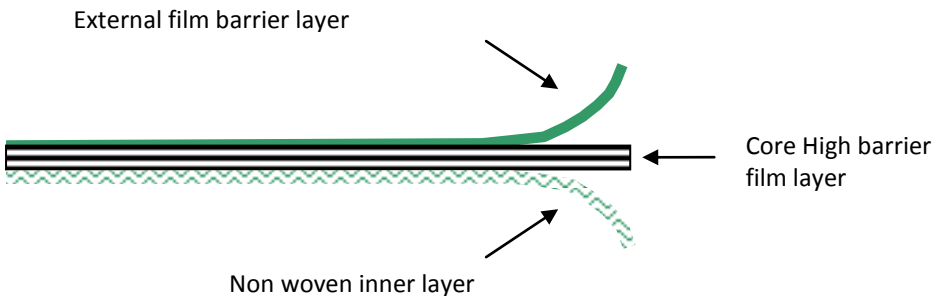
MICROCHEM® 4000 Fabric Technical Data Sheet



Basic Description:	Multi-layer barrier laminate
Basis Weight:	100 gsm
Colour(s):	Green

EN Physical Performance		
Test Method	**Result**	**EN Class** (EN 14325)
EN 530 Abrasion	2000 cycles	6 of 6
EN ISO 7854 Flex Cracking	40,000 cycles	5 of 6
EN ISO 9073-4 Tear Resistance (MD)	88N	3 of 6
EN ISO 9073-4 Tear Resistance (CD)	44N	
EN ISO 13934-1 Tensile Strength (MD)	172N	2 of 6
EN ISO 13934-1 Tensile Strength (CD)	84N	
EN 863 Puncture Resistance	16N	2 of 6
EN ISO 13938-1 Burst Resistance	116kPa	2 of 6
EN 13274-4 Resistance to ignition	Pass	-
EN 13274-4 Resistance to Flame	Pass	1 of 3
EN25978 Resistance to blocking	No Blocking	-
EN 1149-1: 2006 Electrostatic Properties (surface resistance)	$<2.5 \times 10^{9}$	-
EN 1149-1: 2006 Electrostatic Properties (surface resistivity)	$<5.0 \times 10^{10}$	-

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

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EN ISO 6529: 2001 Chemical Permeation Barrier**			
Chemical Name	**CAS Number**	**BT at 0.1µg/cm²/min** (mins)	**BT at 1.0µg/cm²/min** (mins)
Acetone	67-64-1	127	>540
Acetonitrile	75-05-8	>540	>540
Butadiene 1,3- (>99.0 wt%)	106-99-0	>540	>540
Carbon Disulphide	75-15-0	Imm	2
Chlorine (>99.8wt%) Gas, 1 atmos.	7782-50-5	402	>540
Chloroform	67-66-3	53	101
Chloromethane (99.9 wt%)	74-87-3	>540	>540
Cyclohexylamine (>99.5% wt%)	108-91-8	55	92
Dichloromethane (99.99 wt%)	75-09-2	-	9
Dimethylformamide N, N (>99.8 wt%)	68-12-2	>540	>540
Ethyl Acetate (99.98 wt%)	141-78-6	40	>540
Ethylene Oxide (gas at ca. 1 Atmos)	75-21-8	>540	>540
Heptane, n- (99.8 wt%)	142-82-5	73	>540
Hexane, n-	110-54-3	>540	>540
Hydrofluoric Acid (71-75 wt%)	7664-39-3	175	>540
Hydrogen Chloride (> 99.0 wt%) Gas, 1 atmos	7647-01-0	125	>540
Methanol (> 99.5 wt%)	67-56-1	>540	>540
Nitrobenzene (99.99 wt%)	98-95-3	>540	>540
Sodium Hydroxide (aq., 50wt%)	1310-73-2	>540	>540
Sodium Hydroxide 40%	1310-73-2	>540	>540
Sulphuric Acid (95-96 wt%)	7664-93-9	>540	>540
Tetrachloroethylene (99.9 wt%)	127-18-4	218	>540
Toluene (99.97 wt%)	108-88-3	69	>540

TNO Protocols – Resistance to permeation of Chemical Warfare Agents			
Chemical	**Detection Limit**	**Temperature**	**Breakthrough Time (hh:mm)**
Mustard (HD)	0.1µg/cm² (pinpoint BT) or 4µg/cm² (continuous and homogenous BT)	37°C	>24:00
Lewisite (L)	Approx. 0.5µg/cm²	37°C	>05:00 <06:00
Sarin (GB)	Approx. 0.05µg/cm²	37°C	>24:00
VX	Approx. 0.05µg/cm²	37°C	>24:00

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

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.