

## 3M™ Protective Coverall 4545

### Description

The 3M™ Protective Coverall 4545 is designed to help protect against certain light liquid splashes (Type 6) and hazardous dusts (Type 5).

The key features include:

- Constructed of a low-linting, non-woven, laminated microporous material with anti-static coating on both sides
- Knit cuffs with elasticized waist and ankles for increased comfort and freedom of movement
- Three panel hood design for compatibility with complementary PPE
- Two-way zipper with sealable storm flap
- Reinforced gusset adds extra durability

### Materials

- Suit: Polypropylene/Polyethylene Laminate Film, White
- Zipper: Nylon on Polyester Braid
- Elastic: Neoprene Rubber
- Cuffs: Polyester
- Thread: Polyester
- Basis Weight: 49 grams/m<sup>2</sup>






This product does not contain components made from natural rubber latex.

### Approvals

CE approved under PPE Directive (89/686/ECC), Category III.

Article 10 Certification: BTTG Testing & Certification Ltd. Notified Body Number: 0338. Article 11B Supervision: SGS United Kingdom, LTD. Notified Body Number: 0120.

### Comfort and Protection

	<b>Liquid Protection</b>	Type 6 (EN 13034). Whole suit reduced spray test (EN ISO 17491-4:2008)*
	<b>Dust Protection</b>	Type 5 (EN ISO 13982-1:2004). Inward Leakage results: L <sub>mm,82/90</sub> < 30 %; L <sub>S,8/10</sub> < 15 %.
	<b>Anti-static</b>	Anti-static coating on both sides (EN 1149-1:2006)**
	<b>Nuclear</b>	Radioactive particulates (EN 1073-2:2002), Class 1***. Does not offer protection against radiation.
	<b>Biohazard</b>	Tested according to ASTM F1670 and EN 14126:2003 (see class data in test table)

\* In the whole suit test, liquid spray is applied to the subject for 1 minute. During this time the subject moves gently and is rotated through 360°. A total of 1.88 liters is sprayed from four nozzles. The clothing is allowed to drain for 2 minutes and then the absorbent coverall is inspected for stains which are compared to a calibration stain. Requirement: Passes when the stained area inside is smaller than 3 times the calibration stain area.

\*\* All apparel must be grounded for anti-static treatment to be effective. Electrostatic propensity may decrease with wearing time and/or severe conditions.

\*\*\* Except puncture resistance.

### Applications and Performance

<b>Non-Hazardous Particulates</b>	Yes	<b>Hazardous Liquid Splash</b>	No*
<b>Non-Hazardous Liquid Splash</b>	Yes	<b>Hazardous Liquid Spray</b>	No
<b>Hazardous Dusts and Fibers</b>	Yes	<b>Organic Solvents</b>	Contact 3M for chemical compatibility data
<b>Liquid Continuous Contact/Immersion</b>	No	<b>Acids/Alkalies</b>	Yes, if chemical is compatible with suit material*
<b>Gases and Vapors</b>	No		

\* Contact 3M for additional chemical penetration and repellency data.

### Typical Applications

Typical applications may include paint spraying, pharmaceutical, asbestos and lead abatement, general industrial clean-up, insulation installation, food processing and biological aerosol exposure.

In all cases a risk assessment should be carried out. Users must be trained and have read all *User Instructions*. Use limitations and performance data should be considered to ascertain the protection required. If in doubt, contact a safety professional.

### Performance

The table below shows the performance of this product when tested under laboratory conditions. Please note that the tests may not reflect the reality of use and do not account for factors such as excessive heat and mechanical wear.

Test	Standard	Result	Standard*	Class**/Result
Abrasion	ASTM D4157 Cycles to Rupture	No data	EN 530	Class 1
Flex Cracking			ISO 7854	Class 3
Tear Resistance Trapezoidal	ASTM D5733 (warp direction/ fill direction)	5 lbf / 15 lbf	ISO 9073-4	Class 1
Tensile Strength	ASTM D751, Section 11, Procedure A (longitude/traverse)	No data	ISO 13934-1	Class 1
Puncture Resistance	ASTM D2582 (MD/CD)	25N / 42N	EN 863	Class 1
Bursting Resistance	ASTM D751, Section 18	29 psi	ISO 13938-1	Class 1
Resistance to Ignition	CPSC 16 CFR PT 1610	Class 1	EN 13274-4	Pass
Seam Strength	ASTM D751, Section 66 (Peak Load/Seam Strength)	7 lbf / 3 lbf/in	EN ISO 13935-2	Class 2
Hydrostatic Resistance	ASTM D751, Procedure B	No data		
Repellency to Liquids*** – 30% H <sub>2</sub> SO <sub>4</sub>			EN ISO 6530	Class 3 of 3
Liquid Penetration Resistance*** – 30% H <sub>2</sub> SO <sub>4</sub>			EN ISO 6530	Class 3 of 3
Repellency to Liquids*** – 10% NaOH			EN ISO 6530	Class 3 of 3
Liquid Penetration Resistance*** – 10% NaOH			EN ISO 6530	Class 3 of 3
Anti-static Coating on Both Sides			EN 1149-1:2006	Pass
Radioactive Particulates			EN 1073-2	Class 1 of 3
Synthetic Blood Penetration Resistance			ISO 16603	Class 3
Blood-borne Pathogen Penetration Resistance			ISO 16604	Class 0
Contaminated Solid Particle Penetration Resistance			EN ISO 22612	Class 3 of 3
Contaminated Liquid Aerosol Penetration Resistance			EN ISO 22611	Class 3 of 3
Wet Bacteria Penetration Resistance			EN ISO 22610	Class 6

\* The standards EN 13034:2005 and EN ISO 13982-1:2004, and EN 1073-2:2002 define performance classes.

\*\* The maximum Class is 6 unless otherwise noted.

\*\*\* The European Standard EN ISO 6530 measures liquid penetration through a fabric and liquid repellency by a fabric. The test simulates exposure to small amounts of chemicals (10 ml) for 1 minute duration only. The penetration index refers to the percentage of the original quantity which penetrates the fabric within 1 minute (in a detector beaker) as a percentage of the original quantity.

## Use Limitations

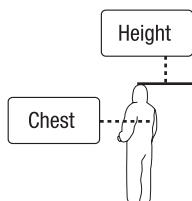
Do not use for:

- Contact with heavy oils, sparks or flames, or combustible liquids
- Exposure situations resulting in spray or liquid buildup on the suit
- Environments with high mechanical risks (abrasions, tears, cuts)
- Environments with exposure to hazardous substances beyond CE Type 5/6 certification
- Environments with conditions of excessive heat

## Sizing

An appropriate size garment should be selected to allow sufficient movement for the task. Meets ANSI 101-1996 (R2008) sizing guidelines.

	Height		Chest	
<b>M</b>	66 – 69 in	167 – 176 cm	36 – 39 in	92 – 100 cm
<b>L</b>	69 – 71 in	174 – 181 cm	39 – 43 in	100 – 108 cm
<b>XL</b>	70 – 74 in	179 – 187 cm	43 – 45 in	108 – 115 cm
<b>XXL</b>	73 – 76 in	186 – 194 cm	45 – 49 in	115 – 124 cm
<b>3XL</b>	76 – 78 in	194 – 200 cm	49 – 52 in	124 – 132 cm
<b>4XL</b>	78 – 81 in	200 – 206 cm	52 – 55 in	132 – 140 cm



## Storage and Disposal

- Store in dry, clean conditions in original packaging
- Store away from direct sunlight, sources of high temperature, and solvent vapors
- Store within the temperature range -20°C to +25°C (-4°F to +68°F) and with relative humidity below 80%
- Shelf life is three years from date of manufacture when stored as stated above
- Replace garments if damaged, heavily contaminated or in accordance with local work practice
- Handle and dispose of contaminated garments with care and in accordance with national regulations



Limited Use



Do not wash



Do not bleach



Do not iron



Do not tumble dry



Do not dry-clean



Flammable — keep away from sparks or flames

Product must never be altered or modified.

For more information on 3M products and services please contact 3M.

### Important Notice

This guide is only an outline. It should not be used as the only means for selecting protective apparel. Before using any protective apparel, 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. Sections 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 user'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.

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