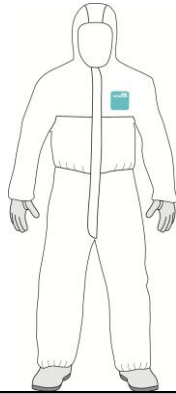


Technical Data Sheet



MICROGARD® 2000 Standard, Model 111

Part Number(s): WH20-B-00-111(White), GR20-B-00-111(Green)

Fabric: MICROGARD® 2000

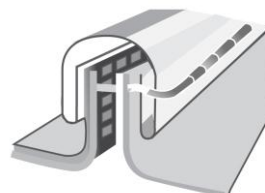
Seam Type: Bound

Product Description & Features	CE Category
Coverall with 3-piece hood, elasticated wrists, finger loops, waist and ankles. 2-way front zipper with re-sealable storm flap.	Cat III

Whole Suit Test Results		
Test Method	Description	Result
EN ISO 13982-2	Type 5 Particulate Inward Leakage*	Ljmn, 82/90 ≤ 30% Ls, 8/10 ≤ 15%
EN 13034	Type 6 Reduced Spray Test*	Pass
EN 1073-2	Inward leakage test for non-ventilated protective clothing against particulate radioactive contamination*	Class 2 of 3
EN ISO 13935-2	Seam Strength	Class 3 of 6

* Test performed with wrists, cuffs, ankles and hood taped to ancillary PPE with the storm flap closed and sealed

CE Approvals	
EN ISO 13982-1: 2004 +A1:2010	Type 5 (Limited life, full body protection against airborne solid particulates)
EN 13034: 2005+A1: 2009	Type 6 (Limited life, full body limited chemical protective clothing against liquids)
EN 1073-2: 2002	Non-ventilated protective clothing against particulate radioactive contamination
EN14126: 2003	Types 5-B, 6-B (Limited life, full body protective clothing against infective agents)
DIN 32781	Protective suits against pesticides
EN1149-5: 2008	"for protective clothing with electrostatic dissipative properties"



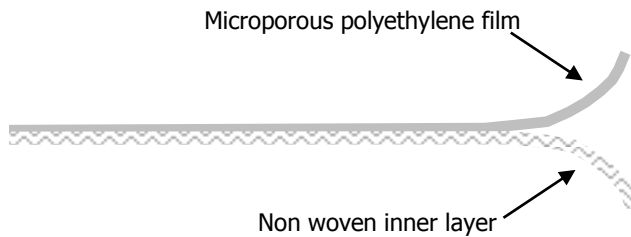
Bound Seams

Superior strength, liquid and particle barrier

Safety Note: All chemical tests and breakthrough times given relate to laboratory tests on fabrics only. Seams and closures may have lower breakthrough times, particularly when worn or damaged. It is the user's responsibility to select an appropriate garment, gloves, boots and other equipment for the particular use. The user shall be responsible for determining how long the garment can be worn for the particular use and whether it can be suitably cleaned for re-use. Microgard Limited does not give any warranties or make any representations about its garments other than those contained in the official literature supplied by Microgard Limited with each garment.



MICROGARD® 2000 Fabric Technical Data Sheet



Basic Description:	Microporous Polyethylene (PE) Laminate
Basis Weight:	63 gsm
Colour(s):	White, Green and Yellow

Fabric Physical Tests according to EN 14325: 2004		
Test Method	Result	EN Class
Abrasion Resistance EN530 Method 2	100	2 of 6
Flex ISO 7854 Method B	40,000	5 of 6
Tear Resistance EN ISO 9073-4 (MD)	40.7N	1 of 6
Tear Resistance EN ISO 9073-4 (CD)	18.6N	
Bursting Resistance ISO 13938-1	184.1kPa	3 of 6
Tensile Strength ISO 13934-1 (MD)	108.1N	1 of 6
Tensile Strength ISO 13934-1 (CD)	48.3N	
Puncture Resistance EN 863	8.2N	1 of 6
EN 25978 Resistance to Blocking	No blocking	

Other Physical Data	
Test Method	Result
Hydrostatic Head (water pressure test) BS EN 20811	>200cm
Water Vapour Resistance EN 31092/ISO 11092	<20 m ² ·Pa/W
Thermal Resistance EN 31092/ISO 11092	16.3·10 ⁻³ m ² ·K/W

ISO 13994 - Fabric resistance to penetration of liquid chemicals under pressure		
Chemical	CAS Number	Result (kPa)
Sodium Hydroxide 30%	1310-73-2	>14
Sulphuric Acid 96%	7664-93-9	>14
Methanol	67-56-1	10.5
Toluene	108-88-3	7.0

EN ISO 6529:2001 Chemical Permeation Barrier*			
Chemical	CAS Number	BT at 1.0µg/cm ² /min (mins)	EN Class (EN 14325)
Sodium Hydroxide 10%	1310-73-2	>10	1 of 6
Glycerol	56-81-5	>480	6 of 6

*For an up to date list of chemicals tested please visit www.microgard.fr or e-mail the Microgard Technical Team at technical@microgard.com





MICROGARD® 2000 Fabric Technical Data Sheet

Chemical Repellence EN368/EN ISO 6530*						
Chemical	White Result	EN Class	Green Result	EN Class	Yellow Result	EN Class
30% Sulphuric Acid	96.7%	3 of 3	97.5%	3 of 3	94.4%	2 of 3
10% Sodium Hydroxide	96.7%	3 of 3	97.8%	3 of 3	95.3%	3 of 3
o-Xylene	95.5%	3 of 3	95.7%	3 of 3	89.8%	1 of 3
Butan-1-ol	93.8%	2 of 3	93.9%	2 of 3	96.1%	3 of 3
Chemical Penetration EN368/EN ISO 6530*						
Chemical	White Result	EN Class	Green Result	EN Class	Yellow Result	EN Class
30% Sulphuric Acid	0.0%	3 of 3	0.0%	3 of 3	0.0%	3 of 3
10% Sodium Hydroxide	0.0%	3 of 3	0.0%	3 of 3	0.0%	3 of 3
o-Xylene	0.0%	3 of 3	0.0%	3 of 3	0.0%	3 of 3
Butan-1-ol	0.0%	3 of 3	0.0%	3 of 3	0.0%	3 of 3

EMSL Particle Penetration Test (Fabric Filtration Efficiency)			
Particle Size (µm)	Initial Particle Mass (mg)	Mass passing sample (mg)	Percent Passing sample (%)
0<n<0.01	109	22	>20, <25
0.01<n<0.1	114	0	0
0.1<n<1.0	108	0	0
1.0<n<10	151	0	0
10<n<100	107	0	0
100<n<1000	111	0	0

EN 14126: 2003 - Barrier to Infective Agents		
Test Method	Result	EN Class
ISO 16603 Resistance to penetration by blood/fluids under pressure	Pass to 20kPa	6 of 6
ISO 16604 Resistance to penetration by blood borne pathogens	Pass to 20kPa	6 of 6
EN ISO 22610 Resistance to wet bacterial penetration (mechanical contact)	No penetration (up to 75 mins)	6 of 6
ISO/DIS 22611 Resistance to biologically contaminated aerosols	No penetration	3 of 3
ISO 22612 Resistance to dry microbial penetration	No penetration	3 of 3



MICROGARD® 2000 Fabric Technical Data Sheet

EN 14786: 2006 Atomiser Test				
Determination of resistance to penetration by sprayed liquid chemicals, emulsions and dispersions				
Brand name & ZA-Nr.	Type of Preparation	Active Substance	Manufacturer	Result (% Penetration)
U46-D-Fluid 0941-00	SL	2,4-D-DMA-Salz	BASF	None Detected
Pirimor Granulat 2470-00	WG	Pirimicarb	Syngenta	None Detected
Amistar 5090-00	SC	Azoxystrobin	Syngenta	None Detected
Betanal Expert 4991-00	EC	Phenmedipham	Bayer CropScience	None Detected
Folicur 4028-00	EW	Tebuconazole	Bayer CropScience	None Detected

Comfort Testing MICROGARD® 2000 White	
Air Permeability: Gurley Method (s 100 cm ⁻²)	>500
Water Vapour Resistance (R _{et}) (m ² ·Pa/W)	19.6
Thermal Resistance (R _{ct}) (m ² ·K/W)	0.0127
Water Vapour Permeability Index (WVPI)	0.039
clo value	0.082

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