNING: Cuffs and zipper are not flame resistant. Cuffs must be worn under gloves.

Review Product Selection Guide

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.

WARRANTY: 3M will replace or refund the purchase price of any Personal Safety Division product found to be defective in material, manufacture, or not in conformance with any expressed warranty. THIS WARRANTY IS EXCLUSIVE

3M™ Protective Coveralls



3M[™] Protective Coverall 4510

Designed to offer cost effective protection against hazardous dusts and limited liquid splashes.

- Elasticized hood, ankles, cuffs and waist
- 2 way zip with storm flap
- Ultra low linting
- Collared and hooded available
- Anti-static

















3M[™] Protective Coverall 4515

Made from lightweight and extremely breathable material and is designed to offer protection against hazardous dusts and limited liquid splashes.

- Elasticized hood, cuffs, ankles and waist
- 2 way zip with storm flap
- Low linting













3M™ Protective Coverall 4520

Made from lightweight and extremely breathable material and is designed to offer protection against hazardous dusts and limited liquid splashes.

- Elasticized hood, ankles and waist
- 2 way zip with sealable tab on storm flap
- 3-panel hood
- Knitted cuffs
- ► Low linting
- Collared and hooded available
 Anti-static

















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3M™ Protective Coverall 4530

Made from extremely lightweight and breathable material and is designed to offer protection against hazardous dusts and limited liquid splashes. The fabric complies with ISO 14116:2008 for limited flamespread index 1 (must be worn over an index 2 or 3 garment and must not be worn next to skin).

- Elasticized hood, ankles and waist
- 2 way zip with fully sealable storm flap
- ► 3-panel hood ► Knitted cuffs
- Low linting

- Anti-static
- ► Collared and hooded available















Provides a superb balance of comfort and protection. The microporous PE laminate at the front of the garment is designed to offer a good barrier to limited liquid splash, while the large SMMMS breathable back panel helps increase wearer comfort.

- Elasticized hood, ankles and waist
- 2 way zip with storm flap
- Knitted cuff
- Low linting















A highly versatile protective coverall, which is mostly made from a unique microporous PE laminate, designed to be

Made from soft, lightweight, yet durable fabric which provides a good barrier to hazardous particles and limited liquid splash. Supplied in vacuum packaging.

3M[™] Protective Coverall 4545

- Elasticized hood, ankles, and waist
- 2 way zip with fully sealable storm flap
- 3-panel hood
- Knitted cuffs
- Ultra low linting
- Anti-static







3M™ Protective Coverall 4565

and limited liquid splash and spray.

Elasticized hood, ankles and waist

2 way zip with fully sealable storm flap



Made from a soft lightweight fabric with taped seams,

providing a very good barrier to hazardous particles







3M™ Protective Coverall 4535

- - Anti-static







3M™ Protective Coverall 4540+

Elasticized hood, ankles and waist

▶ Knitted cuffs ▶ Low linting

2 way zip with fully sealable storm flap



softer and drape better over the body. It is designed to

offer a good barrier to particles and limited liquid splash but it also features a breathable SMMMS back panel.







Limited Splash

3-panel hood

Knitted cuffs





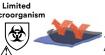


▶ Ultra low linting ▶ Anti-static











3M[™] Protective Coverall 4570

Designed to offer a barrier to hazardous particles and certain liquid splashes, sprays and jets.

- Elasticized hood and ankles
- Double front closing system with large ring zip pull for easy wear
- 3-panel hood
- Elasticized cuffs with thumb loops
- Ultra low linting
- Anti-static





3-panel hood









► Collared and hooded available ► Anti-static





















Jet Nuclear









Accessories



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Lab Coats

3M[™]Lab Coat 4440

- Made from the same microporous PE laminate material as the 3M™ Protective Coverall 4535
- Knitted cuffs
- Offers a barrier against non-hazardous particles and light liquid splashes
- ► Zip fastener
- Anti-static treatment

Overboot Covers



3M[™]Overboot 450

Reduced Slip Sole



Standard Sole

- ▶ Made from the same microporous PE laminate material as the protective coverall 4535
- Elastic at the calf
- ▶ Universal size with ties to help provide a good fit
- Laminated material ties to minimize particle shed and contamination in particle restricted environments such as clean rooms
- Overboot 450 features a reduced slip sole
- ► Anti-static

Overshoe Covers



- Offers a general barrier to non-hazardous substances
- Reduced slip print on base
- ► Elastic at ankle



- Made from the same microporous PE laminate material as the protective coverall 4535
- ► Elastic at ankle
- ► Anti-static

Oversleeves





- Made from the same laminated material as the 3M™ Protective Coverall 4510
- Offers a general barrier to non-hazardous substances
- 16 inch/40.5cm protection covering wrist to top of arm
- Elastic finish on top end

Head Protection



3M™ Overhood 446

- ▶ Made from the same laminated material as the protective coverall 4510
- Drapes over the shoulders offering excellent coverage



3M[™]Hair Net 407

- Designed to help prevent hair from contaminating the working environment
- Universal size



Selection guide by application

Suggested O Possible alternative

Click on photos to view web content.	4510	4515	4520	4530	4535	4540+	4545	4565	4570	
Certification**	Limited Splash Particle Limited Anti-Microstatic Organism	Limited Splash Particle	Limited Splash Particle Anti- static	Anti-static	Anti- static	Limited Splash Particle	Anti- static organism	Spray Anti-static	Limited Splash Particle Spray Jet Nuclear Anti- static	
								Limited Micro-organism	Micro- Organisms	
Material weight	1.38 oz/yd² (47gsm)	1.47 oz/yd² (50gsm)	1.26 oz/yd² (43gsm)	1.59 oz/yd² (54gsm)	1.62 oz/yd² (55gsm)	1.44 oz/yd² (49gsm)	1.44 oz/yd² (49gsm)	1.44 oz/yd² (49gsm)	2.71 oz/yd² (92gsm)	
Sizes	M-4XL	M-4XL	M-4XL	M - 4XL	M - 4XL	M-4XL	M-4XL	M-4XL	S - 4XL	
Colors				Å						
► Abatement/reme	diation									
Exposure to radioactive particles	0	0	0	•	0	0	0	0	•	
Mold remediation/ mold spores	0	•	•	0	0	0	0	0	0	
Asbestos inspection, site preparation	0	•	•	0	0	0	0	0		
Asbestos removal	0	0	0	0	0	0	0	•		
► Agriculture			ı	I	I			ı		
Fertilizer application (dry/granular)	0	•	0	0	0	0	0			
Animal waste (solid)		0	0							
Pesticide spraying ³					0			•	0	
► Emergency respo	nse/biohazar	d	1	1	T		T	1		
Bloodborne pathogens									•	
Hazardous biological aerosol									•	
► Pharmaceutical/o	lean room									
Pharmaceutical processing	0		0	0	0	0	0	•		
Handling powders	0		0	0	0	0	0	•		
Clean rooms	0					0				
► Painting										
Spray Painting	•			0	•	•	•	•		
Resin application	•			0	•	•	•	0		
Fiberglass application	•			0	•	•	•	0		

Click on photos to view web									
content.									(3)
Product Guide (continued)	4510	4515	4520	4530	4535	4540+	4545	4565	4570
► Cleaning and mai	ntenance							!	
Dirt			0	0					
Machine or vehicle maintenance	0	0	0	•	0	0	0		
Light duty building maintenance	0	0	0						
Grease (general)	0	0	0	0	0	0	0		
Light duty warehousing, janitorial		•							
General industry									
Electronics/circuit board assembly ¹			•	•					
Fiberglass/cellulose insulation	0	•	•	0	0	0	0	0	
Food processing	0	0	0		0	0	0		
General powder handling	0	•	0	0	0	0	0		
Lime handling			0	0					
Woodworking									
Non-hazardous aerosols (sprays)	0	0	0	0	•	0	0	0	
Non-hazardous liquids	0	0	0	0		0	0	0	
Non-hazardous solids			0						
Coal dust	0		0	0	0	0	0	0	
► Oil & gas/chemic	al								
Maintenance (refinery)				•					
Tank cleaning								0	
Chemical mixing and handling								0	•
► Metal work									
Metal grinding									
Welding in certain applications (worn									

Summary: Materials and design

over appropriate welding garment)²

► Color options	White	White, blue	White	Blue	White with blue full back	White with blue triangle	White	White with red taped seams	Grey
► Suit material	PE laminate	SMS	SMMMS	SMMS	PE laminate + SMMMS	BICO PE laminate + SMMMS	BICO PE laminate	BICO PE laminate	Multi-layer PE laminate
Fabric weight	47 gsm	50 gsm	43 gsm	54 gsm	55 gsm	49 gsm	49 gsm	49 gsm	92 gsm
► Coating	Anti-static	None	Anti-static	Anti-static, FR	Anti-static	Anti-static	Anti-static	Anti-static	Anti-static
► Storm flap	Basic flap	Storm flap with tabs	Storm flap with tabs	Sealable flap	Basic flap	Sealable flap	Sealable flap	Sealable flap	Double flap, double zip
► Cuffs	Elastic	Elastic	Knitted	Knitted	Knitted	Knitted	Knitted	Knitted	Elastic + thumb loops
► Reinforced gusset	No	No	No	Yes	Yes	Yes	Yes	No	No
► Hood design	2-panel	2-panel	3-panel	3-panel	2-panel	3-panel	3-panel	3-panel	3-panel
► Seams type	Stitched & partially bound	Stitched	Stitched	Stitched	Stitched & partially bound	Stitched & partially bound	Stitched & partially bound	Taped	Taped



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