

AdvanTech 517

Chemical Product	CAS #	Breakthrough time (minutes)	Permeation level	Standard	Degradatio level	Rating
1,1,1-Trichloroethane 99%	71-55-6	7	0	ASTM F739	NT	
1,1,1,2,2,3,4,5,5,5-Decafluoropentan 97%	138495-42-8	13	1	ASTM F739	NT	
1,1,2-Trichlorotrifluoroethane (Freon TF or Freon 113) 99%	76-13-1	20	1	ASTM F739	1	-
1,2 Dichloroethylene 98%	156-60-5	2	0	ASTM F739	2	-
1,3 Ethoxy propionate (Ethyl 3-ethoxypropionate) 99%	763-69-9	480	6	ASTM F739	NT	
2-Butoxyethanol (Butyl Cellusolve) 99%	111-76-2	53	2	ASTM F739	NT	
2-Butoxyethylacetate (Butyl cellosolve acetate) 85%	112-07-2	35	2	ASTM F739	NT	
2-Ethoxyethanol (Cellosolve) 99%	110-80-5	27	1	ASTM F739	NT	
2-Ethoxyethyl acetate (Cellosolve Acetate) 99%	111-15-9	14	1	ASTM F739	4	+
2-Methoxyethanol (Methyl Cellosolve) 99%	109-86-4	40	2	ASTM F739	NT	
2-Methoxyethanol Acetate (Methyl cellosolve acetate) 98%	110-49-6	27	1	ASTM F739	NT	
2-Propanol (Isopropanol) 99%	67-63-0	29	1	EN 374-3:2003	4	+
4,4 - diamino diphenylsulfone 97%	80-008-0	480	6	ASTM F739	NT	
4,4'-Methylenedianiline (MDA) 15% and 15% Methanol mixture	101-77-9	19	1	ASTM F739	NT	
4,4'-Methylenedianiline (MDA) 15% in Toluene mixture	101-77-9	15	1	ASTM F739	NT	
Acetic acid 10%	64-19-7	NT	NT		4	
Acetic acid 50%	64-19-7	NT	NT		4	
Acetic acid 99%	64-19-7	29	1	EN 374-3:2003	4	+
Acetone 99%	67-64-1	6	0	ASTM F739	4	=
Aluminum Etch mixture	NA	960	6	ASTM F739	4	++
Aluminum Oxide mixture	NA	55	2	ASTM F739	NT	
Ammonium Fluoride 40%	12125-01-8	480	6	ASTM F739	NT	
Ammonium Fluoride 79%	12125-01-8	480	6	ASTM F739	NT	
Ammonium hydroxide solution 29%	1336-21-6	19	1	EN 374-3:2003	4	+
Baker PRS-1000 mixture	NA	20	1	ASTM F739	NT	
Baker PRS-2000 mixture	NA	130	4	ASTM F739	NT	
Baker PRS-3000 mixture	NA	480	6	ASTM F739	NT	nt normalized result

*not normalized result

Overall Chemical Protection Rating

Protection rating is determined by taking into account the effects of both permeation and degradation in an attempt to provide users with an overall protection guideline when using our glove products against specific chemicals.

Used for **high chemical exposure** or chemical immersion, limited to breakthrough time based on a working day.

Used for repeated chemical contact, limited to total chemical exposure i.e. : accumulative breakthrough time based on a working day.
Splace protection only on chemical exposure the gloves should be discarded and new gloves were as seen as possible.

Splash protection only, on chemical exposure the gloves should be discarded and new gloves worn as soon as possible. **Not recommended**, these gloves are deemed unsuitable for work with this chemical.

NT : Not tested

NA : Not applicable because not fully tested (only degradation OR permeation results)

The chemical test data and overall chemical protection rating should not be used as the absolute basis for glove selection. Actual in-use conditions may vary glove performance from the controlled conditions of laboratory tests. Factors other than chemical contact time





Mapa Chemical

AdvanTech 517

Chemical Product	CAS #	Breakthrough time (minutes)	Permeation level	Standard	Degradatio level	Rating
Benzene 99%	71-43-2	4	0	ASTM F739	1	-
Buffered Oxide Etch mixture	NA	480	6	ASTM F739	4	++
Butyl Acetate 99%	123-86-4	5	0	EN 374-3:2003	4	=
Chromic Acid 50%	7738-94-5	60	2	ASTM F739	NT	
Cyclohexanone 99%	108-94-1	23	1	ASTM F739	1	-
Cyclopentanone 99%	120-92-3	11	1	ASTM F739	NT	
Dichloromethane (Methylene Chloride) 99%	75-09-2	4	0	ASTM F739	NT	
Dichromate cleaning solution mixture	NA	480	6	ASTM F739	4	++
Diethylamine 98%	109-89-7	4	0	ASTM F739	NT	
Diglycidal ether of bisphenol 100%		480	6	ASTM F739	NT	
Dimethylamine 35%	124-40-3	53	2	ASTM F739	NT	
Dimethylformamide 99%	68-12-2	8	0	ASTM F739	NT	
Dimethylsulfoxide 99%	67-68-5	181	4	ASTM F739	4	++
Epichlorohydrin 99%	106-89-8	4	0	ASTM F739	NT	
Ethanol 95%	64-17-5	21	1	ASTM F739	NT	
Ethyl lactate 95%	97-64-3	29	1	ASTM F739	NT	
Ethylene glycol 99%	107-21-1	480	6	ASTM F739	4	++
Formaldehyde 37%	50-00-0	480	6	EN 16523-1:2015	4	++
Hexamethyldisilazane (HMDS) 98%	999-97-3	18	1	ASTM F739	1	-
Hydrochloric acid 10%	7647-01-0	480	6	EN 374-3:2003	4	++
Hydrochloric acid 35%	7647-01-0	NT	NT		4	
Hydrochloric acid 37%	7647-01-0	454	5	ASTM F739	4	++
Hydrofluoric Acid 10%	7664-39-3	480	6	EN 374-3:2003	4	++
Hydrofluoric Acid 40%	7664-39-3	480	6	EN 16523-1:2015	NT	
Hydrofluoric Acid 49%	7664-39-3	480	6	EN 374-3:2003	NT	
Hydrogen peroxide 30%	7722-84-1	480	6	EN 16523-1:2015	4	++
Hydrotreated Light Naphthenic Distillate mixture	64742-53-6	161	4	ASTM F739	2	+
Kerosene mixture	8008-20-6	26	1	ASTM F739	1	-
KOH Etch mixture	NA	278	5	ASTM F739	4	++
					*n(ot normalized result

*not normalized result

Overall Chemical Protection Rating

Protection rating is determined by taking into account the effects of both permeation and degradation in an attempt to provide users with an overall protection guideline when using our glove products against specific chemicals.

Used for high chemical exposure or chemical immersion, limited to breakthrough time based on a working day.
 Used for repeated chemical contact, limited to total chemical exposure i.e. : accumulative breakthrough time based on a

working day.
Splash protection only, on chemical exposure the gloves should be discarded and new gloves worn as soon as possible.
Not recommended, these gloves are deemed unsuitable for work with this chemical.

NT : Not tested

NA : Not applicable because not fully tested (only degradation OR permeation results)

The chemical test data and overall chemical protection rating should not be used as the absolute basis for glove selection. Actual in-use conditions may vary glove performance from the controlled conditions of laboratory tests. Factors other than chemical contact time





Mapa Chemical

AdvanTech 517

Chemical Product	CAS #	Breakthrough time (minutes)	Permeation level	Standard	Degradatio level	Rating
KTI Pad Etch mixture	NA	480	6	ASTM F739	NT	
KTI Silicon Etch mixture	NA	480	6	ASTM F739	NT	
Methanesulfonic Acid 99%	75-75-2	NT	NT		4	
Methanol 85%	67-56-1	19	1	ASTM F739	4	+
Methanol 99%	67-56-1	NT	NT		4	
Methyl Amyl Ketone 98%	110-43-0	8	0	ASTM F739	1	-
Methyl Ethyl Ketone (2-Butanone) 99%	78-93-3	4	0	ASTM F739	3	=
Methyl-3-methoxypropionate 100%	3852-09-3	11	1	ASTM F739	3	=
n-hexane 95%	110-54-3	3	0	ASTM F739	1	-
N-methyl-2-Pyrrolidone 99%	872-50-4	33	2	EN 374-3:2003	4	+
N-N dimethyl acetamide 99%	127-19-5	47	2	ASTM F739	NT	
Naphtha VM&P mixture	8032-32-4	2	0	ASTM F739	1	-
Nitric acid 10%	7697-37-2	840	6	ASTM F739	4	++
Nitric acid 20%	7697-37-2	480	6	ASTM F739	4	++
Nitric acid 40%	7697-37-2	480	6	ASTM F739	4	++
Nitric acid 50%	7697-37-2	NT	NT		4	
Nitric acid 68%	7697-37-2	299	5	EN 374-3:2003	4	++
Nitric acid 70%	7697-37-2	307	5	ASTM F739	4	++
Nitric acid 90%	7697-37-2	7	0	ASTM F739	NT	
Nitride Etch mixture	NA	NT	NT		4	
Nitrohydrochloric acid (Aqua Regia) mixture	8007-56-5	480	6	ASTM F739	NT	
Phenol 85%	108-95-2	102	3	ASTM F739	4	++
Phosphoric acid 75%	7664-38-2	480	6	ASTM F739	4	++
Phosphoric acid 85%	7664-38-2	480	6	ASTM F739	4	++
Phosphorus Oxychloride 99%	10025-87-3	15	1	ASTM F739	NT	
Piranha Etch mixture	NA	243	5	ASTM F739	1	-
Polyethylene glycol octylphenyl ether 100%	9002-93-1	480	6	ASTM F739	NT	
Potassium Hydroxide 50%	1310-58-3	480	6	ASTM F739	4	++
					*n(normalized result

*not normalized result

Overall Chemical Protection Rating

Protection rating is determined by taking into account the effects of both permeation and degradation in an attempt to provide users with an overall protection guideline when using our glove products against specific chemicals.

Used for **high chemical exposure** or chemical immersion, limited to breakthrough time based on a working day.

Used for **repeated chemical contact**, limited to total chemical exposure i.e. : accumulative breakthrough time based on a working day.

Splash protection only, on chemical exposure the gloves should be discarded and new gloves worn as soon as possible. **Not recommended**, these gloves are deemed unsuitable for work with this chemical.

NT : Not tested

NA : Not applicable because not fully tested (only degradation OR permeation results)

The chemical test data and overall chemical protection rating should not be used as the absolute basis for glove selection. Actual in-use conditions may vary glove performance from the controlled conditions of laboratory tests. Factors other than chemical contact time



Mapa Professionnel Défense Ouest - 420, rue d'Estienne d'Orves - 92705 Colombes Cedex - France Tel: (33) 1 49 64 22 00 - Fax: (33) 1 49 64 24 29 <u>www.mapa-pro.com</u>



AdvanTech 517

Chemical Product	CAS #	Breakthrough time (minutes)	Permeation level	Standard	Degradatio level	Rating
Potassium Hydroxide Etch mixture	NA	24	1	ASTM F739	NT	
Propylene Glycol 99%	57-55-6	480	6	ASTM F739	4	++
Propylene Glycol Methyl Ethyl Acetate (PGMEA) 99%	108-65-6	47	2	ASTM F739	3	+
Propylene Glycol Monomethyl Ether 99%	107-98-2	26	1	ASTM F739	4	+
Silicon Tetrachloride 100%	10026-04-7	15	1	ASTM F739	NT	
Slope Etch mixture	NA	260	5	ASTM F739	4	++
Sodium hydroxide 20%	1310-73-2	480	6	EN 16523-1:2015	4	++
Sodium hydroxide 40%	1310-73-2	480	6	EN 16523-1:2015	4	++
Sodium hydroxide 50%	1310-73-2	480	6	EN 16523-1:2015	4	++
Sulfuric acid 10%	7664-93-9	900	6	ASTM F739	4	++
Sulfuric acid 96%	7664-93-9	41	2	EN 374-3:2003	1	-
Tetrachloroethylene (Perchloroethylene) 99%	127-18-4	3	0	EN 374-3:2003	1	-
Tetraethyl Orthosilicate 100%	78-10-4	25	1	ASTM F739	1	-
Tetramethyl Ammonium Hydroxide 25%	75-59-2	480	6	ASTM F739	4	++
Thionylchloride 99%	7719-09-7	15	1	ASTM F739	NT	
Toluene 49% Methyl Isobutyl Ketone 34.5% Methyl Ethyl Ketone 16.5% mixture	NA	1	0	EN 374-3:2003	NT	
Toluene Diisocyanate (TDI) 80%	584-84-9	27	1	ASTM F739	NT	
Trichloroethylene 99%	79-01-6	NT	NT		1	
Trimethylphosphite 97%	121-45-9	10	0	ASTM F739	NT	
Unleaded gasoline mixture	8006-61-9	4	0	ASTM F739	1	-
Xylene 99%	1330-20-7	3	0	EN 374-3:2003	1	-

*not normalized result

Overall Chemical Protection Rating

Protection rating is determined by taking into account the effects of both permeation and degradation in an attempt to provide users with an overall protection guideline when using our glove products against specific chemicals.

Used for high chemical exposure or chemical immersion, limited to breakthrough time based on a working day.
 Used for repeated chemical contact, limited to total chemical exposure i.e. : accumulative breakthrough time based on a working day.

Splash protection only, on chemical exposure the gloves should be discarded and new gloves worn as soon as possible. Not recommended, these gloves are deemed unsuitable for work with this chemical.

NT : Not tested

NA : Not applicable because not fully tested (only degradation OR permeation results)

The chemical test data and overall chemical protection rating should not be used as the absolute basis for glove selection. Actual in-use conditions may vary glove performance from the controlled conditions of laboratory tests. Factors other than chemical contact time

