

PROTECTION AND DEXTERITY



STC420E - Rev 3 - 10.11.97

CATEGORY III CERTIFICATION

CE 0334

TECHNIC 400 - 420 - 450

CE-Type Examination Certificates

TECHNIC 420 : 0072/014/162/05/94/10514

TECHNIC 400 : 0072/014/162/05/94/10514/Ex01 05 94

TECHNIC 450 : 0072/014/162/05/94/10514/Ex02 05 94

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

TECHNIC 400 - 420 - 450

DESCRIPTION AND GENERAL PROPERTIES

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

Cotton flock-lining over an internal layer of **white natural latex**.

Curved fingers and **contoured palm**.

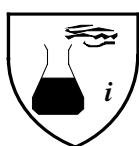
Non-slip finish in palm and fingers area.

Surface treatment with **silicone**.

| Reference | Colour | Glove Length for all sizes (in cm)* | Thickness in wrist area (in mm)* | Sizes available | Corresponding European Sizes | Standard packaging Number of pairs | |
|-------------|--------|-------------------------------------|----------------------------------|-----------------|------------------------------|------------------------------------|------------|
| | | | | | | per printed PE bag | per carton |
| Technic 400 | Red | 31 | 0.75 | 6 - 6 ½ | 7.5 | 10 | 100 |
| | | | | 7 - 7 ½ | 8 | | |
| Technic 420 | Black | 41 | 0.75 | 8 - 8 ½ | 8.5 | 1 | 100 |
| Technic 450 | | | | | 9 - 9 ½ | 9 | 1 |
| | | | | 10 - 10 ½ | 9.5 | | |

* nominal values

"CE"-TYPE EXAMINATION RESULTS



PROTECTION AGAINST CHEMICALS

According to EN 374 standard.

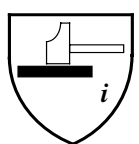
Liquidproof gloves.

Permeation data : see the enclosed chemical resistance chart.



PROTECTION AGAINST MICRO-ORGANISMS

According to EN 374 standard.



PROTECTION AGAINST MECHANICAL RISKS

Levels of performance according to EN 388 standard.

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

TECHNIC 400 - 420 - 450

SPECIFIC ADVANTAGES

- Freedom of movement : flexibility of neoprene and comfort of cotton flocklining.
- Good grip thanks to the non-slip finish.
- Multi-purpose chemical resistance : acids, aliphatic solvents.
- Resistant to sunlight and ozone.
- Products manufactured in a MAPA factory which is ISO 9002 certified.

MAIN FIELDS OF USE

- Handling in chemical industry.
- Manufacture of electrical accumulators.
- Fertilizer.
- Leather treatment.
- Manufacture of applied abrasives.
- Manufacture and installation of ovens.
- Glue manufacturing.

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 natural latex, thiurames, thiourea, thiazoles and 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 cloth

Caution : using the gloves or submitting them to another cleaning or laundering process 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.

TECHNIC 400 - 420 - 450

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 TECHNIC 420.

| CHEMICAL | Chemical Resistance Index | Degradation Index (1 to 4) | Permeation Breakthrough time (minutes) | Permeation index (EN 374) (0 to 6) |
|---------------------------------------|---------------------------|----------------------------|--|------------------------------------|
| Acetic acid 100% | ++ | 4 | 182 | 4 |
| Acetone | + | 3 | 16 | 1 |
| 2-Butoxyethanol | ++ | 4 | 103 | 3 |
| Butyl acetate | = | 2 | 22 | 1 |
| Cyclohexane | ++ | 3 | 40 | 2 |
| Dichloromethane | - | 2 | 3 | 0 |
| Diethylamine | - | 2 | 7 | 0 |
| Dimethyl formamide (DMF) | ++ | 3 | 48 | 2 |
| Dimethyl sulfoxide (DMSO) | ++ | 4 | > 360 | 5** |
| Ethanol | ++ | 4 | 135 | 4 |
| Ethyl acetate | + | 3 | 13 | 1 |
| Ethylene glycol * | ++ | 4 | NT | NT |
| Hydrochloric acid 35% | ++ | 4 | > 480 | 6 |
| Isopropanol | ++ | 4 | 288 | 5 |
| Methanol | ++ | 4 | 70 | 3 |
| Methyl T-butyl ether | = | 2 | 20 | 1 |
| Methyl ethyl ketone (MEK) | - | 2 | 9 | 0 |
| Methyl isobutyl ketone (MIBK) | + | 3 | 24 | 1 |
| Methyl methacrylate | = | 3 | 9 | 0 |
| N-Methyl-2Pyrrolidone | ++ | 3 | 55 | 2 |
| Nitric acid 68% | ++ | 4 | > 480 | 6 |
| 2-Nitropropane | + | 3 | 30 | 1 |
| Phosphoric acid 75% | ++ | 4 | > 480 | 6 |
| Sodium hydroxide 50% | ++ | 4 | > 480 | 6 |
| Styrene | = | 2 | 13 | 1 |
| Sulphuric acid 95% | + | 4 | 310 | 5 |
| Tetrachlorethylene (perchlorethylene) | = | 2 | 8 | 0 |
| Tetrahydrofurane (THF) | - | 1 | 8 | 0 |
| Toluene | - | 1 | 6 | 0 |
| 1,1,1 Trichlorethane | = | 2 | 20 | 1 |
| Trichlorethylene | - | 2 | 5 | 0 |
| Vinyl acetate | = | 3 | 7 | 0 |
| White Spirit | ++ | 4 | 123 | 4 |
| Xylene | - | 1 | 12 | 1 |

** test discontinued after 6 hours NT: not tested yet *: Chemical resistance index determined from degradation result only

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 in MAPA laboratories, unless otherwise specified.

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