

MICROCHEM® 5000



Applications

- Chemicals
- Oil and petrochemicals
- Pharmaceuticals
- Mining
- Agriculture
- First response
- Fire service
- Industrial and tank cleaning
- Sewage purification installations

MICROCHEM® 5000 reaches new levels in chemical protection and has been engineered to protect. The highly visible multi layer fabric is strong, durable and suitable for workers in extremely hazardous areas, including HAZMAT response teams.



Features & Benefits

Performance - Barrier to numerous organic and inorganic chemicals and biological hazards

Comfort - Multi layer material which is lightweight, yet strong and durable

Highly visible - Highly visible bright orange colour for improved worker safety

Protection - >480 minutes breakthrough time against 14 of 15 chemicals listed in EN ISO 6529

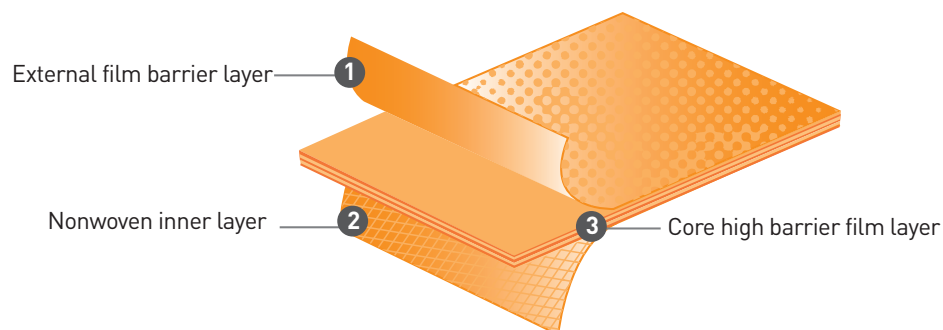
Anti-static - Tested according to EN 1149-1

Designed to protect - Innovative design features include liquid-tight dual zip designs without the need for additional taping

MICROCHEM®
5000

MICROCHEM® 5000

This highly visible innovative material is strong, durable and suitable for workers in extremely hazardous areas, including HAZMAT response teams.

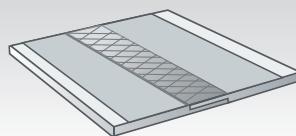


Protection Levels & Additional Properties

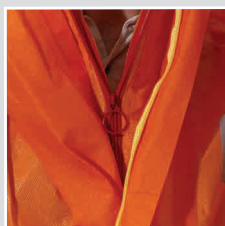


Ultrasonically Welded & Taped Seams

A feature throughout the MICROCHEM® 5000 range, this seam technology is our highest barrier to liquids and particulates.



Innovative Design Features



Double zip system helps ensure a liquid tight seal without the need for additional taping



Double cuff design to enable a spray-tight connection with chemical protective gauntlets (additional taping or Glove Link is required)

Specialist Approvals

MICROCHEM® 5000 has passed a range of specialist testing methods including:



Biological Agents
EN14126 : 2003
See page 9



Suitable for Ex-Zones
See page 10

Technical Support

Contact the Microgard technical team to discuss facilitating independent permeation testing of your specific chemical or chemical mixture

Email: technical@microgard.com

Technical datasheets & product flyers available to download at: www.microgard.com



MICROCHEM® 5000 Range Overview

MICROCHEM® 5000

Protection against organic and inorganic chemicals and biological hazards



▲ MICROCHEM® 5000

MICROCHEM® 5000 model 151

Developed for the emergency services. Rubber face seal for use with full face respirators



▲ MICROCHEM® 5000 151 - See page 49

MICROCHEM® 5000

MICROCHEM® 5000 Technical Data

MICROCHEM® 5000 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 (EN 14325)
EN 530 Abrasion	2000 Cycles	6 of 6
EN ISO 7854 Flex Cracking	5000 Cycles	3 of 6
EN ISO 9073-4 Tear Resistance [Machine Direction]	67.7N	4 of 6
EN ISO 9073-4 Tear Resistance [Cross Direction]	60.2N	
EN ISO 13934-1 Tensile Strength [Machine Direction]	165.0N	3 of 6
EN ISO 13934-1 Tensile Strength [Cross Direction]	136.3N	
EN 863 Puncture Resistance	14.3N	2 of 6
EN ISO 13938-1 Burst Resistance	143.1kPa	2 of 6
EN 13274-4 Resistance to ignition	Pass	-
EN 13274-4 Resistance to Flame	Pass	2 of 3
EN25978 Resistance to blocking	Slight Blocking	-
EN 1149-1: 2006 Electrostatic Properties (Surface Resistance)	$<2.5 \times 10^9$	-
EN 1149-1: 2006 Electrostatic Properties (Surface Resistivity)	$<5.0 \times 10^{10}$	-
ISO: 13935-2 Seam Strength	241.8N	4 of 6

MICROCHEM® 5000 has been tested against numerous chemicals. For further information on permeation testing and a more extensive list of chemicals see page 55 onwards.

EN ISO 6529 Chemical Permeation Test Results			
Chemical Name	CAS Number	BT at 1.0µg/cm²/min	EN Class (EN 14325)
Acetone	67-64-1	>480	6 of 6
Acetonitrile	75-05-8	>480	6 of 6
Ammonia Gas, 1 atmos.	7664-41-7	>480	6 of 6
Carbon Disulphide	75-15-0	>480	6 of 6
Chlorine (>99.8wt%) Gas, 1 atmos.	7782-50-5	>480	6 of 6
Diethylamine	109-89-7	>480	6 of 6
Ethyl Acetate	141-78-6	>480	6 of 6
Hexane-n (99.8 wt%)	110-54-3	>480	6 of 6
Hydrogen Chloride (> 99.0 wt%) Gas, 1 atmos	7647-01-0	>480	6 of 6
Methanol (> 99.5 wt%)	67-56-1	>480	6 of 6
Sodium Hydroxide (aq, 50wt%)	1310-73-2	>480	6 of 6
Sulphuric Acid (96 wt%)	7664-93-9	>480	6 of 6
Tetrahydrofuran	109-99-9	>480	6 of 6
Toluene (99.99 wt%)	108-88-3	>480	6 of 6

TNO Protocols – Resistance to permeation of Chemical Warfare Agents			
Chemical	Detection Limit	Temperature (°C)	Breakthrough Time (hh:mm)
Mustard (HD)	Approx. 0.5 µg/cm²	37	>17:40
Lewisite (L)	Approx. 0.5 µg/cm²	37	>06:30 <09:30
Sarin (GB)	Approx. 0.05 µg/cm²	37	>24:00
VX	Approx. 0.05 µg/cm²	37	>24:00

MICROCHEM® 5000 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

MICROCHEM® 5000 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

MICROCHEM®
5000

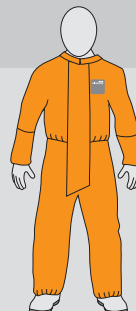
MICROCHEM® 5000 Coverall Models

Model 103

Suit Features

- Collar
- Double zip closure
- Double cuffs with knitted inner cuff
- Elasticated outer cuffs, waist and ankles

Sizes: S-3XL
Colour: Orange

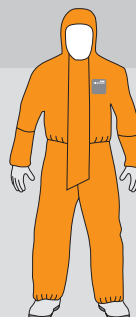


Model 111

Suit Features

- 2 piece hood
- Double zip closure
- Double cuffs with knitted inner cuff
- Elasticated hood, outer cuffs, waist and ankles

Sizes: S-3XL
Colour: Orange

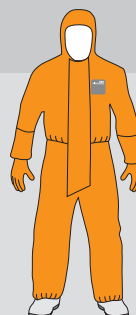


Model 121 - G02

Suit Features

- 2 piece hood
- Double zip closure
- Elasticated hood, waist and ankles
- Attached Ansell Barrier Gloves

Sizes: S-3XL
Colour: Orange

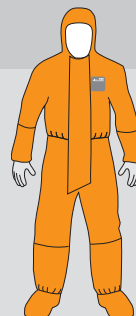


Model 122

Suit Features

- 2 piece hood
- Double zip closure
- Double cuffs with knitted inner cuff
- Elasticated hood, outer cuffs, waist and boot overflaps
- Integrated socks with boot overlap

Sizes: S-3XL
Colour: Orange

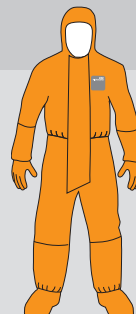


Model 125 - G02

Suit Features

- 2 piece hood
- Double zip closure
- Elasticated hood, waist and boot overflaps
- Integrated socks with boot overflaps
- Attached Ansell Barrier Gloves

Sizes: S-3XL
Colour: Orange



MICROCHEM® 5000 Model 151

MICROCHEM®
5000



Developed for first responders and the emergency services

Rear entry suit, with neoprene rubber face seal for a close fit to full face respirators. Ideal for use in hazardous areas where protection against concentrated chemicals and biological agents is required.

MICROCHEM® 5000 Model 151

Protection Levels & Additional Properties



TYPE 3-B



TYPE 4-B



TYPE 5-B



EN 1073-2



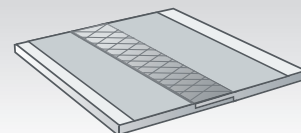
EN 1149-1



EN 14126

Ultrasonically Welded & Taped Seams

A feature throughout the MICROCHEM® 5000 range, this seam technology is our highest barrier to liquids and particulates.



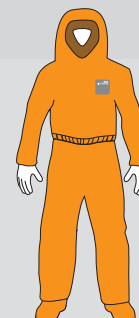
Model 151 - G00 & G02

Suit Features

- Neoprene rubber face seal
- Rear horizontal zip entry
- Attached socks with boot overflap
- Ultrasonically welded and taped seams

151-G02

- Includes attached Ansell Barrier Gloves, with over sleeves and finger loops



Sizes: S-3XL

Colour: Orange

Model 151 also available in...



Socks with boot overflap



Neoprene rubber face seal



Rear entry double zip system

Applications

- Chemicals
- Oil and petrochemicals
- Pharmaceutical
- Agriculture
- Sewage purification installations
- Industrial and tank cleaning
- Emergency Services (HAZMAT, CBRN)

Specialist Approvals



Biological Agents
EN14126 : 2003
See page 9



Suitable for Ex-Zones
See page 10

Specialist Accessories



MICROGARD® Outlast® PCM Vest

Outlast® is the original temperature-regulating technology. Outlast® technology balances your temperature through the use of patented Thermocules™ that absorb and store excess heat, releasing it when you need it most.

The main benefits of products with Outlast® technology

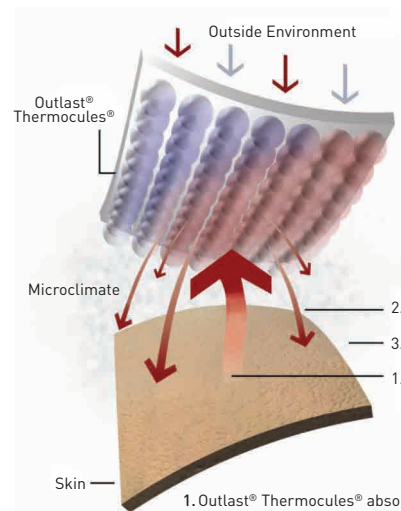
- Balances temperature
- Adapts to your thermal needs
- Reduces overheating
- Less perspiration
- Less chill
- Not too hot, not too cold

Outlast® Thermocules™ continually absorb, store and release excess body heat to balance temperature and humidity build-up.



Registered trademark of the Space Foundation, an initiative of the aerospace industry and NASA. Patented Outlast® Phase Change Technology is recognized by NASA as Certified Space Technology.

How Outlast® Adaptive Comfort® Works



1. Outlast® Thermocules® absorb the excess heat
2. Stored heat is released to the body as needed
3. The result is a constant microclimate



MICROGARD® SURE STEP™ Overshoes

The MICROGARD® SURE STEP™ Overshoes feature a revolutionary monofilament coating that offers excellent anti-slip properties (confirmed by independent laboratory tests).

This unique coating also makes MICROGARD® SURE STEP™ stronger and more durable than traditional CPE overshoes, resulting in a safer yet more economical product.

Features include

- Liquid resistant material
- Lint free
- Generous sizing to accommodate shoe size 42-48
- Anti-static to EN1149-1
- Available in white or blue

For more information on our range of accessories, or if you can't see the accessory you are looking for, please contact Microgard Limited customer services
Tel: +44 (0) 1482 625444, email sales@microgard.com or visit www.microgard.com

MICROGARD® GLOVE LINK

Provides a splash proof seal without the need for additional taping. GLOVE LINK is compatible with most MICROGARD® and MICROCHEM® coveralls where a splash proof connection with chemical protective gauntlets is required.

NOTE: Chemical protective gauntlets must have a minimum cuff size of 325mm (13") and a smooth surface. If in any doubt on the compatibility with your chemical gauntlets, email the Microgard technical team: technical@microgard.com

Each MICROGARD® GLOVE LINK set contains:
• 2 x Grooved cuff adapters • 4 x Rubber o-rings
(One adapter and two rings are required for each glove connection)

