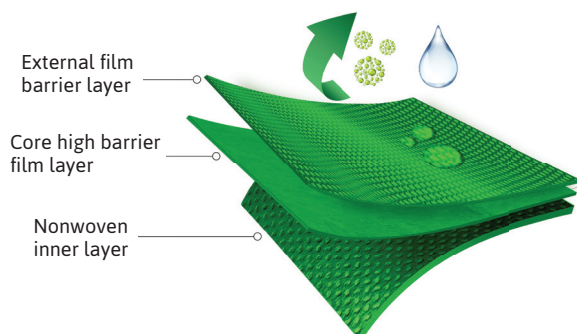




Product name	AlphaTec® 4000
Product material	Multi-layer nonwoven barrier laminate fabric
Colours available	Green, Orange
Material weight	103gsm



Physical Properties - EN 14325:2004

Test Method		Result	EN Class
Abrasion	EN 530	>2,000 Cycles	6 of 6
Flex cracking	EN ISO 7854	>15,000 Cycles	4 of 6
Tear resistance (MD)	EN ISO 9073-4	>60 N	4 of 6
Tear resistance (CD)		>100 N	
Tensile strength (MD)	EN ISO 13934-1	>100 N	3 of 6
Tensile strength (CD)			
Puncture resistance	EN 863	>10 N	2 of 6
Seam Strength	EN ISO 13935-2	>125 N	4 of 6

Fabric Repellence & Penetration to Liquid Chemicals - EN 14325:2004

Fabric Repellence of Liquids

Test Chemical	Test Method	Result %	EN Class
Sulphuric Acid (30% w/w)	EN ISO 6530	>95	3 of 3
Sodium Hydroxide (10% w/w)		>95	3 of 3
o-Xylene		>90	2 of 3
Butan-1-ol		>95	3 of 3

Fabric Penetration Resistance of Liquids

Sulphuric Acid (30% w/w)	EN ISO 6530	<1	3 of 3
Sodium Hydroxide (10% w/w)		<1	3 of 3
o-Xylene		<1	3 of 3
Butan-1-ol		<1	3 of 3

Chemical Permeation Performance - EN 14325:2004

Fabric Repellence of Liquids

Test Chemical	CAS No.	Test Method	BT _{1.0} (mins) (Fabric)	EN Class (Fabric)	BT _{1.0} (mins) (Seam)	EN Class (Seam)
Methanol	67-56-1	ISO 6529	>480	6 of 6	>480	6 of 6
Sulphuric Acid (96%)	7664-93-9		>480	6 of 6	>480	6 of 6
Toluene	108-88-3		>480	6 of 6	>480	6 of 6

Additional Testing

Test Method		Result	EN Class
Anti-static Properties (EN 1149-5)	EN 1149-3 (Charge Decay)	$t_{50} < 4$ s	Pass
Hydrostatic Head (Water Pressure Test)	ISO 811	> 500 cm H ₂ O	

Comfort Testing

Test Method		Result	Units
Thermal Resistance (R_{cl})	EN 31092/ISO 11092	0.019	m ² ·K/W
Clothing Insulation (clo) value		0.125	-

Barrier to Infective Agents - EN 14126:2003

Test Method		Result	EN Class
Resistance to penetration by synthetic blood	ISO 16603	Pass (20 kPa)	n/a
Resistance to penetration by blood borne pathogens	ISO 16604	Pass (20 kPa)	6 of 6
Resistance to wet bacterial penetration (mechanical contact)	EN ISO 22610	No penetration (up to 75 min)	6 of 6
Resistance to biologically contaminated aerosols	ISO/DIS 22611	No penetration	3 of 3
Resistance to dry microbial penetration	ISO 22612	No penetration	3 of 3

FINABEL O.7.C - Resistance to Permeation of Chemical Warfare Agents (suit material only)

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 homogenous BT)	37	>24:00
Lewisite (L)	Approx. 0.5 µg/cm ²	37	05:00
Sarin (GB)	Approx. 0.05 µg/cm ²	37	>24:00
Soman (GD)	Qualitative	37	>24:00
Tabun (GA)	Qualitative	37	>24:00
VX	Approx. 0.05 µg/cm ²	37	>24:00

Whole Suit Testing

Test Method	
EN 14605:2005+A1:2009	Type 3: Jet Test
EN 14605:2005+A1:2009	Type 4: Spray Test
EN ISO 13982-1:2004+A1:2010	Type 5: Particle Test
EN 1073-2:2002	Radioactive Particulates (Class 1 of 6)*

* Resistance to ignition is not tested as product already carries flammability warning. Note: does not protect against ionizing radiation.

Ansell **GUARDIAN**®

Visit: www.ansellguardianchemical.com
for online chemical resistance database

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. Ansell Limited does not give any warranties or make any representations about its garments other than those contained in the official literature supplied by Ansell Limited with each garment. Ansell 2023. All rights Reserved.