PRODUCT CATALOGUE

SMART SELECTION OF HAND AND BODY PROTECTION

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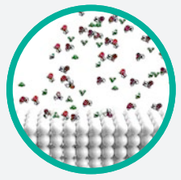
CHEMICAL

The chemical industry is comprised of companies that produce industrial chemicals by converting raw materials into different products. It contributes $5.7 trillion (7%) to the world's GDP. Did you know that there are over 159 million chemicals registered with CAS and approximately 10,000 new chemicals are added every day? The chemical landscape is constantly changing, and new chemical combinations can affect toxicity, permeation and a variety of other factors that may alter the effectiveness of personal protective equipment (PPE). There are 120 million workers in the chemical industry and many of them come in contact with significant hazards every day. It's critical to understand the complexities of new chemicals, chemical reactions and new chemical combinations to ensure safety in chemical manufacturing so that workers can be equipped with the most appropriate hand and body protection.

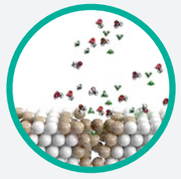
Chemical Interactions with PPE

When choosing the right chemical protection, it is important to understand how chemicals interact with different materials. These interactions fall under three main headings: permeation, degradation and penetration.



Permeation

The movement of a chemical through the barrier material at a molecular level. The rate or speed at which a chemical is able to permeate through a barrier is described as "breakthrough time", which is communicated in minutes of protection.



Degradation

The physical change in one or more properties of a barrier material due to contact with chemicals. Indicators include visible discolouration, elongation, burns or crackles in the surface.

Penetration

The movement of a chemical through pores, gaps in seams, pinholes or imperfections on a barrier material, commonly caused by defects or degradation.

There are 5 key questions which need to be answered in order to identify appropriate chemical protection solutions:

1. What is the chemical?
2. What is the CAS number?
3. Is it a liquid, solid or gas?
4. What is the concentration?
5. What is the application?

AnsellGUARDIAN®

Performed by our safety experts, AnsellGUARDIAN® is a service that helps our customers to improve their safety, productivity, combining 45 years of safety assessment experience with a data-driven methodology, delivering unique personalised assessments.

Safety & Compliance

We provide a personalised risk management solution that leads to improved worker safety, injury reduction and increased regulatory compliance.

Cost Performance

We advise on business performance improvements that result in lower overall costs for your company.

Productivity

We deliver best practice recommendations to optimise your PPE dispensing, improve your company's output and eliminate waste, leading to an increase in productivity.

AnsellGUARDIAN® Chemical

AnsellGUARDIAN® Chemical simplifies the glove and suit selection for your unique set of chemicals. Self-service tool to search our extensive chemical permeation and degradation data to identify the appropriate hand and body protection for the chemicals they use.

Search by CAS number or chemical name:
ansellguardianpartner.com

How does it works:

1. Search for chemicals by CAS or Name
2. Search for products or materials
3. View permeation and degradation charts and identify optimal solutions

CAS	CHEMICAL NAME
110-82-7	CYCLOHEXANE

CHEMICAL PERMEATION DATA

For more information, visit ansell.com/services

PERMEATION BREAKTHROUGH TIMES

Permeation breakthrough time is the time (in minutes) for the chemical in question to be permeating through the material at a rate of 1.0 µg /cm²/min (as per EN ISO 374) or 0.1 µg /cm²/min (as per ASTM F739).

Degradation ratings evaluate the amount of change a glove material will suffer due to contact with a chemical.

RATING SYSTEM	NOT RECOMMENDED	SPLASH PROTECTION		MEDIUM PROTECTION		GOOD PROTECTION	
PERFORMANCE LEVEL	0	1	2	3	4	5	6
BREAKTHROUGH TIME (MINUTES)	≤10	>10	>30	>60	>120	>240	>480

**PS = Physical State: L = Liquid, S = Solid*

*Coloured cells with numbers and the symbol **(C)** correspond to experimentally determined data generated by external accredited laboratory. Coloured cells with numbers and the symbol **(V)** correspond to experimentally determined data using internal accredited laboratory. Coloured cells that do not display specific numbers correspond to estimations.*

ENHANCED PROTECTION AGAINST CHEMICAL EXPOSURE

ANSELLGUARDIAN® CHEMICAL - CASE STUDY

Every company and worker is unique, and they face distinct challenges when dealing with exposure to chemicals. Selecting the right protective solutions is crucial to mitigate risks, safeguard employee well-being, and foster a culture of care and productivity. AnsellGUARDIAN® Chemical can provide tailored safety solutions according to the unique set of chemicals and applications in your workplace, ensuring optimal protection for workers.

PERMEATION BREAKTHROUGH TIMES

Product				 AlphaTec® 02-100	 AlphaTec® 15-554	 AlphaTec® 38-628	 AlphaTec® 38-514	 AlphaTec® 53-001
Material				LLDPE	PVA	Viton Butyl	Butyl	Nitrile/Neoprene
Thickness (mm)				0.062	N.A.	0.70	0.35	0.38
CAS	Chemical Name	%	PS*	Permeation Breakthrough Times (min)				
5324-84-5	1-Octanesulfonic Acid, Sodium Salt, Monohydrate	100	S	>480	>480	>480	>480	>480
71-23-8	1-Propanol	100	L	>480	68 C	>480	>480	240-480
67-63-0	2-Propanol	100	L	>480	72 C	>480	>480	>480 C
67-64-1	Acetone	100	L	>480 C	101 C	>480 C	337 C	12 C
75-05-8	Acetonitrile	100	L	>480 C	330 C	>480 C	>480 C	78 C
94-44-0	Benzyl Nicotinate	100	L					>480
6138-23-4	D(+)-Trehalose Dihydrate	100	S	>480	>480	>480	>480	>480
64-17-5	Ethanol	70	L	>480	<10	>480	>480	>480
64-17-5	Ethanol	100	L	>480 C	10-30	>480	>480	240-480
50-01-1	Guanidine Hydrochloride	100	S	>480	>480	>480	>480	>480
67-56-1	Methanol	100	L	>480 C	5 C	>480 C	>480 C	264 C
75-09-2	Methylene Chloride	100	L	65 C	>480 C	83 C	<5 C	5 C
26412-87-3	Sulfur Trioxide Pyridine Complex	100	S	>480	>480	>480	>480	>480
109-99-9	Tetrahydrofuran	100	L	>480 C	52 C	17 C	5 C	15 C

PERMEATION BREAKTHROUGH TIMES

Product				 AlphaTec® 58-530B/58-535B	 AlphaTec® 58-270	 TouchNTuff® 92-500/92-600/ 92-605/ 93-250/ 93-300/93-700	 MICROFLEX® 93-260/93-360	 MICROFLEX® NeoTouch™ 25-101/25-201
Material				Nitrile	Nitrile	Nitrile	Nitrile/Neoprene	Neoprene
Thickness (mm)				N.A.	N.A.	0.12	0.20	0.13
CAS	Chemical Name	%	PS*	Permeation Breakthrough Times (min)				
5324-84-5	1-Octanesulfonic Acid, Sodium Salt, Monohydrate	100	S	>480	>480	>480	>480	>480
71-23-8	1-Propanol	100	L	240-480	>480	21 C	200 C	30-60
67-63-0	2-Propanol	100	L	>480 C	>480	117 C	380 C	70 C
67-64-1	Acetone	100	L	6 C	<10	<10	3 C	<1 C
75-05-8	Acetonitrile	100	L	5 C	<10	<5 C	5 C	<5 C
94-44-0	Benzyl Nicotinate	100	L	>480	>480	30-60	>480	
6138-23-4	D(+)-Trehalose Dihydrate	100	S	>480	>480	>480	>480	>480
64-17-5	Ethanol	70	L	>480	120-240	27 C	240-480	14 C
64-17-5	Ethanol	100	L	120-240	60-120	<10	130 C	<10
50-01-1	Guanidine Hydrochloride	100	S	>480	>480	>480	>480	>480
67-56-1	Methanol	100	L	56 C	21 C	1 C	22 C	9 C
75-09-2	Methylene Chloride	100	L	<10	<10	<10	2 C	<10
26412-87-3	Sulfur Trioxide Pyridine Complex	100	S	>480	>480	>480	>480	>480
109-99-9	Tetrahydrofuran	100	L	<10	<10	<5 C	3 C	<10

PERMEATION BREAKTHROUGH TIMES - $BT_{1.0}$

Product				 AlphaTec® 3000 - Model 111	 AlphaTec® 4000 - Model 111	 AlphaTec® 5000 - Model 111
CAS	**Chemical Name**	**%**	**PS***	**Permeation Breakthrough Times (min)**		
5324-84-5	1-Octanesulfonic Acid, Sodium Salt, Monohydrate	100	S			
71-23-8	1-Propanol	100	L			
67-64-1	2-Propanone	100	L	28 C	>480 C	>480 C
67-63-0	2-Propanol	100	L	>480 C	>480 C	
75-05-8	Acetonitrile	100	L	<6 C	>480 C	>480 C
94-44-0	Benzyl Nicotinate	100	L			
109-99-9	Butylene Oxide	100	L	<1 C	4 C	>480 C
67-56-1	Carbinol	100	L	>480 C	>480 C	>480 C
6138-23-4	D(+)-Trehalose Dihydrate	100	S			
75-09-2	DCM	100	L	0 C	5 V	59 C
64-17-5	Ethanol	70	L			
64-17-5	Ethanol	100	L		>480 C	
50-01-1	Guanidine Hydrochloride	100	S			
26412-87-3	Sulfur Trioxide Pyridine Complex	100	S			

The $BT_{1.0}$ is the time taken (in minutes) for the chemical in question to be permeating through the material at a rate of 1.0 µg /cm²/min. This can be determined with a number of standard test methods including EN 16523-1 and ISO 6529. It is commonly utilised mainly within the regions concerned with the EN and ISO standards.

PERMEATION BREAKTHROUGH TIMES - $BT_{0.1}$

Product				 AlphaTec® 3000 - Model 111	 AlphaTec® 4000 - Model 111	 AlphaTec® 5000 - Model 111
CAS	**Chemical Name**	**%**	**PS***	**Permeation Breakthrough Times (min)**		
5324-84-5	1-Octanesulfonic Acid, Sodium Salt, Monohydrate	100	S			
71-23-8	1-Propanol	100	L			
67-64-1	2-Propanone	100	L	5 C	127 C	>480 C
67-63-0	2-Propanol	100	L			
75-05-8	Acetonitrile	100	L	<1 C	>480 C	>480 C
94-44-0	Benzyl Nicotinate	100	L			
109-99-9	Butylene Oxide	100	L	<1 C	<1 C	>480 C
67-56-1	Carbinol	100	L	4 C	>480 C	>480 C
6138-23-4	D(+)-Trehalose Dihydrate	100	S			
75-09-2	DCM	100	L	0 C	3 V	27 C
64-17-5	Ethanol	70	L			
64-17-5	Ethanol	100	L		>480 C	
50-01-1	Guanidine Hydrochloride	100	S			
26412-87-3	Sulfur Trioxide Pyridine Complex	100	S			

The $BT_{0.1}$ is the time taken (in minutes) for the chemical in question to be permeating through the material at a rate of 0.1 µg /cm²/min. This can be determined with a number of standard test methods including EN 16523-1 and ISO 6529. It is commonly utilised mainly within the regions concerned with the ASTM standards.

CHEMICAL PROTECTION

Ansell offers PPE solutions designed to protect against the highest levels of risk from hazardous chemicals and biological agents in medium to heavy-duty applications. This type of PPE protects against liquid or strong jets of chemicals.

AlphaTec® 02-100

Key Features and Benefits

- Five-layer chemical barrier: EN374 Type A chemical protection ensured
- Antimicrobial defenses: Safety gloves with EN374 viral protection
- Air-pressure tested: PPE gloves subject to rigorous quality checks

EN ISO374-1 Type A: ABCEFGHILMS
EN ISO374-5: VIRUS

AlphaTec® 15-554

Key Features and Benefits

- PVA coating: Advanced resistance to aromatic and chlorinated solvents
- Anatomical design: For secure, form-fitting hand protection gloves
- Soft two-piece knit liner: Reduced perspiration, enhanced comfort

EN 388: 3121A
EN ISO374-1 Type A: BCDFIJ
EN ISO374-5

AlphaTec® 38-628

Key Features and Benefits

- For use on AlphaTec® gas-tight/Level A chemical protective suits.
- Fitted as standard on the AlphaTec® gas-tight chemical protective suits
- Mounted in the AlphaTec® Bayonet Ring System, when fitted on suits

AlphaTec® 38-514

Key Features and Benefits

- Butyl polymer: Resistance against the most aggressive chemicals*
- Latex-free formulation: No risk of latex-related allergic reactions
- Ergonomic design and soft feel: Form-fitting comfort and protection

*including aldehydes, ketones, esters and concentrated mineral acids

EN 388
EN ISO374-1 Type A: 1000X ABCIKMPST
EN ISO374-5

AlphaTec® 53-001

Key Features and Benefits

- MICROCHEM™ multi-layer barrier: Acid, chemical, hydrocarbon defenses
- ANSELL GRIP™ treatment: Secure handling of wet or oily components
- Soft nylon inner liner: Safety gloves with guaranteed all-day comfort

EN 388: 3121A
EN ISO374-1 Type A: ACFGJKLMNOPST
EN ISO374-5
EN 407: X1XXXX

AlphaTec® 58-530B/58-535B

Key Features and Benefits

- ANSELL GRIP™ Technology: Less force needed to grip wet or oily parts
- Black acrylic liner: Comfortable and ideally colored for outdoor usage
- Bonded construction: No liner penetration and heightened dexterity

EN 388: 3122A
EN ISO374-1 Type A: AJKLOPT
EN ISO374-5
EN 407: X1XXXX

TouchNTuff® 92-500/92-600

Key Features and Benefits

- Advanced chemical resistance: With TNT™ Technology for ultimate protection
- Superior comfort: Extra-soft, smooth feel, boosting comfort for extended wear
- Outstanding durability: Proprietary nitrile resists rips and tears

EN ISO374-1 Type B: JKPT
EN ISO374-5: VIRUS
ISO 18889: G1

TouchNTuff® 92-605

Key Features and Benefits

- Advanced, extended chemical resistance: Superior chemical splash protection
- Superior comfort: Extra-soft, smooth feel, enhancing comfort for extended wear
- Outstanding durability: Proprietary nitrile resists rips and tears

EN ISO374-1 Type B: JKPT
EN ISO374-5: VIRUS
EN 421
ISO 18889: G1

TouchNTuff® 93-250

Key Features and Benefits

- ANSELL GRIP™: 80% less finger force and 33% less palm force required
- Soft nitrile formulation: Hand protection with added comfort
- Silicone-free design: Paint/finish process-friendly

EN ISO374-1 Type B: JKPT
EN ISO374-5: VIRUS

TouchNTuff® 93-300/93-700

Key Features and Benefits

- Robust nitrile formulation: Puncture, tear and chemical splash resistance
- Silicone-free design: Improved product protection
- Class 100 (ISO 5) cleanroom compatibility: Assured cleanliness

EN ISO374-1 Type B: JKPT
EN ISO374-5: VIRUS
EN 421

MICROFLEX® 93-260

Key Features and Benefits

- Three-layer design: Offering resistance to harsh chemicals
- Thinnest chemical-resistant disposable glove: For tactility and dexterity
- Low AQL: 0.65 AQL for allowable pinholes means exceptional barrier integrity

EN 388: 2000X
EN ISO374-1 Type A: JKLOPST
EN ISO374-5: VIRUS
EN 421
ISO 18889: G1

MICROFLEX® 93-360

Key Features and Benefits

- Three-layer design: Protection against harsh chemical hazards*
- Proprietary formulation: Comfort, tactility and dexterity
- Nitrile and neoprene composite: Type I latex allergy risks eliminated

*including acids, solvents and bases

EN ISO374-1 Type A: JKLOPST
EN ISO374-5: VIRUS
EN 421

MICROFLEX® NeoTouch™ 25-101

Key Features and Benefits

- Certified chemical splash protection: Guards against acids/alcohols
- Neoprene design with textured fingertips: Excellent wet and dry grip
- Allergy-friendly material: Prevents latex Type I allergic reactions

EN ISO374-1 Type B: KPT
EN ISO374-5: VIRUS

MICROFLEX® NeoTouch™ 25-201

Key Features and Benefits

- Chemical splash protection: Extended guards against acids/alcohols
- Neoprene design with textured fingertips: Excellent wet and dry grip
- Allergy-friendly material: Prevents latex allergic reactions

EN ISO374-1 Type B: KPT
EN ISO374-5: VIRUS
EN 421

BODY PROTECTION

Ansell offers a wide range of solutions that comply with the World Health Organization's guidance regarding infection prevention and control. In order to make an informed decision, product purchasers and users should stay abreast of the latest and most complete information regarding appropriate PPE to protect against COVID-19 and other viruses in their specific environments and applications.

AlphaTec® 3000 - Model 111

Key Features and Benefits

- Multi-layer barrier fabric provides effective protection against numerous chemicals
- Designed to protect, typical innovative features include dual zip systems and double cuffs
- Lightweight and durable
- Highly visible bright yellow color for improved worker safety

TYPE 3-B TYPE 4-B TYPE 5-B TYPE 6-B

EN 1073-2 EN 1149-5 EN 14126

AlphaTec® 4000 - Model 111

Key Features and Benefits

- Intensive permeation testing: Protection from varied chemicals*
- Double cuffs and dual-zip systems: Extended wear life
- Taped and welded seams: Additional barrier defenses

**Including chemical warfare agents*

TYPE 3-B TYPE 4-B TYPE 5-B EN 1073-2

EN 1149-5 EN 14126

AlphaTec® 5000 - Model 111

Key Features and Benefits

- Permeation barrier: Resists chemicals/ biohazards/chemical warfare agents*
- Highly visible orange color: For greater worker and workplace safety
- Double zip enclosure: Enhanced wear life

**Including chemical warfare agents*

TYPE 3-B TYPE 4-B TYPE 5-B EN 1073-2

EN 1149-5 EN 14126

Comments

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