

# 4532+ Technical Data Sheet







## 3M™ Protective Coverall 4532+


The 3M™ Protective Coverall 4532+ offers an excellent combination of breathable material comfort, with enhanced liquid and dust protection. The 5 layer SSMMS material is specially treated to increase the repellence to certain oils and solvents enabling this product to be used in many applications not usually suitable for SMS-based coveralls. The 3M protective coverall 4532+ is certified to Type 5 and Type 6, to protect against certain hazardous dusts and light liquid splashes, and offers radioactive particulate protection to EN 1073-2 and Antistatic protection to EN 1149.

### Key Features

- Excellent barrier against dry particles and certain limited liquid chemical splash (CE Type 5/6)
- Alcohol and oil repellence treatment
- Robust yet soft highly breathable SSMMS material
- Fabric has an anti-static treatment
- Elasticated waist and ankles for convenience and freedom of movement and knitted cuffs for extra comfort
- 2-way zipper with sealable storm flap for added on-off convenience and extra protection
- Low linting
- Enhanced and reinforced triangular gusset panel
- 3 panel hood for optimal fit
- Available in blue (with a light blue triangle back panel) and Cool White

### Comfort and Protection

|   |                          |   |
|---|--------------------------|---|
|  | <b>Liquid Protection</b> | Type 6 - Light Liquid Splashes (EN 13034:2005 + A1:2009)            |
|  | <b>Dust Protection</b>   | Type 5 - Solid Airborne Particulates (EN ISO 13982-1:2004 +A1:2010) |
|  | <b>Anti-static</b>       | Anti-static treatment* on both sides                                |
|  | <b>Nuclear</b>           | Radioactive particulates (EN 1073-2:2002) Class 1                   |

 Except EN863 puncture resistance. Does not offer protection against radiation.  
\* All apparel must be suitably grounded for anti-static treatment to be effective.

### Approvals

CE approved under PPE Directive (89/686/ECC), Category III  
Certificate under Article 10, EC Type-Examination, by BTTG Testing & Certification Ltd., Notified Body Number 0338  
Certificate under Article 11, EC quality control, issued SGS United Kingdom Ltd., Notified Body Number 0120

### Materials

|                |                                      |
|----------------|--------------------------------------|
| <b>Suit</b>    | SSMMS Polypropylene in blue or white |
| <b>Zipper</b>  | Metal / Nylon / Polyester Braid      |
| <b>Elastic</b> | Synthetic Rubber                     |
| <b>Cuffs</b>   | Polyester                            |
| <b>Thread</b>  | Polyester / Cotton                   |

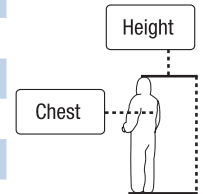
This product does not contain components made from natural rubber latex.

The Power to Protect Your World<sup>SM</sup>

### Sizing

An appropriate size garment should be selected to allow sufficient movement for the task.

|            | Height     |              | Chest      |              |
|------------|------------|--------------|------------|--------------|
| <b>S</b>   | 64 – 67 in | 164 – 170 cm | 33 – 36 in | 84 – 92 cm   |
| <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 vapours
- Store within the temperature range -20°C to +25°C (-4°F to +77°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 applicable regulations

### Storage and Disposal

|   |                   |   |   |
|---|-------------------|---|---|
|  | 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



## Applications and Performance

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

† The chemicals against which the product has been tested and certified are listed in the user instructions. For additional chemical penetration data, please call your local 3M Technical Service Representative.

| Test   | Standard/Test Method | Class**/ Result |
|--|----------------------|-----------------|
| Abrasion resistance (visual assessment)                            | EN 530:1994          | Class 2         |
| Flex cracking (visual assessment)                                  | ISO 7854:1995        | Class 6         |
| Tear resistance  | ISO 9073-4:1997      | Class 2         |
| Tensile strength   | 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 <sub>2</sub> SO <sub>4</sub>         | EN ISO 6530:2005     | Class 2/3       |
| Liquid penetration resistance – 30% H <sub>2</sub> SO <sub>4</sub> | EN ISO 6530:2005     | Class 3/3       |
| Repellency to liquids – 10% NaOH                                   | EN ISO 6530:2005     | Class 2/3       |
| Liquid penetration resistance – 10% NaOH                           | EN ISO 6530:2005     | Class 3/3       |
| Radioactive particulates (TIL)                                     | EN 1073-2:2002       | Class 1 of 3    |

\*\* The maximum Class is 6 unless otherwise noted. For additional technical data please contact 3M.

**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. 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.

Typical applications may include metal grinding or polishing, powder handling, oil related or greasy environments, cement manufacturing, painting and coating.

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.

The table 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.

