Disposable gloves - permeation times

AnsellGUARDIAN® Chemical Report

Duke OESO Laboratory Safety Division

Mar 12, 2026

Ansell

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 Hand Protection

Permeation Breakthrough Times		
	<10	Not Recommended
	10-30	Splash Protection
	30-60	Splash Protection
	60-120	Medium Protection
	120-240	Medium Protection
	240-480	Good Protection
	>480	Good Protection

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 /cm^2/min (as per EN ISO 374) or 0.1 µg /cm^2/min (as per ASTM F739).

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

Pages unrelated to glove permeability have been removed from this document.

Note thickness

Permeation Breakthrough Times

The permeation breakthrough times present in this chart were evaluated according to ASTM F739 standard. Colored cells with numbers and the symbol C correspond to experimentally determined data generated by an accredited laboratory. The rest of cells correspond to estimations
For inquiries about chemical testing, please contact anselltesting@ansell.com.

Material				Nitrile	Nitrile	Nitrile	Nitrile	Nitrile /Neoprene	Neoprene	Neoprene	Neoprene	Neoprene	NRL /Neoprene /Nitrile
Thickness (mm)				0.11 mm 4.3 mil	0.11 mm 4.3 mil	0.12 mm 4.7 mil	0.125 mm 4.9 mil	0.20 mm 7.9 mil	0.18 mm 7 mil	0.10 mm 3.9 mil	0.13 mm 5.1 mil	0.13 mm 5.1 mil	0.45 mm
Brand				TouchNTuff®	MICROFLEX®	MICROFLEX®	TouchNTuff®	MICROFLEX®	DermaShield®	MICROFLEX®	MICROFLEX®	MICROFLEX®	TouchNTuff®
Product Group				92-665.675.670	93-743.843 /94-243. Supreno SE SU-690	MidKnight MK-296.93-852.93-252	92-600.605 . 93-300.700	93-260.360	73-701.711.721	Neogard 73-847.C52	Neopro NPG-888	25-101.201	93-800
CAS	Chemical Name	%	PS										
54-11-5	(-)-Nicotine	100.0	L	< 10'	10-30'	10-30'	10-30'	30-60'	< 10'	< 10'	< 10'	< 10'	< 10'
624-49-7	(E)-2-Butenedioic acid dimethyl ester	100.0	S	240-480'	240-480'	240-480'	240-480'	> 480'	240-480'	120-240'	120-240'	120-240'	240-480'
7697-37-2	(White) Fuming Nitric Acid	100.0	L	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	10-30'
999-97-3	1,1,1,3,3,3-Hexamethyldisilazane	100.0	L	60-120'	60-120'	60-120'	60-120'	> 480' C	10-30'	< 10'	< 10'	< 10'	60-120'
79-01-6	1,1,2-Trichloroethylene	100.0	L	< 10'	< 10'	< 10'	< 10'	3' C	< 10'	< 10'	< 10'	< 10'	0' C
107-06-2	1,2-Dichloroethane	100.0	L	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'
107-21-1	1,2-ethanediol	100.0	L	> 480'	> 480'	> 480'	> 480'	> 480' C	240-480'	120-240'	240-480'	240-480'	> 480'
108-38-3	1,3-Dimethylbenzene	100.0	L	< 10'	< 10'	< 10'	< 10'	10-30'	< 10'	< 10'	< 10'	< 10'	< 10'
123-91-1	1,4-Dioxacyclohexane	100.0	L	< 10'	< 10'	< 10'	< 10'	10-30'	< 10'	< 10'	< 10'	< 10'	10-30'
822-06-0	1,6-hexane diisocyanate	100.0	L	< 10'	< 10'	< 10'	< 10'	10-30'	< 10'	< 10'	< 10'	< 10'	10-30'
71-36-3	1-butanol	100.0	L	30-60'	10-30'	30-60'	30-60'	434' C	> 480'	30-60'	240-480'	60-120'	> 480'
106-89-8	1-Chloro-2,3-Epoxypropane	100.0	L	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	10-30'

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Brand				TouchNTuff®	MICROFLEX®	MICROFLEX®	TouchNTuff®	MICROFLEX®	DermaShield®	MICROFLEX®	MICROFLEX®	MICROFLEX®	TouchNTuff®
Product Group				92-665.675.670	93-743.843 /94-243. Supreno SE SU-690	MidKnight MK-296.93-852.93-252	92-600.605 . 93-300.700	93-260.360	73-701.711.721	Neogard 73-847.C52	Neopro NPG-888	25-101.201	93-800
CAS	Chemical Name	%	PS										
592-41-6	1-Hexene	100.0	L	60-120'	60-120'	120-240'	60-120'	> 480'	10-30'	< 10'	< 10'	< 10'	10-30'
111-42-2	2,2'-iminodiethanol	100.0	L	60-120'	60-120'	60-120'	60-120'	240-480'	120-240'	60-120'	60-120'	60-120'	> 480'
584-84-9	2,4- TDI	100.0	L	10-30'	10-30'	10-30'	10-30'	10-30'	10-30'	< 10'	< 10'	< 10'	60-120'
141-43-5	2-Amino ethanol	100.0	L	60-120'	60-120'	60-120'	> 480'	120-240'	120-240'	60-120'	60-120'	60-120'	60-120'
78-93-3	2-butanone	100.0	L	< 10'	< 10'	< 10'	< 10'	3' C	< 10'	< 10'	< 10'	< 10'	12' C
107-07-3	2-chloroethanol	100.0	L	< 10'	< 10'	< 10'	< 10'	30-60'	60-120'	30-60'	30-60'	30-60'	60-120'
95-49-8	2-Chlorotoluene	100.0	L	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'
95-53-4	2-Methyliniline	100.0	L	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	30-60'
67-63-0	2-propanol	100.0	L	30-60'	10-30'	30-60'	140' C	240-480'	120-240'	60-120'	60-120'	60-120'	315' C
67-64-1	2-Propanone	100.0	L	< 10'	< 10'	< 1' C	1' C	3' C	< 10'	< 10'	< 10'	< 10'	17' C
107-18-6	2-Propenol	100.0	L	< 10'	< 10'	< 10'	< 10'	30-60'	< 10'	< 10'	< 10'	< 10'	30-60'
106-43-4	4-Chlorotoluene	100.0	L	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'

Note thickness

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Brand				TouchNTuff®	MICROFLEX®	MICROFLEX®	TouchNTuff®	MICROFLEX®	DermaShield®	MICROFLEX®	MICROFLEX®	MICROFLEX®	TouchNTuff®
Product Group				92-665.675.670	93-743.843 /94-243. Supreno SE SU-690	MidKnight MK-296.93-852.93-252	92-600.605 . 93-300.700	93-260.360	73-701.711.721	Neogard 73-847.C52	Neopro NPG-888	25-101.201	93-800
CAS	Chemical Name	%	PS										
75-07-0	Acetaldehyde	100.0	L	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	10-30'
64-19-7	Acetic acid	100.0	L	< 10'	< 10'	< 10'	8' C	30' C	60-120'	< 10'	10-30'	10-30'	75' C
108-24-7	Acetic anhydride	100.0	L	< 10'	< 10'	< 10'	< 10'	< 10'	10-30'	< 10'	< 10'	< 10'	60-120'
141-78-6	Acetic Ester	100.0	L	< 10'	< 10'	< 10'	< 10'	4' C	< 10'	< 10'	< 10'	< 10'	10' C
75-05-8	ACN	100.0	L	< 10'	< 10'	< 10'	< 10'	5' C	< 10'	< 10'	< 10'	< 10'	35' C
79-10-7	Acroleic Acid	100.0	L	< 10'	< 10'	< 10'	< 10'	30-60'	60-120'	10-30'	30-60'	30-60'	30-60'
107-13-1	Acrylonitrile	100.0	L	< 10'	< 10'	< 10'	< 10'	2' C	< 10'	< 10'	< 10'	< 10'	26' C
100-44-7	Alpha-chlorotoluene	100.0	L	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'
62-53-3	Aminobenzene	100.0	L	< 10'	< 10'	< 10'	< 10'	10-30'	< 10'	< 10'	< 10'	< 10' C	60-120'
108-91-8	Aminocyclohexane	100.0	L	< 10'	< 10'	< 10'	< 10'	10-30'	< 10'	< 10'	< 10'	< 10'	30-60'
7664-41-7	Ammonia, gas	100.0	G	< 10'	< 10'	< 10'	10-30'	24' C	10-30'	< 10'	< 10'	< 10' C	3' C
1336-21-6	Ammonium hydroxide	35.0	L	< 10'	< 10'	< 10'	< 10'	10-30'	< 10'	< 10'	< 10'	< 10'	10-30'

Note thickness

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Material				Nitrile	Nitrile	Nitrile	Nitrile	Nitrile /Neoprene	Neoprene	Neoprene	Neoprene	Neoprene	NRL /Neoprene /Nitrile
Thickness (mm)				0.11 mm 4.3 mil	0.11 mm 4.3 mil	0.12 mm 4.7 mil	0.125 mm 4.9 mil	0.20 mm 7.9 mil	0.18 mm 7 mil	0.10 mm 3.9 mil	0.13 mm 5.1 mil	0.13 mm 5.1 mil	0.45 mm
Brand				TouchNTuff®	MICROFLEX®	MICROFLEX®	TouchNTuff®	MICROFLEX®	DermaShield®	MICROFLEX®	MICROFLEX®	MICROFLEX®	TouchNTuff®
Product Group				92-665.675.670	93-743.843 /94-243. Supreno SE SU-690	MidKnight MK-296.93-852.93-252	92-600.605 . 93-300.700	93-260.360	73-701.711.721	Neogard 73-847.C52	Neopro NPG-888	25-101.201	93-800
CAS	Chemical Name	%	PS										
1336-21-6	Ammonium hydroxide	25.0	L	< 10'	< 10'	< 10'	25' C	65' C	10-30'	< 10'	10-30'	< 10'	66' C
123-75-1	Azacyclopentane	100.0	L	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'
110-86-1	Azine	100.0	L	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'
71-43-2	Bensol/Benzol	100.0	L	< 10'	< 10'	< 10'	< 10'	5' C	< 10'	< 10'	< 10'	< 10'	7' C
7726-95-6	Bromine	100.0	L	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'
7726-95-6	Bromine water (Saturated solution)	3.0	L	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'
67-56-1	Carbinol	100.0	L	< 10'	< 10'	< 10'	3' C	10-30'	10-30'	< 10'	< 10'	< 10'	48' C
75-15-0	Carbon Bisulphide	100.0	L	< 10'	< 10'	< 10'	< 10'	1' C	< 10'	< 10'	< 10'	< 10'	< 1' C
7722-64-7	Chameleon mineral	7.0	L	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'
7782-50-5	Chlorine, gas	100.0	G	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	10-30'
108-90-7	Chlorobenzene	100.0	L	< 10'	< 10'	< 10'	< 10'	2' C	< 10'	< 10'	< 10'	< 10'	10-30'
74-87-3	Chloromethane	100.0	G	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'

Note thickness

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Material				Nitrile	Nitrile	Nitrile	Nitrile	Nitrile /Neoprene	Neoprene	Neoprene	Neoprene	Neoprene	NRL /Neoprene /Nitrile
Thickness (mm)				0.11 mm 4.3 mil	0.11 mm 4.3 mil	0.12 mm 4.7 mil	0.125 mm 4.9 mil	0.20 mm 7.9 mil	0.18 mm 7 mil	0.10 mm 3.9 mil	0.13 mm 5.1 mil	0.13 mm 5.1 mil	0.45 mm
Brand				TouchNTuff®	MICROFLEX®	MICROFLEX®	TouchNTuff®	MICROFLEX®	DermaShield®	MICROFLEX®	MICROFLEX®	MICROFLEX®	TouchNTuff®
Product Group				92-665.675.670	93-743.843 /94-243. Supreno SE SU-690	MidKnight MK-296.93-852.93-252	92-600.605 . 93-300.700	93-260.360	73-701.711.721	Neogard 73-847.C52	Neopro NPG-888	25-101.201	93-800
CAS	Chemical Name	%	PS										
1333-82-0	Chromium trioxide, 50%	50.0	L	< 10'	< 10'	10-30'	10-30'	120-240'	30-60'	< 10'	10-30'	10-30'	> 480'
8007-45-2	Coal tar	100.0	L	240-480'	240-480'	240-480'	240-480'	> 480'	60-120'	10-30'	30-60'	30-60'	240-480'
98-82-8	Cumene	100.0	L	< 10'	< 10'	< 10'	< 10'	10-30'	< 10'	< 10'	< 10'	< 10'	10-30'
110-82-7	Cyclohexane	100.0	L	> 480'	120-240'	120-240'	> 480'	30-60'	< 10'	< 10'	< 10'	< 10'	10-30'
75-09-2	Dichloromethane	100.0	L	< 10'	< 10'	< 10'	< 10'	1' C	< 10'	< 10'	< 10'	< 10'	< 2' C
68334-30-5	Diesel fuel	100.0	L	240-480'	240-480'	240-480'	240-480'	> 480'	30-60'	< 10'	10-30'	10-30'	30-60'
109-89-7	Diethylamine	100.0	L	< 10'	< 10'	< 10'	3' C	6' C	< 10'	< 10'	< 10'	< 10'	< 3' C
60-29-7	Diethylether	100.0	L	< 10'	< 10'	< 10'	< 10'	10-30'	< 10'	< 10'	< 10'	< 10'	< 10'
75-18-3	Dimethyl sulfide	100.0	L	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'
67-68-5	Dimethyl Sulfoxide	100.0	L	< 10'	< 10'	< 10'	< 10'	93' C	30-60'	10-30'	10-30'	10-30'	> 480'
124-40-3	Dimethylamine, aqueous solution	50.0	L	30-60'	30-60'	30-60'	30-60'	60-120'	30-60'	10-30'	30-60'	30-60'	240-480'
68-12-2	Dimethylformamide	100.0	L	< 10'	< 10'	< 10'	< 10'	9' C	< 10'	< 10'	< 10'	< 10'	66' C

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CAS	Chemical Name	%	PS										
75-08-1	Ethanethiol	100.0	L	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'
64-17-5	Ethanol	100.0	L	< 10'	< 10'	< 10'	23' C	120-240'	10-30'	10-30'	10-30'	< 10'	100' C
75-21-8	Ethylene Oxide	100.0	G	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'
7758-94-3	Ferric (II) chloride, saturated solution	39.0	L	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'
50-00-0	Formaldehyde	37.0	L	> 480' C	> 480'	240-480'	> 480' C	> 480' C	240-480'	240-480'	240-480'	240-480'	> 480' C
50-00-0	Formalin	10.0	L	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'
64-18-6	Formic acid	98.0	L	< 10'	< 10'	< 10'	< 10'	20' C	240-480'	60-120'	60-120'	60-120'	162' C
64-18-6	Formic acid	90.0	L	< 10'	< 10'	< 10'	< 10'	30-60'	240-480'	60-120'	60-120'	60-120'	120-240'
8006-61-9	Gasoline, natural	100.0	L	30-60'	< 10'	< 10'	60-120'	120-240'	30-60'	< 10'	< 10'	< 10'	10-30'
142-82-5	Heptane	100.0	L	> 480' C	85' C	240' C	> 480' C	> 480' C	10-30'	< 10'	< 10'	< 10'	74' C
110-54-3	Hexane	100.0	L	240-480'	60-120'	120-240'	> 480' C	> 480'	10-30'	< 10'	< 10'	< 10'	39' C
7647-01-0	Hydrochloric acid	37.0	L	60-120'	60-120'	30-60'	30-60'	> 480' C	> 480'	30-60'	120-240'	60-120'	> 480'

Note thickness

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CAS	Chemical Name	%	PS										
7647-01-0	Hydrochloric acid, anhydrous	100.0	G	< 10'	< 10'	< 10'	< 10'	60-120'	30-60'	< 10'	10-30'	10-30'	60-120'
7697-37-2	Hydrogen nitrate	70.0	L	< 10'	< 10'	< 10'	< 10'	32' C	> 480'	10-30'	10-30'	10-30'	> 480'
7722-84-1	Hydrogen peroxide	10.0	L	30-60'	240-480'	> 480'	60-120'	> 480'	> 480'	60-120'	> 480'	> 480'	> 480'
7722-84-1	Hydrogen peroxide	30.0	L	35' C	120-240'	240-480'	41' C	480' C	> 480'	60-120'	> 480'	> 480'	> 480' C
7705-08-0	Iron (III) chloride, saturated solution	50.0	L	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'
1310-58-3	KOH	30.0	L	> 480'	> 480'	> 480'	> 480' C	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'
1310-58-3	KOH	86.0	L	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'
79-22-1	Methyl chloroformate	100.0	L	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'
872-50-4	N- METHYL PYRROLIDONE	100.0	L	< 10'	< 10'	< 10'	< 10'	7' C	< 10'	< 10'	< 10'	< 10'	60' C
111-65-9	n-Octane	100.0	L	> 480'	60-120'	240-480'	> 480'	> 480'	10-30'	< 10'	< 10'	< 10'	120-240'
98-95-3	Nitrobenzol	100.0	L	< 10'	< 10'	< 10'	< 10'	30-60'	< 10'	< 10'	< 10'	< 10'	30-60'
7664-38-2	Orthophosphoric Acid	85.0	L	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480' C

Note thickness

Permeation Breakthrough Times

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Material				Nitrile	Nitrile	Nitrile	Nitrile	Nitrile /Neoprene	Neoprene	Neoprene	Neoprene	Neoprene	NRL /Neoprene /Nitrile
Thickness (mm)				0.11 mm 4.3 mil	0.11 mm 4.3 mil	0.12 mm 4.7 mil	0.125 mm 4.9 mil	0.20 mm 7.9 mil	0.18 mm 7 mil	0.10 mm 3.9 mil	0.13 mm 5.1 mil	0.13 mm 5.1 mil	0.45 mm
Brand				TouchNTuff®	MICROFLEX®	MICROFLEX®	TouchNTuff®	MICROFLEX®	DermaShield®	MICROFLEX®	MICROFLEX®	MICROFLEX®	TouchNTuff®
Product Group				92-665.675.670	93-743.843 /94-243. Supreno SE SU-690	MidKnight MK-296.93-852.93-252	92-600.605 . 93-300.700	93-260.360	73-701.711.721	Neogard 73-847.C52	Neopro NPG-888	25-101.201	93-800
CAS	Chemical Name	%	PS										
106-42-3	p-Xylene	100.0	L	< 10'	< 10'	< 10'	< 10'	10-30'	< 10'	< 10'	< 10'	< 10'	< 10'
7601-90-3	Perchloric acid	30.0	L	240-480'	240-480'	240-480'	240-480'	> 480'	> 480'	240-480'	240-480'	240-480'	> 480'
108-95-2	Phenol	90.0	L	< 10'	< 10'	< 10'	< 10'	10-30'	10-30'	< 10'	< 10'	< 10'	10-30'
25322-68-3	Polyethylene glycol, molar mass <600	99.0	L	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'
115-07-1	Propene	100.0	G	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	10-30'
79-09-4	Propionic acid	100.0	L	< 10'	< 10'	10-30'	10-30'	30-60'	30-60'	< 10'	10-30'	10-30'	120-240'
107-12-0	Propionitrile	100.0	L	< 10'	< 10'	< 10'	< 10'	10-30'	10-30'	< 10'	< 10'	< 10'	30-60'
107-10-8	Propylamine	100.0	L	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'
7439-97-6	quicksilver	100.0	L	240-480'	240-480'	240-480'	240-480'	> 480'	120-240'	60-120'	60-120'	60-120'	> 480'
7681-38-1	Sodium bisulfate, sat. solution	40.0	L	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'
7647-14-5	Sodium chloride	100.0	S	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'
143-33-9	Sodium cyanide, sat.sol	37.0	L	240-480'	240-480'	240-480'	240-480'	> 480'	240-480'	120-240'	120-240'	120-240'	240-480'

Note thickness

Permeation Breakthrough Times

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Material				Nitrile	Nitrile	Nitrile	Nitrile	Nitrile /Neoprene	Neoprene	Neoprene	Neoprene	Neoprene	NRL /Neoprene /Nitrile
Thickness (mm)				0.11 mm 4.3 mil	0.11 mm 4.3 mil	0.12 mm 4.7 mil	0.125 mm 4.9 mil	0.20 mm 7.9 mil	0.18 mm 7 mil	0.10 mm 3.9 mil	0.13 mm 5.1 mil	0.13 mm 5.1 mil	0.45 mm
Brand				TouchNTuff®	MICROFLEX®	MICROFLEX®	TouchNTuff®	MICROFLEX®	DermaShield®	MICROFLEX®	MICROFLEX®	MICROFLEX®	TouchNTuff®
Product Group				92-665.675.670	93-743.843 /94-243. Supreno SE SU-690	MidKnight MK-296.93-852.93-252	92-600.605 . 93-300.700	93-260.360	73-701.711.721	Neogard 73-847.C52	Neopro NPG-888	25-101.201	93-800
CAS	Chemical Name	%	PS										
7681-49-4	Sodium fluoride, saturated solutions	4.0	L	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'
16893-85-9	Sodium Fluorosilicate, sat. solution	1.0	L	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'
1310-73-2	Sodium Hydroxide	40.0	L	> 480' C	> 480'	> 480'	> 480' C	> 480' C	> 480'	> 480'	> 480'	> 480'	> 480' C
1310-73-2	Sodium Hydroxide	30.0	L	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'
1310-73-2	Sodium Hydroxide, sat. sol.	50.0	L	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'
7664-93-9	Sulfuric acid	50.0	L	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'
8014-95-7	Sulfuric acid, fuming contains 20% sulfur trioxide	20.0	L	< 10'	< 10'	< 10'	< 10'	10-30'	30-60'	< 10'	< 10'	< 10'	30-60'
7664-93-9	Sulphuric acid	99.0	L	< 10'	< 10'	< 10'	< 10'	30-60'	60-120'	< 10'	< 10'	< 10'	120-240'
77-78-1	Sulphuric Acid Dimethyl Ester	100.0	L	< 10'	< 10'	< 10'	< 10'	30-60'	60-120'	10-30'	30-60'	30-60'	120-240'
7790-94-5	Sulphuric Chlorohydrin	100.0	L	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'
1634-04-4	Tert-Butyl Methyl Ether	100.0	L	10-30'	10-30'	10-30'	60-120'	60-120'	< 10'	< 10'	< 10'	< 10'	10-30'

Note thickness

Permeation Breakthrough Times

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Material				Nitrile	Nitrile	Nitrile	Nitrile	Nitrile /Neoprene	Neoprene	Neoprene	Neoprene	Neoprene	NRL /Neoprene /Nitrile
Thickness (mm)				0.11 mm 4.3 mil	0.11 mm 4.3 mil	0.12 mm 4.7 mil	0.125 mm 4.9 mil	0.20 mm 7.9 mil	0.18 mm 7 mil	0.10 mm 3.9 mil	0.13 mm 5.1 mil	0.13 mm 5.1 mil	0.45 mm
Brand				TouchNTuff®	MICROFLEX®	MICROFLEX®	TouchNTuff®	MICROFLEX®	DermaShield®	MICROFLEX®	MICROFLEX®	MICROFLEX®	TouchNTuff®
Product Group				92-665.675.670	93-743.843 /94-243. Supreno SE SU-690	MidKnight MK-296.93-852.93-252	92-600.605 . 93-300.700	93-260.360	73-701.711.721	Neogard 73-847.C52	Neopro NPG-888	25-101.201	93-800
CAS	Chemical Name	%	PS										
110-05-4	tert-Butylperoxide	100.0	L	120-240'	120-240'	120-240'	120-240'	240-480'	60-120'	10-30'	30-60'	30-60'	60-120'
127-18-4	Tetrachloroethylene	100.0	L	< 10'	< 10'	< 10'	< 10'	60-120'	< 10'	< 10'	< 10'	< 10'	< 10'
109-99-9	THF	100.0	L	< 10'	< 10'	< 10'	< 10'	2' C	< 10'	< 10'	< 10'	< 10'	< 10'
7719-09-7	Thionyl chloride	100.0	L	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'
108-88-3	Toluene	100.0	L	< 10'	< 10'	< 10'	< 10'	6' C	< 10'	< 10'	< 10'	< 10'	4' C
26471-62-5	Toluene diisocyanate, mixed isomers	100.0	L	10-30'	10-30'	10-30'	10-30'	6' C	10-30'	< 10'	< 10'	< 10'	> 480' C
108-31-6	TOXILIC ANHYDRIDE	100.0	S	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'	> 480'
76-03-9	Trichloroacetic acid	100.0	S	< 10'	< 10'	< 10'	< 10'	10-30'	30-60'	30-60'	30-60'	30-60'	> 480'
67-66-3	Trichloromethane	100.0	L	< 10'	< 10'	< 10'	< 10'	2' C	< 10'	< 10'	< 10'	< 10'	< 2' C
1319-77-3	Tricresol	100.0	L	< 10'	< 10'	10-30'	10-30'	60-120'	60-120'	30-60'	30-60'	30-60'	60-120'
121-44-8	Triethylamine	100.0	L	30-60'	10-30'	< 10'	> 480' C	287' C	< 10'	< 10'	< 10'	< 10'	10-30'
75-98-9	Trimethylacetic acid	100.0	S	30-60'	30-60'	30-60'	30-60'	60-120'	10-30'	< 10'	10-30'	10-30'	30-60'

Note thickness

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Material				Nitrile	Nitrile	Nitrile	Nitrile	Nitrile /Neoprene	Neoprene	Neoprene	Neoprene	Neoprene	NRL /Neoprene /Nitrile
Thickness (mm)				0.11 mm 4.3 mil	0.11 mm 4.3 mil	0.12 mm 4.7 mil	0.125 mm 4.9 mil	0.20 mm 7.9 mil	0.18 mm 7 mil	0.10 mm 3.9 mil	0.13 mm 5.1 mil	0.13 mm 5.1 mil	0.45 mm
Brand				TouchNTuff®	MICROFLEX®	MICROFLEX®	TouchNTuff®	MICROFLEX®	DermaShield®	MICROFLEX®	MICROFLEX®	MICROFLEX®	TouchNTuff®
Product Group				92-665.675.670	93-743.843 /94-243. Supreno SE SU-690	MidKnight MK-296.93-852.93-252	92-600.605 . 93-300.700	93-260.360	73-701.711.721	Neogard 73-847.C52	Neopro NPG-888	25-101.201	93-800
CAS	Chemical Name	%	PS										
1120-21-4	Undecane	100.0	L	240-480'	240-480'	240-480'	240-480'	> 480'	30-60'	< 10'	10-30'	10-30'	60-120'
108-05-4	Vinyl acetate	100.0	L	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'
2177-18-6	Vinyl acrylate	100.0	L										
100-42-5	Vinylbenzene	100.0	L	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	< 10'	0' C
92062-35-6	White mineral oil (petroleum), light	100.0	L	240-480'	240-480'	240-480'	240-480'	> 480'	30-60'	< 10'	10-30'	10-30'	60-120'