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# 3M<sup>™</sup> Protective Coverall 4540+

**Technical Data Sheet** 



# **Description**

With premium dual material technology and offering CE Type 5/6 protection, the 3M<sup>™</sup> Protective Coverall 4540+ is ideal for applications where both high levels of protective performance and comfort are desired.

#### **Comfort & Protection**



Liquid Protection Type 6 - Light Liquid Splashes (EN 13034:2005 + A1:2009)



Dust Protection Type 5 - Solid Airborne Particulates (EN ISO 13982-1:2004 +A1:2010)



**Anti-Static** 

Anti-static coating on inner surface, white material only

(EN 1149-5:2008)



Nuclear

Radioactive particulates (EN 1073-2:2002) Class 1

# **Features & Benefits:**

- Excellent barrier against dry particles and certain liquid chemical splash (CE Type 5/6)
- Soft and light, super low-linting laminated microporous material that drapes and hangs well over the body facilitating ease of movement
- Back panel made of breathable SMMMS material for improved air circulation and reduced heat stress
- 2-way zipper with fully sealable storm flap for added onoff convenience and extra protection
- 3-panel hood design for enhanced compatibility with complimentary PPE
- Knitted cuffs and elastic waist and ankles for increased comfort and freedom of movement
- Enhanced and reinforced triangular gusset panel to increase product durability
- Anti-static treatment to EN 1149 to reduce charge build up
- Meets inward leakage requirements of EN1073-2 for protection against nuclear particles
- Low linting

#### **Standards**

These products are type examined by SATRA Technology Europe Ltd., Notified body number 2777 and audited annually by SGS, Notified Body number 0598.



#### **Materials**

The following materials are used in the manufacture of this product.

Component	Material	
Suit	Polypropylene + Polyethylene Laminate 55gsm (white)	
Back Panel	SMMMS Polypropylene (blue)	
Zipper	Nylon on Polyester Braid	
Elastic	Synthetic Rubber (non-latex)	
Cuffs	Polyester	
Thread	Polyester/ Cotton	

This product does not contain components made from silicone or natural rubber latex

#### Fabric material

The 3M™ protective coverall 4540+ material is made using a composite layer of soft, spunbond fibres and a layer of light, but high quality polyethylene laminate film giving excellent levels of barrier efficiency and protection. Compared with many other laminates it has a particularly soft feel and drapes well over the body The blue back panel is made from 5 layers of spunbond and melt blown polypropylene giving excellent breathability, whilst maintaining the Type 5/6 level of protection.

#### Seam Technology

Seams are serged for Type 5/6 and certain seams bound for extra protection.



SMMMS back-panel.



Microporous laminate fabric.



<sup>1.</sup> All apparel must be suitably grounded for anti-static treatment to be effective. White material only. seams bound for extra protection.

# Sizing<sup>2</sup>

An appropriate size garment should be selected to allow sufficient movement for the task whilst maintaining a secure fit.

Size	Height		Chest	
М	66 – 69 in	167 – 176 cm	36 – 39 in	92 – 100 cm
L	69 – 71 in	174 – 181 cm	39 – 43 in	100 – 108 cm
XL	70 – 74 in	179 – 187 cm	43 – 45 in	108 – 115 cm
XXL	73 – 76 in	186 – 194 cm	45 – 49 in	115 – 124 cm
3XL	76 – 78 in	194 – 200 cm	49 – 52 in	124 – 132 cm

<sup>2.</sup> The values above are the result of illustrative lab test measures and should not be considered as a commitment from 3M.

# **Applications**

Non-Hazardous Particulates	Yes
Non-Hazardous Liquid Splash	Yes
Hazardous Dusts and Fibres	Yes
Liquid Continuous Contact/ Immersion	No
Gases and Vapours	No
Hazardous Liquid Splash	Yes, if chemical is compatible with suit material <sup>3</sup>
Hazardous Liquid Spray	No
Organic Solvents	No
Acids/ Alkalis	Yes, if chemical is compatible with suit material <sup>3</sup>

<sup>3.</sup> The chemicals against which the product has been tested and certified are listed in the user instructions and shown in the following table. For additional chemical penetration data, please call your local 3M Technical Service Representative or visit the 3M Chemical Test library on http://go.3M.com/CHTL

In all cases, a risk assessment should be carried out. Always read product user information. Use limitations and performance data should be considered to ascertain the protection required. If in doubt, contact a safety professional.

For more information on  $3M^{^{\intercal}}$  products and services please contact  $3M^{^{\intercal}}\!.$ 

## **Performance**

The tables show the performance of this product when tested under laboratory conditions in accordance with the referenced standard test method.

Note: The maximum Class is 6 unless otherwise noted.

Test	Standard/Test Method	Class/ Result
Abrasion resistance (visual assessment)	EN 530:2010	Class 1
Flex cracking (visual assessment)	ISO 7854:1995	Class 6
Tear resistance	ISO 9073-4:1997	Class 1
Tensile strength	EN ISO 13934-1:1999	Class 1
Puncture resistance	EN 863:1995	Class 1
Resistance to blocking	EN 25978:1990	No Blocking
Seam strength	EN ISO 13935-2:1999	Class 2
Repellency to liquids – 30% H <sub>2</sub> SO <sub>4</sub> Sulfuric Acid	EN ISO 6530:2005	Class 3 of 3
Liquid penetration resistance – 30% H <sub>2</sub> SO <sub>4</sub> Sulfuric Acid	EN ISO 6530:2005	Class 3 of 3
Repellency to liquids – 10% NaOH Sodium Hydroxide	EN ISO 6530:2005	Class 3 of 3
Liquid penetration resistance – 10% NaOH Sodium Hydroxide	EN ISO 6530:2005	Class 3 of 3
Anti-static coating inner surface, white material only	EN 1149-1:2006	Pass
Radioactive particulates (TIL)	EN 1073-2:2002	Class 1 of 3

# Storage and Disposal

- Store in dry, clean conditions in original packaging, away from direct sunlight, sources of high temperature, and solvent vapours
- Store within the temperature range -20°C to +25°C (-4°F to +77°F) and with relative humidity below 80%
- Expected shelf life is five (5) years from date of manufacture when stored as stated<sup>4</sup>
- Replace garments if damaged, heavily contaminated or in accordance with local work practice or regulations
- Handle and dispose of contaminated garments with care and in accordance with applicable regulations

4. The shelf life as defined above remains an indicative and maximum data, subject to many external and non-controllable factors. It may never be interpreted as a warranty.

#### **Limited Use**



Do not wash



Do not dry clean



Do not bleach



Flammable — keep away from sparks or flames



Do not iron



Single Use - do not re-use



Do not tumble dry

# **Warnings and Limitations**

Before use read and understand all user instructions and be sure that the product is suitable for the application and fitted correctly. Product must never be altered or modified.

#### Do not use for:

- Contact with heavy oils, sparks or flame, or combustible
- Environments with high mechanical risks (abrasions, tears, cuts);
- Contact with hazardous substances beyond Type 5/6 certification;
- Environments with conditions of excessive heat.

# **Ordering Information**

3M Code	Model #	Description
UU001501566	4540+	Coverall White/Blue type 5/6 Size M
UU001501574	4540+	Coverall White/Blue type 5/6 Size L
UU001501582	4540+	Coverall White/Blue type 5/6 Size XL
UU001501590	4540+	Coverall White/Blue type 5/6 Size XXL
UU001501608	4540+	Coverall White/Blue type 5/6 Size 3XL

## **Important Notice**

To the extent permitted by law, 3M shall not be liable for any loss or damage including any loss of business, loss of profits, or for any indirect, special, incidental or consequential loss or damage arising from reliance upon any information herein provided by 3M. Nothing in this statement will be deemed to exclude or restrict 3M's liability for death or personal injury arising from its negligence.

