

Ansell

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 | |
|--|------------------------|
|  | No Barrier |
|  | Splash/Limited Barrier |
|  | Medium Barrier |
|  | 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 utilized 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 utilized 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: **EVO**
 Brand : **AlphaTec®**



Colored cells with numbers and the symbol **c** correspond to experimentally determined data generated by an external accredited laboratory. Colored cells with numbers and the symbol **v** correspond to experimentally determined data generated by an internal accredited laboratory.

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 | >1440' c | 1440' c | | |
| 67-64-1 | Acetone | 100.0 | L | >1440' c | 1440' c | | |
| 75-05-8 | Acetonitrile | 100.0 | L | >1440' c | 1440' c | | |
| 75-36-5 | Acetyl chloride | 100.0 | L | | 480' c | | |
| 79-06-1 | Acrylamide, aqueous solution | 40.0 | L | >480' c | 480' c | | |
| 79-10-7 | Acrylic acid | 100.0 | L | >480' c | 480' c | | |
| 7664-41-7 | Ammonia, gas | 100.0 | G | >1440' c | 1440' c | | |
| 7784-42-1 | Arsine | 100.0 | G | >480' c | 480' c | | |
| 71-43-2 | Benzene | 100.0 | L | >480' c | 480' c | | |
| 7726-95-6 | Bromine | 100.0 | L | | 380' c | | |
| 75-15-0 | Carbon disulfide | 100.0 | L | >1440' c | 1440' c | | |
| 7782-50-5 | Chlorine, gas | 100.0 | G | >1440' c | 1440' c | | |
| 108-90-7 | Chlorobenzene | 100.0 | L | | 480' c | | |
| 67-66-3 | Chloroform | 100.0 | L | | 480' c | | |
| 7790-94-5 | Chlorosulfonic acid | 100.0 | L | | 480' c | | |
| 506-77-4 | Cyanogen chloride | 100.0 | G | | 60' c | | |
| 75-09-2 | Dichloromethane | 100.0 | L | >1440' c | 1440' c | | |
| 109-89-7 | Diethylamine | 100.0 | L | >480' c | 480' c | >480' c | <24' c |
| 60-29-7 | Diethylether | 100.0 | L | >480' v | 480' v | >480' v | <4.8' v |



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








| CAS | Chemical Name | % | PS | BT _{1,0} | BT _{0,1} | cumulative | |
|-----------|--|-------|----|--|---|---|--|
| | | | | | | CPT | CP |
| 67-68-5 | Dimethyl Sulfoxide | 100.0 | L | | 480'  | | |
| 68-12-2 | Dimethylformamide | 100.0 | L | >1440'  | 1440'  | | |
| 57-14-7 | Dimethylhydrazine | 100.0 | L | | 480'  | | |
| 77-78-1 | Dimethylsulfate | 100.0 | L | >180'  | 180'  | | |
| 106-89-8 | Epichlorohydrin | 100.0 | L | | 480'  | | |
| 141-78-6 | Ethyl acetate | 100.0 | L | >1440'  | 1440'  | | |
| 107-21-1 | Ethylene Glycol | 100.0 | L | | 480'  | | |
| 75-21-8 | Ethylene Oxide | 100.0 | G | >1440'  | 1440'  | | |
| 50-00-0 | Formaldehyde | 50.0 | L | | 480'  | | |
| 50-00-0 | Formaldehyde | 37.0 | L | | 480'  | | |
| 64-18-6 | Formic acid | 98.0 | L | | 480'  | | |
| 64-18-6 | Formic acid | 96.0 | L | | 480'  | | |
| 98-01-1 | Furaldehyde | 100.0 | L | | 480'  | | |
| 142-82-5 | Heptane | 100.0 | L | | 480'  | | |
| 7803-57-8 | Hydrazine monohydrate, 64%-65% hydrazine | 98.0 | L | >480'  | 480'  | >480'  | <20'  |
| 7647-01-0 | Hydrochloric acid | 37.0 | L | | 480'  | | |
| 7664-39-3 | Hydrofluoric Acid | 49.0 | L | | 480'  | | |
| 7647-01-0 | Hydrogen chloride | 100.0 | G | >1440'  | 1440'  | | |
| 7664-39-3 | Hydrogen fluoride, gaseous | 100.0 | G | >480'  | 480'  | | |



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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'  | 480'  | | |
| 78-79-5 | Isoprene | 100.0 | L | >480'  | 480'  | | |
| 67-56-1 | Methanol | 100.0 | L | >1440'  | 1440'  | | |
| 74-87-3 | Methyl chloride | 100.0 | G | >1440'  | 1440'  | | |
| 78-93-3 | Methyl ethyl ketone | 100.0 | L | >480'  | 480'  | | |
| 624-83-9 | Methyl isocyanate | 100.0 | L | | 480'  | | |
| 80-62-6 | Methyl methacrylate | 100.0 | L | | 480'  | | |
| 109-73-9 | n-Butylamine | 100.0 | L | | 384'  | | |
| 110-54-3 | n-Hexane | 100.0 | L | >1440'  | 1440'  | | |
| 7697-37-2 | Nitric acid | 70.0 | L | | 480'  | | |
| 7697-37-2 | Nitric acid, fuming | 100.0 | L | 135'  | | | |
| 98-95-3 | Nitrobenzene | 100.0 | L | >1440'  | 1440'  | | |
| 75-52-5 | Nitromethane | 100.0 | L | | 480'  | | |
| 8014-95-7 | Oleum, 30% SO ₃ | 30.0 | L | | 480'  | | |
| 75-44-5 | Phosgene | 100.0 | G | | 480'  | | |
| 7664-38-2 | Phosphoric acid | 85.0 | L | | 480'  | | |
| 7719-12-2 | Phosphorus Trichloride | 100.0 | L | | 480'  | | |
| 110-86-1 | Pyridine | 100.0 | L | | 480'  | | |
| 1310-73-2 | Sodium Hydroxide | 40.0 | L | >480'  | | | |
| 1310-73-2 | Sodium Hydroxide, sat. sol. | 50.0 | L | | 1440'  | | |



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|-----------|---|-------|----|---|--|------------|----|
| | | | | | | CPT | CP |
| 100-42-5 | Styrene | 100.0 | L | | 480'  | | |
| 7446-09-5 | Sulfur dioxide | 100.0 | G | >480'  | 480'  | | |
| 7664-93-9 | Sulfuric acid | 96.0 | L | >480'  | 480'  | | |
| 7664-93-9 | Sulfuric acid | 99.0 | L | >1440'  | 1440'  | | |
| 1634-04-4 | Tert-Butyl Methyl Ether | 100.0 | L | >480'  | 480'  | | |
| 127-18-4 | Tetrachloroethylene | 100.0 | L | >1440'  | 1440'  | | |
| 109-99-9 | Tetrahydrofuran | 100.0 | L | >1440'  | 1440'  | | |
| 7719-09-7 | Thionyl chloride | 100.0 | L | >480'  | 480'  | | |
| 108-88-3 | Toluene | 100.0 | L | >1440'  | 1440'  | | |
| 584-84-9 | Toluene-2,4-diisocyanate | 100.0 | L | >480'  | 480'  | | |
| 76-03-9 | Trichloroacetic acid | 100.0 | S | | 480'  | | |
| 79-01-6 | Trichloroethylene | 100.0 | L | | 480'  | | |
| 121-44-8 | Triethylamine | 100.0 | L | | 480'  | | |
| 112-24-3 | Triethylenetetramine | 100.0 | L | | 480'  | | |
| 108-05-4 | Vinyl acetate | 100.0 | L | >480'  | 480'  | | |
| 75-01-4 | Vinyl chloride | 100.0 | G | >480'  | 480'  | | |
| | Hydrogen Fluoride (CAS# 7664-39-3, 0 C) | | L | >480'  | 280'  | | |