

Protective Gloves Catalogue

For more information: www.mapa-pro.com



- > Selection guides for each segment to help you choose the right glove. Also with a comprehensive, constantly updated database to protect you against chemical risks,
- > an advanced search engine to find a product based on your own criteria,
- > a product comparison tool,
- > a tool to help you locate your nearest Mapa Professional distributor,
- > and, of course, news, downloadable documents, a technical glossary, an FAQ section, etc.

If you have a Smartphone, scan this QR Code to visit the Mapa Professional download centre.



There you will find documentation for all of our existing products, which you can read on your Smartphone or easily share with your contacts:

Product brochures, data sheets, EC declarations of conformity, chemical resistance tables, thermal insulation curves, food safety test certificates and reports, etc.



A solution for every hand that works **MAPA PROFESSIONAL**

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European legislation and standards

European legislation regarding personal protective equipment lay down the requirements that the equipment and their users must satisfy. The standards are used to draw up technical specifications that meet these new requirements. Directive 89/656/EEC (use) lays down the requirements that employers must meet with regard to the supply and use of PPE by their employees. Regulation (EU) 2016/425 lays down the essential requirements for marketing protective gloves within the European Union. The whole Mapa Professional range is certified in compliance with these essential requirements, and is labelled with the CE-marking.

CE certification categories

- **Category 1:** The manufacturer is responsible for the conformity of its products with respect to the essential requirements of the Directive.
- **Category 2:** Certificate of conformity obtained from a notified body.
- **Category 3:** Certificate of conformity and regular production inspections on the manufacturer's premises by the notified bodies.

Pictograms

The following pictograms, defined according to European standards, can help you understand the performance characteristics of a glove:

EN 388 MECHANICAL HAZARDS
 PERFORMANCE LEVELS* 0-4 0-5 0-4 0-4: A-F (P)
 Impact protection according to ISO 13997
 Tear resistance
 Blade cut resistance
 Abrasion resistance

EN 374: 2003 GENERAL CHEMICAL PROTECTION
MICRO-ORGANISMS EN ISO 374-5
 Protection against bacteria, fungi
PROTECTION AGAINST BACTERIA, FUNGI, VIRUS

ANSI CUT RESISTANCE
 PERFORMANCE LEVELS* 0-4 0-4 0-4 0-4 0-4
 Resistance to large quantities of molten metal
 Resistance to small drops of molten metal
 Radiant heat resistance
 Convective heat resistance
 Contact heat resistance
 Burning behaviour

EN 407 THERMAL RISK Heat and fire
ANSI CUT RESISTANCE
 PERFORMANCE LEVELS* 0-4 0-4 0-4 0-4
 Resistance to large quantities of molten metal
 Resistance to small drops of molten metal
 Radiant heat resistance
 Convective heat resistance
 Contact heat resistance
 Burning behaviour

EN 511 COLD HAZARDS
 PERFORMANCE LEVELS* 0-4 0-4 0-4 0-4
 Water permeability
 Contact cold resistance
 Resistance au froid convectif

EN 421 RADIOACTIVE CONTAMINATION

Type A UVWXYZ
 A Methanol
 B Acetone
 C Acetonitrile
 D Dichloromethane
 E Carbon Disulfide
 F Toluene
 G Diethylamine
 H Tetrahydrofuran
 I Ethyl acetate

Type B XYZ
 J n-Heptane
 K Sodium hydroxide 40%
 L Sulphuric acid 96%
 M Nitric acid 65%
 N Acetic acid 99%
 O Ammonia 25%
 P Hydrofren peroxide 30%
 S Hydrofluoric acid 40%
 T Formaldehyde 37%

Type C

This catalogue has been designed to help you find the product that gives you the protection you need.

Because every company faces different risks,

Mapa Professional has a wide range of protective gloves

New materials, processes and finishes... Mapa Professional gloves are designed to overcome the constraints of the professional and industrial world, as well as to meet increasing demands for protection and comfort:

Disposable P. 10
Disposable gloves to protect hands and products during delicate work.

Liquidproof Protection P. 12
For prolonged contact with mildly aggressive liquids.

Chemical Protection P. 14
A solution for every chemical risk situation when handling more or less aggressive products

Handling Protection P. 20
To resist injuries endured during general handling work (precision work/heavy-duty work).

Cut Protection P. 24
To provide hand comfort and protection specially designed for various types of work involving cutting hazards.

Thermal Protection P. 30
For any work requiring thermal protection in a hot or cold environment

Food Expert P. 32
To provide an appropriate response to each application in the food industry and ensure maximum hygiene.

Critical Environments P. 36
To ensure the protection of both operators and the products they handle in controlled or confined environments

> STEP 1: identify your protection needs:



> STEP 2: Define the type of gloves that best meets your needs in terms of:

- usage (performance, comfort, environment, wear time),
- the environment and the risks involved.

STEP 2		STEP 3								
ENVIRONMENT	RISK	SERVICE LIFE	GLOVE	DESCRIPTION	SIZE	LENGTH	INTERIOR/ EXTERIOR FINISH	STANDARDS	APPLICATIONS	
Cut Protection	PRECISION WORK - THE KRY RANGE	The Mapa Professional range of cut-protection gloves provides excellent hand comfort and protection specially designed for various types of work involving cut hazards.		Moderate protection for intricate handling in clean environments	22-27 cm	22-27 cm	Seamless textile support from HDPE fibres/ Polyurethane palm and fingers Gauge 13	EN 13997 5.5 N CAT 2	Automotive/mechanical industry: Assembling electrical devices, Automotive assembly, Handling and sorting small, sharp parts, Handling automotive parts or sheet metal, Precision assembly Paper industry: Handling cardboard and paper	
				Moderate protection for intricate handling in clean environments	27-32 cm	27-32 cm	Seamless textile support from HDPE fibres/ Polyurethane palm and fingers Gauge 13	EN 13997 5.5 N CAT 2	Automotive/mechanical industry: Assembling electrical devices, Automotive assembly, Handling and sorting small, sharp parts, Handling automotive parts or sheet metal, Precision assembly Paper industry: Handling cardboard and paper	
				Moderate protection for intricate handling in clean environments	10 7 8 9 10 11	22-27 cm	22-27 cm	Seamless textile support from HDPE fibres/ Polyurethane palm and fingers Gauge 13	EN 13997 5.5 N CAT 2	Automotive/mechanical industry: Assembling electrical devices, Automotive assembly, Handling and sorting small, sharp parts, Handling automotive parts or sheet metal, Precision assembly Paper industry: Handling cardboard and paper
				Moderate protection for intricate handling in clean environments	26-31 cm	26-31 cm	Seamless textile support from HDPE fibres/ Polyurethane palm and fingers Gauge 13	EN 13997 5.5 N CAT 2	Automotive/mechanical industry: Assembling electrical devices, Automotive assembly, Handling and sorting small, sharp parts, Handling automotive parts or sheet metal, Precision assembly Paper industry: Handling cardboard and paper	
				Moderate protection and durability for intricate handling in moderately clean environments	7 8 9 10 11	22-27 cm	22-27 cm	Seamless textile support from HDPE fibres/ Polyurethane palm and fingers Gauge 13	EN 13997 6.5 N CAT 2	Automotive/mechanical industry: Assembling electrical devices, Automotive assembly, Handling and sorting small, sharp parts, Handling automotive parts or sheet metal, Precision assembly Paper industry: Handling cardboard and paper
				Cut, Grip and durability for dry and slightly oily environments	23-28 cm	23-28 cm	Seamless textile support from HDPE fibres/ Polyurethane palm and fingers Gauge 13	EN 13997 5.5 N CAT 2	Automotive/mechanical industry: Assembling electrical devices, Automotive assembly, Handling and sorting small, sharp parts, Handling automotive parts or sheet metal, Precision assembly Paper industry: Handling cardboard and paper	
				Cut protection with optimal comfort, high level of breathability & durability for precision work	7 8 9 10 11	23-27 cm	23-27 cm	Seamless textile support from HDPE fibres/ water-based Polymer on palm and fingers Gauge 13	EN 13997 6.5 N CAT 2	Automotive/mechanical industry: Assembling electrical devices, Automotive assembly, Handling and sorting small, sharp parts, Handling automotive parts or sheet metal, Precision assembly Paper industry: Handling cardboard and paper
				Cut protection with optimal comfort, high level of breathability & durability for precision work	7 8 9 10 11	23-27 cm	23-27 cm	Seamless textile support from HDPE fibres/ water-based Polymer on palm and fingers Gauge 13	EN 13997 6.5 N CAT 2	Automotive/mechanical industry: Assembling electrical devices, Automotive assembly, Handling and sorting small, sharp parts, Handling automotive parts or sheet metal, Precision assembly Paper industry: Handling cardboard and paper
				Cut protection with optimal comfort, high level of breathability & durability for precision work	7 8 9 10 11	23-27 cm	23-27 cm	Seamless textile support from HDPE fibres/ water-based Polymer on palm and fingers Gauge 13	EN 13997 6.5 N CAT 2	Automotive/mechanical industry: Assembling electrical devices, Automotive assembly, Handling and sorting small, sharp parts, Handling automotive parts or sheet metal, Precision assembly Paper industry: Handling cardboard and paper
				Cut protection with optimal comfort, high level of breathability & durability for precision work	7 8 9 10 11	23-27 cm	23-27 cm	Seamless textile support from HDPE fibres/ water-based Polymer on palm and fingers Gauge 13	EN 13997 6.5 N CAT 2	Automotive/mechanical industry: Assembling electrical devices, Automotive assembly, Handling and sorting small, sharp parts, Handling automotive parts or sheet metal, Precision assembly Paper industry: Handling cardboard and paper

> STEP 3: Select the most appropriate reference to meet your needs with the help of the technical characteristics table.

For more information and to download the data sheets for all of our products www.mapa-pro.com

STANDARD EN 374 : 2016

This standard applies to gloves protecting against chemicals and microorganisms.

In many countries there are more than 15 000 different chemicals in use in more than 60 000 products within industry, construction, agriculture etc. Tested and approved chemical gloves are the right solution against many of these chemicals. You have to find out the name of the chemical and approximately how long time you need to be in contact with the chemical.

Standard EN ISO 374-1 : 2016

Protective gloves against chemicals

It is based on three test methods:

- Penetration test in accordance with standard EN 374-2 : 2014
- Permeation test in accordance with standard EN 16523-1 : 2015 which replaces standard EN 374-3
- Degradation test in accordance with standard EN 374-4 : 2013

6 new chemicals have been added to the list of hazardous compounds : now, there are 18 chemical products that can be tested.

Standard EN ISO 374-5 : 2016

Protective gloves against micro-organisms.

Gloves must pass the penetration resistance test in accordance with standard EN 374-2 : 2014. The possibility of claiming protection against viruses was added, if the glove passes ISO 16604 : 2004 (method B) test.



For gloves offering protection against bacteria and fungi.



For gloves protecting against bacteria, fungi and viruses.

1 PICTOGRAM AND 3 TYPES OF GLOVE

Type of gloves	Requirement	Marking
Type A	Penetration resistance (EN 374-2) Breakthrough time \geq 30 min for at least 6 chemicals in the new list (EN 16523-1)	EN ISO 374-1 / TYPE A AJKLPR
Type B	Penetration resistance (EN 374-2) Breakthrough time \geq 30 min for at least 3 chemicals in the new list (EN 16523-1)	EN ISO 374-1 / TYPE B JKL
Type C	Penetration resistance (EN 374-2) Breakthrough time \geq 10 min for at least 1 chemical in the new list (EN 16523-1)	EN ISO 374-1 / TYPE C JKL

STANDARD EN 388 : 2016

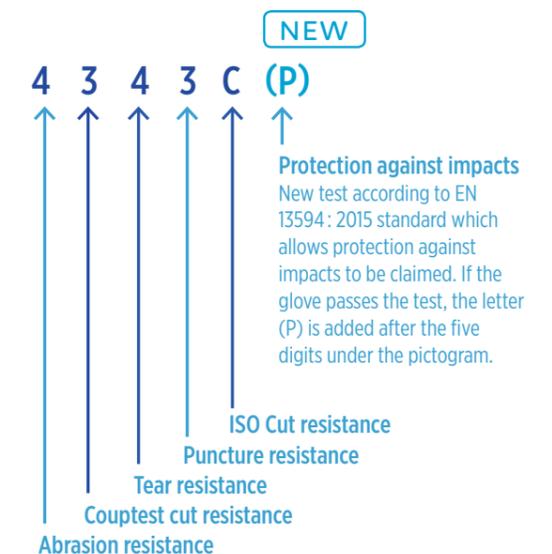
This standard applies to gloves protecting against mechanical risks, including abrasion, cut, tear and puncture.

It was necessary to revise the standard as the cut resistance test (Couptest) did not allow the performance of high resistance gloves to be fully qualified correctly.

Cut resistance: a more reliable Couptest method with improved control of the blade. A fifth digit under the pictogram is created to indicate the cut level according to the ISO 13997 test.

MAPA Professional was already using this method for many years.

Abrasion resistance: the abrasion test is done with a new abrasive paper (Klingspor PL31B 180 grit), a more reliable quality paper than the one used previously.



PERFORMANCE LEVELS (value greater than or equal to...)

Test	Level 1	Level 2	Level 3	Level 4	Level 5
Abrasion resistance (cycles)	100	500	2 000	8 000	
Cut resistance - Couptest (index)	1,2	2,5	5,0	10,0	20,0
Test resistance (Newton)	10	25	50	75	
Puncture resistance (Newton)	20	60	100	150	
Cut resistance according to EN ISO 13997 (Newton)	Level A	Level B	Level C	Level D	Level E
	2	5	10	15	22
					Level F
					30

Note : The letter X means that the test was not performed or is not applicable.

> Why opt for one type of wrist finish rather than another?

Because wrist finishes are designed according to the type of use and precise characteristics.

Safety cuff

Wrist protection, quick glove removal and good ventilation of the hand. Perfect for jobs with a risk of entanglement.

Knitted wrist

Fitted to the hand and protects the wrist.

Straight cuff

Better hand ventilation.

Rolled cuff

Increased resistance to tearing when putting gloves on.

Scalloped cut

Longer-lasting glove.



> What shape, size or thickness?

Glove lengths.

They must be chosen in accordance with the risks associated with the handling circumstances, to give more or less protection to the forearm. They generally vary between 22 and 60 cm.

Glove sizes.

This depends on the circumference of the user's palm, and varies from size 5 to 12. To be comfortable during use, a glove needs to be the correct size.

Glove thickness.

This influences the user's dexterity and the glove's performance. It varies from 0.07 to 2.5 mm.



> Anatomical or ambidextrous glove?

A glove is called **anatomical** when there is one shape for the left hand and another for the right.

Ambidextrous gloves can be worn equally well on either hand; this is principally the case for thinner gloves.

> The various interior finishes

Powdered

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

Chlorinated

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.

Flocked

Cotton-based textile fibres, covering the inside of the gloves. Fleeced feel providing good absorption of perspiration.

Textile support

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

The different textile types

Cotton: Comfort, thermal insulation and absorption of perspiration.

Polyamide: Optimised dexterity (fine, seamless).

Para-aramide: Cut and heat-resistant.

High density polyethylene: Cut-resistant and optimised dexterity (PEHD).

> How to choose the appropriate exterior finish?

<p>Smooth</p>  <p>does not mark the objects handled</p>	<p>Embossed texture</p>  <p>excellent grip in oily environments</p>	<p>Pebbled</p>  <p>good grip and minimal glove fouling</p>	<p>Reinforced grip</p>  <p>excellent grip in wet environments</p>	<p>Grip and proof</p>  <p>excellent grip in oily environments combined with liquidproof protection</p>	<p>Dots</p>  <p>improved thermal insulation</p>
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MAPA VENDING PACKAGING RANGE



An easy way to access to hand protection

Vending machine distribution system helps reducing hand's injuries and improving working conditions.

Vending machine system for gloves



Safety

Clear information available on sticker.



Increase efficiency

Easy access. 24/7 access to products to avoid down time.



Packaging quality

Folded glove held with a plastic band to ensure a small packing size. A qualitative film has been developed to protect the product during storage.

Category	Choice criteria	Product name	Page	
Handling protection Precision work	Dry	ULTRANE 548 VM	P.20	
		ULTRANE 549 VM	P.20	
		ULTRANE 550 VM	P.20	
		ULTRANE 551 VM	P.20	
		ULTRANE 553 VM	P.20	
	Oily	ULTRANE 500 VM	P.20	
Cut protection Precision work	Dry	KRYTECH 557 R VM	P.25	
		KRYTECH 579 VM	P.25	
		KRYTECH 586 VM	P.26	
		KRYTECH ARM 532 VM	P.24	
			KRYTECH ARM 538 VM	P.24
	Oily	KRYNIT 580 VM	P.27	
KRYNIT 582 VM		P.27		
Thermal protection	Short contact	TEMPDEX 710 VM	P.31	
	Prolonged contact	TEMPDEX 720 VM	P.31	
Chemical protection	Frequent contact Intermittent use	ULTRANITRIL 492 VM	P.17	



CUT PROTECTION NEW DRY ENVIRONMENT PRECISION WORK

33% of accidents concern injuries to hands and 19% are due to cut/lacerations.*

These facts have raised safety awareness among workers and end-user companies.

*According to data from CPAM, 2016

The new Cut Range combines the need of high cut protection and expectations in terms of SAFETY, COMFORT & DURABILITY.



KRYTECH 610



Refer to **P.26** of the catalogue



KRYTECH 615



Refer to **P.26** of the catalogue



Comfort

Anatomical shape: close fit for precision. Fibre plating and optimized coating covering.



Durability

A higher durability that offers better productivity and optimizes your costs.



Skin protection

Silicon Free.



Marking

Cut level easy to identify thanks to the clear marking on the back of the glove

Disposable



Mapa Professional offers a range of disposable gloves to meet your needs, regardless of your working environment.

The use of different polymers makes it possible to optimise glove performance and ergonomics: flexibility, sturdiness, comfort, etc.

HOW CAN YOU REFINE YOUR CHOICE?

> POLYMERS

PVC mechanical resistance and price

LATEX flexibility and comfort

NITRILE mechanical resistance and resistance to oils

TRIPOLYMER flexibility, mechanical resistance and chemical resistance to splashes.

> INTERIOR FINISHES

The various interior finishes (powdered/chlorinated) make it possible to adapt to the specific characteristics of applications and the specific requirements of the wearer.

POWDERED Better absorption of perspiration

CHLORINATED / EASY DONING TREATMENT Easy donning and no powder on hands

> COLOUR

The use of different colours is a response to the unique demands of certain sectors and it enables visual checks by the assignment of a specific colour to each application.

> DIMENSIONS

Choosing the length and thickness of the glove makes it possible to factor in the limitations related to the workstation: dexterity, resistance and forearm protection.

There are several advantages of disposable gloves:

- freedom of movement
- protection for hands and the products being handled
- rolled cuff to prevent tearing while ensuring the glove stays in place on the arm

To ensure consistent quality across the disposable range, these gloves are all of an Acceptable Quality Level (AQL).

POLYMER	COMFORT	GLOVE	DESCRIPTION	SIZE	LENGTH/THICKNESS	INTERIOR/EXTERIOR FINISH	STANDARDS	APPLICATIONS
PVC/VINYL	POWDERED	SOLO 990	The best value for precise movements	6 7 8 9	24 cm / 0,10 mm	Powdered/Smooth	Type C CAT 3	Automotive/mechanical industry: - Assembly of small parts
LATEX	CHLORINATED	SOLO EXTRA 998	Optimal flexibility and dexterity	6 7 8 9	30 cm / 0,10 mm	Chlorinated/Smooth with pebbled fingertips	Type C CAT 3	Automotive/mechanical industry: - Assembly of small, oil and grease free parts Health: - Common tasks in hospitals and clinics Laboratory: - Medicine manufacturing - Pharmaceutical preparation - Research, analysis, manipulation of precision parts
	EASY DONING TREATMENT	SOLO 993 SOLO 995					Type C CAT 3	
	POWDERED	SOLO 992					Type C CAT 3	
NITRILE	CHLORINATED	SOLO 967	Excellent dexterity thanks to flexibility and reduced material thickness. Exist in bag and box.	6 7 8 9	24,5 cm / 0,08 mm	Chlorinated/Smooth with pebbled fingertips	Type C CAT 3	Cosmetics and Pharmaceutical industry: - Handling in laboratories Chemical industry : - Sampling chemicals Laboratory: - Pharmaceutical preparation
		SOLO GREEN 977	Ideal protection in chemical industry against splashes				Type B JKT CAT 3	
		SOLO ULTRA 999	Excellent mechanical resistance, ideal in oily environments				Type B JKT CAT 3	
	POWDERED	SOLO 987 SOLO 997	Ideal protection for light handling in oily environments	6 7 8 9	24,5 cm / 0,10 mm	Powdered/Smooth with pebbled fingertips	Type B JKT CAT 3	Aeronautics industry: - Work with composite materials (resins) Automotive/mechanical industry: - Assembly of small oily parts Laboratory: - Medicine manufacturing - Pharmaceutical preparation - Research, analysis, manipulation of precision parts
		SOLO ULTRA 996	Excellent mechanical resistance, ideal in oily environments				Type B KPT CAT 3	
TRIPOLYMER	CHLORINATED	SOLO TRILITES 994	Tripolymer formula for protection against chemical splashes	6 7 8 9	25,5 cm / 0,15 mm	Chlorinated/Pebbled	Type B KPT CAT 3	Laboratory: - Medicine manufacturing - Pharmaceutical preparation

Liquidproof Protection



This line meets hand comfort and protection needs for all work involving liquids with a low chemical aggression factor: water, cleaning products, etc.

PERFORMANCE INDICATORS

To choose the most suitable product for your needs, we suggest you take into account two criteria:

> PROTECTION:

The performance level of a liquidproof glove is directly linked to your working environment.

The greater the risk, the stronger your gloves need to be and the longer they need to protect you.

• LIGHT PROTECTION

use in light aggressive environments (cleaning products, water, etc.)

• STANDARD PROTECTION

use in aggressive environments (detergents, etc.)

• HIGH-LEVEL PROTECTION

use in aggressive environments (handling of heavy, slippery and rough objects, concentrated detergents, etc.)

> WEAR TIME:

This criteria identifies the comfort level required by the operator.

The longer the wear time, the more comfortable the glove needs to be (perspiration, flexibility/fatigue).



SHORT-TERM USE

(opt for a chlorinated interior finish)



INTERMITTENT USE

(opt for a flocked interior finish)



CONTINUOUS USE

(opt for a fabric-lined finish to limit the effects of perspiration)

PROTECTION	WEAR TIME	GLOVE	DESCRIPTION	SIZE	LENGTH/THICKNESS	MATERIAL/INT. FINISH/EXT. FINISH	STANDARDS	APPLICATIONS	
LIGHT	🕒	SUPERFOOD 174 	Dexterity and flexibility in non-aggressive environments	7 8 9	31 cm / 0.45 mm	Latex/chlorinated/pebbled	Type B 0010X KPT VIRUS CAT 3	Food industry: - Common cleaning tasks - Handling and preparation <i>see Food Expert range</i> Local authorities (Cleaning): - Handling of household detergents Mechanical industry: - Assembly of small, oil and grease free parts	
		OPTINIT 472 	Fingertip precision for light chemical protection and food handling	6 7 8 9 10	31 cm / 0.40 mm	Nitrile/chlorinated/pebbled	EN 388: 2003 Type B 2101X JOT CAT 3	Construction industry (Carpentry/Joinery): - Handling of PVC adhesives - Preparation of filler and varnishes Food industry: - Food handling and preparation <i>see Food Expert range</i> Mechanical industry: - Assembly of small oily parts - Machining parts using cutting oil - Precision assembly	
		GANTEX 520 	Dexterity and flexibility in light aggressive environments	6 7 8 9 8 9 10	33,5 cm / 0.40 mm 31 cm / 0.40 mm	Latex/ Powdered/ Smooth Latex/ Powdered/ Non-slip grip	520 2010X KMP CAT 3	Type B 0010X KPT CAT 3	Local Authorities (Cleaning): - Handling household detergents Food industry: - Common cleaning Tasks - Preparation and packaging
	🚫	🕒	VITAL 115 	Precision dexterity in non-aggressive environments	6 7 8 9 6 7 8 9 10	30.5 cm / 0.35 mm	Latex/flocked/embossed texture	Type B 0010X KPT CAT 3	Food industry: - Common cleaning tasks Local authorities (Cleaning): - Handling of household detergents Mechanical industry: - Assembly of small, oil and grease free parts
			DUO-NIT 180 	Dexterity and better resistance to oils and greases	6 7 8 9 10 7 8 9	31 cm / 0.40 mm	Latex blended nitrile/flocked/embossed texture Latex blended nitrile/flocked/pebbled	Type B 1110X KPT CAT 3	Mechanical industry: - Assembly of small oily parts Other industries: - Cleaning and general maintenance in wet environments
		JERSETLITE 307 	Exceptional comfort and precision dexterity in light aggressive environments	6 7 8 9	31 cm / 0.75 mm	Latex/textile support/pebbled	2120X CAT 2	Local authorities (Cleaning): - Handling of household detergents Local authorities (Site visits): - Minor general maintenance tasks	
	STANDARD	🚫	MEDIO 210 	Effective response to contact with aggressive detergents	6 7 8 9	32 cm / 0.50 mm	Latex/flocked/embossed texture	1110X CAT 3	Mechanical industry: - Assembly of small, oil and grease free parts - Minor maintenance tasks
			OPTIMO 454 	Precision dexterity in mildly aggressive environments, for those sensitive to natural latex	6 7 8 9 10	31 cm / 0.35 mm	Synthetic material/flocked/embossed texture	Type B 2000X KPT CAT 3	Health: - Common tasks in hospitals and clinics Local authorities (Cleaning): - Handling of household detergents
		JERSETTE 300 	Maximum comfort for long-term work in aggressive environments	5 6 7 8 9 10	29-33 cm / 1.15 mm	Latex/textile support/smooth Latex/textile support/pebbled	EN 388: 2003 EN 374: 2003 3141 CAT 2	Aeronautics industry: - Work with composite materials (resins) Construction industry (Masonry/Plastering): - Preparing and pouring mortar and cement Local authorities (Cleaning): - Handling of household detergents	
	HIGH-LEVEL	🚫	ALTO 258 	Strong protection against aggressive concentrated detergents	6 7 8 9 10	32 cm / 0.60 mm	Latex/flocked/embossed texture	1110X CAT 3	Aeronautics industry: - Work with composite materials (resins) Chemical industry: - Common handling tasks Mechanical industry: - Assembly of small, oil and grease free parts - Minor maintenance tasks
DUO-MIX 405 			Precision dexterity in aggressive environments	6 7 8 9 10	33 cm / 0.70 mm	Latex blended neoprene/flocked/embossed texture	Type B 2110X KMT CAT 3	Aeronautics industry: - Work with composite materials (resins) Automotive/mechanical industry: - Spray painting Other industries: - Industrial cleaning, maintenance	
HARPON 321 		Comfort and safety when gripping heavy, rough or slippery objects in highly aggressive environments	6 7 8 9 10 8 9 10	32 cm / 1.35 mm 37 cm / 1.35 mm	Latex/textile support/reinforced grip	EN 388: 2003 EN 374: 2003 4131 CAT 2	Fishing: - Fish-handling - Oyster farming - Work with frozen products		

Chemical Protection



Chemical hazards are not confined to the chemical industry. Many people, in a variety of sectors, are faced with chemical risks when handling more or less aggressive products (oils, acids, solvents, etc).

More than 100,000 chemical substances are now classified, and can be identified, due to their unique CAS numbers.

In order to meet the diversity of hazardous situations that exist, Mapa Professional propose a wide range of protective gloves designed using polymers, which, due to their intrinsic nature, will behave differently with respect to the same chemical product.



Refer to our dynamic database, which is constantly updated, and download the chemical resistance tables for our gloves.

www.mapa-pro.com

The results of chemical testing and the different chemical classification indices must not be seen as the only factors when selecting a glove. Actual usage conditions, the contact time with a given chemical, the concentration, the temperature, the usage frequency of a glove and the care conditions can affect glove performance.

All of these factors should be taken into account when choosing the right glove.

SELECT THE MOST APPROPRIATE CHEMICAL GLOVE FOR YOUR NEEDS, USING THE THREE STEPS BELOW:

STEP 1: Identify which family of chemical products the substance you are handling belongs to.

STEP 2: Determine the most appropriate protective material for your specific application.

STEP 3: Choose your gloves according to the level of protection you require.

PERFORMANCE INDICATORS

To characterise the performance of the elastomers and plastics used to manufacture safety gloves, tests are carried out to determine the behaviour of the materials when confronted with the various families of chemical products.

The tests measure:

> **The permeation time** for a given chemical product, i.e. the time taken for the chemical to penetrate the glove, at a molecular level. In some cases, there is no visible deterioration of the glove.

> **The degradation rate** of the glove in contact with a given chemical product, i.e. the degree of deterioration of the glove, shown by an alteration of its physical properties (e.g. softening, hardening, etc.).

Mapa Professional takes these different parameters into account to determine the relative performance of the different families of gloves, and hence help you to make the best possible choice.

A COMPLETE RANGE CLASSIFIED BY POLYMER

MAPA'S RECOMMENDATION

Light protection ● → ●●● Optimal protection

STEP 1 YOU ARE HANDLING	CAS	EN ISO 374	STEP 2					BUTYL	FLUORO-ELASTOMER
			PVC	LATEX	NITRILE	NEOPRENE			
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 (tetrahydrofurane (THF) 100%)	109-99-9	H			●	●	●	●	
Esters (ethyl acetate 99%)	141-78-6	I			●	●	●●●		
Aliphatic solvents (heptane 99%)	142-82-5	J	●		●●●	●●		●●●	
Alkalis (sodium hydroxide (soda) 40%)	1310-73-2	K	●●●	●●●	●●●	●●●	●●●	●●●	
Oxidising acids (sulphuric acid 96%)	7664-93-9	L	●	●		●●	●●●	●●●	
Oxidizing acid (nitric acid 65%)	7697-37-2	M	●	●●●		●●●	●●●	●●●	
Organic acid (acetic acid 99%)	64-19-7	N	●	●		●●●	●●●	●●	
Organic base (ammonia 25%)	1336-21-6	O	●	●	●●		●●●	●●	
Peroxide (hydrogene peroxide 30%)	7722-84-1	P	●●●	●●●	●●●	●●●	●●●	●●●	
Contact poison acid (hydrogene fluoride 40%)	7664-39-3	S		●●●		●●●	●●●	●●	
Aldehyde (formaldehyde 37%)	50-00-0	T	●●●	●●●	●●●	●●●	●●●	●●●	
			STRENGTHS	<ul style="list-style-type: none"> Value for money Mechanical resistance 	<ul style="list-style-type: none"> Excellent flexibility Good puncture and tearing resistance Suitable for cold environments 	<ul style="list-style-type: none"> Good puncture and abrasion resistance No risk of protein-related allergies 	<ul style="list-style-type: none"> Good flexibility Good thermal resistance 	<ul style="list-style-type: none"> Excellent chemical resistance Flexible and elastic 	<ul style="list-style-type: none"> High chemical resistance
			RESTRICTIONS	<ul style="list-style-type: none"> Not suitable for handling hot parts 	<ul style="list-style-type: none"> Risk of allergies caused by the proteins in the natural latex 	<ul style="list-style-type: none"> Not recommended for cold environments 	<ul style="list-style-type: none"> Poor mechanical properties 	<ul style="list-style-type: none"> Poor mechanical properties 	

* The most frequently used materials for chemical protection gloves.

** This target protection against certain families of aggressive chemicals. They are generally more expensive than common materials.

PVC/LATEX

MATERIAL	WEAR TIME	GLOVE	DESCRIPTION	SIZE	LENGTH/THICKNESS	INTERIOR/EXTERIOR FINISH	STANDARDS	APPLICATIONS
PVC			Long-lasting mechanical protection against low risk of chemical hazards	9 10	35 cm / 1.3 mm	Textile support/pebbled	4141X Type B KMO CAT 3	Petrochemical industry: - Maintenance and handling Chemical industry: - Handling drums of chemical products Other industries: - Cleaning and general maintenance in wet environments
			Comfort, flexibility and mechanical protection for low chemical hazards	8 9 10	30 cm / 1.5 mm		4121X Type A KLWNPPT CAT 3	Mechanical industry: - Maintenance work in wet environments Pharmaceutical industry: - Maintenance and cleaning Other industries: - Servicing and maintenance work in wet environments
LATEX			Good mechanical performance for long-lasting chemical protection	8 9 10	42 cm / 1 mm	Chlorinated/smooth	3131X Type A AKLWMPPT CAT 3	Mechanical industry: - Maintenance work in wet environments Pharmaceutical industry: - Maintenance and cleaning Other industries: - Servicing and maintenance work in wet environments
				60 cm / 1 mm	Chlorinated/reinforced grip		2131X Type A ABRMPT CAT 3	
			Fine touch for light chemical protection	7 8 9 10	31 cm / 0.9 mm	Flocked/embossed texture	3121X Type A AKLWMPPT CAT 3	
				6 7 8 9 10 11	32 cm / 0.6 mm		1011X Type B KMT CAT 3	
				7 8 9 10 11	32 cm / 0.8 mm		2120X Type A AKLWMPPT CAT 3	
				7 8 9 10 11	32 cm / 0.8 mm		Chlorinated/embossed texture	

PERFORMANCE INDICATORS

> **THE RISK:** combination between contact time and the aggressiveness of the chemical being handled.

Choose the performance of your gloves based on the type of risk:

- SPLASH-PROTECTION**
- FREQUENT CONTACT**
- PROLONGED CONTACT** (even in immersion)

> **WEAR TIME:** identifies the comfort level required by the operator.

The longer the wear time, the more comfortable the glove needs to be (perspiration, flexibility/fatigue).

- SHORT-TERM USE** (chlorinated interior finish)
- INTERMITTENT USE** (flocked interior finish)
- CONTINUOUS USE** (textile support)
- ULTRA COMFORT** (Exclusive MAPA Technology for increased flexibility)

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NITRILE

RISK	WEAR TIME	GLOVE	DESCRIPTION	SIZE	LENGTH/THICKNESS	INTERIOR/EXTERIOR FINISH	STANDARDS	APPLICATIONS
			Fingertip precision for light chemical protection	7 8 9 10	32 cm / 0.28 mm	Chlorinated/embossed texture	2101X Type B JOT CAT 3	Mechanical industry: - Handling and assembly of small oily parts - Machining parts using cutting oil - Precision assembly Other industries: - Spray-painting
			Good sensitivity for standard chemical protection	7 8 9 10	31 cm / 0.34 mm	Flocked/embossed texture	3101X Type B JKOPT CAT 3	Mechanical industry: - Machining parts using cutting oil Chemical industry: - Manufacture and application of paints and varnishes Other industries: - Application of pesticides - Timber treatment and finishing - Maintenance
			Good mechanical resistance and long-lasting chemical protection	6 7 8 9 10 11	37 cm / 0.38 mm		3101X Type A JKOPT CAT 3	Mechanical industry: - Machining parts using cutting oil - Treating/degreasing metals with solvents Chemical industry: - Manufacture and application of paints and varnishes Other industries: - Application of pesticides - Timber treatment and finishing - Maintenance - Cleaning of printing-press rollers
			Maximum comfort for standard chemical protection	7 8 9 10 11	35.5 cm / 0.85 mm	Mapa technology textile support/embossed texture	3111A Type A JKOPT CAT 3	Automotive/mechanical industry: - Automotive assembly - Part degreasing - Surface treatment Chemical industry: - Chemical product blending - Handling drums of chemical products - Manipulating valves Other industries: - Laboratory tests - Machine maintenance
			Ultra-long chemical protection	7 8 9 10	46 cm / 0.55 mm	Chlorinated/embossed texture	4102X Type A JKOPT CAT 3	Automotive/mechanical industry: - Treating/degreasing metals with aggressive solvents Chemical industry: - Handling drums of chemical products Other industries: - Application of pesticides - Cleaning of printing-press rollers - Maintenance - Timber treatment and finishing
			Ultra-long chemical protection	8 9 10 11	39 cm / 0.55 mm	Flocked/embossed texture	4102X Type A JKOPT CAT 3	Automotive/mechanical industry: - Automotive assembly - Machine tool manufacture - Surface treatment Chemical industry: - Chemical product blending - Handling and transporting drums of chemical products - Manipulating valves - Unloading fuel and cleaning tanks - Manufacturing paints and varnishes Other industries: - Industrial cleaning and print-press cleaning - Heavy-duty packaging
			Comfort and reinforced mechanical resistance for long-lasting chemical protection	8 9 10	38 cm / 1.3 mm	Textile support/smooth	4122X Type A JKOPT X1XXXX CAT 3	

NEOPRENE

RISK	WEAR TIME	GLOVE	DESCRIPTION	SIZE	LENGTH/ THICKNESS	INTERIOR/ EXTERIOR FINISH	STAND- ARDS	APPLICATIONS
18			Tactile sensitivity for light chemical protection	7 8 9 10	31 cm / 0.55 mm	Flocked/ embossed texture	2110X Type A ALMNST CAT 3	Mechanical industry: - Spray-painting - Battery manufacturing Construction industry: - Finishing work, jointing, etching Other industries: - Industrial cleaning - Maintenance - Preparation of industrial glues
			Comfort with light chemical protection	7 8 9 10	38 cm / 1.15 mm	Textile support/ smooth	2121X Type A CLMNST X1XXXX CAT 3	Mechanical industry: - Battery, pump and compressor manufacturing Chemical industry: - Handling and transporting chemicals Other industries: - Industrial cleaning, maintenance - Timber treatment
			Extremely supple with freedom of movement for standard chemical protection	6 7 8 9 10	31 cm / 0.75 mm	Flocked/ embossed texture	2121X Type A ALMNST CAT 3	Automotive/mechanical industry: - Electric accumulator and battery manufacturing Chemical industry: - Handling, loading and unloading of chemicals Other industries: - Industrial cleaning, maintenance - Preparation of industrial glues - Spreading fertilizer
				7 8 9 10	41 cm / 0.75 mm			
			Comfort with standard chemical protection	8 9 10 11	38 cm / 1.45 mm	Textile support/ smooth	2121X Type A ACLMNS X1XXXX CAT 3	Automotive/mechanical industry: - Electric accumulator and battery manufacturing Chemical industry: - Handling and transporting chemicals - Chemical treatment of metals Other industries: - Industrial cleaning, maintenance - Timber treatment
			Maximum comfort for standard chemical protection	6 7 8 9 10	35.5 cm / 0.9 mm	Mapa technology textile support/ embossed texture	2121X Type A ALMNST CAT 3	Automotive/mechanical industry: - Engine part assembly - Surface treatment Chemical industry: - Chemical product blending - Handling drums of chemical products - Manipulating valves Other industries: - Laboratory tests - Machine maintenance
			Ultra-high performance chemical protection	9 10	35.5 cm / 0.75 mm	Chlorinated/ embossed texture	2111X Type A 407: ABCULMNS 414: ACULMNS CAT 3	Mechanical industry: - Surface treatment of metals (acids) Chemical industry: - Handling on alkylation units - Galvanoplasty - Handling and transporting drums of chemical products - Site pollution control
					45.5 cm / 0.75 mm			
			Comfort and high-level chemical protection	9 10	35.5 cm / 1.35 mm	Textile support/ pebbled	3121X Type A ABCULMNS X1XXXX CAT 3	Automotive/mechanical industry: - Surface treatment of metals (acids) Chemical industry: - Handling on alkylation units - Hot, petrochemical product sampling - Resin-working - Handling and transporting drums of chemical products - Site pollution control

BUTYL/FLUOROELASTOMER

MATERIAL	WEAR TIME	GLOVE	DESCRIPTION	SIZE	LENGTH/ THICKNESS	INTERIOR/ EXTERIOR FINISH	STAND- ARDS	APPLICATIONS
BUTYL			Ultimate specific chemical resistance	7 8 9 10	35 cm / 0.5 mm	Chlorinated/ embossed texture	0010X Type A ABCULMNS CAT 3	Chemical industry: - Formulating paints, varnishes, resins and inks - Handling and repackaging chemicals - Sampling chemicals Cosmetics and pharmaceutical industry: - Handling in laboratories Mechanical and electronic industry: - Metal treatment and degreasing
				7 8 9 10 11	35 cm / 1.5 mm	Mapa technology textile support/ embossed texture	1121X Type A ABCULMNS CAT 3	
FLUROELASTOMER			Tactile sensitivity with wear-indicator	8 9 10	30 cm / 0.5 mm	Chlorinated/ smooth	3102X Type A ADEFGJLMNO CAT 3	Mechanical industry: - Metal degreasing and etching Chemical industry: - Manufacturing paints and varnishes - Chemical treatments (solvents) - Galvanoplasty - Resin and adhesive manufacturing - Handling and transporting chemicals (solvents) Other industries: - Printing - Petrochemical refining - Site pollution control
			Comfort and flexibility for extended wear	9 10	37 cm / 1.5 mm	Textile support/ smooth	3121X Type A ACDEFGJLMN X1XXXX CAT 3	Mechanical industry: - Metal degreasing and etching Chemical industry: - Manufacturing paints and varnishes - Chemical treatments (solvents) - Galvanoplasty - Resin and adhesive manufacturing - Handling and transporting chemicals (solvents) Other industries: - Printing - Petrochemical refining - Site pollution control - Emergency interventions on chemical accidents

PERFORMANCE INDICATORS

> **THE RISK:** combination between contact time and the aggressiveness of the chemical being handled.

Choose the performance of your gloves based on the type of risk:

- SPLASH-PROTECTION**
- FREQUENT CONTACT**
- PROLONGED CONTACT** (even in immersion)

> **WEAR TIME:** identifies the comfort level required by the operator.

The longer the wear time, the more comfortable the glove needs to be (perspiration, flexibility/fatigue).

- SHORT-TERM USE**
(chlorinated interior finish)
- CONTINUOUS USE**
(textile support)
- INTERMITTENT USE**
(flocked interior finish)
- ULTRA COMFORT**
(Exclusive MAPA Technology for increased flexibility)

Handling Protection

PRECISION WORK



The Mapa Professional Handling Protection range provides the comfort and protection hands require to carry out a wide variety of work.

PERFORMANCE INDICATORS

We suggest that you select your gloves for precision work based on their service life in order to make your choice easier:

> **THE ENVIRONMENT:** Select the glove that meets your needs according to your working environment:



> **THE SERVICE LIFE** of a glove for precision work is directly linked to the thickness of the polymer layer covering the fabric and the nature of the fabric, in a given environment.

> **1 >> 2 >>> 3**
3 GIVING THE MOST PROTECTION

new **VM** Product available in Vending Machine packaging - more information on www.mapa-pro.com

ENVIRONMENT	SERVICE LIFE	GLOVE	DESCRIPTION	SIZE	LENGTH	INTERIOR/EXTERIOR FINISH	STANDARDS	APPLICATIONS			
		 ULTRANE 548 VM	Optimal dexterity and sensitivity for light protection	6 7 8 9 10 11	21-27 cm	Seamless textile support/polyurethane coating on palm and fingers Gauge 13	 3121X	Automotive/mechanical industry: - Intricate assembly - Sorting small parts - Fitting small screws and fasteners Electronics: - Assembly of electrical components - Microprocessor handling Cosmetics and pharmaceutical industry: - Medicine manufacturing - Cosmetics preparation			
		 ULTRANE 549 VM		6 7 8 9 10							
		 ULTRANE 551 VM	Unbeatable for fingertip precision	6 7 8 9 10 11	21-27 cm	Seamless textile support/polyurethane coating on palm and fingers Gauge 13 	 4131X	Automotive/mechanical industry: - Intricate assembly - Sorting small parts - Fitting small screws and fasteners Electronics: - Electrical component assembly - Microprocessor handling - High-frequency antennae riveting Cosmetics and pharmaceutical industry: - Medicine manufacturing - Cosmetics preparation			
		 ULTRANE 550 VM		6 7 8 9 10							
		 ULTRANE 510	Optimal comfort, high level of breathability & durability for precision work	6 7 8 9 10 11	22-27 cm	Seamless knitted lining / water-based polymer on palm and fingers Gauge 13 	 CAT 2	Automotive / mechanical industry - Precision mechanical work - Precision assembly - Automotive assembly - Mechanical maintenance - Assembly of small parts - Fitting small screws and fasteners Electronics - Assembly of electrical components - Microprocessor handling Cosmetics and Pharmaceutical industry - Cosmetics preparation - Medicine manufacturing			
		 ULTRANE 553 VM	Unbeatable for fingertip precision in dirty environments	6 7 8 9 10	21-26 cm	Seamless textile support/ Ventilated back: nitrile coating on palm and fingers Gauge 13		Automotive/mechanical industry: - Intricate assembly - Screwing and bolting - Pump manufacturing - Precision assembly - Sorting small parts Other industries: - Minor maintenance tasks - Light handling in storage areas - Packaging activities			
		 ULTRANE 500 VM	Grip assured, skin protected and unbeatable fingertip for slightly oily and dirty environments	6 7 8 9 10 11	23-28 cm	Seamless knitted lining / nitrile coating on palm and fingers Gauge 13	 4121X	Automotive/mechanical industry: - Intricate assembly - Screwing and bolting - Precision assembly - Sorting small parts - Machining non-sharp parts beneath the pad Other industries: - Light maintenance work - Light handling in the storage area - Packing activities			
		 ULTRANE 525	Grip assured, skin protected and unbeatable fingertip for handling precision in oily environments	7 8 9 10 11					Seamless knitted lining / 3/4 nitrile coating Gauge 13	 CAT 2	Automotive / mechanical industry: - Precision mechanical work - Light metal fabrication - Handling mechanical parts - Quality control Other industries: - Assembly of white goods - General site and factory maintenance - Construction material handling
		 ULTRANE 526	Grip assured, skin protected and unbeatable fingertip for precision handling in very oily environments						Seamless knitted lining / full nitrile coating Gauge 13		Automotive/ mechanical industry: - Handling mechanical parts - Precision mechanical work Construction industry: - Woodwork - Sanding - Construction material handling

Handling Protection

HEAVY-DUTY WORK



The Mapa Professional Handling Protection range provides the comfort and protection hands require to carry out a wide variety of work.

PERFORMANCE INDICATORS

We suggest that you select your gloves for heavy-duty handling work based on 2 criteria in order to make your choice easier:

> **THE ENVIRONMENT:** Select the glove that meets your needs according to your working environment:



> **SERVICE LIFE** combination of material and thickness of gloves to give a service life from 1 to 3.



To maximise safety and comfort, nitrile gloves for heavy-duty work are recommended for dry or dirty environments.

ENVIRONMENT	SERVICE LIFE	GLOVE	DESCRIPTION	SIZE	LENGTH	INTERIOR/EXTERIOR FINISH	STANDARDS	APPLICATIONS	
		TITAN SUPERLITE 833	Comfort and dexterity for light handling tasks	7 8 9 10	26.5 cm	Textile support/ 3/4 nitrile coating	 3111X CAT 2	Automotive/mechanical industry: - Handling mechanical parts - Parts assembly - Precision mechanical work - Sanding Construction industry (Masonry/Plastering): - Handling of bricks and breeze blocks - Plastering Local authorities: - Handling materials for use during road works - Minor general maintenance tasks	
		DEXTRAM 375	Appropriate protection for all types of light handling activities	6 7 8 9	26 cm	Textile support/ Full nitrile coating, scalloped cut	 3111X CAT 2	Automotive/mechanical industry: - Handling mechanical parts - Precision mechanical work Other industries: - Woodwork - Sanding - Packaging	
		DEXTRAM 376		8 9	31 cm	Textile support/ Full nitrile coating, knitted wrist			
	DEXILITE 383	7 8 9 10	26-29 cm						
			TITANLITE 397	Comfort and dexterity for common handling tasks	6 7 8 9 10	27-31 cm	Textile support/ 3/4 nitrile coating, knitted wrist	 4111X CAT 2	Automotive/mechanical industry: - Precision mechanical work - Part assembly - Sanding - Handling mechanical parts
			TITAN 385	Comfort and durability for heavy-duty work	9 10	24-26 cm	Textile support/3/4 nitrile coating, safety cuff	 4111X CAT 2	Mechanical industry: - Handling of thick, untrimmed sheet metal - Metal shearing or cutting Construction and public works: - Construction material handling - Metal construction Other industries: - Household waste collection, - Forestry
		TITAN 388	8 9 10		Textile support/Full nitrile coating, safety cuff				
		TITAN 391	8 9 10		Textile support/3/4 nitrile coating, knitted wrist				
		TITAN 392	8 9 10	Textile support/Full nitrile coating, knitted wrist					
	TITAN 393		Optimised comfort and maximum durability for heavy-duty handling work		7 8 9	31 cm	Brushed cotton lining/ Full nitrile coating	 4111X X1XXXX CAT 2	Mechanical industry: - Handling of thick, untrimmed sheet metal - Metal stamping Construction and public works: - Construction material handling - Metal construction Other industries: - Household waste collection - Forestry - Non-ferrous mineral mining
		ENDURO 328	Flexibility and grip for common handling tasks	8 9 10	24-27 cm	Seamless textile support/ Non-slip natural latex coating on palm and fingers Gauge 10	 2142X X2XXXX CAT 2	Construction and public works: - Fibreboard handling - Construction material handling Environment: - Household waste collection - Public park maintenance Other industries: - Warehousing and receipt of goods	
		HARPON 319	Comfort, reinforced safety and excellent grip in wet environments	7 8 9	25-27 cm	Textile support/Full reinforced natural latex coating	 3131X X1XXXX CAT 2	Construction and public works: - Fibreboard handling - Construction material handling Environment: - Public park maintenance - Forestry - Waste collection - Handling barbed wire Other industries: - Spreading fertilizer - Glass working - Quarrying - Wood working	
	ENDURO 330	6 7 8 9		Textile support/Reinforced natural latex coating on palm and fingers					
TITAN 850		Shock absorption, durability & comfort for Heavy Duty work		7 8 9 10 11	23.5-27.5 cm	Seamless textile support/ Nitrile coating on palm and fingers	 4132XP CAT 2	Manufacturing/Metal transformation/Industrial equipment/Electrical equipment: - Handling oily mechanical parts / Thick metal sheets - Machining of Heavy parts/Assembling of Heavy parts - Machine tool manufacturing - Metal working - Mechanical maintenance Utilities/Mining/Transportation: - Maintenance Transport/Logistics: - Goods Handling on loading bays, docks, warehousing, etc. Industrial maintenance/Installation of industrial equipments	

Cut Protection

PRECISION WORK - THE KRY RANGE



The Mapa Professional range of cut-protection gloves provides excellent hand comfort and protection specially designed for various types of work involving cut hazards.

YOUR NEED

Select your cut protection gloves according to your specific needs.

For precision work, you need gloves that act like a second skin, protecting against cuts but maintaining excellent dexterity.

> **THE ENVIRONMENT:** Select the glove that meets your needs according to your working environment:



> **THE RISK:** The higher the level of performance, the greater the glove's resistance to the combined effects of the sharpness of the object's cutting edge and the pressure applied.



> **THE SERVICE LIFE** of a glove for precision work is directly linked to the thickness of the polymer layer covering the fabric and the nature of the fabric, in a given environment.



new **CUT PROTECTIVE SLEEVES WITH THUMB LOOP**
for a comfortable and convenient usage in intricate environment

KRYTECH ARM 532

Moderate protection from HDPE, polyamide ultra-thin thumb loop
Length : 450 mm

334XB
ISO 13997 : 5.3 N

APPLICATIONS

Mechanical/Automotive Industry:

- Handling sheet metal plates
- Assembling sharp metal parts
- Handling metal parts
- Cutting and stamping
- Assembling of rolled plate
- Laminating

Construction industry (roofers/tilers/glaziers):

- Handling and fitting windows

Glass industry:

- Handling glass sheets

KRYTECH ARM 538

High-performance protection from HDPE and fiberglass, polyamide ultra-thin thumb loop.
Length : 600 mm

4X4XD
ISO 13997 : 17.8 N

new Product available in Vending Machine packaging - more information on www.mapa-pro.com

IMPORTANT: Using cut-protection gloves does not guarantee total protection (for instance, when using a motor-operated sharp object). Furthermore, the EN 388 and ISO 13997 test results give no more than an indicative average value, and an on-site study may be recommended to determine the most appropriate type of protection for a workstation. Do not hesitate to contact our technical department for further information.

ENVIRONMENT	RISK	SERVICE LIFE	GLOVE	DESCRIPTION	SIZE	LENGTH	INTERIOR/ EXTERIOR FINISH	STANDARDS	APPLICATIONS		
				Moderate protection for very intricate handling in reasonably clean environments		22-27 cm	Seamless textile support from HDPE fibres/ Polyurethane on palm and fingers Gauge 13	4342B ISO 13997: 5.3 N CAT 2	Automotive/mechanical industry: <ul style="list-style-type: none"> - Assembling thin metal sheets - Automotive assembly - Finishing work - Handling and sorting small, sharp parts - Handling untrimmed parts or sheet metal - Precision assembly Paper industry: <ul style="list-style-type: none"> - Handling cardboard and paper 		
						27-32 cm					
				Moderate protection for intricate handling in reasonably clean environments	6 7 8 9 10 11	22-27 cm	Seamless textile support from HDPE fibres / Polyurethane on palm and fingers + crotch reinforcement in nitril Gauge 13	4343B ISO 13997: 5.3 N CAT 2	Automotive/mechanical industry: <ul style="list-style-type: none"> - Finishing work - Handling and sorting small, sharp parts Construction industry: <ul style="list-style-type: none"> - Timber assembly/cutting - Laying of steel structures/Screwing/Studwork - Handling metal parts - Handling cutting tools - Handling and laying tiles, inserts, frames or zinc sheeting Paper industry: <ul style="list-style-type: none"> - Handling cardboard and paper 		
						26-31 cm				4343B ISO 13997: 5.3 N CAT 2	Automotive/mechanical industry: <ul style="list-style-type: none"> -Bodywork assembly -Mechanical maintenance Construction Industry (Carpenters/Joiners): <ul style="list-style-type: none"> -Installing steel structures Construction Industry (Metalworkers/Locksmiths): <ul style="list-style-type: none"> -Handling and installing metal structures
						22-27 cm					
				Cut, Grip and dexterity for dry and slightly oily environments	7 8 9 10 11	23-28 cm	Seamless textile support from HDPE fibres/ Ventrilated back Gauge 13	4343B ISO 13997: 5.9 N CAT 2	Automotive/mechanical industry: <ul style="list-style-type: none"> - Handling sheet metal - Handling oily mechanical parts - Handling and sorting small, sharp parts Other industries: <ul style="list-style-type: none"> - Maintenance Mechanical industry: <ul style="list-style-type: none"> - Maintenance in wet environments (water, oil, greases, hydrocarbons) 		
				Cut protection with optimal comfort, high level of breathability & durability for precision work	7 8 9 10 11	23-27 cm				Seamless textile support from HDPE fibres / water-based Polymer on palm and fingers	4341 ISO 13997: 6.1 N CAT 2

*The measurement of cut protection in Newton may vary from batch to batch

CUT PROTECTION : PRECISION WORK - DRY ENVIRONMENT

ENVIRONMENT	RISK	SERVICE LIFE	GLOVE	DESCRIPTION	SIZE	LENGTH	INTERIOR/ EXTERIOR FINISH	STANDARDS	APPLICATIONS
			 <p>new</p> <p>KRYTECH 601</p>	An ambidextrous glove with a high dexterity coupled with a good cut performance and comfort.	7 8 9 10 11	23-28 cm	Seamless textile support from HDPE fibres	1X4XC ISO 13997: 14.2 N 	Automotive/mechanical industry: - Finishing work Plastics industry: - Post-injection material removal
			 <p>new</p> <p>KRYTECH 610</p>	A cut protection with a maximum comfort. A seamless plaited glove for very good fit, dexterity and flexibility.	6 7 8 9 10 11	24-29 cm	Seamless textile support from HDPE fibres Polyurethane on palm and fingers	4X43C ISO 13997: 14.9 N CAT 2	Automotive/mechanical industry: - Handling and sorting small, sharp parts - Handling sheet metal Construction Industry: (Metalworkers/Locksmiths): - Handling and installing metal structures - Handling sheet metal - Installing and repairing locks Glass industry: - Handling glass sheets Industrial maintenance: - Maintenance with cut risk - Mechanical maintenance
			 <p>KRYTECH 531</p>	High-performance protection with optimal comfort, high level of breathability & durability for precision work	7 8 9 10 11	23-27 cm	Seamless textile support from HDPE fibres / water-based Polymer on palm and fingers	4X42C ISO 13997: 14 N CAT 2 	Automotive/mechanical industry: - Handling metal parts - Assembly of thin metal sheets - Finishing sharp parts Plastics industry: - Post-injection material removal Local Authorities (Technical Maintenance): - Maintenance work with risk of cuts Construction Industry (Roofers/Tilers/Glazers): - Handling and fitting windows
			 <p>VM</p> <p>KRYTECH 586</p>	High-performance protection for intricate handling in reasonably clean environments	6 7 8 9 10 11	24-30 cm	Seamless textile support from HDPE fibres/ Polyurethane palm and fingers Gauge 13	4X43D ISO 13997: 18.6 N CAT 2	Automotive/mechanical industry: - Assembling thin metal sheets - Finishing work on sharp-edged parts - Handling metal parts Construction industry (Roofers/Tilers/Glazers): - Handling and fitting windows Paper industry: - Cutter work
			 <p>new</p> <p>KRYTECH 615</p>	A high cut protection with a maximum comfort. A seamless plaited glove for very good fit, dexterity and flexibility.	6 7 8 9 10 11	24-29 cm	Seamless textile support from HDPE fibres Polyurethane on palm and fingers	4X43D ISO 13997: 20 N	Automotive/mechanical industry: - Assembly of thin metal sheets - Cutting aluminium strips - Handling sheet metal - Metal working Construction Industry (Carpenters/Joiners): - Installing steel structures Construction Industry (Metalworkers/Locksmiths): - Handling and installing metal structures - Handling glass sheets Industrial equipment / Metal transformation: - Handling of thick metal sheets - Maintenance with cut risk Industrial maintenance: - Mechanical maintenance

CUT PROTECTION : PRECISION WORK - OILY ENVIRONMENT

ENVIRONMENT	RISK	SERVICE LIFE	GLOVE	DESCRIPTION	SIZE	LENGTH	INTERIOR/ EXTERIOR FINISH	STANDARDS	APPLICATIONS
			 <p>VM</p> <p>KRYNIT 580</p>	Moderate protection, grip and skin protected for intricate handling slightly oily and dirty environments	6 7 8 9 10 11		Seamless textile support from HDPE fibres/ nitrile coating on palm and fingers Gauge 13		Automotive/mechanical industry: - Handling sheet metal plates - Assembling sharp metal parts - Pressing metals - Cutting and stamping - Laminating Glass industry: - Handling sheet glass - Maintenance in wet conditions - Manufacturing of white appliances Other industries: - Maintenance in wet conditions - Manufacturing of white appliances
			 <p>KRYNIT 599</p>	Moderate protection, grip and skin protected for intricate handling in oily environments	7 8 9 10 11	23-28 cm	Seamless textile support from HDPE fibres/3/4 nitrile coating Gauge 13	EN 388: 2003  4343 ISO 13997: 6 N CAT 2	Automotive and mechanical industry: - Handling and assembling of sharp components with oil, grease coating - Assembly of engine & transmission drive trains - Bodyshop of light pieces - Handling of machine parts coated with light oil - Machining, metal working Glass industry: - Handling glass sheets Other industry: - Primary assembly
			 <p>KRYNIT 600</p>	Moderate protection, grip and skin protected for intricate handling in very oily environments	7 8 9 10		Seamless textile support from HDPE fibres/full nitrile coating Gauge 13		Automotive/mechanical industry: - Mechanical maintenance - Stacking oily panels - Pressing metal, handling metal sheets Paper industry: - Handling cardboard and paper Environment: - Waste collection and handling
			 <p>VM</p> <p>KRYNIT 582</p>	High-performance protection for intricate handling in oily environments	7 8 9 10 11		Seamless textile support from HDPE fibres/ 3/4 nitrile coating Gauge 13	CAT 2	Automotive/mechanical industry: - Mechanical maintenance work - Pressing metal, handling metal sheets - Sorting small parts - Stacking oily panels Glass industry: - Handling glass sheets Paper industry: - Cutter work Other industries: - Maintenance in wet environments - Maintenance

*The measurement of cut protection in Newton may vary from batch to batch

Cut Protection

HEAVY-DUTY HANDLING - THE KRO RANGE



The Mapa Professional range of cut-protection gloves provides excellent and comfort and protection specially designed for various types of work involving cut hazards.

YOUR NEED

Select your cut protection gloves according to your specific needs. **For heavy handling work**, your gloves must protect against cuts and impacts but also need to be tough and long lasting.

> THE ENVIRONMENT:

Select the glove that meets your needs according to your working environment:



> THE RISK:

The higher the performance level, the better the glove resists the combined effects of the object's sharpness and the pressure applied.



> SERVICE LIFE:

Combination of material and thickness of gloves to give a service life from 1 to 3.



ENVIRONMENT	RISK	SERVICE LIFE	GLOVE	DESCRIPTION	SIZE	LENGTH	INTERIOR/ EXTERIOR FINISH	STANDARDS	APPLICATIONS
				Moderate protection for heavy-duty handling in dry and relatively clean environments	7 9	26-27 cm	Textile support made from para-aramide fibres/ Full nitrile coating/ Pebbled	4431C X1XXXX ISO 13997: 14 N CAT 2	Environment: - Sorting metal and plastic waste Mechanical industry: - Cutting and stamping work - Handling aluminium strips - Handling sharp sheet metal
				Excellent cut protection and resistance to wear with optimal dexterity and comfort.	7 8 9 10 11	27-32 cm	Seamless textile support from HDPE fibres/ Leather layer on palm with reinforced thumb/index Gauge 13	4X44D X1XXXX ISO 13997: 15.6 N CAT 2	Automotive/mechanical industry: - Metal working - Handling untrimmed parts or sheet metal - Handling sheet metal - Handling parts post-press - Cutting strips (plasma etc.)
				Reinforced cut protection for the food industry Ambidextrous	7 8 9 10	34 cm	Seamless textile support from HDPE Fibres Gauge 10	2X4XE ISO 13997: 24.2 N CAT 2	Food industry: - Cutting meat and fish - Deboning poultry - Deboning, slicing
				High-performance protection for handling heavy, sharp objects in dry and relatively clean environments	8 9 10 11	23-26 cm	Seamless textile support from superior strength fibres/ Leather layer on palm with reinforced thumb/index Gauge 13	4X43D X1XXXX ISO 13997: 17.2 N CAT 2	Automotive/mechanical industry: - Handling untrimmed parts - Handling parts post-press - Handling sheet metal - Metal working - Cutting strips (plasma, etc.)
				High-performance protection for handling heavy or sharp objects in wet environments	7 8 9 10	23-26 cm	Seamless textile support from superior strength fibres/ Latex grip on palm and fingers/ Embossed texture Gauge 10	3X43D X2XXXX ISO 13997: 19.8 N CAT 2	Ceramic and plastics industry, composite industries: - Handling of composite materials after heat processing - Post-injection handling of hot plastic parts Construction industry (Carpentry/Joinery): - Assembly - Timber cutting - Laying of steel structures - Screwing - Studwork
				Moderate protection, grip and skin protected for heavy-duty work in oily/dirty environments	8 9 10	25-27 cm	Seamless textile support from HDPE and cotton fibres/ 3/4 nitrile coating safety cuff Gauge 13	4344B X1XXXX ISO 13997: 7.6 N CAT 2	Automotive mechanical industry: - Handling parts post-press - Pressing metal, handling metal sheets Mechanical industry: - Metal stamping in very oily environments - Cutting and stamping metal
				Long-lasting chemical protection and cut protection combined	8 9 10	32 cm	Multi-layer technology: combination of superior strength fibres and nitrile/ Textile support	EN 388: 2003 4543 EN 374: 2003 JKL X2XXXX ISO 13997: 14.6 N CAT 3	Automotive/mechanical industry: - Metal rolling, stamping and assembly - Sheet metal - Cutting aluminium strips Other industries: - Collection and sorting of industrial and household waste
				High performance cut protection Shock absorption, durability & comfort for Heavy Duty work	7 8 9 10 11	23.5-27.5 cm	Seamless textile support from HDPE fibres Nitrile coating on palm and fingers	4X43DP ISO 13397: 17.6 N CAT 2	Manufacturing/Metal transformation/Industrial equipment/Electrical equipment: - Handling oily mechanical parts - Handling heavy metal sheets - Cutting & stamping heavy metal sheets - Machining of Heavy parts - Assembling of Heavy parts - Machine tool manufacturing - Metal working - Mechanical maintenance Utilities/recycling/mining/transportation/Industrial maintenance/installation of industrial equipments: - Handling heavy parts with cut risk - Maintenance with cut risk

*The measurement of cut protection in Newton may vary from batch to batch

Thermal Protection



The Mapa Professional Thermal Protection range provides excellent comfort and protection to hands whenever work situations require.

PERFORMANCE INDICATORS

We suggest that you select your gloves based on three criteria in order to make your choice easier:

> TEMPERATURE:

PROTECTION AGAINST THE **COLD** -10 AND -30°C

STANDARD PROTECTION UP TO 150°C

HIGH-LEVEL PROTECTION ABOVE 150°C

> ENVIRONMENT:

Select the glove that meets your needs according to your working environment:

DRY environments **WET** environments **CHEMICAL** environments

MODERATELY OILY environments

> CONTACT TIME:

Performance depends on the contact time with the part at a given temperature.

	at 80°C	at 100°C	at 125°C
SHORT CONTACT	70 s	30 s	20 s
INTERMEDIATE CONTACT	80 s	45 s	25 s
PROLONGED CONTACT	1 min 50	1 min	38 s

Take a look at the thermal insulation curves for all of our gloves at www.mapa-pro.com

> SERVICE LIFE:

Combination of material and thickness of gloves to give a service life from 1 to 3.

> 1 >> 2 >>> 3

3 GIVING THE MOST PROTECTION

new



Product available in Vending Machine packaging - more information on www.mapa-pro.com

PROTECTION AGAINST HEAT

TEMPERATURE	ENVIRONMENT	CONTACT TIME	GLOVE	DESCRIPTION	SIZE	LENGTH	MATERIAL/INT. FINISH/EXT. FINISH	STANDARDS	APPLICATIONS
		x 2		High dexterity and thermal protection	7 9 11	24-28 cm	Seamless textile support/Nitrile coating with dot embossing on palm and fingers Gauge 13	4111X X1XXXX CAT 2	Ceramics and plastics industries, composite industries: - Handling of composite materials after heat processing Construction industry (Heating engineers/Plumbers): - Maintenance of pipes and ducts Other industries: - Handling of hot piping - Handling of hot steel after welding - Handling of moulds in the ceramic industry - Handling of sheet metal after hot stamping Maximum recommended temperature: 125°C
				Dexterity and resistance to cuts for optimised thermal protection	9 11 12	45 cm	Seamless textile support from aramide fibres/Nitrile coating with dot embossing on palm and fingers Gauge 10	4343B X2XXXX CAT 2	Rubber industry: - Vulcanization, demoulding, calendaring, etc. Mechanical industry: - Working with hot, sharp and oily parts Other industries: - Handling of hot piping - Handling of hot steel after welding - Handling of moulds in the ceramic industry - Handling of metals after heat treatment Maximum recommended temperature: 125°C
				Hygienic with high-temperature thermal protection 100% liquidproof	9 11 12	45 cm	Nitrile/ Knitted thermal protection/ Embossed texture	4443D 111 X2XXXX Type A AFGJOT CAT 3	Bakeries: - Removing trays from ovens Catering industry: - Removing dishes from warming ovens - Removing hot dishes from ovens (wet or dry) - Removing objects from autoclaves or steam ovens Food industry: - Pre-cooking Local authorities (Catering): - Removing hot dishes from ovens (wet or dry) - Removing objects from autoclaves or steam ovens <i>see Food Expert range</i> Maximum recommended temperature: 150°C
				Effective thermal insulation and multi-purpose chemical resistance	8 9 10	35,5 cm	Neoprene/ Knitted thermal protection/ Pebbled	EN 388: 2003 2212 111 CAT 3	Mechanical industry: - Chemical treatment of metals - Oil quenching of steel Petrochemical industry: - Hot, petrochemical product sampling Rubber industry: - Polymer extrusion Other industries: - Boiler room work - Handling of hot piping - Handling of moulds in the ceramic industry - Manufacture of adhesives - Manufacture of insulating electric wires - Road works - Steam cleaning Maximum recommended temperature: 175°C

PROTECTION AGAINST COLD

TEMPERATURE	ENVIRONMENT	CONTACT TIME	GLOVE	DESCRIPTION	SIZE	LENGTH	MATERIAL/INT. FINISH/EXT. FINISH	STANDARDS	APPLICATIONS
-10°C				Durability and thermal insulation	7 8 9 10	24 - 27 cm	Seamless knitted lining / ¾ Nitrile coating Gauge 15	3222X 02X CAT 2	Construction and public works: - Construction material handling - Handling of bricks, breeze blocks and pipe - Road construction Transport and supply: - Railroads handling - Order preparation in warehouse and delivery Other industries: - Electrical distribution - Maintenance (dry, wet and oil environment) - Local authorities (Waste collection, landscaping...)
-30°C				Thermal insulation 100% liquidproof to protect from extreme contact cold	9 10	30 cm	PVC/ Jersey support, lined with woollen fleece/ Pebbled	4221X 121 Type B KMO CAT 3	Fishing and work at sea: - Handling produce Transport: - Handling of liquids at low temperatures (water, oil, hydrocarbons, etc.) Other industries: - Handling in refrigerated or open-air warehouses - Maintenance in wet or cold environments

Food Expert Range



Compliance with hygiene rules is an essential requirement in the food industry. The industry continuously invests to improve the safety of its customers, as producers alone are legally liable for the sanitary quality of their products.

European regulations define precisely the food contact tests to be performed for each type of food. So, a glove can be approved for the handling of certain foodstuffs and not others.

Indeed, simply affixing the pictogram to a glove without giving more detailed information does not provide an adequate guarantee of compatibility with a given food.

Through its dedicated food industry selection guide, Mapa Professional aims to help end users check the food compliance of each glove according to the foods they actually handle, strictly in line with European and French regulations.

By providing the test results for all of the gloves in its Food Expert range, Mapa Professional aims to meet the strictest requirements of its customers' quality systems.

SELECT THE RIGHT GLOVE FOR YOU ACCORDING TO THE FOOD HANDLED:

STEP 1: Find the food you handle using the food groups.

STEP 2: Identify the gloves suitable for handling this type of food.

THEN CHECK YOUR GLOVE FOR USE AND COMFORT:

STEP 3: Turn to the next page to choose the level of protection required (disposable, thermal protection, cut protection, liquidproof) and the performance required based on your use.

MATERIALS GUIDE FOR DISPOSABLE AND LIQUIDPROOF GLOVES:

> **Natural latex:** flexibility, comfort and value for money.

> **Nitrile:** strength, durability, handling of oily foods and no risk of allergies.

FOOD CONTACT: YOUR SELECTION GUIDE

Selecting the right glove

- Suitable for contact with this type of food
- If pH > 4.5, suitable for contact with this type of food
If pH < 4.5, unsuitable
- Unsuitable for contact with this type of food

STEP 1	YOU ARE HANDLING	STEP 2											
		Disposable gloves			Liquidproof protection						Thermal protection	Cut protection	
		Natural latex	Nitrile		Waterproof		Completely liquidproof						
		Solo 988	Solo 995	Solo 967	SuperFood 165	SuperFood 177	Jersette 308	Harpon 326	Optinit 472	Ultrafood 475	Ultrafood 495	Temp-Cook 476	Krotech Food 838
Drinks	Non-alcoholic beverages or alcoholic beverages of an alcoholic strength lower than or equal to 6% vol. clear												
	Non-alcoholic beverages or alcoholic beverages of an alcoholic strength lower than or equal to 6% vol. cloudy												
	Alcoholic beverages of an alcoholic strength of between 6% vol. and 20%.												
	Alcoholic beverages of an alcoholic strength above 20%.												
Cereals, starch, sugar, chocolate and by-products	Starches, cereals, flour, meal, dry pasta e.g. macaroni, spaghetti and similar products and fresh pasta												
	Biscuits, pastry, cakes and other bakery products, dry, sugar and confectionery products in solid form; without fatty substances												
	Biscuits, pastry, cakes and other bakery products and confectionery products in solid form; with fatty substances, chocolate, substitutes and products coated												
	Confectionery products in moist past form												
	Molasses, sugar syrups, honey												
	Confectionery products with fatty substances on the surface												
Fruits, vegetables and by-products	Whole fruit, fresh or chilled, unpeeled; dried or dehydrated fruits; nuts shelled and roasted												
	Fresh vegetables, peeled or cut												
	Processed: cut, in the form of purées, paste or preserved in an aqueous medium, including pickled and in brine												
	Processed in an alcoholic medium												
	Preserved vegetables in an oily medium												
	Preserved fruits in an oily medium												
	Nuts in paste or cream form												
Fat and oils	Animal or vegetable, natural or treated												
	Water emulsions in oil (margarine, butter)												
Animal products and eggs	Crustaceans and molluscs not naturally protected by their shells, preserved fish in an aqueous medium												
	Crustaceans and molluscs not naturally protected by their shells, preserved fish in an oily medium, marinated meat products in an oily medium												
	Crustaceans and molluscs fresh within the shell												
	Fresh fish, chilled, salted, smoked or in the form of paste												
	Meat of all zoological species, fresh, chilled, salted, smoked or in the form of paste, creams												
	Preserved and part-preserved meat in an aqueous medium												
	Preserved and part-preserved meat in an oily medium												
	Eggs, egg yolks, whites of eggs in a powdered or dried or frozen form												
Dairy products	Eggs, egg yolks, whites of eggs in a liquid or cooked form												
	Whole, skimmed or partly dried milk												
	Fermented milk (yoghurt, butter milk), cream and sour cream												
	Natural cheese without rind or with edible rind and melting cheese												
	Whole cheeses with non-edible form												
	Processed cheese (soft cheese), preserved cheese in an aqueous medium (mozzarella...)												
	Preserved cheese in an oily medium												
Dressing	Milk powder including infant formula												
	Sauces with aqueous character												
	Sauces with fatty character (e.g. mayonnaise, salad creams...)												
	Mustard												
Mixed food preparations	Vinegar												
	Sandwiches, toasted bread, pizza containing any kind of foodstuff with fatty substances on the surface												
	Sandwiches, toasted bread, pizza containing any kind of foodstuff but without fatty substances on the surface												
	Soups, sauces, broths powdered or dried with fatty characters (including yeast)												
	Soups, sauces, broths powdered or dried but without fatty characters (including yeast)												
	Soups, sauces, broths in any other form with fatty characters (including yeast)												
	Soups, sauces, broths in any other form but without fatty characters (including yeast)												
Others	Fried or roasted foods of vegetable origin (fried potatoes, fritters)												
	Fried or roasted foods of animal origin												
	Dried foods with fatty substances on the surface												
	Dried foods without fatty substances on the surface												
	Herbs, spices, aromatic herbs, coffee and coffee substitutes, granulated or powdered												
	Spices and seasoning in oily medium												
	Cocoa powder												
Cocoa paste													
Concentrated extracts of an alcoholic strength equal to or exceeding 6% vol.													
Frozen or deep-frozen foods													
Ice-creams													

	FINISHES	GLOVE	DESCRIPTION	SIZE	LENGTH/ THICKNESS	INTERIOR/ EXTERIOR FINISH	STANDARDS
DISPOSABLE GLOVES	Natural latex Powdered		The perfect protection for light food handling	6 7 8 9	23 cm / 0.10 mm	Powdered/smooth	EN 374: 2003 CAT 3
	Natural latex Chlorinated			6 7 8 9	24-26 cm / 0.10 mm	Chlorinated/Smooth with pebbled fingertips	Type C CAT 3
	Nitrile Chlorinated			6 7 8 9	24.5 cm / 0.08 mm	Chlorinated/ Pebbled, chlorinated	CAT 3
THERMAL PROTECTION	Nitrile		Hygiene and effective thermal protection 100% liquidproof	9 (S)/ 11 (M)/ 12 (L)	45 cm / NS	Nitrile/ Knitted thermal protection / Embossed texture	4443D 111 X2XXXX Type A AFGJOT CAT 3
CUT PROTECTION	Seamless textile support from HDPE Fibres		Reinforced cut protection for the food industry Ambidextrous	7 8 9 10	34 cm	Seamless textile support from HDPE Fibres Gauge 10	2X4XE ISO 13997 : 26 N CAT 2

	FINISHES	SERVICE LIFE	GLOVE	DESCRIPTION	SIZE	LENGTH/ THICKNESS	INTERIOR/ EXTERIOR FINISH	STANDARDS
LIQUID-PROOF PROTECTION	Natural latex Chlorinated			Dexterity and flexibility	6 7 8 9 10	31 cm / 0.40 mm	Chlorinated/ embossed texture	EN 388: 2003 0010 Type B KPT CAT 3
	Natural latex Flocked			Flexibility and precision dexterity	7 8 9	30.5 cm / 0.29 mm	Flocked/Embossed texture	CAT 1
	Natural latex Textile support			Comfortable and suitable for long-term work	6 7 8 9 10	30-33 cm / 1.15 mm	Textile support/ Smooth	EN 388: 2003 3121 CAT 2
	Natural latex Textile support with grip			Comfort and safety for gripping bulky, slippery foods	7 8 9 10	32 cm / 1.35 mm	Textile support/ Reinforced grip	4131 X2XXXX CAT 2
	Nitrile Chlorinated			Fingertip precision for handling oily foods	6 7 8 9 10	31 cm / 0.20 mm	Chlorinated/ Pebbled	EN 388: 2003 2101 EN 374: 2003 JOT CAT 3
	Nitrile Flocked			Liquidproof and strong for handling oily foods	6 7 8 9 10	31 cm / 0.34 mm	Flocked/Embossed texture	3001X Type B JOT CAT 3
			The lasting solution for safe handling of oily foods		32 cm / 0.38 mm	3101X Type A AJKOPT CAT 3		

 **SHORT-TERM USE**
[opt for a chlorinated interior finish]

 **INTERMITTENT USE**
[opt for a flocked interior finish]

 **CONTINUOUS USE**
[opt for a fabric-lined finish to limit the effects of perspiration]

Critical Environments



Ensuring the protection of both operators and the products they handle, the Mapa AdvanTech range was designed to perfectly fulfil the requirements of high-tech production.

Created with innovative, highly technical processes, and subject to inspection at every stage of their design and of packaging, each of these gloves satisfy all the quality criteria necessary for work in controlled and confined environments.

Quality guaranteed at every stage of production:

- Mapa AdvanTech uses its own post-manufacturing cleaning process and clean rooms to maintain a level of product and packaging quality that meets requirements for cleanliness.
- All manufacturing sites have ISO 9002 certification.
- The levels of glove cleanliness are tested periodically to ensure that the production quality of these gloves, intended for use in critical environments, complies with established specifications.
- Each chemical protection glove is tested using appropriate methods to detect any liquid-resistance defect, as well as inflation tested under inspection lamps so as to ensure user safety.
- The chemical resistance checks comply with ASTM standards and EN 374-3, providing the users with the information they need to choose suitable gloves for a given application.

YOUR PRIORITIES ARE OUR PRIORITIES:

- improving the effectiveness of the users, their productivity and their safety, by designing gloves that are ever-more effective and safe to use,
- increasing production yields by reducing the amount of contaminants in products.

ENVIRONMENT	GLOVE	DESCRIPTION	SIZE	LENGTH	MATERIAL/ INT. FINISH/ EXT. FINISH	STANDARDS	APPLICATIONS
CONTROLLED ENVIRONMENT (CLEAN ROOM)	 NIPROTECT 529	Reinforced mechanical resistance for short-term operations	6 7 8 9 10	30 cm / 0.10 mm	Nitrile/ Chlorinated/ Smooth with pebbled fingertips	  CAT 3	Electronics: - Assembly of CD/DVD players, integrated circuits, CD production, flat screen assembly Health: - Manufacturing of medical equipment - Manufacturing of pharmaceutical products Laboratories: - Research, analysis - Handling of precision parts
	 STANSOLV 519	The chemical protection of nitrile combined with excellent mechanical resistance	7 8 9 10	33 cm / 0.30 mm	Nitrile/ Chlorinated/ Chlorinated	 2001X  Type B  JOT  CAT 3	All applications requiring a reduced incidence of particles and extractables, combined with resistance to solvents, abrasion and puncture: - Silicon handling - Production of ultra-pure chemicals - Solvent handling - Blending operations
	 TRIONIC 513	A tripolymer exclusive that offers 100% comfort for optimal mechanical and chemical resistance	6 7 8 9 10	30 cm / 0.20 mm	Mixed formula (Latex, neoprene and nitrile) Chlorinated/ Pebbled fingertips	 Type B  KPT CAT 3	Electronics: - Manufacturing integrated circuits, manufacturing semi-conductors, handling of silicon wafers in acid baths Laboratory: - Blending, handling and transport of chemicals, handling under fume hood
	 TRIONIC 514		6 7 8 9 10	38 cm / 0.51 mm	Mixed formula (latex, neoprene and nitrile)/ Chlorinated/ Embossed texture	 1110X	
	 TRIONIC 517		8 9 10	36 cm / 0.50 mm		 Type B  KST  CAT 3	
 TRIONIC 522	8 9 10		61 cm / 0.50 mm	 CAT 3			
CONFINED ENVIRONMENTS (DRY BOX GLOVES)	 ADVANTECH 565	The most comprehensive solution: resistance to alpha rays, mechanical and chemical protection	10 Ø* 178 mm	80 cm / 0.50 mm	Polyurethane/ Smooth/ Smooth	EN 388: 2003 4232  EN 374: 2003 AFGJKL 	- Dry box glove handling - Handling aggressive parts - Laboratories - Production of nuclear fuel - Operations in isolators, in the pharmaceutical industry - Stripping of parts in confined settings
	 ADVANTECH 566		10 Ø* 132 mm			 Type C  CAT 3	
	 ADVANTECH 567		10 Ø* 160 mm			 CAT 3	
	 ADVANTECH 570		10 Ø* 178 mm	EN 388: 2003 4344  EN 374: 2003 AFGJKL 			
	 ADVANTECH 571		10 Ø* 132 mm	 CAT 3			
	 ADVANTECH 572		10 Ø* 160 mm	 CAT 3			

* Cuff diameter

Notes

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A series of horizontal dotted lines for writing notes on the right side of the page.