4520 Technical Data Sheet

3M™ Protective Coverall 4520

Description

The 3M™ Protective Coverall 4520 is designed to help protect against certain light liquid splashes (Type 6) and hazardous dusts (Type 5).

The key features include:

- Breathable material to help reduce heat build-up and promote comfortable wear
- Knit cuffs with elasticized waist and ankles for convenience and freedom of movement.
- Three panel hood design for compatibility with complementary PPE
- Two-way zipper with storm flap
- Anti-static coating on both sides

Materials

- Suit: SMMMS Polypropylene, White
- Back panel: SMMMS Polypropylene, Green
- Zipper: Nylon on Polyester Braid
- Elastic: Neoprene Rubber
- Cuffs: Polyester
- Thread: Polyester
- Basis Weight: 43 grams/m^2

This product does not contain components made from silicone or 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

Liquid Protection	Type 6 (EN 13034). Whole suit reduced spray test (EN ISO 17491-4-2008)*
Dust Protection	Type 5 (EN ISO 13982-1:2004). Inward Leakage results: $L_{jmn,82/90}$ < 30 %; $L_{S,8/10}$ < 15 %.
Anti-static	Anti-static coating on both sides (EN 1149-1:2006/ EN 1149-5:2008)**
Nuclear	Radioactive particulates (EN 1073-2:2002), Class 1***. Does not offer protection against radiation.

* 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

Non-Hazardous Particulates	Yes	**Hazardous Liquid Splash**	No*
Non-Hazardous Liquid Splash	Yes	**Hazardous Liquid Spray**	No
Hazardous Dusts and Fibers	Yes	**Organic Solvents**	No
Liquid Continuous Contact/Immersion	No	**Acids/Alkalis**	Yes, if chemical is compatible with suit material*
Gases and Vapors	No		

* For additional chemical penetration data, please contact your local 3M Technical Service Representative.

Typical Applications

Typical applications may include insulation installation, asbestos and lead abatement, coal dust in power plants, woodworking, metal polishing, light-duty building cleaning, general powder handling, general industrial clean-up and maintenance, machine or vehicle maintenance and food processing.

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	>3000	EN 530	Class 1
Flex Cracking			ISO 7854	Class 5
Tear Resistance Trapezoidal	ASTM D5733 (warp direction/ fill direction)	4 lbf / 8 lbf	ISO 9073-4	Class 1
Tensile Strength	ASTM D751, Section 11, Procedure A (longitude/ traverse)	24 lbs / 15 lbs	ISO 13934-1	Class 1
Puncture Resistance	ASTM D2582 (MD/CD)	20N / 23N	EN 863	Class 1
Bursting Resistance	ASTM D751, Section 18	94N	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)	10 lbf / 5 lbf/in	EN ISO 13935-2	Class 2
Hydrostatic Resistance	ASTM D751, Procedure B	233 mm		
Repellency to Liquids*** – 30% H_2SO_4			EN ISO 6530	Class 3 of 3
Liquid Penetration Resistance*** – 30% H_2SO_5			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/ EN 1149-5:2008	Pass
Radioactive Particulates			EN 1073-2	Class 1 of 3

* 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.

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Use Limitations

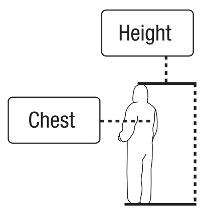
Do not use for:

- 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	
M	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
4XL	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 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. 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.

WARRANTY: 3M will replace or refund the purchase price of any Occupational Health and Environmental Safety Division (OH&ESD) product found to be defective in material, manufacture, or not in conformance with any express warranty. This warranty is exclusive and is in lieu of any implied warranty of merchantability or fitness for a particular purpose.

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