

MICROCHEM® 4000
Range Overview


MICROGARD®



MICROCHEM®
4000

Ansell

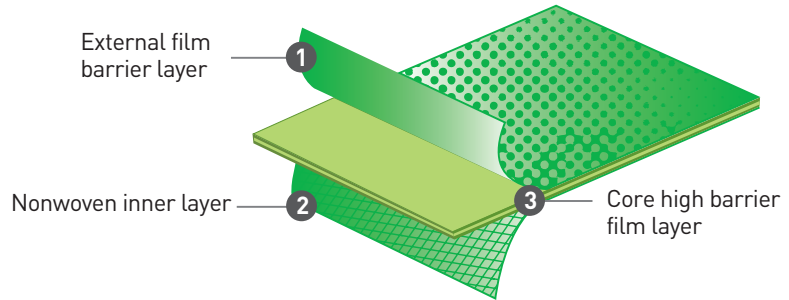
MICROCHEM® 4000

MICROCHEM®
4000



MICROCHEM® 4000 is designed to provide an exceptional barrier against organic and inorganic chemicals and biological agents.

A unique multi-layer barrier fabric renowned for its lightweight, yet robust textile feel and exceptional barrier to organic & inorganic chemicals.



Applications

- Chemical handling / transportation
- Oil-based mud protection
- Hazardous waste remediation
- Sewage purification installations
- Industrial / tank cleaning
- HAZMAT Emergency Response (i.e. Level B)
- Pharmaceutical
- Mining
- Agriculture

Features & Benefits

Protection - Permeation tested against over 190 chemicals, including chemical warfare agents

Comfort - Textile like inner improves wearer acceptance

Anti-static - Tested according to EN 1149-5

Designed to protect - Typical coverall features include dual zip systems and double cuffs

Protection Levels & Additional Properties



TYPE 3-B



TYPE 4-B



TYPE 5-B



EN 14126



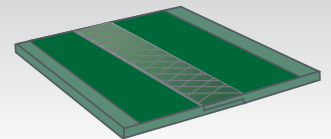
EN 1073-2



EN 1149-5

Ultrasonically Welded & Taped Seams

A feature throughout the MICROCHEM® 4000 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



Biological Agents
EN 14126:2003



Suitable for Ex-Zones

MICROCHEM[®] 4000 Coveralls

MICROCHEM[®]
4000

Model 103

Suit Features

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

Sizes: S-5XL
Colour: Green



Model 111

Suit Features

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

Sizes: S-5XL
Colour: Green



Model 121

Suit Features

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

Sizes: S-5XL
Colour: Green



Model 122

Suit Features

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

Sizes: S-5XL
Colour: Green



Model 125

Suit Features

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

Sizes: S-5XL **Colour:** Green

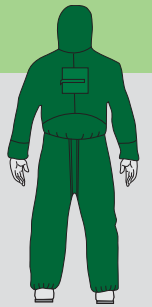


Model 162

Suit Features

- Pass-thru device for use with fall arrest equipment
- 2-piece hood
- Double zip closure
- Double cuffs with knitted inner cuff
- Elasticated hood, outer cuffs, waist & ankles

Sizes: S-5XL **Colour:** Green



MICROCHEM® 4000 Accessories

MICROCHEM®
4000



Model **212** Apron

- Tie fastening to waist
- 100cm long tie fastening

Size: One Size Colour: Green



Model **230** Jacket

- 2 piece hood
- Double zip closure
- Elasticated hood, wrists and hem
- Welded and taped seams
- Double cuff with knitted inner cuff

Sizes: S-3XL Colour: Green



Model **406** Overboots

- Elastic to top of boot
- Tie fastening
- Welded seams

Size: One Size (fits size 42-46)
Colour: Green



Model **507** Cape Hood

- Balaclava style cape hood covering part of shoulders
- Velcro fastening to front
- Welded seams

Size: One Size
Colour: Green



Model **215** Apron with Sleeves

- Velcro fastening to neck
- Tie fastening at the waist
- Double cuff with knitted inner cuff
- Welded and taped seams

Sizes: S-3XL Colour: Green



Model **301** Trousers

- Elastication to waist and ankles
- No pockets
- Welded & taped seams

Sizes: S-2XL Colour: Green



Model **516** Cape Hood with visor

- Hood with visor and 3 inch velcro body panel
- Welded & taped seams

Size: One Size
Colour: Green



Model **600** Oversleeves

- Elasticated at both ends
- Welded seams

Size: One Size
Colour: Green

MICROCHEM® 4000 Technical Data

MICROCHEM® 4000 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 | >2,000 Cycles | 6 of 6 |
| EN ISO 7854 Flex Cracking | >40,000 Cycles | 5 of 6 |
| EN ISO 9073-4 Tear Resistance (Machine Direction) | >60 N | 3 of 6 |
| EN ISO 9073-4 Tear Resistance (Cross Direction) | >40 N | |
| EN ISO 13934-1 Tensile Strength (Machine Direction) | >100 N | 2 of 6 |
| EN ISO 13934-1 Tensile Strength (Cross Direction) | >60 N | |
| EN 863 Puncture Resistance | >10 N | 2 of 6 |
| EN ISO 13938-1 Burst Resistance | >80 kPa | 2 of 6 |
| EN 13274-4 Resistance to ignition | Pass | - |
| EN 13274-4 Resistance to flame | Pass | 1 of 3 |
| EN 1149-5 Electrostatic Properties (Surface Resistance) | <2.5 x 10 ⁹ Ω | - |
| ISO 13935-2 Seam Strength | >125 N | 4 of 6 |

MICROCHEM® 4000 has been tested against over 190 chemicals.

| EN ISO 6529 Chemical Permeation Test Results | | | |
|--|------------|----------------------------------|---------------------|
| Chemical Name | CAS Number | BT at 1.0µg/cm ² /min | EN Class (EN 14325) |
| Acetone | 67-64-1 | >480 | 6 of 6 |
| Acetonitrile | 75-05-8 | >480 | 6 of 6 |
| Chlorine (Gas, 1 atmos.) | 7782-50-5 | >480 | 6 of 6 |
| Chromium Trioxide (50% w/w) | 1333-82-0 | >480 | 6 of 6 |
| Ethyl Acetate | 141-78-6 | >480 | 6 of 6 |
| Heptane, n- | 142-82-5 | >480 | 6 of 6 |
| Hydrofluoric Acid (71-75% w/w) | 7664-39-3 | >480 | 6 of 6 |
| Hydrogen Chloride (Gas, 1 atmos.) | 7647-01-0 | >480 | 6 of 6 |
| Hydrogen Peroxide (35% w/w) | 7722-84-1 | >480 | 6 of 6 |
| Methanol | 67-56-1 | >480 | 6 of 6 |
| Methyl Ethyl Ketone | 78-93-3 | >480 | 6 of 6 |
| Nitric Acid (70% w/w) | 7697-37-2 | >480 | 6 of 6 |
| Sodium Hydroxide (40% w/w) | 1310-73-2 | >480 | 6 of 6 |
| Sulphuric Acid (96% w/w) | 7664-93-9 | >480 | 6 of 6 |
| Toluene | 108-88-3 | >480 | 6 of 6 |

| FINABEL 0.7.C – Resistance to permeation of Chemical Warfare Agents | | | |
|---|--|------------------|---------------------------|
| Chemical | Detection Limit | Temperature (°C) | Breakthrough Time (hh:mm) |
| Mustard (HD) | 0.1 µg/cm ² (pinpoint BT) or 4 µg/cm ² (continuous and homogeneous BT) | 37 | >24:00 |
| Lewisite (L) | Approx. 0.5 µg/cm ² | 37 | >05:00<06:00 |
| Sarin (GB) | Approx. 0.05 µg/cm ² | 37 | >24:00 |
| VX | Approx. 0.05 µg/cm ² | 37 | >24:00 |

MICROCHEM® 4000 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.

| EN14126 Barrier to Infective Agents | Result | EN Class |
|---|-------------------------------|--------------|
| ISO 16603 Resistance to penetration by blood/fluids under pressure | Pass to 20 kPa | Class 6 of 6 |
| ISO 16604 Resistance to penetration by blood borne pathogens | Pass to 20 kPa | Class 6 of 6 |
| EN ISO 22610 Resistance to wet bacterial penetration (mechanical contact) | No penetration (up to 75 min) | 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® 4000 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

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