



Product name	AlphaTec® 2000 Ts PLUS
Product material	Microporous polyethylene laminate nonwoven
Color	White
Material weight	63 gsm / 1.86 oz/yd ²

Physical Properties			
Test Method		Units	Results
Tensile strength (MD)	ASTM D5034	lbs in ⁻¹	21.5
Tensile strength (CD)			28.6
Tear resistance (MD)	ASTM D5733	lbs in ⁻¹	7.1
Tear resistance (CD)			12.0
Burst strength	ASTM D3787	lbs in ⁻¹	32
Puncture propagation tear resistance (MD)	ASTM D2582	N	47.0
Puncture propagation tear resistance (CD)			27.9
Flame spread	16 CFR Part 61610	sec	IBE* - Class 1
Surface resistance at RH 40% - Inner	AATCC 76	Ohms	1.04 x 10 ¹¹
Surface resistance at RH 40% - Outer			9.10 x 10 ¹⁰
Surface resistance at RH 20% - Inner			1.32 x 10 ¹¹
Surface resistance at RH 20% - Outer			1.46 x 10 ¹¹
Whole suit inward leakage**	EN ISO 13982-2	% TIL	<0.128

Chemical Penetration under Pressure Performance			
Test Chemical	Test Method	Unit	Results
Hexamethylene diisocyanate commercial mixture (HDI)***	ASTM F903 Procedure C (penetration under pressure)	min	>60
4,4 -methylenediphenyl diisocyanate commercial mixture (MDI)****			>60
Sodium Hypochlorite (5%)			>60
Test Chemical	Test Method	Unit	Results
Sodium Hydroxide (30%)	ISO 13994: 2005 Procedure D	kPa	>14
Sulfuric Acid (96%)			>14
Methanol			10.5

* Ignites but extinguishes

** Whole suit particle inward leakage testing performed with self-adhesive tape sealing the full face respirator, gloves and boots to the coverall and additional tape applied over the zipper flap. Particle size range of 0.02-2 microns with a mass median of 0.6 microns. Data for model 111 coveralls. Result for other models may vary. Please email the Ansell technical team for information on a specific model at customerserviceus@ansell.com

*** Consisting of hexamethylene diisocyanate Polymer, 57.23%, CAS 28182-81-2 n-Butyl Acetate, 42.66%, CAS 123-86-4 Hexamethylene Diisocyanate (max), 0.11%, CAS 822-06-0 (Tested on 11/30/2020). This mixture is representative of HDI's.

**** Consisting of 4,4-methylenediphenyl diisocyanate, 25-50%, CAS 101-69-8; Isocyanic acid, polymethylenepolyphenylene ester polymer, 10- 25%, CAS 67815-87-6, o-(p-isocyanatobenzyl)phenyl isocyanate, 10-15%, CAS 5873-54-1, 1,2-Propanediol polymer, 10-25%, CAS 72088-97-2 (Tested on 12/11-2020). This mixture is representative of MDI's.

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

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

Additional Testing

Test Method		Units	Results
Anti-static Properties (EN 1149-5)	EN 1149-3 (Charge Decay)	t ₅₀ <4 s	Pass
Hydrostatic Head (Water Pressure Test)	AATCC 127	cm H ₂ O	>127
	Limited by test equipment. ISO 811 result >200cm H ₂ O		

Comfort Testing

Test Method		Units	Results
Thermal resistance	ISO 11092	R _{ct}	16.0 x 10 ⁻³
Water vapor resistance		R _{et}	<20
Water vapor transmission rate	ASTM E96, Method B	g/m ² /24hr	583

Fabric Barrier to Infective Agents - EN 14126

Test Method		Result	EN Class
Resistance to penetration by blood borne pathogens	ISO 16604 / ASTM F1671	Pass to 20 kPa	6 of 6
Resistance to wet bacterial penetration (mechanical contact)	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

Whole Suit Testing

Test Method	
EN 14605:2005+A1:2009	Type 4 : Spray Test
EN ISO 13982-1:2004+A1:2010	Type 5 : Particle Test
EN 13034:2005+A1:2009	Type 6 : Reduced Spray Test
EN 1073-2:2002	Radioactive Particulates (Class 2 of 6)*****

***** Overall tested to EN 1073-2 for barrier to radioactive particles, with the exception of Clause 4.2: Puncture resistance achieves Class 1 versus the requirement of Class 2. Resistance to ignition is not tested as product already carries flammability warning. Note: Does not protect against ionizing radiation.

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 2024. All rights Reserved.