

## TẠI SAO CẦN BẢO VỆ WHY IS PROTECTION NEEDED?

Mối nguy hiểm cơ khí  
& các chấn động  
Mechanical hazards  
& vibrations

Mối nguy hiểm hóa chất  
Chemical hazards

Mối nguy hiểm vì nhiệt  
Thermal hazards

Chất thải phóng xạ  
Radioactive contamination

Dòng điện  
Electric current

Vi sinh vật  
Micro-organisms

Lây nhiễm  
Contamination

**Bàn tay:**  
Công cụ hữu dụng nhất của chúng ta

**The Hand:**  
Our most useful tool

Độ nhạy và khéo léo không gì  
so sánh được

**Incomparable  
Dexterity and touch  
sensitivity**

Technical help  
to choose  
 Tư vấn lựa chọn

Một số mối nguy hiểm với bàn tay  
This tool is exposed to numerous hazards

Permeation index 1 2 3 4 5 6  
(Chỉ số Xuyên thấm)

The glove with the highest index is most resistant to degradation.  
**Chỉ số càng cao - Chống hư hỏng càng tốt.**

B.T.T (break through time)  
B.T.T (Thời gian Xuyên thấm)

Is defined as the time at which one microgram of a chemical permeates per square centimetre per minute through the glove palm sample (1µgm/cm<sup>2</sup>/min).  
**là khoảng thời gian cho phép 1 Microgram hóa chất đi qua 1 cm<sup>2</sup>**

The test lasts a maximum of 8 hours. If no permeation occurs, >480 minutes is indicated as the result.

**Thời gian thử nghiệm 8 giờ Nếu không có sự xuyên thấm thì được chỉ định là lớn hơn 480 phút**

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**MAPA**  
PROFESSIONNEL

Cat 3 - 60 years - 90 countries - FDA 21 CFR 177.2600  
Cat 3 - 60 năm - 90 nước - An Toàn Thực Phẩm



Ký hiệu tiêu chuẩn  
**CHỐNG MÀI MÒN, CẮT, XÉ, XUYỀN THÙNG**

0 to 4 0 to 5 0 to 4 0 to 4 **Mức độ bảo vệ - PERFORMANCE LEVELS**

d: RESISTANCE TO PUNCTURE : **Chống đâm xuyên**  
Force required to pierce the sample with a standardized punch.

c: RESISTANCE TO TEARING : **Chống xé**  
Maximum force required to tear the sample.

b: RESISTANCE TO CUTTING WITH A BLADE : **Chống cắt**  
Number of cycles required to cut the sample at constant speed.

a: ABRASION RESISTANCE : **Chống mài mòn**  
Number of cycles required to damage the sample at constant speed.

Test	Level 1	Level 2	Level 3	Level 4	Level 5
Abrasion resistance (number of cycles)	100	500	2000	8000	-
Blade cut resistance (index)	1,2	2,5	5,0	10,0	20
Tear resistance (N)	10	25	50	75	-
Puncture resistance (N)	20	60	100	150	-



Ký hiệu tiêu chuẩn  
**CHỐNG CÁC HÓA CHẤT RIÊNG BIỆT (A,B...L)**

Product	Family	Product	Family
A Methanol	Alcohols	G diethylamine	Amines
B Acetone	Ketones	H Tetrahydrofuran	Ethers
C Acetonitrile	Nitriles	I Ethyl acetate	Esters
D Dichloromethane	Chlorinated solvents	J n-Heptane	Aliphatic solvents
E Carbon disulphide	Sulphurbased chemicals	K Soda 40%	Alkalis
F Toluene	Aromatic solvents	L sulphuric acid 96%	Acids



Ký hiệu tiêu chuẩn  
**CHỐNG HÓA CHẤT TỔNG QUÁT  
(Chống thấm thấu chất lỏng)**



Ký hiệu tiêu chuẩn  
**CHỐNG LÂY MÙI THỰC PHẨM**  
The European laws apply, in particular the Framework Directive 89/109/EEC and Directive 90/128/EEC which concern plastic objects and materials to be used in contact with food products



Ký hiệu tiêu chuẩn **CHỐNG VI KHUẨN**

## What is the purpose of each interior finish?

(MỤC ĐÍCH LỚP LỚT TRONG)

### Powdered *có bột, dễ mang & tháo ra*

Makes it easier to put on and take them off, without having to increase the thickness of the glove.

### Chlorinated *giặt sạch các bụi bám*

Makes it easier to put on and take off gloves, without increasing the thickness and without using powder.

Reduces the allergy risk of natural latex gloves. *(giảm ngứa)*

### Flocked *(lót vải rút mồ hôi)*

Cotton-based textile fibres, covering the inside of the gloves.

Fleeced feel providing good absorption of perspiration.

### Textile support *(lót vải rút mồ hôi, êm)*

Knitted interior, made from cotton or synthetic materials for increased comfort.

Particularly suited to extended tasks.

### Chống :

- Mài mòn 4 > 1
- Cắt 5 > 1
- Xé 4 > 1
- Đâm xuyên 4 > 1

Mechanical hazards EN 388

### Phạm vi ứng dụng - (Application) :

- Chống dầu mỡ - *(resistance oil & grease)*
- Chống các hóa chất (đặc biệt các loại A - J - K - L) - *(anti - chemical)*
- Vệ sinh nhà xưởng, cơ khí ... - *(common cleaning task, mechanical induing)*

Vật liệu:  
Nitrile

- Đặc tính:
- + Chống dầu mỡ
  - + Chống hóa chất
  - + Chống mài mòn



Ultranitritil 480

Cat 3



4102



AJKL



Ultranitritil 492 - 491

Cat 3



4101



AJKL



Ultranitritil	480	493
Material	nitrile	
Length	46cm	39cm
Thickness	0.55mm	
Colour	■ green	■ green
Interior finish	chlorinated	flocked
Exterior finish	embossed texture	
Size	7 8 9 10 11	8 9 10
Packaging	1 pair/bag 12 pairs/carton	1 pair/bag 50 pairs/carton

Ultranitritil	491	492
Material	nitrile	
Length	37cm	32cm
Thickness	0.45mm	
Colour	■ green	■ green
Interior finish	flocked	
Exterior finish	embossed texture	
Size	6 7 8 9 10	6 7 8 9 10 11
Packaging	10 pairs/bag 50 pairs/carton	1 or 10 pairs/bag 100 pairs/carton

### Đặt tính :

- Không gây dị ứng da - chịu nhiệt - độ mài mòn cao " 4 "
- Độ bám tốt *(embossed texture)*
- Chống vi khuẩn



**Tư vấn lựa chọn vật liệu Găng tay**  
*Technical help for choosing material of glove*



You are handling	CAS	EN374	PVC	Latex	Nitrile	Neoprene	Butyl	Fluoroelastomer	TopChem
Alcohols [methanol 100%]	67-56-1	A	●	●	● ●	● ●	● ● ● ●	● ●	● ●
Ketones [acetone 100%]	67-64-1	B		●		●	● ● ● ●		● ● ● ●
Nitriles [acetonitrile methyl cyanide 99%]	75-05-8	C					● ● ● ●	●	● ● ● ●
Chlorinated solvents [methylene chloride/dichloromethane 99%]	75-09-2	D						●	● ● ● ●
Sulphur-based chemicals [carbon disulphide 100%]	75-15-0	E			●		●	● ● ● ●	● ● ● ●
Aromatic solvents [toluene 100%]	108-88-3	F	●		● ● ●	●		● ● ● ●	● ● ● ●
Amines [diethylamine 98%]	109-89-7	G			●			● ● ●	● ● ●
Ethers [tetrahydrofuran (THF) 100%]	109-99-9	H			●	●	●	●	● ● ●
Esters [ethyl acetate 99%]	141-78-6	I			●		● ● ● ●	●	● ● ● ●
Aliphatic solvents [heptane 99%]	142-82-5	J		●	● ● ● ●	● ● ●	●	● ● ● ●	● ● ● ●
Alkalies [sodium hydroxide (soda) 40%]	1310-73-2	K	● ●	● ● ● ●	● ● ● ●	● ● ● ●	● ● ● ●	● ● ● ●	● ● ● ●
Oxidizing acids [sulphuric acid 96%]	7664-93-9	L	● ●	● ●	● ●	● ● ● ●	● ● ● ●	● ● ● ●	● ● ● ●
<b>Some common products</b>									
Butoxy-2-propanol 100%	5131-66-8			●	● ● ●	● ● ●	● ● ● ●	●	● ● ●
Acetic acid 10%	64-19-7		● ●	● ● ● ●	● ● ● ●	● ● ● ●	● ● ● ●	● ● ● ●	● ● ● ●
Benzene 99%	71-43-2			●	●	●		● ● ● ●	● ● ● ●
Cutting, lubricating or hydraulic oils			● ●	●	● ● ● ●	● ● ●	● ● ●	● ● ● ●	● ● ● ●
Methyl methacrylate 100%	80-62-6				●	●	● ● ●	●	● ● ● ●
Methyl Ethyl Ketone (butanone) (MEK) 100%	78-93-3			●		●	● ● ● ●		● ● ● ●
N,n-dimethylacetamide 99%	127-19-5			●	●	● ● ●	● ● ● ●	●	● ● ● ●
Methyl tert-butyl ether (MTBE) 100%	1634-04-4				● ● ● ●			●	● ● ● ●
2,4-Toluene-diisocyanate (TDI) 100%	584-84-9			●	● ● ● ●	● ● ● ●		● ● ● ●	● ● ● ●

For more information visit [www.mapachemicals.com](http://www.mapachemicals.com)





PTP 492E - Rev 8- 06.01.10

**CERTIFICATION CATEGORY III**

**CE 0334**

## **ULTRANITRIL 492**

**CE-Type Examination Certificates  
ULTRANITRIL 492 : 0072/014/162/10/1993/10506**

**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.

# ULTRANITRIL 492

## DESCRIPTION AND GENERAL PROPERTIES

Liquidproof gloves made of **nitrile** rubber.

**Cotton flock-lining** over an internal layer of **white nitrile** rubber.

**Curved fingers** and **contoured palm**.

Guaranteed **silicone-free**.

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

**Thickness** (in wrist area) : 0.38 in mm (nominal values)

Glove Reference	Colour	External surface	Glove Length for all sizes (in cm)*	Sizes available
<b>Ultranitril 492</b>	Green	finish	32	6-7-8-9-10-11

\* nominal values

Standard packaging :

- **each pair or 10 pairs** in printed polyethylene bag.
- **100 pairs** per carton

## "CE"-TYPE EXAMINATION RESULTS



### PROTECTION AGAINST CHEMICALS

According to **EN 374** standard.  
Liquidproof gloves.  
Permeation data : see the enclosed chemical resistance chart

**AJKL**



### PROTECTION AGAINST MECHANICAL RISKS

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

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



### PROTECTION AGAINST MICRO-ORGANISMS

According to **EN 374** standard.

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

# ULTRANITRIL 492

## SPECIFIC ADVANTAGES

- Dexterity and comfort thanks to anatomically designed hand shape and quality flocklining.
- Longer working life : excellent mechanical resistance (abrasion, puncture).
- Double layer process : enhanced chemical protection.
- High chemical resistance to hydrocarbon derivatives and alcohols. to aromatic and chlorinated solvents.
- Safe grip of slippery objects thanks to non-slip finish
- Recommended for persons sensitized to natural rubber proteins.
- Products manufactured in a MAPA factory which is ISO 9001 certified.

## MAIN FIELDS OF USE

- Manufacturing industries using cutting oils.
- Metal treatment using solvents.
- Manufacture and application of paint and varnish.
- Chemical treatments.
- Automotive industries.
- Cleaning printing press rollers.
- Timber treatment and finishing.
- Light engineering.
- Routine maintenance.
- Food preparation in the food processing and catering industries.
- Pesticides application.

## INSTRUCTIONS FOR USE

For enhanced safety and service life of the gloves :

- Store the gloves in their original packaging protected from light, humidity and heat.
  - 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.
  - Persons sensitised to dithiocarbamates and thiazoles should not 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 alkalis : thoroughly rinse the gloves under running water, and rub over with a dry cloth
- Caution : improper use of the gloves or submitting them to any cleaning or laundering process which is 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.

# ULTRANITRIL 492

## CHEMICAL RESISTANCE CHART

These gloves are designed for protection against numerous chemicals such as alcohols, petroleum. They are not recommended for contact with ketones and nitrogen compounds. In order to ensure that 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 reference ULTRANITRIL 492.

CHEMICAL	CAS Nr	Chemical Resistance Index	Degradation Index (1 to 4)	Permeation (EN 374)	
				Breakthrough time (minutes)	Permeation index (0 to 6)
Acetic acid 100%*	64-19-7	=	ND	93	3
Acetone	<b>B</b> 67-64-1	-	2	3	0
Ammonium hydroxide 30%*	1336-21-6	=	ND	374	5
Aniline*	62-53-3	-	1	88	3
Benzene*	71-43-2	-	ND	18	1
2-Butoxyethanol	111-76-2	++	4	236	5
Butyl acetate	123-86-4	=	3	25	1
t-Butyl methylether	1634-04-4	+	4	240	5
Carbon tetrachloride*	56-23-5	+	ND	352	5
Cyclohexane	110-82-7	++	4	> 360	5**
Cyclohexanone	108-94-1	=	2	29	1
1,3-Dichlorobenzene*	541-73-1	-	1	36	2
1,2-Dichloroethane*	107-06-2	-	1	7	0
Diethylether*	60-29-7	+	4	58	2
Diesel fuel	68334-30-5	++	4	> 480	6
Dichloromethane (methylene chloride)	<b>D</b> 75-09-2	-	1	1	0
Diethylamine	<b>G</b> 109-89-7	=	2	17	1
N-N Dimethyl acetamide	127-19-5	-	1	10	1
Dimethyl sulphoxide (DMSO)	67-68-5	+	3	47	1
Ethanol	64-17-5	++	4	130	4
2-Ethoxyethyl acetate*	111-15-9	+	2	103	3
1,3- Ethoxy propionate*	763-69-9	++	ND	123	4
Ethyl acetate	<b>I</b> 141-78-6	-	2	6	0
n-Heptane	<b>J</b> 142-82-5	++	ND	>480	6
Hexane*	110-53-3	++	ND	>480	6
Hydrochloric acid 35%	7647-01-0	++	4	> 480	6
Isopropanol	67-63-0	++	4	> 360	5**
Kérosène*	8008-20-6	++	4	>480	6
Methanol	<b>A</b> 67-56-1	+	4	49	2
Methyl metacrylate	80-62-6	=	3	11	1
Methyl ethyl ketone (MEK)	78-93-3	-	2	5	0
Methyl isobutyl ketone (MIBK)	108-10-1	=	2	15	1
N-Methyl-2-Pyrrolidone	872-50-4	-	1	35	2
Naphta*	8030-30-6	++	ND	> 480	6



# ULTRANITRIL 492

## 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)
Nitric acid 50%*	7697-37-2	=	3	184	4
Nitric acid 70%*	7697-37-2	=	ND	38	2
Petroleum distillate (Naphta)	64742-47-8	+ +	4	>480	6
Phenol (saturated)*	108-95-2	+	2	223	4
Phosphoric acid 75%	7664-38-2	+ +	4	> 480	6
Potassium hydroxyde 50%*	1310-58-3	+ +	ND	>480	6
Sodium hydroxide 40%	<b>K</b> 1310-73-2	+ +	ND	>480	6
Sodium hydroxide 50%	1310-73-2	+ +	4	> 480	6
Styrene	100-42-5	-	1	9	0
Sulphuric acid 50%*	7664-93-9	+ +	4	> 480	6
Sulphuric acid 96%	<b>L</b> 7664-93-9	=	1	80	3
Tetrachlorethylene (perchlorethylene)	127-18-4	+ +	4	103	3
Tetrahydrofuran (THF)	<b>H</b> 109-99-9	-	1	4	0
Toluene	<b>F</b> 108-88-3	=	3	16	1
1,1,1 Trichlorethane	71-55-6	=	2	45	2
Trichlorethylene	79-01-6	-	2	4	0
Unleaded petrol*	8006-61-9	+ +	4	> 480	6
Vinyl acetate	108-05-4	=	3	9	0
Xylene	1330-20-7	=	3	29	1

\*: Tested according to ASTM F739 on a glove of identical nature and thickness at ambient temperature  
 ND: not determined                      \*\* tests discontinued after 6 hours

### 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

# ULTRANITRIL 492

## LEGISLATION

This product is not classified as hazardous according to the directive 1999/45/EC of the European Parliament and of the Council.

This product does not contain any substances of very high concern according to the regulation n° 1907/2006 of the European Parliament and of the Council (REACH).