# 4570 Technical Data Sheet



### 3M<sup>™</sup> 4570 Protective Coverall

The 3M<sup>™</sup> Protective Coverall 4570 range of coveralls are designed to help protect against hazardous dusts (Type 5), light liquid splashes (Type 6), low pressure liquid sprays (Type 4) and high pressure liquid jets (Type 3).

#### **Key Features**

- Advanced film technology
- Soft material reducing noise from movement
- Excellent levels of chemical hold out and mechanical strength
- Certified to offer protection against radioactive particulates (EN 1073-2) and infective agents (EN 14126).
- Anti-static treated (inside only) to EN 1149
- · Elastic waist is adhered with glue to minimise potential entry points
- Elasticised wrists and ankles for convenience and freedom of movement.
- Thumb loops for secure fit during overhead work
- Three-panel hood design for a better fit and compatibility with other PPE
- Chin Flap with easy grab sealable tape for ease of use and secure fit
- Two integrated storm-flaps combined with double colour-coded zip to create a double seal for added convenience and extra protection.
- Large ring-pull zippers for easy donning and doffing when wearing gloves
- Seams are taped with a multi layer co-extruded clear tape which offers a discreet finish and a consistent seal and barrier to hazardous dusts and high pressure liquid jets

#### **Comfort and Protection**

	Liquid Protection	Type 3 & Type 4 (EN 14605) and Type 6 (EN 13034) Whole suit full and reduced spray test (EN ISO 17491-3)
	Dust Protection	Type 5 (EN ISO 13982-1) Inward Leakage results: Ljmn,82/90 < 30 %; LS,8/10 < 15 %.
In the second se	Anti-static	Anti-static coating (EN 1149-5:2008)*
	Nuclear	Radioactive particulates (EN 1073-2:2002), Class 2
	Biohazard	Tested according to EN 14126:2003 (Type 3-B, Type 4-B, Type 5-B, Type 6-B)

All apparel must be suitably grounded for anti-static treatment to be effective. Does not offer protection against radiation.

#### **Approvals**

CE approved under PPE Directive (89/686/ECC), Category III CE Certificate Issue: BTTG Testing and Certification Limited, UK. Notified Body Number: 0338 Article 11B Supervision: SGS United Kingdom Limited, UK Notified Body Number: 0120

#### **Materials**

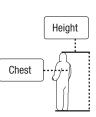
Suit	Polypropylene / Polyethylene
Zipper	Metal / Nylon / Polyester Braid
Elastic	Synthetic Rubber (non-latex)
Seam Tape	Polyetheylene
Thread	Polyester / Cotton

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

#### Sizing

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

Height		Chest		
S	64 – 67 in	164 – 170 cm	33 – 36 in	84 – 92 cm
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
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 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 national regulations

#### Limited use



Do not dry clean

Flammable – keep away from sparks or flames

Single use - do not re-use

Do r

Do not tumble dry





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#### Warnings and Limitations

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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)
  Environments with exposure to hazardous substances beyond CE Type 3/4/5/6 certification
- Environments with conditions of excessive heat

#### **Applications and Performance**

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

Typical applications may include: asbestos handling, paint spraying, agriculture, pharmaceutical manufacturing, tank cleaning, healthcare and chemical mixing and handling. 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 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 5
Flex cracking (visual assessment)	ISO 7854:1995	Class 2
Tear resistance	ISO 9073-4:1997	Class 2
Tensile strength	EN ISO 13934-1:1999	Class 1
Puncture resistance	EN 863:1995	Class 2
Bursting resistance	EN ISO 13938-1	Class 2
Resistance to ignition	EN 13274-4:2001	Pass
Resistance to blocking	EN 25978:1990	No Blocking
Seam strength	EN ISO 13935-2:1999	Class 3
Repellency to liquids – $30\% H_2SO_4$	EN ISO 6530:2005	Class 3 of 3
Liquid penetration resistance – $30\%$ H <sub>2</sub> SO <sub>4</sub>	EN ISO 6530:2005	Class 3 of 3
Repellency to liquids – 10% NaOH	EN ISO 6530:2005	Class 3 of 3
Liquid penetration resistance – 10% NaOH	EN ISO 6530:2005	Class 3 of 3
Anti-static coating on inside only	EN 1149-1:2006	Pass
Radioactive particulates	EN 1073-2:2002	TIL Class 2/3
Biological protection	EN 14126:2003	Pass
Synthetic blood penetration resistance	ISO 16603:2004	Class 6 of 6
Blood-borne pathogen penetration resistance	ISO 16604:2004	Class 6 of 6
Contaminated solid particle penetration resistance	ISO 22612:2005	Class 3 of 3
Contaminated liquid aerosol penetration resistance	ISO/DIS 22611:200	Class 3 of 3
Wet bacteria penetration resistance	EN ISO 22610:2006	Class 6 of 6

The table left 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.

Note: The maximum Class is 6 unless otherwise noted.



#### **Permeation Test Results**

		Fabric	Seam
Chemical	CAS Number	EN374-3	EN374-3
		classified to EN14325 1ug/cm <sup>2</sup>	classified to EN14325 1ug/cm <sup>2</sup>
2-(2-aminoethoxy) ethanol 98%	929-06-6	Class 6	Class 6
2,4-Difluoroanaline 99%	367-25-9	Class 3	Class 1
2-Chloroethanol 99%	107-07-3	Class 6	Class 6
2-Ethylhexanoic Acid 99%	149-57-5	Class 6	Class 6
Acetic Acid 30% (ethanoic acid)	64-19-7	Class 6	Class 6
Ammonium Hydroxide 30%	1336-21-6	Class 6	Class 1
Aniline 99% (phenylamine, aminobenzene)	62-53-3	Class 5	Class 5
Dimethyl Sulphate 98%	77-78-1	Class 6	Class 6
Dimethylformamide (DMF)	68-12-2	Class 6	Class 6
Ethylene Glycol 99.5%	107-21-1	Class 6	Class 6
Formaldehyde 10%	50-00-00	Class 6	Class 6
Formic Acid 96%	64-18-6	Class 6	Class 6
Hydrazine Monohydrate 98%	7803-57-8	Class 6	Class 6
Hydrobromic Acid 48%	10035-10-6	Class 6	Class 6
Hydrochloric Acid 37%	7647-01-0	Class 4	Class 4
Hydrofluoric Acid (71-75wt%)	7664-39-3	Class 4	Class 5
Hydrofluoric Acid 48%	7664-39-3	Class 6	Class 6
Isopropyl alcohol 99.5%	67-63-07	Class 6	Class 6
Mercuric Chloride sat. soln.	7487-94-7	Class 6	Class 6
Mercury	92786-62-4	Class 6	Class 6
Methanol	67-56-1	Class 2	Class 6
Nitric Acid 70%	7694-37-2	Class 6	Class 6
Phenol 85% soln.	108-95-2	Class 6	Class 6
Phosphoric Acid 85%	7664-38-2	Class 6	Class 6
Potassium Chromate (saturated soln.)	7789-00-6	Class 6	Class 6
Sodium Bisulphate 40% soln.	7681-38-1	Class 6	Class 6
Sodium Fluoride Saturated soln.	7681-49-4	Class 6	Class 6
Sodium Hydroxide 40wt%	1310-73-2	Class 6	Class 6
Sodium Hypochlorite (13% chlorine)	7681-52-9	Class 6	Class 6
Sulfuric Acid 30wt%	7664-93-9	Class 6	Class 6
Sulfuric Acid 93.1 wt%	7664-93-9	Class 6	Class 6
Zinc Bromide Saturated soln.	7699-45-8	Class 6	Class 6

Data given here is: for information only; not certified product claims; based on one sample only; based on lab conditions; subject to change. Product supplied may show variation. Breakthrough times are not safe wear times. Permeation rates increase with temperature. Permeation testing does not assess: degradation; mechanical defects; product design/fit.



EN14325 Classification		ANSI 103 Classification	
Class 6	>480 mins	Н	>480 mins
Class 5	>240 mins	М	>120 mins
Class 4	>120 mins	L	>30 mins
Class 3	>60 mins		
Class 2	>30 mins		
Class 1	>10 mins		

Test methods referenced above are EN 374 and ASTM F-739. EN 374 reports the breakthrough detection time at a permeation rate of 1.0  $\mu$ g/cm<sup>2</sup> and refers to the EN 14325 classification in the table above. ASTM F-739 reports the normalised breakthrough detection time at a permeation rate of 0.1  $\mu$ g/cm<sup>2</sup> and refers to the ANSI 103 classification stated in the table above. Both normalised permeation rates of 0.1  $\mu$ g/cm<sup>2</sup> and 1.0  $\mu$ g/cm<sup>2</sup> are reported in EN ISO 6529

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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<sup>TM</sup> Protective Coveralls in order to ensure correct operation. If you have questions contact 3M Technical Service.

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