

3M™ Protective Coverall 4532+

Technical Data Sheet



Description

The 3M™ Protective Coverall 4532+ range is made from a highly breathable and lightweight 5 layered SSMMS material, providing the wearer with CE Type 5/6 protection with specialist treatments providing anti-static protection and an enhanced liquid repellency.

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 both sides of material (EN 1149-5:2008)¹



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

Features & Benefits:

- Specialist coatings enable this product to be used in many applications not usually suitable for SMS Based coveralls
- SSMMS material, see Fabric Material
- 3-panel elasticated hood for enhanced compatibility with complimentary PPE
- Knitted cuffs and elasticated waist and ankles
- 2-way zipper for added convenience and a storm flap with full sealable tape for extra protection
- 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 EN 1073-2 for protection against nuclear particles
- Low linting
- Available in blue (with a light blue triangle back panel)

Standards

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

¹ All apparel must be suitably grounded for anti-static treatment to be effective.

⚠ Except EN863 puncture resistance. Does not offer protection against radiation.



Materials

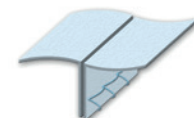
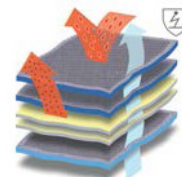
The following materials are used in the manufacture of this product.

Component	Material
Suit	SSMMS Polypropylene 52gsm (all colours)
Zipper	Nylon on Polyester Braid
Elastic	Synthetic Rubber (non-latex)
Thread	Polyester/ Cotton

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

Fabric material

The 3M™ protective coverall 4532+ is made using a 52gsm SSMMS, which consists of two outer layers of spunbond polypropylene (SS) encasing two layers of melt-blown polypropylene (MM) and a third layer of spunbond (S) on the underside. The fabric has been specifically designed to be durable whilst enabling air flow thereby reducing heat stress and enhancing wearer comfort. The middle 2 layers act as a filter to effectively protect against noxious dust and splash whilst the outer layers offer strength and increased liquid hold out from the alcohol and oil repellence treatment.



Seam Technology

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

Sizing²

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

Size	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

2. 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 ³
Hazardous Liquid Spray	No
Organic Solvents	No
Acids/ Alkalies	Yes, if chemical is compatible with suit material ³

3. 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™ products and services please contact 3M™.

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 2
Flex cracking (visual assessment)	ISO 7854:1995	Class 6
Tear resistance	ISO 9073-4:1997	Class 2
Tensile strength	EN ISO 13934-1:1999	Class 1
Puncture resistance	EN 863:1995	Class 1
Resistance to ignition	EN 13274-4:2001	Pass
Seam strength	EN ISO 13935-2:1999	Class 3
Repellency to liquids – 30% H ₂ SO ₄ Sulfuric Acid	EN ISO 6530:2005 Class 3 of 3	Class 2 of 3
Liquid penetration resistance – 30% H ₂ SO ₄ Sulfuric Acid	EN ISO 6530:2005	Class 3 of 3
Repellency to liquids – 10% NaOH Sodium Hydroxide	EN ISO 6530:2005	Class 2 of 3
Liquid penetration resistance – 10% NaOH Sodium Hydroxide	EN ISO 6530:2005	Class 3 of 3
Anti-static coating on both sides	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 stated⁴
- 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 liquids;
- 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
GT700058925	4532+	Coverall Blue type 5/6/ M
GT700059014	4532+	Coverall Blue type 5/6/ L
GT700059022	4532+	Coverall Blue type 5/6/ XL
GT700058933	4532+	Coverall Blue type 5/6/ XXL
GT700059055	4532+	Coverall Blue type 5/6 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.



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AV011491923