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AnsellGUARDIAN[®] Chemical Report

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Disclaimer

In this report, you will find information related to the barrier performance of certain personal protective equipment (PPE) against the chemicals you selected. This information is intended to enable the Health and Safety professional at your organization make more informed decisions about the Ansell PPE that may offer the greatest protection in the intended circumstances and assist with carrying out a risk assessment for your organization.

We wish to highlight that permeation times do not equate to safe wear time. Safe wear time may vary depending on whether the PPE is donned correctly, the surrounding temperature, the chemicals' toxicity, and other factors. Permeation information offered here is limited to the main protective material. Permeation times may vary around seams, zips, visors or any other joins or components of the PPE. It is the responsibility of your organization's Health and Safety professional to undertake a risk assessment before choosing the appropriate PPE for the task at hand. If you want to discuss any aspect in detail, please contact us.

Estimations of the barrier properties of PPE are based on currently available data and extrapolations from laboratory test results and information regarding the chemicals' composition. Synergistic effects of mixing chemicals have not been accounted for. Estimations are subject to change if new testing is carried out or new information is available providing better grounds for extrapolations. For these reasons, any information in this report is provided for informational purposes only and Ansell fully disclaims any liability including warranties related to any statement contained herein.

Legend for Body Protection

Permeation Barrier Performance	
<div></div>	No Barrier
<div></div>	Splash/Limited Barrier
<div></div>	Medium Barrier
<div></div>	Good Barrier

Permeation Breakthrough Times - $BT_{1.0}$

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 $\mu\text{g}/\text{cm}^2/\text{min}$. This can be determined with a number of standard test methods including EN 16523-1 and ISO 6529. It is commonly used mainly within the regions concerned with EN and ISO standards.

Permeation Breakthrough Times - $BT_{0.1}$

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 $\mu\text{g}/\text{cm}^2/\text{min}$. This can be determined with a number of standard test methods including ASTM F739. It is commonly used mainly within the regions concerned with ASTM standards.

Cumulative Permeation

Cumulative permeation (as opposed to breakthrough times) deals with the amount of chemical permeating through the material, and not the speed (rate) as with the breakthrough times. The two results concerned with this for ISO 16602 are: CPt, the time in minutes it takes for the cumulative permeation to reach 150 $\mu\text{g}/\text{cm}^2$, and CP, the cumulative permeation (in $\mu\text{g}/\text{cm}^2$) by the end of the test (usually 480 minutes).

PS = Physical State: A = Aerosol, G = Gas, L = Liquid, P = Paste, S = Solid



Product Group: 5000
Brand : AlphaTec®

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CPt = Cumulative Permeation Times (in minutes) CP = Cumulative Permeation (in $\mu\text{g}/\text{cm}^2$)

CAS	Chemical Name	%	PS	BT _{1,0}	BT _{0,1}	cumulative	
						CPt	CP
106-99-0	1,3-Butadiene	100.0	G	>480' c	480' c	>480' c	<9.6'
109-65-9	1-bromobutane	100.0	L	>480' c	480' c	>480' c	<24'
106-94-5	1-Bromopropane	100.0	L	>480' c	480' c	>480' c	<24'
100-43-6	4-Vinylpyridine	100.0	L	>480' c	480' c	>480' c	<24'
75-07-0	Acetaldehyde	100.0	L	>480' c	480' c	>480' c	<24'
64-19-7	Acetic acid	100.0	L	>480' v	480' v	>480' v	<4.8'
67-64-1	Acetone	100.0	L	>480' c	480' c	>480' c	
75-05-8	Acetonitrile	100.0	L	>480' c	480' c	>480' c	<4.8'
7664-41-7	Ammonia, gas	100.0	G	>480' c	41' c	>480' c	62.7'
1336-21-6	Ammonium hydroxide	35.0	L	>480' c	7' c	>480' c	56'
62-53-3	Aniline	100.0	L	>480' c	480' c	>480' c	<9.6'
71-43-2	Benzene	100.0	L	>480' c	480' c	>480' c	<24'
7726-95-6	Bromine	100.0	L	12' c	11' c		



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CAS	Chemical Name	%	PS	BT _{1.0}	BT _{0.1}	cumulative	
						CPT	CP
75-15-0	Carbon disulfide	100.0	L	>480' c	277' c	>480' c	15'
7782-50-5	Chlorine, gas	100.0	G	>480' c	480' c	>480' c	<0.48'
108-90-7	Chlorobenzene	100.0	L	>480' c	480' c	>480' c	<24'
67-66-3	Chloroform	100.0	L	101' c	56' c	184' c	
7790-94-5	Chlorosulfonic acid	100.0	L	89' c	25' c	153' c	
108-91-8	Cyclohexylamine	100.0	L	>480' c	480' c	>480' c	<47.5'
106-93-4	Dibromoethane	100.0	L	>480' c	480' c	>480' c	<24'
79-36-7	Dichloroacetyl chloride	100.0	L	32' v	24' v	57' v	46463'
75-09-2	Dichloromethane	100.0	L	59' c	27' c	114' c	
109-89-7	Diethylamine	100.0	L	>480' c	480' c	>480' c	<4.8'
60-29-7	Diethylether	100.0	L	>480' c	480' c	>480' c	<4.8'
75-18-3	Dimethyl sulfide	100.0	L	>480' c	480' c	>480' c	<24'
598-56-1	Dimethylethylamine	100.0	L	>480' c	480' c	>480' c	<9.6'



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CAS	Chemical Name	%	PS	BT _{1,0}	BT _{0,1}	cumulative	
						CPT	CP
68-12-2	Dimethylformamide	100.0	L	>480' c	480' c	>480' c	<4.8'
106-89-8	Epichlorohydrin	100.0	L	>480' c	480' c	>480' c	<24'
141-78-6	Ethyl acetate	100.0	L	>480' c	480' c	>480' c	<2.5'
107-15-3	Ethylene diamine	100.0	L	>480' c	480' c	>480' c	<28.8'
75-21-8	Ethylene Oxide	100.0	G	>65' c	49' c		
462-06-6	Fluorobenzene	100.0	L	>480' c	480' c	>480' c	<24'
106-91-2	Glycidyl methacrylate	100.0	L	>480' v	480' v	>480' v	<0.597'
142-82-5	Heptane	100.0	L	>480' c	480' c	>480' c	<4.8'
74-90-8	Hydrocyanic acid	100.0	L	>480' c	65' c	>480' c	125'
7664-39-3	Hydrofluoric Acid	75.0	L	>480' c	480' c	>480' c	<14.4'
7647-01-0	Hydrogen chloride	100.0	G	>480' c	480' c	>480' c	<9.6'
7664-39-3	Hydrogen fluoride, gaseous	100.0	G	>480' c	283' c	>480' c	<50'
7722-84-1	Hydrogen peroxide	35.0	L	>480' c	480' c	>480' c	<24'



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CAS	Chemical Name	%	PS	BT _{1,0}	BT _{0,1}	cumulative	
						CPT	CP
7722-84-1	Hydrogen peroxide	50.0	L	>480' c	480' c	>480' c	<24'
7783-06-4	Hydrogen sulphide	100.0	G	>480' c	480' c	>480' c	<24'
67-56-1	Methanol	100.0	L	>480' c	480' c	>480' c	<14.4'
74-83-9	Methyl bromide	100.0	G	>480' c	480' c	>480' c	<19.2'
74-87-3	Methyl chloride	100.0	G	>480' c	480' c	>480' c	<24'
78-93-3	Methyl ethyl ketone	100.0	L	>480' c	393' c	>480' c	<34'
110-18-9	N,N,N',N'-Tetramethylethylenediamine	100.0	L	>480' c	480' c	>480' c	<33.6'
110-54-3	n-Hexane	100.0	L	>480' c	480' c	>480' c	<4.8'
107-10-8	n-Propyl amine	100.0	L	>480' c	164' c	390' c	114'
7697-37-2	Nitric acid, fuming	100.0	L	>480' c	480' c	>480' c	<24'
98-95-3	Nitrobenzene	100.0	L	>480' c	480' c	>480' c	<2.5'
10102-43-9	Nitrogen monoxide	100.0	G	>480' c	480' c	>480' c	<24'
8014-95-7	Oleum, 20% SO ₃	20.0	L	390' c	256' c	444' c	<226'



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CAS	Chemical Name	%	PS	BT _{1.0}	BT _{0.1}	cumulative	
						CPT	CP
8014-95-7	Oleum, 30% SO ₃	30.0	L	108' c	66' c	178' c	
8014-95-7	Oleum, 40% SO ₃	40.0	L	80' c	66' c	116' c	>150'
8014-95-7	Oleum, 65% SO ₃	65.0	L	35' c	27' c	49' c	>150'
108-95-2	Phenol	90.0	L	>480' c	480' c	>480' c	<24'
10025-87-3	Phosphoric trichloride	100.0	L	>480' c	480' c	>480' c	<2.4'
7719-12-2	Phosphorus Trichloride	100.0	L	>480' c	333' c	>480' c	41.8'
75-56-9	Propylene Oxide	100.0	L	114' c	90' c	171' c	>150'
110-86-1	Pyridine	100.0	L	>480' c	480' c	>480' c	<24'
123-75-1	Pyrrolidine	100.0	L	>480' c	134' c	478' c	<139'
10026-04-7	Silicium tetrachloride	100.0	L	>480' c	366' c	>480' c	<42.1'
1310-73-2	Sodium Hydroxide	30.0	L	>480' c	480' c	>480' c	<6'
1310-73-2	Sodium Hydroxide	40.0	L	>480' c	480' c	>480' c	<24'
1310-73-2	Sodium Hydroxide, sat. sol.	50.0	L	>480' c	480' c	>480' c	<24'



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CAS	Chemical Name	%	PS	BT _{1,0}	BT _{0,1}	cumulative	
						CPT	CP
7681-52-9	Sodium Hypochlorite, aqueous solution	15.0	L	>480' c	480' c	>480' c	<24'
100-42-5	Styrene	100.0	L	>480' c	480' c	>480' c	<24'
7664-93-9	Sulfuric acid	96.0	L	>480' c	480' c	>480' c	<9.6'
127-18-4	Tetrachloroethylene	100.0	L	>480' c	480' c	>480' c	<24'
109-99-9	Tetrahydrofuran	100.0	L	>480' c	480' c	>480' c	<4.8'
7719-09-7	Thionyl chloride	100.0	L	17' c	15' c	27' c	
7550-45-0	Titanium tetrachloride	100.0	L	>473' c	377' c	>472' c	<59.6'
108-88-3	Toluene	100.0	L	>480' v	480' v	>480' v	<24'
79-01-6	Trichloroethylene	100.0	L	>480' c	480' c	>480' c	<28.8'
10025-78-2	Trichlorosilane	100.0	L	>438' v	281' v	>444' v	<154.4'
121-44-8	Triethylamine	100.0	L	>480' c	480' c	>480' c	<4.8'
1493-13-6	Trifluoromethanesulfonic acid	100.0	L	>480' c	277' c	>480' c	66.5'
75-01-4	Vinyl chloride	100.0	G	>480' c	480' c	>480' c	<24'



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CAS	Chemical Name	%	PS	BT _{1.0}	BT _{0.1}	cumulative	
						CPT	CP
	Ammonia (CAS# 7664-41-7, -34 C)		L	>480' c	480' c	>480' c	
	Hydrogen Fluoride (CAS# 7664-39-3, 17 C)		L	>480' c	480' c	>480' c	<4.8'
	Phenol (CAS#108-95-2, 45 C, molten)		L	>480' c	480' c	>480' c	<24'
	Phenol (CAS#108-95-2, 60 C, molten)		L	131' c	60' c	212' c	734'