

TECHNICAL DATA SHEET

VWR® Maximum Protection Coveralls

COVERALLS

- Superior fluid and particulate barrier: >99.9% bacterial filtration efficiency
- Lowest level of particulate shedding: Level I Helmke Drum Classification
- Light chemical splash resistance
- Breathable to ensure user comfort
- Soft, cloth-like fabric with maximum tear strength
- Bonded seam option available

VWR Maximum Protection Coveralls are the cleanest and most durable within the entire VWR Protection line of apparel. Manufactured from a specially formulated breathable microporous fabric, these garments have been engineered to maximize comfort and barrier protection. Coveralls are rigorously tested and manufactured in an ISO Certified facility under stringent process controls to ensure that each product meets exacting quality standards and performs to specification. Our products are validated through independent lab testing.



Coverall Dimensions

Size	M	L	XL	2X	3X	4X	5X
Body (A)	37½"	38¾"	40"	40½"	43"	43"	43½"
Chest (B)	24¼"	25"	27"	29¾"	32"	32½"	33½"
Sleeve (C)	34"	34"	36½"	37"	38"	41"	42"
Leg (D)	28½"	29½"	30"	31"	32"	32½"	33"

VWR® MAXIMUM PROTECTION COVERALLS

Size	Case of	Cat. No.
White		
Small	25	76311-056
Medium	25	414004-315
Large	25	414004-313
X-Large	25	414004-311
2X-Large	25	414004-310
3X-Large	25	414004-312
4X-Large	25	414004-314
5X-Large	25	414004-316
8X-Large	25	77321-788
White with Attached Non-Skid Boot Covers		
Medium	25	414004-320
Large	25	414004-321
X-Large	25	414004-317
2X-Large	25	414004-318
3X-Large	25	414004-319
4X-Large	25	414004-686

Size	Case of	Cat. No.
White Hooded Coveralls with Attached Fluid-Impervious Boot Covers		
Medium	25	414004-309
Large	25	414004-308
X-Large	25	414004-305
2X-Large	25	414004-306
3X-Large	25	414004-683
4X-Large	25	414004-684
5X-Large	25	414004-685
White with Bonded Seams		
Medium	25	10847-292
Large	25	10847-294
X-Large	25	10847-222
2X-Large	25	10847-224
3X-Large	25	10847-226
4X-Large	25	10847-228
6X-8X Large	25	10853-872

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MATERIAL PROPERTIES

Physical properties

Test Item	Result	Test Standard	Test Description
Particle Shedding (Helmke Drum)	Level I	IEST-RP-CCOO3.3	Garments are tumbled in a stainless steel drum for 10 minutes. Particles are then counted with a laser particle counter.
Weight (g/m²)	63	ASTM D3776	Measurement of fabric mass per unit area (weight).
Thickness	0.22	ASTM D1777	Measurement of fabric thickness.
Tensile Strength (Avg. lbs./in.)			
Warp	25.2	ASTM D5034	Covers the grab and modified grab test procedures for determining the breaking strength and elongation of textile fabrics. Provisions are made for wet testing.
Filling	29.4		
Tearing Strength (Avg. lbs./in.)			
Lengthwise Yarns	4.6	ASTM D2261	Measurement of the tearing strength of textile fabrics by the tongue (single rip) procedure using a recording constant-rate-of-extension-type (CRE) tensile testing machine.
Widthwise Yarns	5.7		

Barrier properties

Test Item	Result	Test Standard	Test Description
Bacterial Filtration Efficiency*	>99.9%	ASTM F2101	Measurement of the filtration efficiency of the fabric using a challenge organism of Staphylococcus aureus.
Water Resistance	Pass	AATCC Method 42	Measures the degree to which the material is a barrier to liquids.
Synthetic Blood Penetration Resistance	Pass	ASTM F1670-08	Measures the resistance of chemical protective clothing materials to penetration by liquid.

Comfort properties

Test Item	Result	Test Standard	Test Description
Water Vapor Transmission Rate (Avg. g/m ² /24 hrs.)†	733	ASTM E96	Measurement of the rate at which the fabric transfers water vapor under appropriate conditions.
Delta-P Breathability (mmH ₂ O/cm ²)	>102	MIL-M-36954C	Differential Pressure (Delta-P) is the measured pressure drop across material. Delta-P determines the resistance of the material to air flowing through. Pressure drop also relates to the breathability and comfort.
Air Permeability (cu. ft./min./sq. ft.)	0.06	ASTM D737	Measurement of air permeability to indicate breathability of fabric.

Chemical resistance

Test Item	Result	Test Standard	Test Description
Sulfuric Acid (70% concentration)	Pass	ASTM F903	Measures the barrier effectiveness of materials used for protective clothing and specimens from finished items of protective clothing (such as seams and other discontinuous regions) against liquids.
Phosphoric Acid (85% Concentration)	Pass		
Hydrochloric Acid (37% Concentration)	Pass		
Household Bleach (100% Concentration)	Pass		

*Control Average: 2928 CFU.

†Procedure B, Water Method, 73.4 °F 50% Rh; Air Gap: 1/4".

ALL TEST RESULTS PROVIDED BY INDEPENDENT THIRD-PARTY TESTING LABORATORIES LOCATED IN USA.

WARNING:

These garments and associated materials are not suitable for use in some environments containing chemicals and/or hazardous agents. It is the responsibility of the user to determine the level of risk in a particular environment and the proper personal protection equipment needed. Garments manufactured from synthetic non-woven material may generate static electricity. Garments that contain an anti-stat treatment are not intended to be used as a safety feature. These garments are not recommended to be used in a flammable and or explosive environment. Contact Avantor for garment/fabric safety data. The application of these products is out of Avantor's control. Therefore, Avantor makes no warranties, expressed or implied, and assumes no liability as to the performance of these products for a particular use.

CAUTION:

Avoid heat and/or open flame.

TO ORDER

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