




# Standard EN ISO 374:2016

## Gloves for protection gloves against chemicals.

The new EN 374:2016 chemical standard classifies chemical gloves into 3 categories and is based on three tests: penetration test, permeation test and degradation tests which have been introduced into the new standard.

ONE PICTOGRAM AND THREE TYPES OF GLOVES		
Type of gloves	Requirement	Marking (example)
Type A	Penetration resistance + Breakthrough time $\geq 30$ min for at least <b>6 chemicals</b> in the new list	EN ISO 374-1 / Type A  AJKLPR
Type B	Penetration resistance + Breakthrough time $\geq 30$ min for at least <b>3 chemicals</b> in the new list	EN ISO 374-1 / Type B  JKL
Type C	Penetration resistance + Breakthrough time $\geq 10$ min for at least <b>1 chemical</b> in the new list	EN ISO 374-1 / Type C 

LIST OF HAZARDOUS CHEMICALS			
Code	Chemical	CAS number	Class
A	Methanol	67-56-1	Primary alcohol
B	Acetone	67-64-1	Ketone
C	Acetonitrile	75-05-8	Nitrile composite
D	Dichloromethane	75-09-2	Chlorinated hydrocarbon
E	Carbon disulphide	75-15-0	Organic compound containing sulphur
F	Toluene	108-88-3	Aromatic hydrocarbon
G	Diethylamine	109-89-7	Amine
H	Tetrahydrofuranne	109-99-9	Heterocyclic ether compound
I	Ethyl acetate	141-78-6	Ester
J	n-Heptane	142-82-5	Saturated hydrocarbon
K	sodium hydroxide 40%	1310-73-2	Inorganic base
L	sulphuric acid 96%	7664-93-9	Inorganic mineral acid, oxidising
M	<b>nitric acid 65%</b>	<b>7697-37-2</b>	<b>Inorganic mineral acid, oxidising</b>
N	<b>acetic acid 99%</b>	<b>64-19-7</b>	<b>Organic acid</b>
O	<b>ammonia 25%</b>	<b>1336-21-6</b>	<b>Organic base</b>
P	<b>hydrogen peroxide 30%</b>	<b>7722-84-1</b>	<b>Peroxide</b>
S	<b>hydrofluoric acid 40%</b>	<b>7664-39-3</b>	<b>Inorganic mineral acid</b>
T	<b>formaldehyde 37%</b>	<b>50-00-0</b>	<b>Aldehyde</b>



## Chemical Handling Guide



Glass Industry  
Cleaning  
Food Industry  
Aerospace  
Paint / Varnish / Ink Industry  
Agrochemical Industry




























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Choice depends on concentration, exposure time, mixed products...  
below are some example of gloves suitable for the given risks.

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Oil and Solvent	Oil 	Hydrocarbon 	Trichloroethylene* Dichloromethane  	Xylene Toluene* Benzene*  	Acetone MEK / MIBK 	Mix Acetone / Toluene Type  
	Chemical codes from EN ISO 374:2016	J	D	F	B	F + B
Low exposure-splashes Chemical contact < 30 min		Solo 987 		Ultranihil 493 	Alto 260 	Alto 299  Natural latex UltraNeo 339  X1XXXX Polichloroprene (Neoprene)
Low exposure Chemical contact < 60 min	Solo 997 	Ultranihil 487 		Ultranihil 480 		<div style="border: 1px solid black; padding: 5px; background-color: #0056b3; color: white; text-align: center;">                     Every mixture of chemical products multiplies the risks. Ask your Mapa Expert for professional advise!                 </div>
Medium exposure Chemical contact 60 min – 240 min	Ultranihil 472  Ultranihil 475 	Ultranihil 485 	FluoTech 468 			
High exposure Chemical contact > 240 min	Ultranihil 492  Flocked Ultranihil 381  X2XXXX Textile support MAPAtechnology	Ultranihil 480  Chlorinated Ultranihil 377  X1XXXX Textile support		FluoTech 344  X1XXXX	Butoflex 651 	

Corrosive Chemicals	Ammonia 	Alkali, Detergents 	Hydrofluoric Acid (HF)  	Concentrated Acids except HF 
	Chemical codes from EN ISO 374:2016	O	K	[0-50%] S (HF 40%) [50% - 100%]
Low exposure-splashes Chemical contact < 30 min	Solo 999 	Solo 995 	UltraNeo 420 	Trilites 994  Mix: natural latex, polichloroprene (Neoprene) and nitrile Vital 124  Natural latex
Low exposure Chemical contact < 60 min	Ultranihil 472  Ultranihil 475 	Solo 997  Solo 977 	UltraNeo 341  X1XXXX	Alto 405  Telsol 351
Medium exposure Chemical contact 60 min – 240 min	Ultranihil 495  Ultranihil 492 	Vital 175  Vital 115 	Advantech 517  Mix: natural latex, polichloroprene (Neoprene) and nitrile UltraNeo 339  X1XXXX Polichloroprene (Neoprene)	UltraNeo 420  Flocked UltraNeo 382  X2XXXX textile support MAPA technology
High exposure Chemical contact > 240 min	Ultranihil 493 	Alto 415  Flocked Alto 260  Flocked Jersette 301  X1XXXX Textile support	UltraNeo 401  Flocked UltraNeo 407  Chlorinated	Butoflex 650 