



STC407E - Rev 1 - 23-02-06

CERTIFICATION CATEGORY III

CE 0334

CHEM-PLY 407 - 414

CE-Type Examination Certificates

CHEM-PLY 407 : 0072/014/162/08/98/0137

CHEM-PLY 414 : 0072/014/162/08/98/0137/Ex 01 08 98

issued by the approved body nr. 0072

I.F.T.H. – Av. Guy de Collongue - F-69134 ECULLY CEDEX

Certificate of conformity of the Quality Assurance System

issued by the approved body nr. 0334

ASQUAL - 14, rue des Reculettes - F-75013 PARIS

These gloves conform to the provisions of Directive 89/686/EEC
for protection against mechanical risks, chemicals and micro-organisms
within the limit of the recommendations hereafter.

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MAPA®
PROFESSIONNEL

CHEM-PLY 407 - 414

DESCRIPTION AND GENERAL PROPERTIES

Liquidproof gloves made of **black neoprene (polychloroprene)** rubber.

Internal layer of **red chlorinated neoprene**.

Curved fingers and contoured palm.

Non-slip finish in palm and fingers area.

Guaranteed **silicone-free**.

Conform to the FDA (Food and Drug Administration) regulation for **food contact**.

Thickness (in the wrist area) : **0.75 mm** (nominal value)

Reference	Glove Length for all sizes (in cm)	sizes
Chem-ply 407	35.5	9 10
Chem-ply 414	45.5	11

* nominal values

Standard packaging :

each pair in printed polyethylene bag

- **50** pairs per carton for ref. 407
- **30** pairs per carton for ref. 414

"CE"-TYPE EXAMINATION RESULTS



PROTECTION AGAINST CHEMICALS

According to **EN 374** standard.

ABCJKL

Liquidproof gloves.

Permeation data :
see the enclosed
chemical resistance
chart



PROTECTION AGAINST MECHANICAL RISKS

Levels of performance
according to **EN 388** standard

3 1 1 2
| | | |
| | | | ↪ **puncture resistance (0 to 4)**
| | | | ↪ **tear resistance (0 to 4)**
| | | | ↪ **blade cut resistance (0 to 5)**
| | | | ↪ **abrasion resistance (0 to 4)**

Acceptable Quality Level (**AQL**) : **0.65 %**



PROTECTION AGAINST MICRO-ORGANISMS

According to **EN 374** standard.

CHEM-PLY 407 - 414

SPECIFIC ADVANTAGES

- High flexibility of the material : superior dexterity and comfort.
- Long working life for heavy-duty work.
- Good grip thanks to the non-slip finish.
- Extended cuff to protect forearm.
- Multi-purpose chemical resistance : acids, aliphatic solvents, solvent mixture.
- Red internal layer - wear indicator - for user security.
- Resistant to sunlight and ozone.
- Recommended for persons sensitized to natural rubber proteins.
- Products manufactured in a MAPA factory which is ISO 9001 certified.

MAIN FIELDS OF USE

- Metal degreasing
- Metal stripping
- Chemical etching (acids)
- Electro-plating industry
- Petroleum refineries
- Chemical handling
- Site decontamination

INSTRUCTIONS FOR USE

For enhanced safety and service life of the gloves :

- Store the gloves in their original packaging at a temperature not below 5°C.
- It is recommended to check that the gloves are suitable for the intended use, because the conditions of use at workplace may differ from the "CE"-type tests.
- It is not recommended for persons sensitized to dithiocarbamates to use these gloves.
- Put the gloves on dry, clean hands.
- Do not use the gloves in contact with a chemical for a duration in excess of the measured breakthrough time. Refer to the chemical resistance chart hereafter or contact the Technical Customer Service - MAPA PROFESSIONNEL in order to know this breakthrough time. Use 2 pairs alternatively when in long duration contact with a solvent.
- Turn the cuff end down in order to prevent a hazardous chemical from dripping onto the arm.
- Before taking off the gloves, clean them as appropriate :
 - in use with paints, pigments and inks : wipe with a clean cloth dampened with a suitable solvent, and rub over with a dry cloth
 - in use with a solvent (diluent, etc...) : rub over with a dry cloth
 - in use with acids or alkalies : thoroughly rinse the gloves under running water, and rub over with a dry clothCaution : using the gloves or submitting them to cleaning or laundering process which are not specifically recommended can alter their performance levels.
- Ensure the inside of the gloves is dry before putting them on again
- Inspect the gloves for cracks or snags before reusing them.

CHEM-PLY 407 - 414

CHEMICAL RESISTANCE CHART

These gloves are designed for protection against numerous chemicals such as acids, bases, alcohols, petroleum solvents. In order to know whether these gloves are appropriate for a given chemical, refer to the table hereafter or enquire to Mapa Professionnel's Technical Customer Service. The results quoted in the table hereafter are relative to tests performed on the glove style CHEM-PLY 407.

CHEMICAL	CAS Nr	Chemical Resistance Index	Degradation Index (1 to 4)	Permeation (EN 374)	
				Breakthrough time (minutes)	Permeation index (0 to 6)
Acetaldehyde*	75-07-0	+	4	39	2
Acetic acid 50%*	64-19-7	++	4	> 480	6
Acetic acid	64-19-7	++	4	> 480	6
Acetic acid 100% (glacial)	64-19-7	++	4	> 480	6
Acetone B	67-64-1	++	4	33	2
Acetonitrile C	75-05-8	+	NT	62	3
Acrylonitrile*	107-13-1	++	4	109	3
Ammonium hydroxide 28%*	1336-21-6	++	4	> 480	6
Ammonium hydroxide 50%*	1336-21-6	++	4	> 480	6
Aniline	62-53-3	++	4	415	5
50% Aroclor 1254 (chlorodiphenyl) in 1,2,4-Trichlorobenzene	-	++	NT	161	4
Benzene*	71-43-2	-	1	21	1
2-Butoxyethanol	111-76-2	++	4	> 480	6
Butyl acetate*	123-86-4	+	3	45	2
Carbon disulfure* E	75-15-0	-	1	8	0
Carbon tetrachloride*	56-23-5	-	1	56	2
Chromic acid 50%*	7738-94-5	++	4	> 480	6
Chlorobenzene*	108-90-7	-	1	28	1
Chloroform *	67-66-3	-	1	13	1
2-Chlorotoluene (o- chlorotoluene)*	95-49-8	-	1	36	2
4-Chlorotoluene (p- chlorotoluene)*	106-43-4	-	1	24	1
m-Cresol*	108-39-4	++	4	> 480	6
Cumene*	98-82-8	++	3	66	3
Cyclohexane	110-82-7	++	4	106	3
1,2-Dichloroethane*	107-06-2	-	1	23	1
Dichloromethane* D	75-09-2	-	1	12	1
Diethanolamine*	111-42-2	++	4	> 480	4
Diethyl ether*	60-29-7	=	3	28	1
N,N-Dimethyl acetamide*	127-19-5	++	4	92	3
Dimethyl formamide	68-12-2	++	4	83	3
Dimethyl sulfoxide (DMSO)*	67-68-5	++	4	> 480	6
1,4-Dioxane*	123-91-1	+	NT	74	3
Ethanol*	64-17-5	++	4	> 480	6
2-Ethoxyethanol*	110-80-5	++	4	> 480	6
2-Ethoxyethyl acetate*	111-15-9	++	4	136	4
Ethyl acetate I	141-78-6	+	4	28	1
Ethylene glycol*	107-21-1	++	4	> 480	6
Ethylene oxyde*	75-21-8	=	NT	45	2
Formaldehyde 37%*	50-00-0	++	4	> 480	6
Freon 12*	75-71-8	++	NT	> 480	6
Furfural*	98-01-1	++	4	258	5
n-Heptan J	142-82-5	++	NT	173	4
Hexane*	110-53-3	++	4	132	4
Hydrazine 70%*	302-01-2	++	4	> 480	6
Hydrochloric acid 38%*	7647-01-0	++	4	> 480	6
Hydrofluoric acid 50%*	7664-39-3	++	4	> 480	6

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CHEMICAL RESISTANCE CHART

CHEMICAL	CAS Nr	Chemical Resistance Index	Degradation Index (1 to 4)	Permeation (EN 374) Breakthrough time (minutes)	Permeation index (0 to 6)
Hydrofluoric acid (gas) 99%* (Hydrogen fluoride)	7664-39-3	++	NT	> 480	6
Iodomethane (methyl iodide)*	74-88-4	-	NT	9	0
Isoamyle acetate (isopentylacetate)*	123-92-2	++	3	122	4
Isopropanol*	67-63-0	++	4	> 480	6
Kerosene*	8008-20-6	++	4	> 480	6
Methanol A	67-56-1	++	4	400	5
Methyl amyl ketone*	110-43-0	+	3	52	2
Methyl ethyl ketone	78-93-3	+	4	23	1
Methyl isobutyl ketone (MIBK)*	108-10-1	++	3	63	3
2-Methylpentamethylenediamine*	15520-10-2	++	NT	341	5
n-Methyl-2-Pyrrolidone*	872-50-4	++	3	226	4
Nafta (alkanes)*	68551-17-7	++	4	> 480	6
Nafta VM&P*	8032-32-4	++	4	89	3
Nitric acid 50%*	7697-37-2	++	4	> 480	6
Nitric acid 68%	7697-37-2	++	4	> 480	6
Nitric acid 90% (fuming)*	7697-37-2	+	3	132	4
Nitrobenzene*	98-95-3	++	3	132	4
Pentane*	109-66-0	++	4	122	4
Phenol 88%*	78-93-3	++	4	> 480	6
Phosphoric acid 85%*	7664-38-2	++	4	> 480	6
Pyridine*	110-86-1	=	2	36	2
Potassium hydroxyde 50%*	1310-58-3	++	4	> 480	6
Sodium hydroxide 40% K	1310-73-2	++	NT	> 480	6
Sodium hydroxide 50%	1310-73-2	++	4	> 480	6
Styrene	100-42-5	+	4	20	1
Sulphuric acid 50%*	7664-93-9	++	4	> 480	6
Sulphuric acid 96% L	7664-93-9	++	3	245	5
Tetrachloroethylene*	127-18-4	-	1	40	2
1,1,1,2-Tetrafluoroethane (HCF-134A)*	811-97-2	++	NT	> 480	6
Toluene*	108-88-3	-	1	19	1
Toluene diisocyanate (TDI) 80%*	584-84-9	++	4	> 480	6
1,1,1-Trichloroethane*	71-55-6	-	1	56	2
1,2,4-Trichlorobenzene*	120-82-1	++	4	142	4
Triethanolamine*	102-71-6	++	4	> 480	6
Triethylamine*	12-44-8	++	NT	133	4
2,2,2-Trifluoroethanol*	75-89-8	++	4	> 480	6
Turpentine*	8006-64-2	++	4	> 480	6
Unleaded petrol*	8006-61-9	++	4	41	2
Xylene*	1330-20-7	-	1	24	1
Vinyl acetate*	108-05-4	+	4	38	2

NT: not tested yet

* : permeation test according to ASTM F739 standard.

Chemical Resistance Index :

- ++ can be used for **long duration contact**
(limited to breakthrough time)
- + can be used for **short repeated contacts**
(for a total duration not exceeding the breakthrough time)
- = can be used against **splashes**
- **not recommended**

Degradation Index : a high index indicates a low degradation of the gloves in contact with the chemical.

Breakthrough Time : permeation test performed on the palm of the glove at 30° C in MAPA laboratories, unless otherwise specified.

Permeation Index : a high index indicates a long breakthrough time .

"CE" DECLARATION OF CONFORMITY

The Company

MAPA s.n.c.

57, rue de Villiers
BP 190
92205 Neuilly-sur-Seine Cedex - France

declares that the following MAPA PROFESSIONNEL protective gloves :

CHEMPLY 407
CHEMPLY 414

conform to the gloves which are the subject of **"CE" certificates of conformity**

CHEMPLY 407 : 0072/014/162/08/98/0137
CHEMPLY 414 : 0072/014/162/08/98/0137EX 01 08 98

issued by the notified body nr **0072**

I. F. T. H.

Av. Guy de Colongue - F-69134
ECULLY CEDEX

They are manufactured under a certified **Quality Assurance System** issued by the notified body nr **0334**

ASQUAL

14, rue des Reculettes
F-75013 PARIS

CATEGORY III CERTIFICATION

They conform to the provisions of directive **89/686/CEE**. They are designed for protection against **chemicals, micro-organisms and mechanical risks**, as specified in Article 8-4.(a) within the limits of use described in the technical documentation.

They are manufactured in conformance with the following **European Standards** :
EN420, EN 374 and EN 388

Prepared at Neuilly-sur-Seine, on September 29, 1998

MAPA

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