

# MICROGARD® 2000



## Applications

- Pharmaceutical industries
- Agriculture
- Cleanrooms
- Paint spraying
- Crime scene investigation
- Veterinary services

**MICROGARD® 2000** provides both protection and comfort with exceptional liquid and particulate protection. Ideal for a wide range of industrial applications.



## Features & Benefits

**Protection** - Excellent liquid penetration resistance and barrier to fine particulates (>0.01 microns\*)

**Comfort** - Moisture vapour permeable ('breathable') to help reduce the risk of heat stress

**Silicone free** - Critical in paint spraying applications

**Low linting** - Reduces the risk of fibre contamination in some critical areas

**Optimised body fit** - Improves wearer comfort and safety

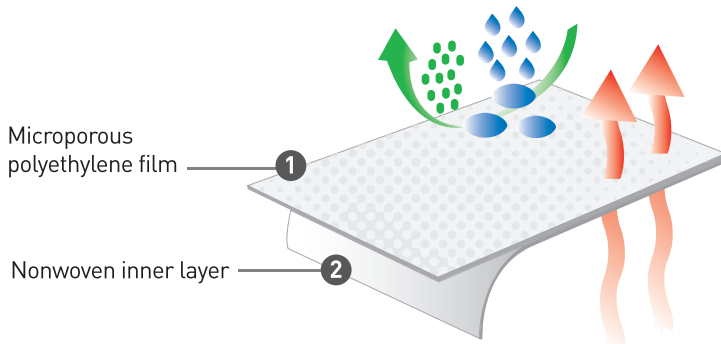
**Anti-static** - Tested according to EN 1149-5

\*EMSL test method

**MICROGARD® 2000**

MICROGARD® 2000 is designed to allow water vapour (perspiration) to escape from the suit yet will withstand saturation of liquid chemicals and filter 100% of particulates down to 0.01 microns in size\*.

The use of a high quality two-way stretch microporous film provides an effective liquid and particle barrier combined with a high water vapour transmission rate from inside to outside.

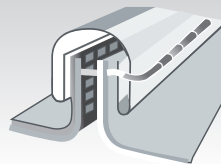


**Protection Levels & Additional Properties**



**Bound Seams**

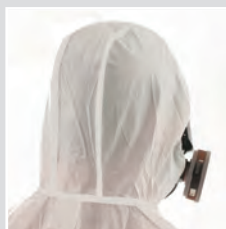
Superior strength, liquid and particle barrier



**Innovative Design Features**



**Finger loops** to prevent sleeve movement when working above your head



**Hoods** designed for optimum fit with respirators, particularly full face masks

**Specialist Approvals**

MICROGARD® 2000 has passed a range of specialist testing methods including:



**Biological Agents**  
EN 14126 : 2003  
See page 9



**Suitable for Ex-Zones**  
See page 10

**Technical Support**

Technical datasheets & product flyers available to download at:

[www.microgard.com](http://www.microgard.com) or by emailing [technical@microgard.com](mailto:technical@microgard.com)



**MICROGARD® 2000  
Range Overview**

**MICROGARD® 2000 STANDARD**

Low hazard liquid chemical repellence, particle protection, protection from pesticides and barrier to biological agents. Spray tight and ultra low linting for critical environments.



▲ MICROGARD® 2000 STANDARD

**MICROGARD® 2000 COMFORT**

Low hazard liquid chemical repellence and particle protection. Provides Type 5 & 6 protection for workers in warm environments



▲ MICROGARD® 2000 COMFORT - See page 19

**MICROGARD® 2000 SOCO**

Designed to prevent crime scene contamination, as well as officer protection, in partnership with Greater Manchester Police.



▲ MICROGARD® 2000 SOCO - See page 20

**MICROGARD® 2000 Ts PLUS**

Type 4 protection, MICROGARD® 2000 performance. Stitched & taped seams offer a higher level of protection from liquid chemical penetration.



▲ MICROGARD® 2000 Ts PLUS - See page 21

# MICROGARD® 2000

## MICROGARD® 2000 Technical Data

MICROGARD® 2000 is extensively tested in accordance with statutory requirements, including physical performance attributes and barrier to hazardous substances. The following tables outline the results obtained in independent laboratories according to European test methods.

Test Method	Result	EN Class (EN14325)
EN 530 Abrasion	100 cycles	2 of 6
EN ISO 7854 Flex Cracking	40,000 cycles	5 of 6
EN ISO 9073-4 Tear Resistance (Machine Direction)	40.7N	1 of 6
EN ISO 9073-4 Tear Resistance (Cross Direction)	18.6N	
EN ISO 13934-1 Tensile Strength (Machine Direction)	108.1N	1 of 6
EN ISO 13934-1 Tensile Strength (Cross Direction)	48.3N	
EN 863 Puncture Resistance	8.2N	1 of 6
EN ISO 13938-1 Burst Resistance	184.1kPa	3 of 6
EN 13274-4 Resistance to ignition	Pass	-
EN 1149-5 Electrostatic Properties (Surface resistivity)	$<5,0 \times 10^{10}$	-
ISO 13935-2 Seam Strength	111N	3 of 6
BS EN 20811 Hydrostatic Head (water pressure test)	>200cm	-
EN 31092/ISO 11092 Thermal Resistance (Rct in m <sup>2</sup> ·K/W)	16,3·10 <sup>-3</sup>	-
EN 31092/ISO 11092 Water Vapour Resistance (Ret in m <sup>2</sup> ·Pa/W)	<15	3 of 3 (DIN 32781)

The following table sets out MICROGARD® 2000 performance for resistance to chemical penetration in accordance with EN ISO 6530. For further information on penetration testing see page 55.

Fabric Repellence & Penetration - Resistance to Liquid Chemicals	White	EN Class	Green	EN Class
Repellence of Liquids - 30% Sulphuric Acid	96.7	3 of 3	97.5	3 of 3
Repellence of Liquids - 10% Sodium Hydroxide	96.7	3 of 3	97.8	3 of 3
Repellence of Liquids - n-heptane (undiluted)	95.5	3 of 3	95.7	3 of 3
Repellence of Liquids - Isopropanol	93.8	2 of 3	93.9	2 of 3
Resistance to penetration by liquids- 30% Sulphuric Acid	0,0	3 of 3	0,0	3 of 3
Resistance to penetration by liquids 10% Sodium Hydroxide	0,0	3 of 3	0,0	3 of 3
Resistance to penetration by liquids – n-heptane (undiluted)	0,0	3 of 3	0,0	3 of 3
Resistance to penetration by liquids – Isopropanol	0,0	3 of 3	0,0	3 of 3

MICROGARD® 2000 when tested in accordance with EN 14126: 2003 demonstrates an excellent barrier to infective agents. The specific test results are detailed in the table below and for further information on this European Norm see page 7.

EN14126 Barrier to Infective Agents	Result	EN Class
ISO 16603 Resistance to penetration by blood/fluids under pressure	Pass to 20kPa	Class 6 of 6
ISO 16604 Resistance to penetration by blood borne pathogens	Pass to 20kPa	Class 6 of 6
EN ISO 22610 Resistance to wet bacterial penetration (mechanical contact)	No penetration (up to 75 mins)	Class 6 of 6
ISO/DIS 22611 Resistance to biologically contaminated aerosols	No penetration	Class 3 of 3
ISO 22612 Resistance to dry microbial penetration	No penetration	Class 3 of 3

MICROGARD® 2000 products have been extensively tested according to European and International requirements, including ASTM, for both physical and barrier performance. More details can be found on our website [www.microgard.com](http://www.microgard.com)

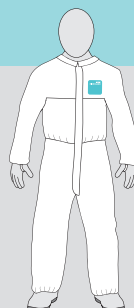
## MICROGARD® 2000 STANDARD Coverall Models

### Model 103

#### Suit Features

- Collar
- 2-way front zipper with re-sealable storm flap
- Finger loops
- Elasticated waist, wrists & ankles

**Sizes:** S-3XL  
**Colours:** White



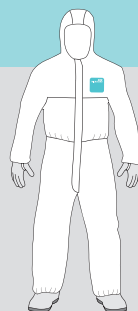
MICROGARD® 2000 STANDARD Coverall Models (continued)

Model 111

**Suit Features**

- 3-piece hood
- 2-way front zipper with re-sealable storm flap
- Finger loops
- Elasticated hood, waist, wrists & ankles

**Sizes:** S-3XL  
**Colours:** White and Green

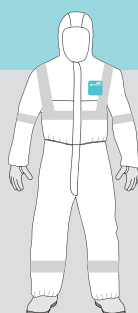


Model 113

**Suit Features**

- 3-piece hood
- 2-way front zipper with re-sealable storm flap
- Finger loops
- Elasticated hood, waist, wrists & ankles
- Reflective Hi-Vis tape

**Sizes:** S-3XL  
**Colour:** White

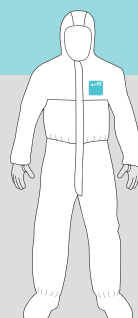


Model 122

**Suit Features**

- 3-piece hood
- 2-way front zipper with re-sealable storm flap.
- Finger loops
- Elasticated hood, waist & wrists & ankles
- Boot end with anti slip soles

**Sizes:** S-3XL  
**Colour:** White

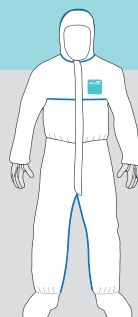


Model 128

**Suit Features**

- 2-piece hood & chinstrap
- 2-way front zipper with re-sealable storm flap
- Dual finger loops
- Elasticated hood, waist, wrists & ankles
- Supplied with 2 loose pockets
- Blue bound seams

**Sizes:** S-3XL  
**Colour:** White



Model 156

**Suit Features**

- 3-piece hood
- 2-way front zipper with re-sealable storm flap
- Finger loops
- Elasticated hood, waist, wrists, ankles & overflaps
- Intergrated socks with boot overflaps

**Sizes:** S-3XL  
**Colour:** White

