DELTAPLUS

THESAFETYBOOK

YOUR SAFETY AT WORK

Offering the best PPE solution at the best price

To easily find the best PPE solution:

there are 3 lines of research needed

- RISKS

- LEVELS OF THE RANGE

PREMIUM
High Tech products for specialised uses

EVOLUTION
Powerful multi-purpose products

ESSENTIAL
Standard multi-purpose products

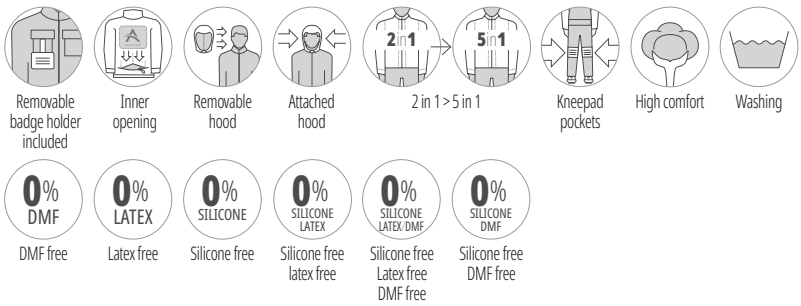
- JOBS

- **Accommodation** — Food services
- **Agriculture** — Forestry, Fishing
- **Construction** — Public works/Building/Finishing works / Craftsmanship
- **Power (Electricity, gas and water supply)/Wind energy** — Electricity, gas and water supply / Wind energy / Waste management
- **Information/Communication** — Telecom/Other «Information and Communication»
- **Manufacturing** — Automotive/Food-Beverage/Chem-Petroche /Other manufacturing (e.g. Semiconductor)/Maintenance
- **Mining/Oil & Gas** — Oil & Gas (extraction)/Mining/Other mining and quarrying
- **Transportation/Storage** — Transportation/Marine/Warehousing/Postal
- **Public Administration/Defense** — Law enforcement/Fire Fighters/First Responder /Defense/Other Public Administration and defense
- **Various Industries** — Hygiene environment/Events/Scenic/Temporary workers/Education/Others (offices, cars parks, labs, hotels...)

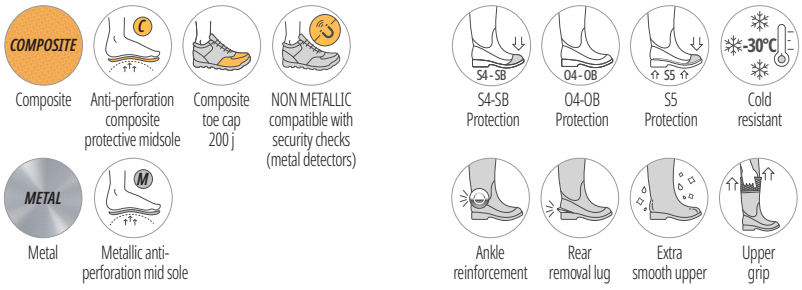
HEAD PROTECTION

HAND PROTECTION

BODY PROTECTION

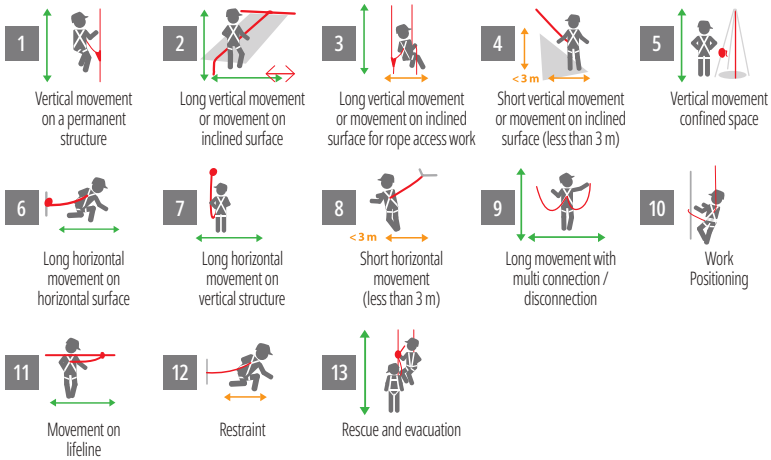


FOOT PROTECTION



FALL ARREST WORK SITUATIONS

Movements — Horizontal / Vertical + n° Corresponding



OUR GLOBAL OFFER

Delta Plus provides protection at work from head to toe for both women and men

Our Purpose

We protect women and men at work

Our Mission

Designing, manufacturing and distributing a full range of Personnal Protective Equipment (P.P.E.)..

Our Values

We are a family business, with an entrepreneurial spirit and a natural curiosity, oriented towards the long term.

Our Vision

Our desire is to elevate our positioning and establish Delta Plus as a key brand n the PPE market over the long term.

Our Markers

To be recognized for :

- Our market share
- Our differentiated products
- Our Services
- Our international coverage

OUR MISSION

Analyse of users needs

Design

Manufacturing

- Head protection
- Hand protection
- Clothes
- Foot protection
- Fall Arrest protection

Logistic

Distribution

OUR HISTORY

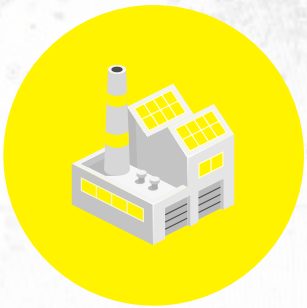
Delta Plus protects women and men at work. Thus, we mobilize our know-how, adaptability and pioneering spirit for over 40 years.

1977

Creation of a group

- Jacques Benoit founds Delta Plus and imports the first containers.
- Standards and European construction speeds up the growth of market.
- International development around the Mediterranean arc, then on the whole of Europe.

2004



The turning point of production

- Investment in production in India and then in China.
- Reinforcement in value-added technical families of product
- Continuing internationalisation in Europe and Middle East.

2013

Creation of a brand

- Transition to a unique brand Delta Plus.
- Implementation of a design office and R&D.
- Expansion in North and South America.

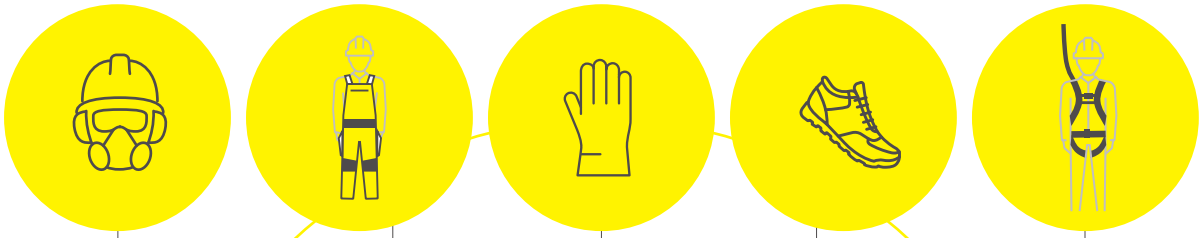
A brand reference

- A structured growth including practice of sustainable and social development
- A logic of creation of shared value around the growth strategy.

OUR UNIQUE OFFER

"Global offer"

‣ We cover the 5 major ranges of PPE positioning us as a multi-specialist, and a "one stop shopping" offer provider.



DELTAPLUS
YOUR SAFETY AT WORK

"Value Products"

‣ An intermedite positionning which ensure a quality/price ratio for our customers and optimization of value creation for our distributors and users.

Proximity

‣ Customer proximity with daily support for distributors and users thanks to our experts.

Service

‣ A service that serves as a benchmark in the business.

OUR GEOGRAPHIC COVER

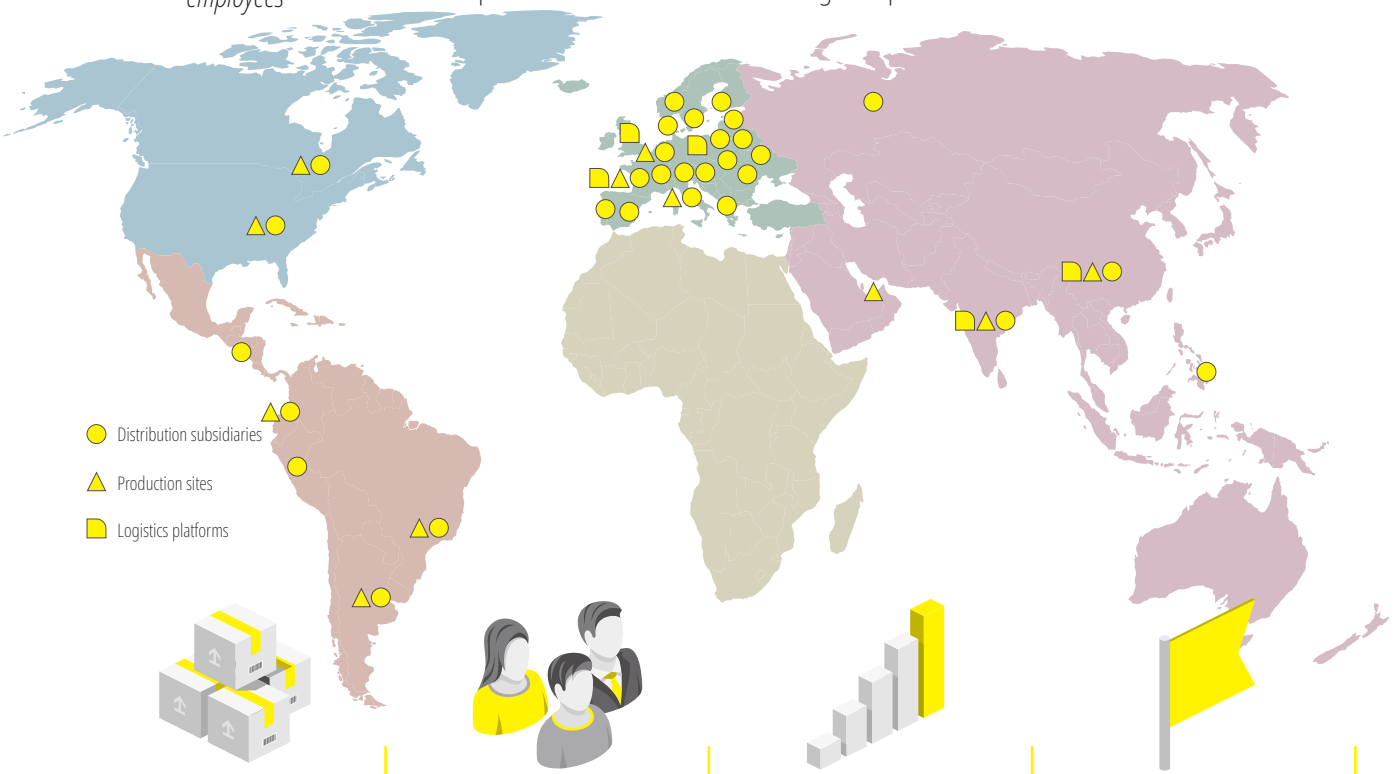
- **3 000 employees** including **280 sales reps.**
- **Skilled call centers** to deal with the orders and the after sales service.
- **Specialists** to advise and help with the choice of PPE.
- **Services and training** through our DPG TRAINING and ALPIC units.
- **110 countries** covered thanks to our subsidaries and Export department.

3000
employees

15
production sites

5
5 logistics platforms

110
Covers 110 countries



40
distribution subsidiaries

280
sales reps.

289
turnover in M€

1977
creation in France

OUR INNOVATIVE OFFER

We offer PPE solutions that provide the best fit for the workplace, from the most technical to the most standard requirement.

OUR R & D
THE SUCCESSES OF TOMORROW

4 million Euro/ year

15% new products / year

25 dedicated people

7000 hours of tests / year

Network organization by competence center

- **Plastics** : France, China.
- **Mechanics** : France, China.
- **Textile** : France (Textile ingeneer), China (technical fabrics and fall arrest), Argentina (weawing and fall arrest), UAE (fall arrest).
- **Safety footwear** : China and India.
- **Respiratory** : China, Spain and Brazil.
- **Project engineering, building safety equipment** : France.

Internal laboratories

- **Leading edge** in China on the 5 ranges and in Spain on head protection.
- **Proximity control** in France, Argentina and UAE.
- **A fleet of almost 200 machines** and test equipment.
- **50 000 tests performed per year.**

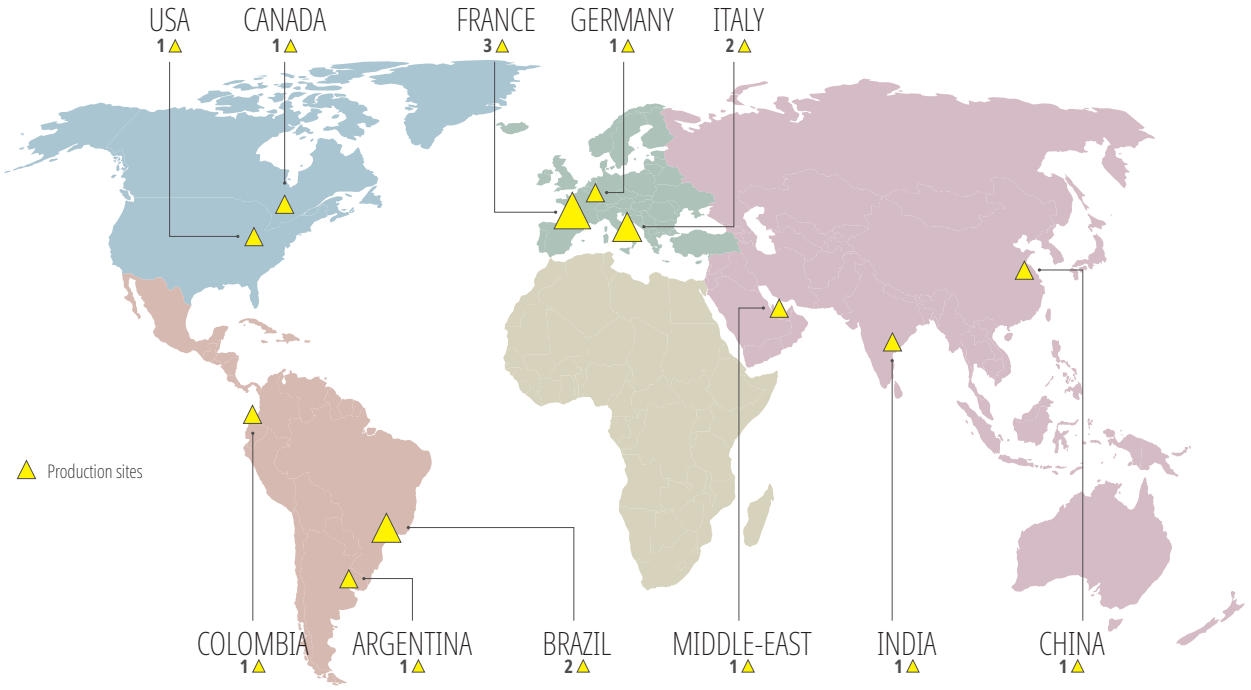
Partnerships with experts and external companies

OUR INTEGRATED MANUFACTURING

Manufacturing expertise on high-tech products
at our 15 production sites.

1500
Personal protection items

8 000
references



Head protection

- **3 millions** helmets.
- **14 millions** pairs of glasses.
- **70 millions** masks.

Body protection

- **2 millions** workwear.
- **1,4 millions** technical wear.
- **2,5 millions** disposable coveralls.

Hand protection

- **50 millions** pairs of glove

Foot protection

- **7,5 millions** footwear protection.

Fall protection

- **150 000** harness.
- **200 000** sold systems.

OUR LOGISTIC ORGANIZATION

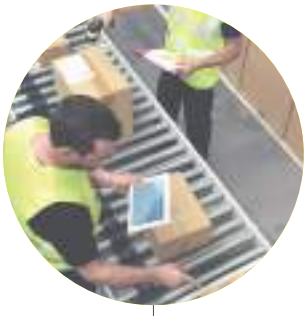
Where ever you are in the world, we offer the most performant level of services on the PPE world market.

Mono range containers

Mix containers*

Pallets**

Picking***



Customers

55000 m² of storage

A commitment to product availability

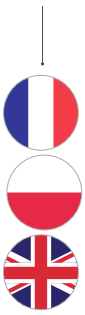
3 days delivery

2 Asian logistics bases*

gathering the best rotation, from which a container can be sent to any location on the planet.

3 European plat-forms**

gathering the full product offer.



14 proximity warehouses***

settled closest to our customers.

OUR CERTIFICATIONS

We have implemented a system of continuous improvement in terms of both products and services.

ALLSAFE Dubai

PRO SAFETY Brazil

Sistema de Gestão Certificado

IFBQ FALCÃO BAUER

NBR ISO 9001

Delta Plus is certified ISO 14001 (environmental management)

Delta Plus is certificed ISO 90001-2015 (quality managment)

DELTA PLUS France
FROMENT France
VERTIC France

afaq ISO 9001 Qualité AFNOR CERTIFICATION

afaq ISO 14001 Environnement AFNOR CERTIFICATION

DELTA PLUS China

TÜVRheinland CERTIFIED

ESLINGAR Argentina

DELTA PLUS India

OUR CSR APPROACH

The DELTA PLUS Group is commited for more than 10 years
to a global approach of social responsablity,
covering the 3 following main axes :

People * Planet * Economy *

Because we want our employees to have the mean to thrive in the workplace,healthy and safe.

- Safety at work
- Training and expertise development
- Health and protection of employees
- Management of attendance time and our resources

Because we want to lead our economic development by limiting its impact on future generations.

- Waste management
- Impact on Climate Change
- Control of resources
- Environmental impact of product life time

Because we want our business develops in a secure environment, ethicall and responsible.

- Fair practices
- Involving suppliers in our approach
- Protection of internal resources
- Support to local initiatives

Personal Protective Equipment

stands for P.P.E. (Personal Protective Equipment)

(PPE)

People Planet Sustainable Economy

stands for Persons, Plant, Sustainable Economy

WorldSkills partner since 2007

www.worldskills-france.org

Production 380,000 kWh / year or 63% of consumption seat

www.deltaplus.eu

Available in 16 languages.

Product information

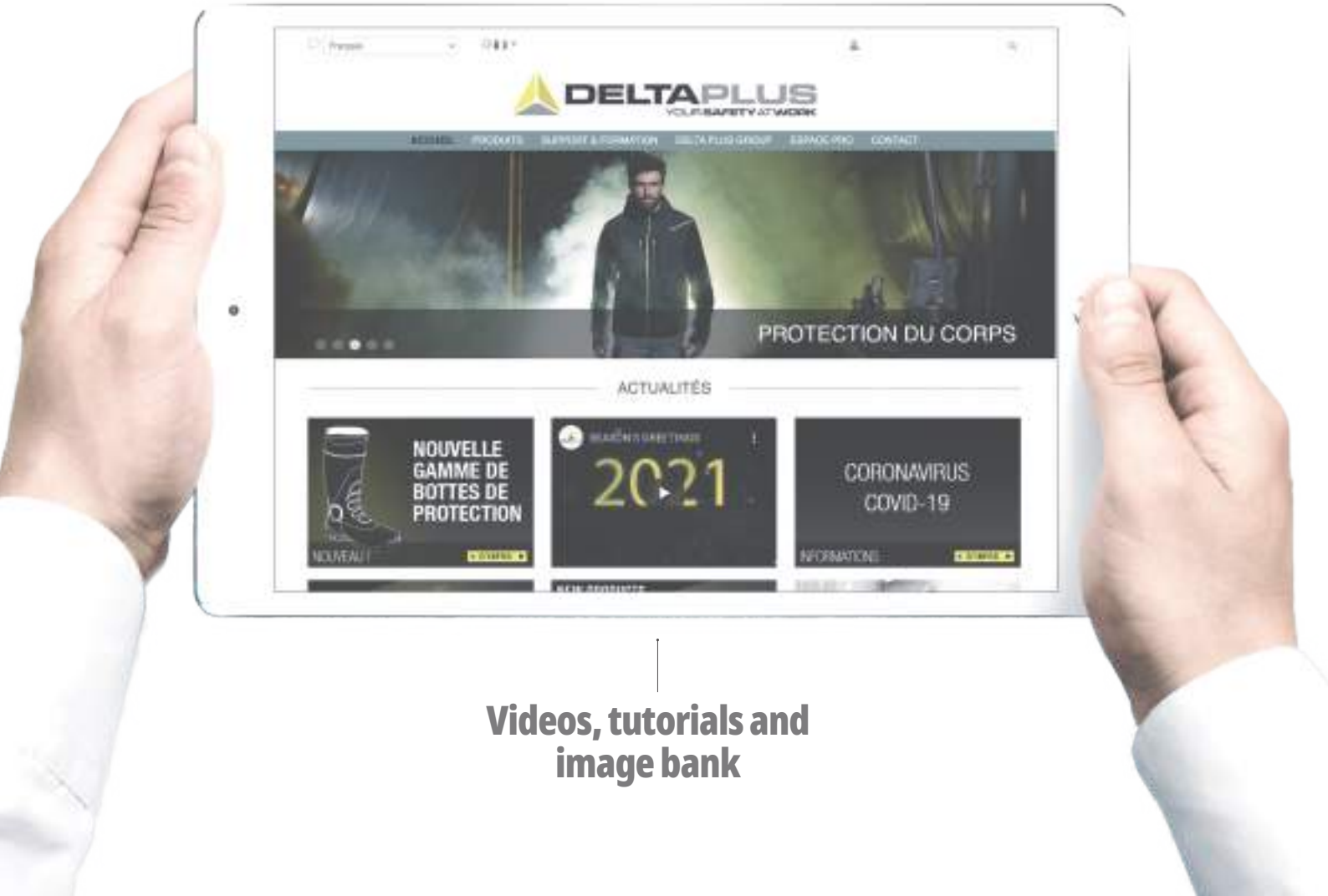
Educational selection aid

Chemical protection search engine

Professional space for online orders

Virtual catalogue Product information

Webinars



Videos, tutorials and image bank

TRAINING

ALPIC DPG Training

We are available to monitor you during your training course to match your needs as close as possible. Our training centers are mainly dedicated to health and safety.

Offer in Present, On site, E-learning

Our offer proposes structured training as follows:

- **Present** (in the classroom with a trainer): on topics around PPE, sales techniques applied to PPE, risk assessment and recommendations for solutions etc.
- **On site** (practical training): working at height, working in wind, rescue and evacuation etc.
- **E-learning** (PPE course) : visual inspection of fall arrest PPE, full course of PPE, modules dedicated to the standard PPE environment etc.

We address

- **For sales teams** to organize and deepen their knowledge of PPE to develop their sales and give more meaning to their job as their business proposals.
- **For companies** that use PPE to identify the most appropriate answers to the risks of their work environment, to choose the most efficient products and follow up the necessary review of PPE category III.
- **QSE employers and managers**, whose teams work at height and who, in accordance with the Labor Code, must be trained in the risks related to their work.

Training is essential

For example, particularly when it is about Fall protection PPE Category III against fatal and irreversible risks.

It allows:

- Awareness of working at height
- Analysis of risk situations
- Securing workstations
- Finding protection solutions
- Providing more productivity
- Providing technical expertise in inspection, maintenance and repair of products

Delta Plus provides protection at work from head to toe for both women and men

HEAD PROTECTION

EYEWEAR PROTECTION

SKULL PROTECTION

HEARING PROTECTION

RESPIRATORY PROTECTION

Glasses

All our polycarbonate glasses filter 99.9% of UV A, B or C (130 - 300 nm).
Our UV400 glasses filter up to 400 nm.

				Indoor / Outoor	CLEAR	YELLOW	SMOKE	MIRROR	LIGHT MIRROR	POLARISED	GRADIENT	BLUE LOCKER	T5	LYVIZ	Anti-mist N / Anti-scratch K	SUPPLIED ACCESSORIES
				PAGES												
GLASSES	INTENSIVE & EXTREME USE	PACAYA		5 - 6	✦		✦						✦	✦		
		RIMFIRE		7	✦			✦		✦						
		ASO2		9	✦		✦								✦	
	COMFORT & LIGHTNESS	THUNDER		12	✦		✦									
		FUJI2		12	✦						✦					
		VULCANO		9	✦		✦									
		HELIUM2*		11	✦		✦					✦				
		IRAYA		13	✦	✦	✦									
		MEIA		14	✦	✦	✦									
		MILO		14	✦		✦									
	CLASSIC & MULTI-PURPOSE	LIPARI2		16	✦								✦			
		BRAVA2		17	✦	✦	✦									
		KILIMANDJARO		18	✦		✦									
		PITON2		18	✦											
	OVERGLASSES	PITON		19	✦											
GOGGLES	PANORAMICS	GALERAS		20	✦		✦									
	COMPACT	RUIZ1 ACETATE		21	✦											
		RUIZ1		21	✦											

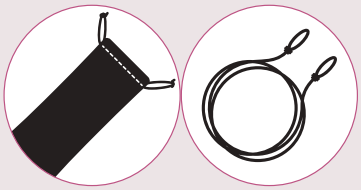
*Available in blue blocker and detectable

FlexGrip™ nasal bridge
- *Optimised comfort*
- *Perfect fit for all body types*

RIMFIRE POLARIZED
RIMFIRE CLEAR
RIMFIRE MIRROR

Polycarbonate frame with matte finish
- *Better comfort and reinforced strength*

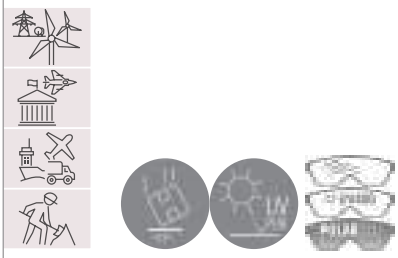
RIMFIRE POLARIZED
RIMFIRE CLEAR
RIMFIRE MIRROR



RIMFIRE POLARIZED
RIMFIRE CLEAR
RIMFIRE MIRROR

RIMFIRE POLARIZED

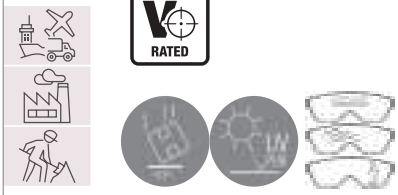
Sport look
Ballistic Vo rated for ballistic protection [Impact according to the military standard MIL-PRF-31013]



Without polarised lenses **Polarised glasses**
- *Reduction of glare and reflections from reflective surfaces (road, water, snow...)*

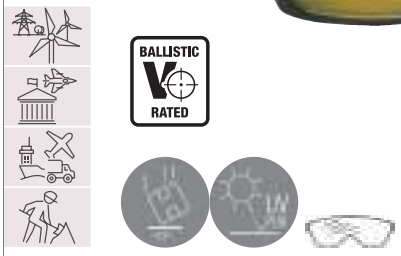
RIMFIRE CLEAR

Sport look
Ballistic Vo rated for ballistic protection [Impact according to the military standard MIL-PRF-31013]



RIMFIRE MIRROR

Sport look
Ballistic Vo rated for ballistic protection [Impact according to the military standard MIL-PRF-31013]

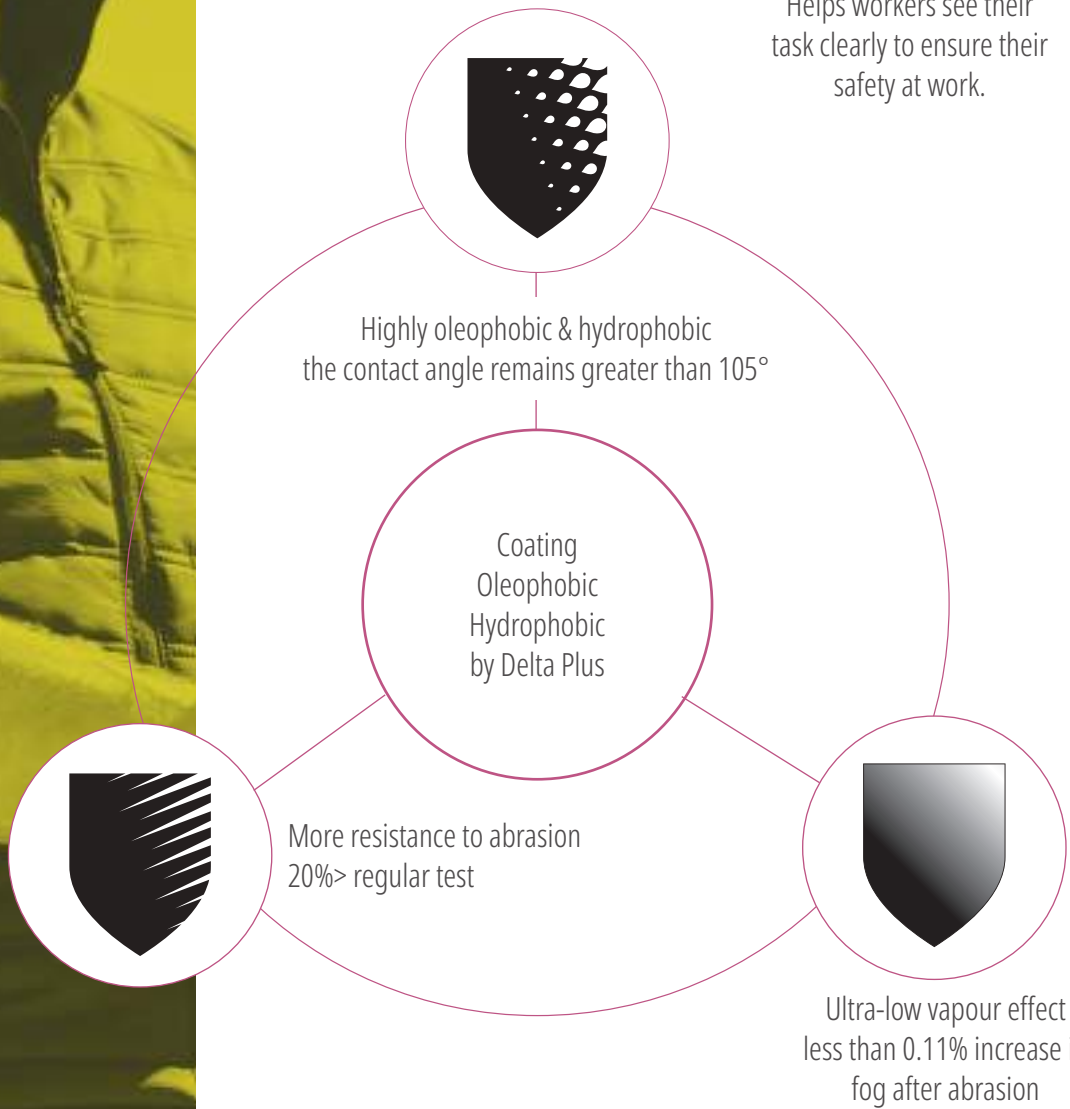


RIMFIRE POLARIZED	Polarized	Polycarbonate glasses. Sport design. Polycarbonate frame with matt finish for better comfort and durability.	CE	EN166 **1 F/F**	EN172 **5-3.1**	ANSI	ANSI Z87.1 **Z87+ U6 L3**	x 100
RIMFIRE CLEAR	Clear				EN170 **2C - 1.2**		ANSI Z87.1 **Z87 + U6**	
RIMFIRE MIRROR	Mirror				EN172 **5-3.1**		ANSI Z87.1 **Z87+ U6 L3**	

*Dirty protective eyewear risks becoming unworn protective eyewear and thus expose the user to a risk. We have developed an innovative **LyViz**™ treatment that keeps the eyepiece cleaner longer and makes it easier to clean.*

***Isabelle Dupuis,** Head Protection Product Expert*

The safety spectacles are always clean thanks to the LyViz™ treatment!



Tilting arms
- *Perfect fit to the shape of the face*

PACAYA CLEAR LYVIZ
PACAYA SMOKE LYVIZ
PACAYA CLEAR STRAP LYVIZ

Removable foam protection
- *Very good sealing in dusty environments*
- *Increased comfort in case of shock*

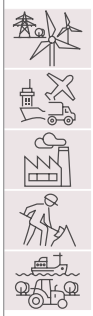
PACAYA CLEAR LYVIZ
PACAYA SMOKE LYVIZ
PACAYA CLEAR STRAP LYVIZ

LyViz treatment : hydrophobic and oleophobic coating
- *Clean eyes guaranteed for longer*
- *Reinforced anti-scratch treatment*

PACAYA CLEAR LYVIZ
PACAYA SMOKE LYVIZ
PACAYA CLEAR STRAP LYVIZ

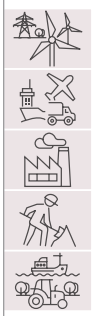
PACAYA CLEAR LYVIZ

LYVIZ™



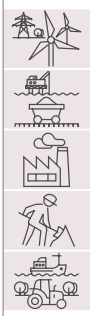
PACAYA SMOKE LYVIZ

LYVIZ™



PACAYA CLEAR STRAP LYVIZ

LYVIZ™



PACAYA CLEAR LYVIZ	Clear	Polycarbonate single lens glasses. Integrated polycarbonate nose piece. Adjustable nylon arms. Side protection.	CE	EN166 **1 FT/FT**	EN170 **UV 2C-1.2**	ANSI	ANSI-ISEA Z87.1 **Z87+ U6**	36 g	x 100
PACAYA SMOKE LYVIZ	Smoke				EN172 **UV 5-3.1**		ANSI-ISEA Z87.1 **Z87+ U6 L3**		
PACAYA CLEAR STRAP LYVIZ	Clear				EN170 **UV 2C-1.2**		ANSI-ISEA Z87.1 **Z87+ U6**	41 g	

Tilting arms
- *Perfect fit to the shape of the face*

PACAYA CLEAR
PACAYA CLEAR STRAP
PACAYA SMOKE
PACAYA T5

Removable foam protection
- *Very good sealing in dusty environments*
- *Increased comfort in case of shock*

PACAYA CLEAR
PACAYA CLEAR STRAP
PACAYA SMOKE

PACAYA CLEAR

PACAYA CLEAR STRAP

Wide elastic and adjustment system
- *Precise adjustment*

PACAYA SMOKE

PACAYA T5

PACAYA CLEAR	Clear	Polycarbonate single lens glasses. Integrated polycarbonate nose piece. Adjustable nylon arms. Side protection.	CE	EN166 **1 FT/FT**	EN170 **UV 2C-1.2**	ANSI	ANSI-ISEA Z87.1 **Z87+ U6**	36 g	x 100
PACAYA CLEAR STRAP								41 g	
PACAYA SMOKE	Smoke				EN172 **UV 5-3.1**		ANSI-ISEA Z87.1 **Z87+ U6 L3**	36 g	
PACAYA T5	Shade 5				EN169 **UV 5**		ANSI-ISEA Z87.1 **Z87+**	32 g	

Delta Plus provides protection at work from head to toe for both women and men

D-PAD technology
- *Optimised comfort*
- *Perfect fit for all body types*

ASO2 CLEAR
ASO2 SMOKE

Bi-material sports section light and comfortable
- *Increased comfort*
- *Very good hold on the head (or on a helmet)*

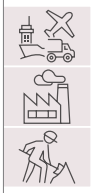
ASO2 CLEAR
ASO2 SMOKE

Curved eyepiece
- *Maximum protection*
- *Extended field of view*

ASO2 CLEAR
ASO2 SMOKE

ASO2 CLEAR
ASO2 SMOKE

ASO2 CLEAR



ASO2 SMOKE

ASO2 CLEAR	Clear	Polycarbonate glasses. Sport design. Polycarbonate/ TPR bi-material flexible arms. Nose piece suitable for all body shapes.	CE	EN166 **1 FT K N /FT**	EN170 **2C-1.2**	ANSI	ANSI-ISEA Z87.1 **Z87+ U6**	28 g	x 100
ASO2 SMOKE	Smoke				EN172 **5-2.5**		ANSI-ISEA Z87.1 **Z87+ U6 L2.5**		

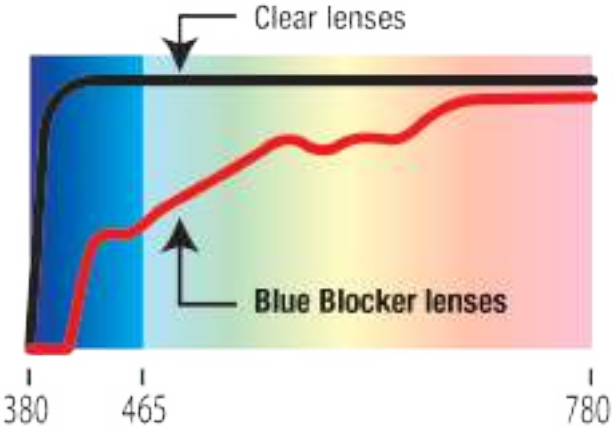
Delta plus considers all possible solutions in concepts and materials to provide the wearer a comfortable fit without pressure points. Helium 2 ensures features such as wearer comfort, protection, functionality and style providing performance in any situation , lightweight and Flexibility are the key features of Helium 2 ! Wear it ! enjoy it !

Isabelle Dupuis, *Head Protection Product Expert*

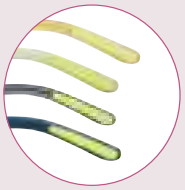
Ideal for demanding workers who do not like to wear heavy and bulky PPE.

Workplaces such as offices, factories, laboratories increasingly illuminate their spaces with LED lights (light emitting diodes). Almost 50% of the global lighting market will be LED.
We all know that exposure to artificial blue light leads to a range of serious health impacts particularly when you spend long hours in front of screens & smartphones

That's why, it is essential to ensure people know the damages of blue light and have easy access to protective solutions and Helium 2 is one of the solutions !



Very light: 18 g
HELIUM 2 BLUE BLOCKER
HELIUM 2 DETECTABLE
HELIUM 2 CLEAR
HELIUM 2 SMOKE



Anti-slip ends
- *Increased comfort*
- *Very good hold on the head (or on a helmet)*

HELIUM 2 BLUE BLOCKER
HELIUM 2 DETECTABLE
HELIUM 2 CLEAR
HELIUM 2 SMOKE

HELIUM 2 BLUE BLOCKER

Eyepiece that filters 65% of blue light to protect the eyes from the harmful radiation from screens
- *Reduction of eye strain*

Extra large field of vision
- *Guaranteed maximum visual comfort*

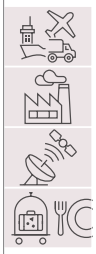
Extra supple sections

HELIUM 2 DETECTABLE

Metallically charged blue frame visually detectable by X-ray and magnetism
- *Suitable for the food industry*

Extra large field of vision
- *Guaranteed maximum visual comfort*

Extra supple sections



HELIUM 2 CLEAR

Extra large field of vision
- *Guaranteed maximum visual comfort*

Extra supple sections

HELIUM 2 SMOKE

Extra large field of vision
- *Guaranteed maximum visual comfort*

Extra supple sections

HELIUM 2 BLUE BLOCKER	Brown	Ultra light polycarbonate single lens glasses. Integrated polycarbonate nose piece. Thin and flexible metal-free frame. Suitable for long duration wear.	CE	EN166 **1 FT/FT**	EN170 **UV 2C-1.4**	ANSI	ANSI-ISEA Z87.1 **Z87+ U6 L1.5**	17 g	x 100
HELIUM 2 DETECTABLE	Blue				EN170 **UV 2C-1.2**		ANSI-ISEA Z87.1 **Z87+ U6 L1.3**	18 g	
HELIUM 2 CLEAR	Clear						ANSI-ISEA Z87.1 **Z87+ U6**	17 g	
HELIUM 2 SMOKE	Smoke				EN172 **UV 5-2.5**		ANSI-ISEA Z87.1 **Z87+ U6 L2.5**		

Extra comfort soft ends

- *Increased comfort*
- *Very good hold on the head (or on a helmet)*

THUNDER CLEAR
THUNDER SMOKE
FUJI2 CLEAR
FUJI2 GRADIENT

THUNDER CLEAR
THUNDER SMOKE
FUJI2 CLEAR
FUJI2 GRADIENT

Without mount in lower part

- *No visual discomfort*

THUNDER CLEAR
THUNDER SMOKE
FUJI2 CLEAR
FUJI2 GRADIENT

Extra flexible TPE nose bridge

- *Optimised comfort*
- *Perfect fit for all body types*

THUNDER CLEAR
THUNDER SMOKE
FUJI2 CLEAR
FUJI2 GRADIENT

THUNDER CLEAR

THUNDER SMOKE

FUJI2 CLEAR

FUJI2 GRADIENT

THUNDER CLEAR	Clear	Ergonomic glasses. Polycarbonate lens. Sports look. Twin material arms. Soft tips. Soft, extra comfort TPE nose piece.	CE	EN166 **1 FT/FT**	EN170 **UV 2C-1.2**		30 g	x 100
THUNDER SMOKE	Smoke				EN172 **UV 5-3.1**			
FUJI2 CLEAR	Clear	Polycarbonate twin lens glasses. Twin material arms. Soft tips. Soft TPE nose piece.			EN170 **UV 2C-1.2**	ANSI ANSI Z87.1 **Z87+**	28 g	
FUJI2 GRADIENT	Gradient				EN172 **UV 5-1.4 : 5-1.7**			

Delta Plus provides protection at work from head to toe for both women and men

IRAYA CLEAR
IRAYA SMOKE
IRAYA YELLOW

Without mount in lower part
- *No visual discomfort*

IRAYA CLEAR
IRAYA SMOKE
IRAYA YELLOW

Extra soft nose bridge
- *Optimised comfort*
- *Perfect fit for all body types*

IRAYA CLEAR
IRAYA SMOKE
IRAYA YELLOW

IRAYA CLEAR

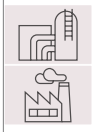
Ultra lightweight frame

IRAYA SMOKE

Ultra lightweight frame

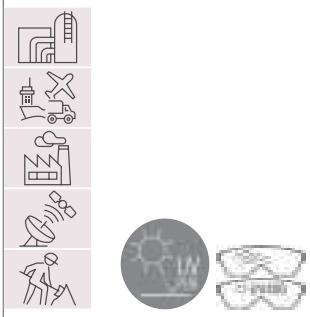
IRAYA YELLOW

Ultra lightweight frame

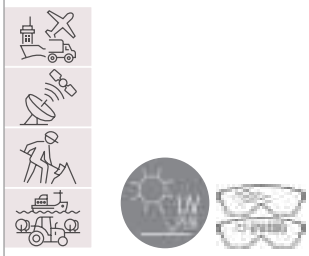


IRAYA CLEAR	Clear	Polycarbonate glasses. Sport design. Polycarbonate frame with matt finish for better comfort and durability.	CE	EN166 **1 FT/FT**	EN170 **UV 2C-1.2**	ANSI	ANSI-ISEA Z87.1 **Z87+ U6**	24 g	x 100
IRAYA SMOKE	Smoke				EN172 **UV 5-3.1**		ANSI-ISEA Z87.1 **Z87+ U6 L3**		
IRAYA YELLOW	Yellow				EN170 **UV 2C-1.2**		ANSI-ISEA Z87.1 **Z87+ U6**		

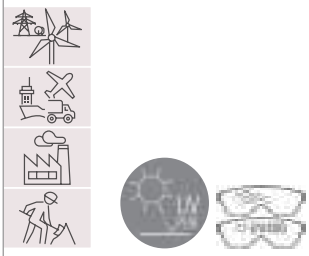
MEIA CLEAR



MEIA SMOKE

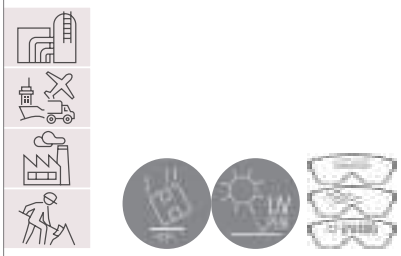


MEIA YELLOW



MILO CLEAR

MILO SMOKE

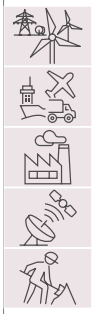


MEIA CLEAR	Clear	Single lens polycarbonate glasses. Integrated polycarbonate nose piece. Polycarbonate arms. Non-slip PVC tips.	CE	EN166 **1 FT/FT**	EN170 **UV 2C-1.2**		22 g	x 100
MEIA SMOKE	Smoke				EN172 **UV 5-3.1**			
MEIA YELLOW	Yellow							
MILO CLEAR	Clear	Single lens polycarbonate glasses. Integrated polycarbonate nose piece. Polycarbonate arms. Metal free: dielectric. Ultra light: 18 g. Ultra flexible.			EN170 **UV 2C-1.2**	ANSI ANSI Z87.1 **Z87+ U6**	18 g	
MILO SMOKE	Smoke				EN172 **UV 5-3.1**	ANSI ANSI Z87.1 **Z87+ U6 L3**		

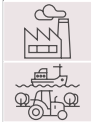
Delta Plus provides protection at work from head to toe for both women and men

LIPARI2 T5

BRAVA2 CLEAR



BRAVA2 YELLOW



BRAVA2 SMOKE

BRAVA2 CLEAR AB

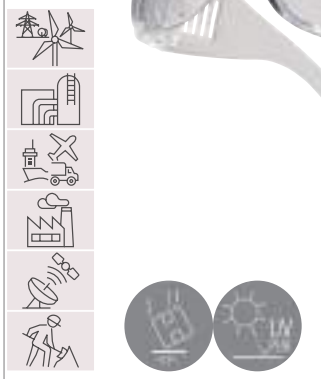
LIPARI2 T5	Shade 5	Polycarbonate single lens glasses. Adjustable and tilting nylon arms. Spatula tips. Integrated TPE nose piece. Side protection.	CE	EN166 **1 FT/FT**	EN169 **UV 5**	ANSI-ISEA Z87.1 **Z87+**	34 g	x 100
BRAVA2 CLEAR AB	Clear	Polycarbonate single lens glasses. Soft flat spatula type arms. Integrated polycarbonate nose piece. Easy to use with safety helmet and ear defenders. Side protection.						
BRAVA2 CLEAR					EN170 **UV 2C-1.2**	ANSI-ISEA Z87.1 **Z87+ U6**	25 g	
BRAVA2 YELLOW	Yellow							
BRAVA2 SMOKE	Smoke				EN172 **UV 5-3.1**	ANSI-ISEA Z87.1 **Z87+ U6 L3**		

KILIMANDJARO CLEAR AB

KILIMANDJARO CLEAR

KILIMANDJARO SMOKE

PITON CLEAR



PITON 2 CLEAR

KILIMANDJARO CLEAR AB	Clear	Polycarbonate single lens glasses. Adjustable nylon arms. Side protection.	CE	EN170 **UV 2C-1.2**	ANSI	ANSI Z87.1 **Z87+**	32 g	x 100
KILIMANDJARO CLEAR								
KILIMANDJARO SMOKE	Smoke			EN172 **UV 5-3.1**				
PITON CLEAR	Clear	Clear polycarbonate single lens glasses. Direct side ventilation. Side protection. Hole in arms for neck cord.		EN166 **1 FT/FT** EN170 **UV 2C-1.2**			44 g	
PITON 2 CLEAR		Polycarbonate single lens glasses. Modern and sport design. Side protection. Open arms for lateral ventilation. Hole in arms for neck cord.					30 g	

Delta Plus provides protection at work from head to toe for both women and men

RUIZ 1 ACETATE

RUIZ 1

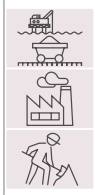
GALERAS CLEAR

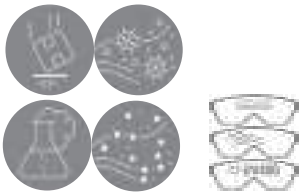
Tilting elastic *(1)*
- *Very good support*

FILM GOGGLE

GALERAS SMOKE

Tilting elastic *(1)*
- *Very good support*





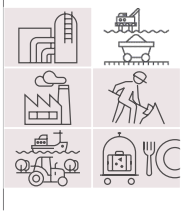
(1)

SAJAMA

Soft frame made of TPE *(1)*
- *Prolonged comfort of use*

Neoprene headband
- *Resistant to chemicals*

PVC free and phthalate free
- *Reduced risk of allergy*



(1)

RUIZ 1 ACETATE	Clear	Clear acetate goggles. Flexible PVC frame. Indirect ventilation with 4 ventilators. Textile elastic strap. Resistant to chemical products splashes.	CE	EN166 **1 FT / 3 FT**			104 g	
RUIZ 1		Clear acetate goggles. Flexible PVC frame. Indirect ventilation with 4 ventilators. Textile elastic strap.		EN166 **1 B / 3 B**		ANSI Z87.1 **Z87**	86 g	
GALERAS CLEAR		Polycarbonate goggles. Indirect ventilation. Flexible PVC and nylon frame. Panoramic screen. Adapted to wear with glasses and disposable respiratory half-mask. Wide elastic strap.		EN166 **1 BT 34 BT**	EN172 **UV 5-3.1**	ANSI - ISEA Z87.1 **Z87+ U6 D3**	104 g	x 60
GALERAS SMOKE	Smoke					ANSI - ISEA Z87.1 **Z87+ U6 L3 D3**		
FILM GOGGLE	Clear	Box of 10 sets of protective film to protect screens of goggles. Each set is made of 3 layers of films.					56 g	×10
SAJAMA	Clear	Clear polycarbonate goggles, indirect ventilation. Antiscratch K and antifog N treatments. TPE flexible frame for long-lasting comfort. Chemicals-resistant neoprene band.		EN166 **1 BT KN 3 4 BT**	EN172 **2C-1.2**	ANSI-ISEA Z87.1 **Z87+ U6 D3 D4**	92 g	x 60

Welding

	 **BARRIER2** EN166 / EN175 / EN379	 **SCREEN** EN166 / EN175 / EN379	 **CASOUD2HE** EN166 / EN169 / EN175	 **CASOUD3** EN166 / EN169 / EN175
	 **LIPARI2 T5** EN166 / EN169	 **PACAYA T5** EN166 / EN169		

WELDING	MMA	MIG	MAG	TIG	TORCH	PLASMA	LASER
Process	Electric arc + Electrode			Electric arc + Electrode Tunsten	Torch flame	Electric arc + Electrode	Laser ray
Gas supply	No	Inert protective gas (Argon or Helium)	Active protective gas (Argon/CO_2 or Argon/Oxygen)	Neutral gas (Argon)	Fuel gas (acetylene, propane, butane or methane) + Combustion gas (oxygen - hydrogen or natural gas)	Argon (principal) + Hydrogen or Helium (annular)	No
	3 500°C to 7 000°C			**3 500°C**	**3 150°C**	**15 000°C to 25 000°C**	
Metal supply	Yes (melting electrode)	Yes (metal coil)		Yes (Filler metal rod)	Yes	Non	No
Example of jobs using these process	Craftsmen, locksmiths, metal workers, coachbuilders	Steel structure, boilermaking, metalwork / ironworks, railway and naval construction		Boilermaking, metalwork / ironworks	Plumbers, heating engineers, cold storage, locksmiths	Aeronautics, light and pharmaceutical Industry	Light and pharmaceutical Industry
Materials	Steel, stainless steel, cast iron, aluminum	Pure steel or weakly alloyed*	Stainless steel and copper alloy*	All type of metals (except light aluminum alloy*)	Copper, tin, brass, aluminum, zinc	Steels, stainless steel, aluminum and alloy*	Metals and plastics
Thickness	2 mm to 10 mm	0,5 mm to 10 mm		0,3 mm to 6 mm	Less than 2 mm	Micro plasma : 0,01 to 1 mm Plasma : 1 to 3 mm Unblocking spray plasma: 3 mm to 8 mm	2 mm to 8 mm
Features	Economical and good quality welding	High speed, regular and good quality welding bead		"Clean" welding, very high quality, slow process	Easy to settle, stand alone device. Easy to learn but average aspect.	Quality welding (fine and precise). Possibility of automatic process but rather slow. + Possibility to cut pieces	"Clean" and very high quality but expensive welding process + Cut of pieces in large series

* An alloy is the combination of a metallic element with one or several other chemical elements by melting, with the aim of modifying the mechanical properties of the basic metal.
Examples of known alloys :
- Cast iron: iron + carbon (between 2,1 and 6,7 % in carbon mass)
- Steel: iron + carbon (less than 2,1 % in carbon mass)
- Brass: copper + zinc / Bronze: copper + tin

BARRIER 2

High performance optical class *(1)*
- *Less visual fatigue*

Field of view 100 x 67 mm *(2)*
- *Guaranteed maximum visual comfort*

4 independent sensors *(3)*
- *Increased product reactivity in all positions and in confined spaces*

Settings : sensitivity, hue selection, switching time *(4)*
- *Guaranteed user comfort for all TYPEs of welding*

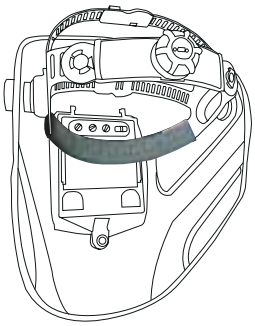
Replaceable exterior protection screen *(5)*
- *Easy replacement of damaged screens*

Replaceable batteries (CR2032) + Low battery indicator *(6)*
- *Increased longevity*

Grinding/soldering mode
- *2 applications for a single product*

BARRIER PLATE 2

BASWELD



BARRIER 2	Black-Grey	Helmet for electric arc welding with self-obscuring screen. Can be used for MIG, MAG, TIG and plasma welding requiring 9 to 13 shade protection. Can be used in shade 5 to 9 for low intensity or flame welding. Can be used for grinding in shade 4.	CE	EN166 **1 B** — EN379 **1/1/1/2 / 4/5-9/9-13**; EN175 **B**	ANSI ANSI-ISEA Z87.1 **Z87 W4/5-9/9-13**	500 g	x 6
BARRIER PLATE 2	Clear	Pack of 5 exterior spare screens for BARRIER 2 helmet in polycarbonate.				38 g	x 100
BASWELD	Black	Bag of 10 sweat bands for BARRIER 2 and SCREEN welding shields.				5 g	x 20

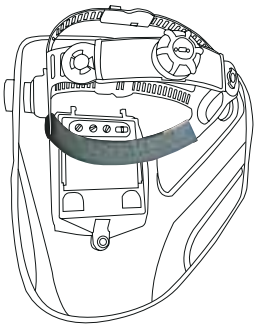
SCREEN

High performance optical class *(1)*
External adjustment of the shade *(2)*
‣ *One-handed adjustment with or without gloves*
Replaceable batteries (CR2032) *(3)*
‣ *Increased longevity*

(1) *(2)* *(3)*

SCREEN PLATE

BASWELD



SCREEN	Black	Helmet for electric arc welding with self-obscuring screen. Can be used for MIG, MAG, TIG and plasma welding requiring 9 to 13 shade protection.	CE	EN166 **1 F**	EN379 **1/1/1/2 / 4/9-13** EN175 **F**	ANSI ANSI-ISEA Z87.1 **Z87 W4/9-13**	474 g	x 6
SCREEN PLATE	Clear	Pack of 5 exterior spare screens for SCREEN helmet in polycarbonate.					14 g	x 150
BASWELD	Black	Bag of 10 sweat bands for BARRIER 2 and SCREEN welding shields.					5 g	x 20

Delta Plus provides protection at work from head to toe for both women and men

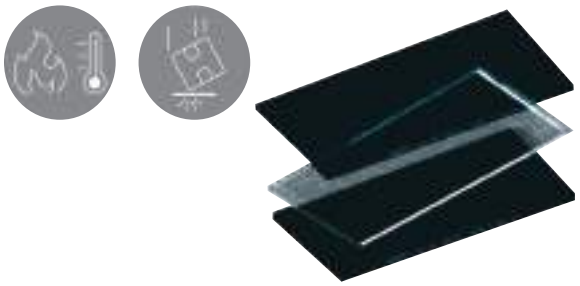
CASOUD2HE

Black	Polypropylene welding face shield, to be used on safety helmets. For all types of welding that requires shade 11 protection. Sold ready to use: fixed screen equipped with one clear polycarbonate filter (FILTER-IN), flip-up screen equipped with one shade 11 filter (FILTER-11), protected by one clear polycarbonate filter (FILTER-IN). Dimensions of the filters: 108 x 51 mm.	CE	EN166 **1F/S** EN169 **11** EN175 **S**	304 g	x 10

CASOUD 3

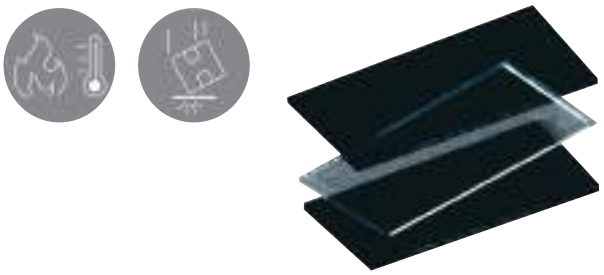
Black	Helmet for all types of welding that requires shade 11 protection. Headband. Sold ready to use: fixed screen equipped with one clear polycarbonate filter (FILTER-IN), flip-up screen equipped with one 11 filter (FILTER-11), protected by one clear polycarbonate filter (FILTER-IN). Dimensions of the filters: 108 x 51 mm.	CE	EN166 **1F/F** EN169 **11** EN175 **F**	415 g	x 6

FILTER-IN



Clear	Pack of 5 clear polycarbonate filter, 108 x 51 mm. to be fitted on CASOUD3 welding helmet and CASOUD2HE welding shield. Thickness: 1,8 mm.	CE	EN166 **1F/F**	140 g	x 20

FILTER 11



Green	Pack of 5 shade 11 mineral filter, 108 x 51 mm. to be fitted on CASOUD3 welding helmet and CASOUD2HE welding shield. Thickness: 3 mm.	CE	EN166 **1** EN169 **11**	240 g	x 20

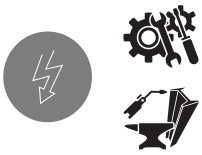
PACAYA T5

Shade 5	Polycarbonate single lens glasses. Integrated polycarbonate nose piece. Adjustable nylon arms. Side protection.	CE	EN166 **1 FT/FT** EN169 **UV 5**	ANSI ANSI-ISEA Z87.1 **Z87+**	32 g	x 100

LIPARI2 T5

Shade 5	Polycarbonate single lens glasses. Adjustable and tilting nylon arms. Spatula tips. Integrated TPE nose piece. Side protection.	CE	EN166 **1 FT/FT** EN169 **UV 5**	ANSI ANSI-ISEA Z87.1 **Z87+**	34 g	x 100

Visor

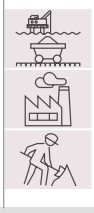
	 **VISOR H** EN1731 / EN166	  **VISOR HOLDER** EN1731 / EN166	  **VISOR U** EN166
 **VISOR FLASH** EN170 **UV 2C-1.7** / EN166		 GS-ET 29 **1FT 8-1-1**	 GS-ET 29 **1FT 8-2-1** ASTM **F2178** (14 CAL/CM²)
 **VISOR TORIC** EN170 **UV 2C-1.2** / EN166	 **1 AT 389**	 **1 AT 389**	 **1 AT 389**
 **VISOR TORIC T5** EN169 **5** / EN166	 **1 AT 39**	 **1 AT 39**	 **1 AT 39**
VISORPC EN166	 **BALBI2** EN166 **1 BT 3**	 **1 BT 3**	
 **VISORG** EN1731 **F**	 **PICO2** EN1731 **F/F**	 **F**	

Delta Plus provides protection at work from head to toe for both women and men

VISOR HOLDER
Compatible with earmuffs

VISOR-H

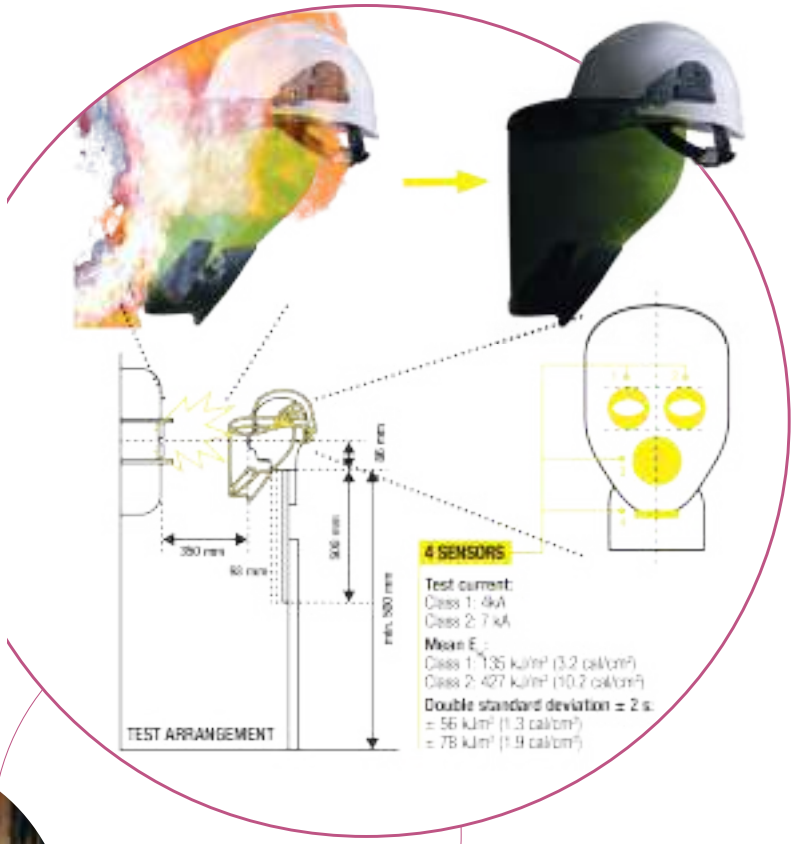
VISOR-U



VISOR HOLDER	Black	Faceshield holder suitable for ZIRCON, QUARTZ and BASEBALL DIAMOND safety helmets. To combine with VISORPC, VISORG, VISOR-TORIC and VISOR FLASH visors, universal fixing.	CE	EN166 **3 BT** **389 AT** EN1731 **F** GS-ET 29 **8-1 FT**	ANSI ANSI-ISEA Z87.1 **Z87+ D3**	86 g	x 20
VISOR-H	Grey	Faceshield with front protection. Innovative adjustable ROTOR system: head sizes 53 to 63 cm.		EN166 **3 BT** **389 AT**		180 g	x 25
VISOR-U	Black	Dielectric faceshield holder suitable for safety helmets and visors.		EN166 **389 AT** GS-ET 29 **8-2 FT**	ANSI ANSI-ISEA Z87.1 **Z87+**	86 g	x 100

Protecting the face against the risk of electric arcs adapted to DELTA PLUS safety helmets*
* except Granite / Diamond VI range

What is an Arc Flash ?
It is a short circuit that bursts from a live conductor exposed to another or to the ground, resulting in a large electrical discharge driven by the ambient air. The phenomenon ionises the air, which becomes almost as conductive as metal. This sudden and massive energy release is like an explosion, generating temperatures that can reach 20,000°C locally. That is 4 times hotter than the surface of the sun. This immense energy can melt and vaporise metals and other materials almost instantly, blowing them with hot gases in the immediate vicinity, destroying the electrical equipment involved and causing injuries to people working nearby.



What causes a Arc Flash ? Usually limited to electrical systems larger than 480 volts, an Arc Flash may be caused by improper handling or by components such as switches, terminating conductors, fuses, circuit breakers, relay contacts, bus-bars or other defective components. Particularly due to poor maintenance, humidity, dust and corrosion for example.
Where to start ? It is important to systematically conduct a risk analysis of the equipment and the workstation before any operation ! This analysis must be carried out by a qualified person and makes it possible to evaluate the level of risk and the equipment necessary for the intervention, in particular the choice of Personal Protective Equipment.

Who may be exposed ? Industrial electricians and technicians in distribution or electrical maintenance.

What are the effects ?
Rapid release of energy and heat : a fireball exploding toward the outside that can cause irreversible burns.
Blinding light.
Shockwave : a blast that strikes violently in a frontal way.
Sound wave : hearing disorders and acoustic trauma.
Sudden spraying of molten metals and incandescent shrapnel in all directions.

*The visors on the market were very cumbersome with imposing chin protectors that bothered workers. The **VISOR FLASH** has been designed for ease of use. An essential point was the mobility of the user during his tasks. The chin protector has been modified three times until we got the best combination of protection and freedom of movement of the head. The curved design at the bottom of the chin guard helps deflect the arc explosion and rests comfortably on the torso during work. In addition, we have retained excellent lateral protection while reducing the overall weight of the visor. Simultaneously with **VISOR FLASH**, we created the VISOR-U Visor Holder, moving the pivot point further back on the worker's safety helmet. This lightweight combination makes **VISOR FLASH** more acceptable and makes it easier to use in an already challenging work environment.*
***Rick Rustello,** Arc Flash Specialist*

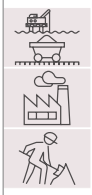
VISOR FLASH

Protection : 14cal/ cm² (ASTM)
- *Maximum protection from electric arcs*

Curved chin protector *(1)*
- *No discomfort in the user's movements*

Light green shade provides 55% visible light transmission
- *Preserved colour perception*
- *Elevated perceived brightness*

(1)

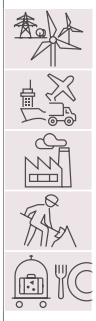


VISOR TORIC CLEAR

Marking (EN170)
2C-1,2 = UV resistance *(1)*
Anti-scratch
- *Increased lifespan*

Spherical visor
- *Extra large field of vision*

Injected polycarbonate
- *Maximum impact resistance*

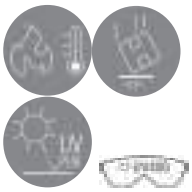


(1)

VISOR TORIC T5

Marking (EN169)
5 = UV and IR resistance
Spherical visor
- *Extra large field of vision*

Injected polycarbonate
- *Maximum impact resistance*



VISORPC

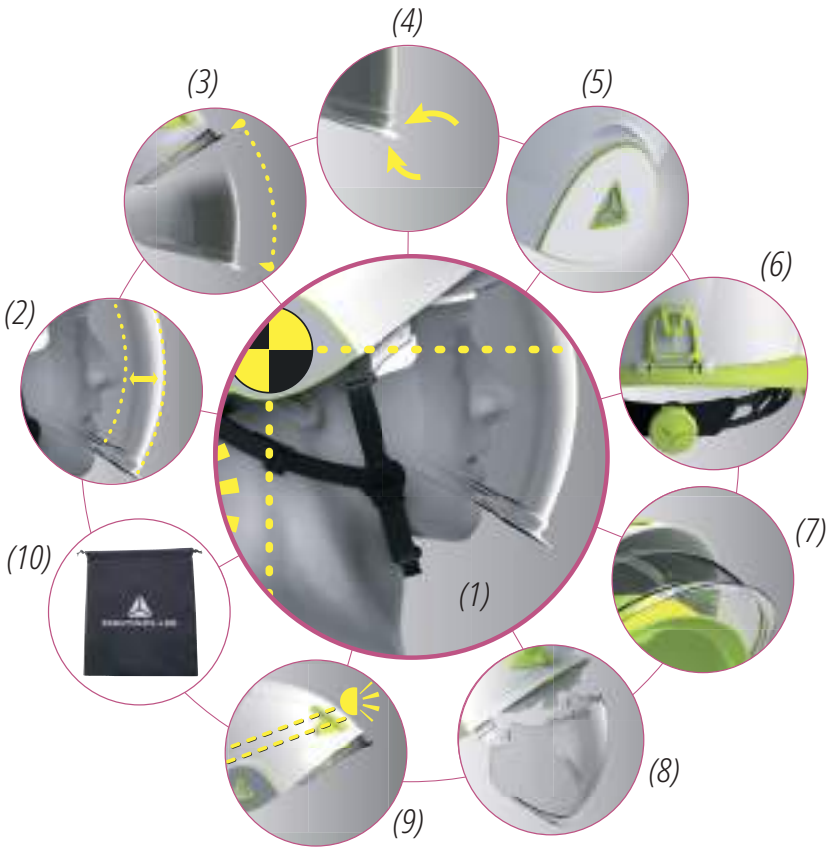
VISOR FLASH	Green	Polycarbonate injected visor, against electric arc and thermal risk. Green shade for better transmission o f light.	CE	**EN166 1 FT 8 EN170 UV 2C-1.7**	GS-ET 29 **VISOR-U 8-2-1 VISOR-HOLDER 8-1-1 CLASS:VISOR-U:2 VISOR-HOLDER:1**	ASTM F 2178-12 **14 cal/cm² 1+2** ANSI Z87.1 **Z87+ U6 L1.7**	230 g	×25
VISOR TORIC CLEAR	Clear	Polycarbonate injected visor. Thickness 1,9/2,0 mm. Electric Arc protection. Universal fixing. Suitable for faceshield holder VISOR HOLDER, VISOR-H, VISOR-U. 39 x 20 cm.		EN166 **1AT 89** EN170 **UV 2C-1.2**		ANSI-ISEA Z87.1 **Z87+ U6 D3**	162 g	x 20
VISOR TORIC T5	Green Shade 5			EN166 **1 AT 9** EN169 **UV 5**		ANSI-ISEA Z87.1 **Z87+ U6 W5 D3**	170 g	
VISORPC	Clear	Pack of 2 clear polycarbonate visors with plastic edge. Universal fixing. Suitable for BALBI2, PICO2, VISOR-H and VISOR HOLDER faceshield holder. 39 x 20 cm.		EN166 **1BT**		ANSI - ISEA **Z87.1** Z87+D3	100g	

A modern design inspired by the world of sport offering dual protection for harsh work environments and electric hazards at a price accessible to all users.

EUROPEAN STANDARD : EN166 - 8
GS-ET 29
Class 1 : 4 kA - 155 kJ.m^{-2}
(3.7 cal.cm^{-2})

The challenge in the development of ***ONYX*** *was to obtain a compact and easy to use product while keeping a comfortable distance between the face and the visor in low position. We managed this with an average of over 2 cm between the user's nose and the visor. The simplicity of use is at the meeting: no spring or complicated locking system for the kinematics of the visor.*

Isabelle DUPUIS,
Head Protection Product Expert



ONYX

Integrated visor
- *Compact and combined solution*

Balanced centre of gravity *(1)*
- *For a prolonged use*
- *Reduction of musculoskeletal disorders (MSDs)*

Comfortable distance between the visor and the user's face *(2)*
- *Good ventilation, prevents fogging*
- *Compatible with glasses*

Easy locking of the visor in two positions *(3)*
- *Optimum safety : The visor does not rise or fall unexpectedly*

Optimised visor grip area *(4)*
- *Guaranteed use and manoeuvrability with or without gloves*

Lateral reflectivity *(5)*
- *For more visible workers*

One-D Rotor ergonomic clamping system *(6)*
- *One-handed adjustment with or without gloves*

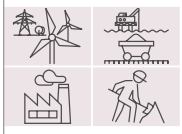
ABS double shell *(7)*
- *Improved robustness, resistance to lateral deformation: increased protection*

Replaceable visor *(8)*
- *Easy replacement of damaged visors*

Clips to hold a headlamp *(9)*
- *Designed to attach a headlamp with an elastic headband*

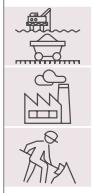
Polyamide cap : 3 textile headbands with 6 attachment points and adjustable headband in high or low position
- *Better weight distribution in the case of shock and guaranteed user comfort*

Microfibre storage bag *(10)*
- *Easy storage for a longer product life*



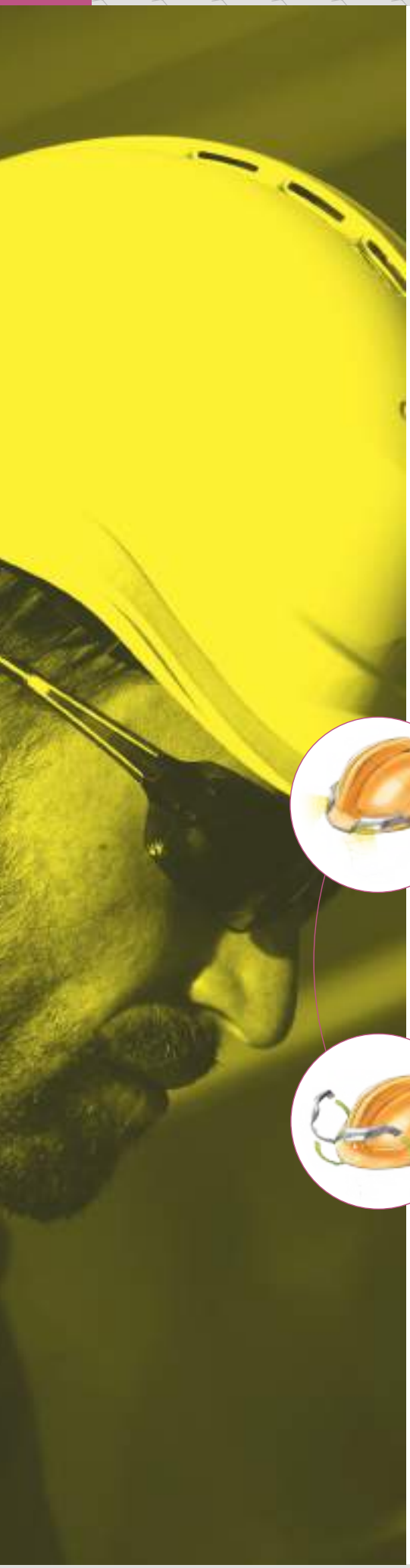
DYNAMIC JUGBETA

VISONYXPR



HARNESS O

ONYX	White	ABS dual shell safety helmet with PC retractable visor. Sport and dynamic design. 3 textile straps with 6 fixing points. Foam sweat band. One-D Rotor clamping system: head size 53 to 63 cm. 2 possible positions of the headband (top/low) for a better comfort. Retro-reflective stickers. Electrical insulation up to 1 000 V.A.C. or 1 500 V.D.C, protection against arc fault Class 1 (GS-ET 29). Visor with anti-Fog N and anti-scratch K treatments and protection against electrical arcs, and molten metals or hot liquids projections.	CE	EN397 **MM LD -20°C +50°C 440VAC** EN50365 **CLASS 0**	EN166 **1 AT 8 9 KN 3 8 9 AT** EN170 **2C-1.2**	GS-ET 29 **8-1-0 CLASS 1 CLASS 0 8-1**	ANSI	ANSI-ISEA Z87.1 **Z87+ U6 D3** ANSI-ISEA Z89.1 **TYPE 1 CLASS E 53-63 cm**	774 g	x 6
VISONYXPR	Clear	Spare polycarbonate injected visor for double-shell ONYX helmet.	CE		EN166 **1 AT 8 9 KN 3 8 9 AT** EN170 **2C-1.2**	GS-ET 29 **8-1-0 CLASS 1 CLASS 0 8-1**	ANSI	ANSI-ISEA Z87.1 **Z87+ U6 D3**	134 g	x 20
HARNESS O	Black	Bag of 6 spare harnesses for ONYX safety helmet. Textile lining, foam sweat band, adjustement with One-D Rotor knob system.							70 g	x 10



The Iconic helmet in construction and industry with its One size design.

The lines underline the sporting kinship and make the helmet stand out in the competition while respecting the codes of the construction helmet.

Inspiration: Baseball Cap
Casual Textile Look

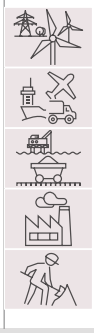
DIAMOND V

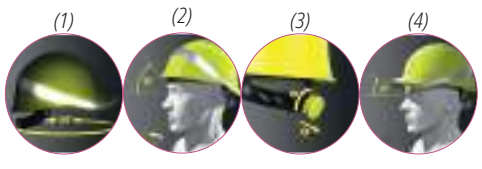
Neon colours and silver band *(1)*
- *To be better seen at your workstation*

Also certified for reverse wearing *(2)*
- *Maximum field of vision without visor*

One-D Rotor ergonomic clamping system *(3)*
- *One-handed adjustment with or without gloves*

Very curved visor *(4)*
- *Best field of view at height*





DIAMOND V	Grey-Yellow White Blue Yellow Black Orange Red Green	ABS safety helmet. Innovative "baseball cap" shape to improve vision when looking up. Also tested for front to back wearing, to reduce encumbrance. Polyamide cradle: 3 textile straps with 8 fixing points. Foam sweat band. Innovative button adjustment "colour to colour" for head size 53 to 63 cm. 2 possible positions of the headband (top/low) for a better comfort. Electrical insulation up to 1000 V.A.C. or 1 500 V.D.C.	CE	EN397 **MM LD** **-30°C** **+50°C** **440 VAC**	EN50365 **CLASS 0**	404 g	x 20

QUARTZ UP IV

Adjustable ventilation *(1)*
- *Optimised ventilation*

One-D Rotor ergonomic clamping system
- *One-handed adjustment with or without gloves (2)*

2 positions of the high and low head circumference
- *Suitable for all body shapes*



QUARTZ UP III

One-D Rotor ergonomic clamping system
- *One-handed adjustment with or without gloves (1)*

2 positions of the high and low head circumference
- *Suitable for all body shapes*



SUPER QUARTZ

Button tightening *(1)*
- *Easy adjustment with a simple push*

Tested on impact and penetration at extreme temperatures + 150°C/-30°C *(2)*
- *Especially for the steel industry trades*

Shell in ABS-PC
- *Resistance to extreme temperatures +150°C/-30°C*


QUARTZ I


ZIRCON 1


QUARTZ UP IV	White Blue Yellow Orange Red Green	Ventilated UV-resistant high density polypropylene (PP) safety helmet. Polyamide cradle: 3 textile bands with 8 fixing points. Foam sweat band. Innovative adjustable ROTOR system: head sizes 53/63 cm. 2 possible positions of the headband (high/low) for better comfort.	CE	EN397 **MM -30°C +50°C**	350 g	x 40
QUARTZ UP III		UV-resistant high density polypropylene (PP) safety helmet. Polyamide cradle: 3 textile bands with 8 fixing points. Foam sweat band. Innovative adjustable ROTOR system: head sizes 53/63 cm. 2 possible positions of the headband (high/low) for better comfort. Electrical Insulation up to 1000 V.A.C. or 1 500 V.D.C.		EN397 **MM -30°C +50°C 440VAC** EN50365 **CLASS 0**	350 g	
SUPER QUARTZ	White	ABS-PC safety helmet. Polyamide cradle: 3 textile bands with 8 fixing points. Foam sweat band. Innovative button adjustment "colour to colour" for head sizes 53/63 cm. 2 possible positions of the headband (high/low) for better comfort. Electrical Insulation up to 1 000 V.A.C. or 1 500 V.D.C.		EN397 **MM LD -30°C +150°C 440VAC** EN50365 **CLASS 0**	410 g	
QUARTZ I	White Blue Yellow	Ventilated UV-resistant high density polypropylene (PP) safety helmet. Polyethylene cradle: 8 fixing points. Sweat band. Manual adjustment: head sizes 53/63 cm. 2 possible positions of the headband (high/low) for better comfort. Helmet with adjustable ventilation.		EN397 **-10°C +50°C** EN50365 **CLASS 0**	322 g	
ZIRCON 1	Green White Blue Grey	UV-resistant high density polyethylene (HDPE) or polypropylene (PP) safety helmet. Low density (LDPE) polyethylene cradle with 8 fixing points. Sweat band. Manual adjustment: head sizes 53/63 cm. Electrical Insulation up to 1 000 V.A.C. or 1 500 V.D.C. Standard holes for accessories. Anchorage for chin straps with 2 or 4 points.		EN397 **-10°C +50°C 440VAC**	330 g	

Delta Plus provides protection at work from head to toe for both women and men

AIR COLTAN

Rear tightening *(1)*
‣ *Easy adjustment*
Bi-material *(2)*
Polyethylene shell with 18 holes *(3)*
‣ *Ventilation*
Ventilated Mesh fabric *(4)*
‣ *Reduction of perspiration*
Assorted colours available to match the MACH 2 CORPORATE - PANOSTYLE HV clothing range

COLTAAIJAFL - 7 cm

COLTAAIBMSH - 5 cm

COLTAAIBM - 7 cm

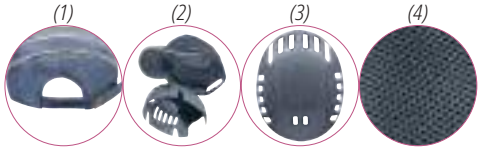
COLTAAIGRMI - 3 cm

COLTAAIGR - 7 cm

COLTAAINOMI - 3 cm

COLTAAINOSH - 5 cm

COLTAAINOLG - 7 cm



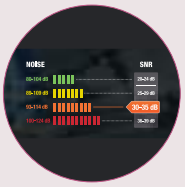
AIR COLTAN	Fluorescent yellow-Grey Black-Red Grey-Yellow Navy blue-Orange	Impact resistant baseball style bump cap. Highly ventilated. Polyurethane coated polyester with mesh fabric on top part for more comfort. Lined with polyethylene and comfortable EVA foam shell to absorb shocks. Adjustable size by buckle 55/62 cm.	CE	EN812	176 g	x 20

Double headband
- *Greater flexibility and comfort*

INTERLAGOS
INTERLAGOS FOLDABLE

Ear defenders holder tool included on the belt
- *Hearing protection always at your fingertips*

INTERLAGOS
INTERLAGOS FOLDABLE



Colour according to the Delta Plus SNR scale
- *For an easier selection of the most suitable protection!*

INTERLAGOS
INTERLAGOS FOLDABLE

MAGNY COURS 2

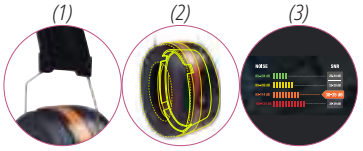
Metallic structure headband *(1)*
- *Lightweight and robust, resists bending and twisting*

Air-Room multi-shell attenuation technology *(2)*
- *High performance level*

Colour according to the Delta Plus SNR scale *(3)*
- *For an easier selection of the most suitable protection!*

Padded cushions in synthetic foam and PU coating
- *Utmost comfort*

SNR 33 dB



MAGNY HELMET 2

Universal Fit *(1)*
- *Easy assembly on all our safety helmets*

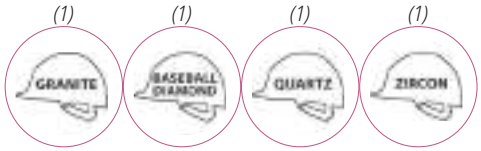
Metallic fork *(2)*
- *Lightweight and robust, resists bending and twisting*

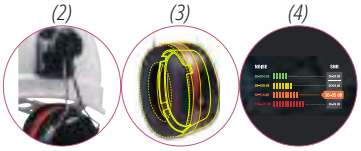
Padded cushions in synthetic foam
- *Utmost comfort*

Air-Room multi-shell attenuation technology *(3)*
- *High performance level*

Colour according to the Delta Plus SNR scale *(4)*
- *For an easier selection of the most suitable protection!*

SNR 30 dB





INTERLAGOS

HV colour
- *To be better seen at your workstation*

SNR 30 dB

SPA 3

SNR 23 dB

MAGNY COURS 2	Black	Ear defenders with ABS cups. Pads filled with synthetic foam. Metallic headgear: external in textile/internal in EVA/PVC material, adjustable in height, very comfortable. High performance level.	CE	EN352-1 **SNR 33 dB H 34 M 32 L 25 S/M/L**	ANSI	ANSI S3.19 **NRR 26 dB**	338 g	x 20
MAGNY HELMET 2	Black	Ear defenders for safety helmets. Adjustable in height. Metallic arms and ABS cups padded with synthetic foam. Can be used on their own or with VISOR HOLDER faceshield holder. Suitable for ZIRCON, QUARTZ, GRANITE and BASEBALL DIAMOND safety helmets.	CE	EN352-3 **SNR 30 dB H 32 M 28 L 22 S/M/L**	ANSI	ANSI 3.19 **NRR 25 dB**	286 g	x 20
INTERLAGOS	Grey Fluorescent Yellow Fluorescent Orange	Ear defenders with ABC cups. Pads filled with synthetic foam. Double plastic headband (POM), adjustable in height, with soft reinforcement for a better comfort.	CE	EN352-1 **SNR 30 dB H 30 M 28 L 20 S/M/L**	ANSI	ANSI S3.19 **NRR 28 dB**	286 g	x 20
SPA3	Blue - Black	Ear defenders with polystyrene (PS) and synthetic foam cups, ABS headband, adjustable in height. Low pressure pads.	CE	EN352-1 **SNR 23 dB H 24 M 20 L 13 S/M/L**	ANSI		155 g	× 50

CONIC DISPLAY

Colour according to the Delta Plus SNR scale *(1)*

‣ *For an easy selection of the most suitable protection!*

CONIC500 refill

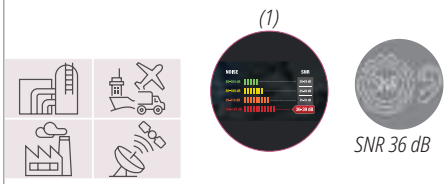
Attachment system included

‣ *Attaches to the wall or sits*

CONIC500

Colour according to the Delta Plus SNR scale *(1)*

‣ *For an easy selection of the most suitable protection!*

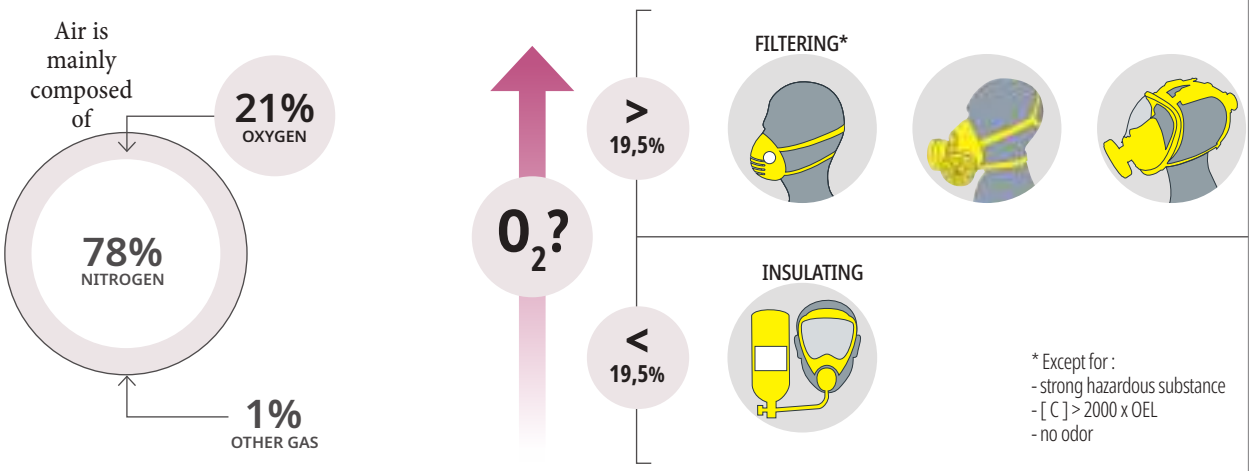


CONIC DISPLAY	Grey	Dispenser for earplugs including a refill of 500 pairs of CONIC500 earplugs.	CE	EN352-2 **SNR 36 dB H 34 M 34 L 31 Ø 7-12 mm**	x 4
CONIC500	Red	Box of 500 pairs disposable polyurethane earplugs. Refill unit for CONICDISPLAY.	ANSI	ANSI S3.19 **NRR 33 dB**	x 5

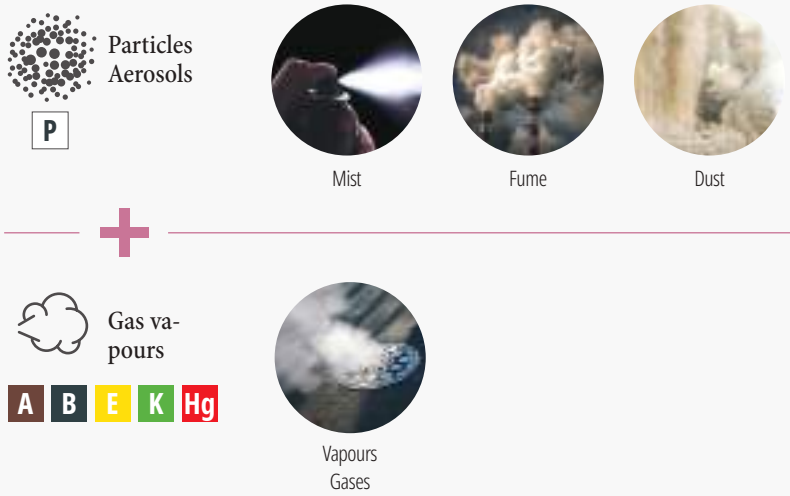
Delta Plus provides protection at work from head to toe for both women and men

Step 1: O_2 or not O_2?

CHEM D-FINDER
http://respiratory.deltaplus.eu



Step 2: Identify the type of risk



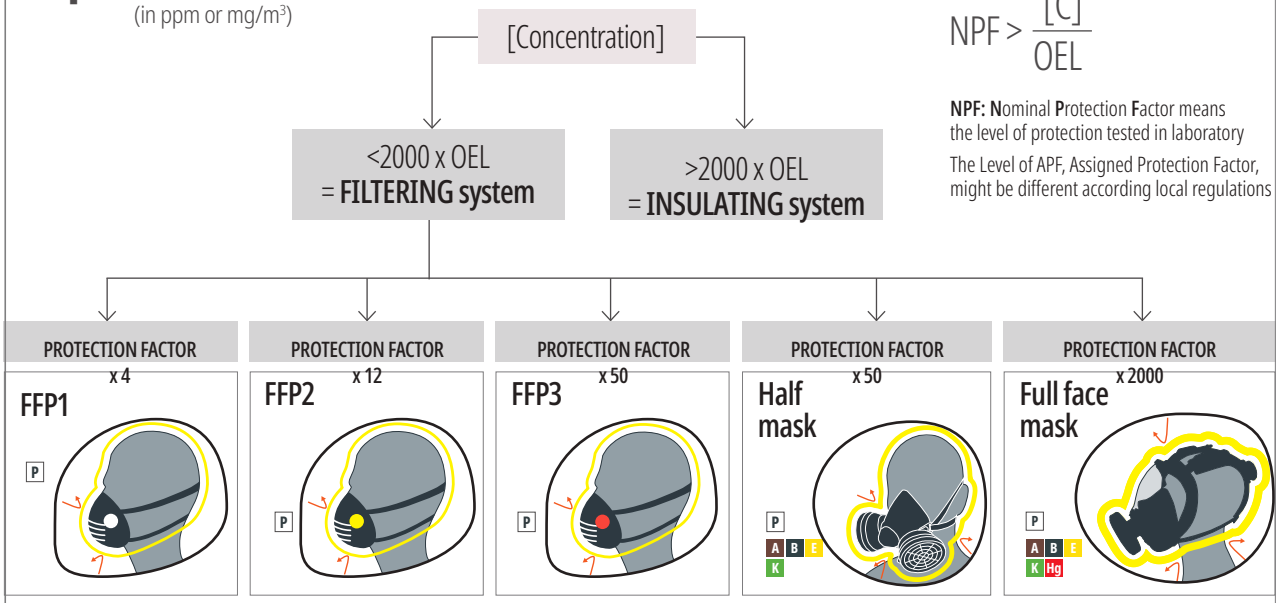
OEL
OCCUPATIONAL EXPOSURE LIMIT

TWA
TIME WEIGHTED AVERAGE
Average exposure limit over an **8 hour** time period

STEL
SHORT TERM EXPOSURE LIMIT
Should not be longer than **15 minutes**
Should not occur more than 4 times per day with at least 60 minutes between exposures

Step 3: Concentration

(in ppm or mg/m³)



$$NPF > \frac{[C]}{OEL}$$

NPF: Nominal **P**rotection **F**actor means the level of protection tested in laboratory

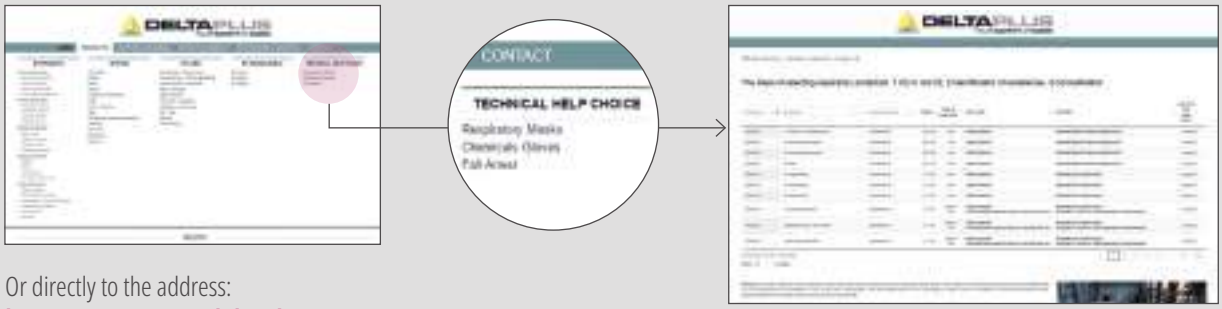
The Level of APF, Assigned Protection Factor, might be different according local regulations

Reusable respiratory protection

			Gas Vapours A B E K Hg — EN14387	Particles Aerosols P — EN143/A1
EN136	 **M9200 - ROTOR GALAXY** ‣ *Rotor® registered mark* ‣ *Adjustable size* ‣ *Wide vision (210C°)*	 **M9300 - STRAP GALAXY** ‣ *Adjustable size* ‣ *Wide vision (210°)* ‣ *To be used with helmet*	On request: **M9000E AX** **M9000E AXP3** **M9000E ABE2** **M9000E ABE2P3** **M9000E ABEKHgP3** **M9000E K2** **M9000E K2P3** **M9000E A2B2** **M9000E A2B2P3** **M9000E B2P3** **M9000E E2** **M9000E E2P3**  **M9000E A2** **M9000E A2B2E2K2** **M9000E A2P3** **M9000E A2B2E2K2P3** x4	 **M9000 P3**
EN140	 **M6400 - JUPITER** ‣ *Comfort half mask PP/TPE* ‣ *Elastic straps and harness* ‣ *2 filter cartridges*	 **M6200 - JUPITER** ‣ *Comfort half mask in tri-material* ‣ *Elastic straps* ‣ *2 filter cartridges*	 x2 **M6000E A2** **M6000E A1B1E1K1** **M6000 A1** **M6000 A2** **M6000 A1B1E1K1**	**M6000E PREP2** **M6000 P2** **M6000E PREP3** **M6000 P3** **M6000 PREP3** **M6000 P2CLIP**
	 **M6300 - JUPITER** ‣ *Comfort half mask PP/TPE* ‣ *Elastic straps and harness* ‣ *1 filter cartridge* ‣ *Available out of Europe*	**M6100 - JUPITER** ‣ *Comfort half mask in tri-material* ‣ *Elastic straps* ‣ *1 filter cartridge*	**M6000 A1**  x2	**M6000 PREP3** **M6000 P2** **M6000 P3** **M6000 P2CLIP**

Advice: Change the filter after each use, or quicker if the atmosphere is polluted, humid and the air flow (or breathing) is high.

Consult our help with choice tool to guide you in your search, from our home page
www.deltaplus.eu > *PRODUCTS* menu > *TECHNICAL SUPPORT* section > *Respiratory masks*



Or directly to the address:
http://respiratory.deltaplus.eu

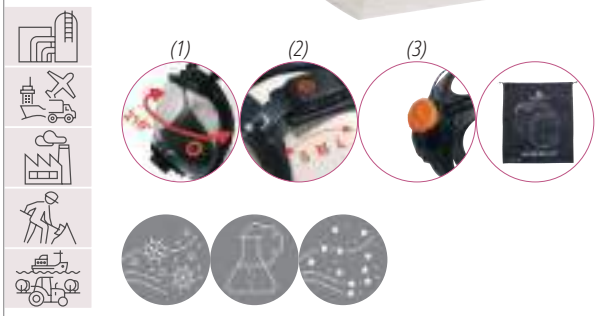
M9200 - ROTOR GALAXY

Extra large field of vision (210°) *(1)*
- *Guaranteed maximum visual comfort*

Adjustable size S/ M/ L *(2)*
- *Suitable for most types of faces*

Rotor® system (patented)
Registered design, registered ROTOR® brand, patented fastening system *(3)*
- *Simple and quick adjustment with or without gloves*

Class 3 : Resistance to radiant heat and flame
- *Use in extreme conditions*



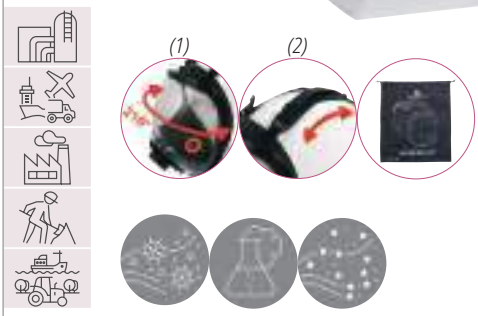
M9300 - STRAP GALAXY

Extra large field of vision (210°) *(1)*
- *Guaranteed maximum visual comfort*

Tightening with silicone straps *(2)*
- *Precise adjustment*

Compatible with other PPE
- *Can be used with a safety helmet*

Class 3 : Resistance to radiant heat and flame
- *Use in extreme conditions*



M9200 - ROTOR GALAXY	Black-Orange	Silicone full face mask with innovative ROTOR® system adjustment (patented), one-hand use even when wearing gloves. Wide polycarbonate screen (210°). Inside silicone half-mask to reduce mist and increased comfort (3 inhalation valves, an exhalation valve, phonic system). Adjustable sizes: S, M, L. Compatible with EN148-1 type cartridges as M9000 range, sold separately. Storage bag included.	Adjustable	CE	EN136 **CLASS 3** EN148-1	x 6
M9300 - STRAP GALAXY		Silicone full face mask with strap adjustment. Wide polycarbonate screen (210°). Inside silicone half-mask to reduce mist and increased comfort (3 inhalation valves, an exhalation valve, phonic system). Adjustable size. Shoulder strap to hold the mask when not in use. Compatible with EN148-1 type cartridges M9000 range, sold separately. Storage bag included.				

M6200 JUPITER

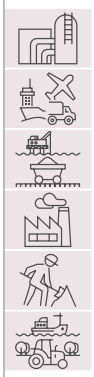
M6000 Bayonet anchor *(1)*

- *Compatible with the M6000 cartridge range (gas and particles)*

M6300 JUPITER

M6000 Bayonet anchor *(1)*

- *Comfort half mask PP/TPE*
- *Elastic strap and harness*
- *1 filter cartridge*
- *Available out of Europe*



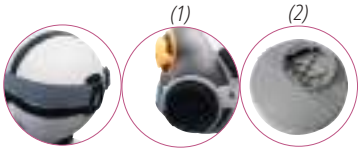
M6400 JUPITER

Thermoplastic over moulding (TPE) : Secured joints *(1)*

- *Low breathing resistance*
- *Enhanced security*

M6000 Bayonet anchor *(2)*

- *Compatible with the M6000 cartridge range (gas and particles)*



M6200 JUPITER	Black-Grey	Comfort half mask in tri-material: Half mask body in Thermo-plastic Elastomer (TPE) - Support for cartridge anchorage in polyethylene HD (HDPE) - Valve protective housing in polypropylene (PP). Elastic straps. To be used with 2 filter cartridges, M6000 series, sold separately. Cardboard packaging.	Adjustable	CE	EN140	x 15
M6300 JUPITER		Comfort half mask mono-filter: Half mask body in polypropylene (PP) - Thermoplastic (TPE) overmould. Elastic straps. To be used with 1 filter cartridge, M6000 series, sold separately. Shell packaging.	S/M			
M6400 JUPITER		Comfort half mask bi-filter: Half mask body in polypropylene (PP) - Thermplastic (TPE) overmould. Elastic straps. To be used with 2 filter cartridges, M6000 series, sold separately. Shell packaging.	M/L			

Delta Plus provides protection at work from head to toe for both women and men

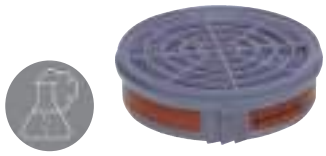
M6400 JUPITER MARS KIT A2 P2

M6400 JUPITER SPRAY KIT A2 P3

M6400 JUPITER CHEM KIT ABEK P3

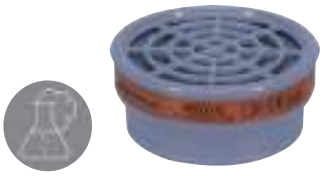
M6400 JUPITER MARS KIT A2 P2	Black-Grey	Comfort half mask with bi filters : Half mask body in polypropylene (PP) - Thermoplastic molding (TPE). With 2 filter cartridges A2 and 2 prefilters P2. Elastic straps. Plastic shell packaging.	M/L	CE	EN140	x 10
M6400 JUPITER SPRAY KIT A2 P3	Black-Grey	Comfort half mask with bi filters : Half mask body in polypropylene (PP) - Thermoplastic molding (TPE). With 2 filter cartridges A2 and 2 prefilters P3. Elastic straps. Plastic shell packaging.	M/L	CE	EN140	x 10
M6400 JUPITER CHEM KIT ABEK P3	Black-Grey	Comfort half mask with bi filters : Half mask body in polypropylene (PP) - Thermoplastic molding (TPE). With 2 filter cartridges ABEK1 and 2 prefilters P3. Elastic straps. Plastic shell packaging.	M/L	CE	EN140	x 10

M6000 A1



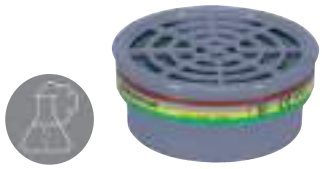
Grey	Pack of 2 A1 filtering cartridges for M6000 JUPITER series half masks.	CE	EN14387 **A1**	x 30

M6000E A2



Grey	Pack of 2 A2 filter cartridges for M6200 JUPITER half-mask and M6400 JUPITER half mask.	CE	EN14387 **A2**	x 30

M6000E ABEK1



Grey	Pack of 2 A1B1E1K1 filter cartridges for M6200 JUPITER and M6400 JUPITER half masks.	CE	EN14387 **A1B1E1K1**	x 30

M6000E PREP2

Grey	Set of 6 P2 pre-filters and 2 adapters for M6000 JUPITER half-mask series. To use with M6000E filters.	CE	EN143 **P2R**	x 30

M6000E PREP3

Grey	Set of 2 P3 pre-filters and 2 adapters for M6000 JUPITER half-mask series. To use with M6000E filters.	CE	EN143 **P3R**	x 30

M6000 P2 CLIP

Grey	Set of 2 P2 filter cartridges for M6000 JUPITER series half masks + 20 spare disposable filters.	CE	EN143 **P2NR**	x 30

M6000 P3

Grey	Pack of 2 P3 filter cartridges for M6000 JUPITER series half mask.	CE	EN143 **P3R**	x 30

M6000 P2

Grey	Pack of 2 P2 filter cartridges for M6000 JUPITER series half masks.	CE	EN143 **P2R**	x 30

M9000E A2

Black	Box of 4 A2 filtering cartridges for M9200 ROTOR GALAXY and M9300 STRAP GALAXY full face masks.	CE	EN148-1	x 10

M9000E A2P3

Black	Kit of 4 A2P3 filtering cartridges for M9200 ROTOR GALAXY and M9300 STRAP GALAXY full face masks.	CE	EN148-1	x 10

M9000E A2B2E2K2

Black	Box of 4 A2B2E2K2 filtering cartridges for M9200 ROTOR GALAXY and M9300 STRAP GALAXY full face masks.	CE	EN148-1	x 10

M9000E A2B2E2K2P3



Black	Box of 4 A2B2E2K2P3 filtering cartridges for M9200 ROTOR GALAXY and M9300 STRAP GALAXY full face masks.	CE	EN148-1	x 10

M9000 P3

Black	Kit of 4 P3R filtering cartridges for M9200 ROTOR GALAXY, M9300 STRAP GALAXY full face masks.	CE	EN148-1	x 10

M9000E A2B2

Black	Box of 4 A2B2 filtering cartridges for M9200 ROTOR GALAXY and M9300 STRAP GALAXY full face masks.	CE	EN148-1	x 10

M9000E A2B2P3

Black	Box of 4 A2B2P3 filtering cartridges for M9200 ROTOR GALAXY and M9300 STRAP GALAXY full face masks.	CE	EN148-1	x 10

M9000E A2B2E2P3

Black	Box of 4 A2B2E2P3 filtering cartridges for M9200 ROTOR GALAXY and M9300 STRAP GALAXY full face masks.	CE	EN148-1	x 10

M9000E A2B2E2K2HGP3

Black	Box of 4 A2B2E2K2HgP3 filtering cartridges for M9200 ROTOR GALAXY and M9300 STRAP GALAXY full face masks.	CE	EN148-1	x 10

M9000E AX

Black	Box of 4 AX filtering cartridges for M9200 ROTOR GALAXY and M9300 STRAP GALAXY full face masks.	CE	EN148-1	x 10

M9000E AXP3

Black	Box of 4 AXP3 filtering cartridges for M9200 ROTOR GALAXY and M9300 STRAP GALAXY full face masks.	CE	EN148-1	x 10

M9000E B2P3

Black	Box of 4 B2P3 filtering cartridges for M9200 ROTOR GALAXY and M9300 STRAP GALAXY full face masks.	CE	EN148-1	x 10

M9000E E2

Black	Box of 4 E2 filtering cartridges for M9200 ROTOR GALAXY and M9300 STRAP GALAXY full face masks.	CE	EN148-1	x 10

M9000E E2P3

Black	Box of 4 E2 filtering cartridges for M9200 ROTOR GALAXY and M9300 STRAP GALAXY full face masks.	CE	EN148-1	x 10

M9000E K2

Black	Box of 4 K2 filtering cartridges for M9200 ROTOR GALAXY and M9300 STRAP GALAXY full face masks.	CE	EN148-1	x 10

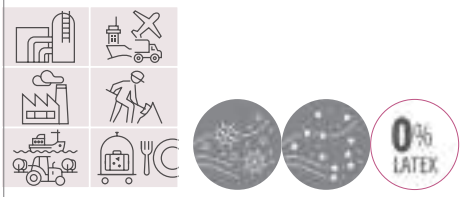
M9000E K2P3

Black	Box of 4 K2P3 filtering cartridges for M9200 ROTOR GALAXY and M9300 STRAP GALAXY full face masks.	CE	EN148-1	x 10

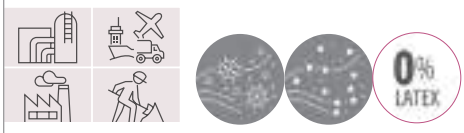
M9000E A2B2E2

Black	Box of 4 A2B2E2 filtering cartridges for M9200 ROTOR GALAXY and M9300 STRAP GALAXY full face masks.	CE	EN148-1	x 10

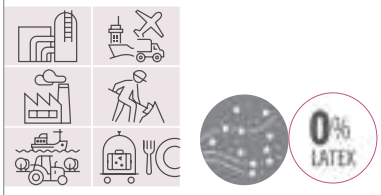
M1300V



M1200V



M1100V



M1300V	White	Box of 5 non woven synthetic fibre disposable masks FFP3. Wide adjustable straps. Moulded mask. Nose clip for adjustment. Complete ultra-soft face joint ring. High performance exhalation valve. DOLOMIA optional test for longer continuous wear time.	CE	NIOSH	EN149	NIOSH N99	x 10
M1200V		Box of 10 non woven synthetic fibre disposable masks FFP2. Moulded mask. Nose clip for adjustment. Foam edge under nose clip. High performance exhalation valve. DOLOMIA optional test for longer continuous wear time.				NIOSH N95	
M1100V		Box of 10 non woven synthetic fibre disposable masks FFP1. Moulded mask. Nose clip for adjustment. Foam edge under nose clip. High performance exhalation valve. DOLOMIA optional test for longer continuous wear time.					

Delta Plus provides protection at work from head to toe for both women and men

HAND PROTECTION

CUT PROTECTION

MECHANICAL PROTECTION FOR PRECISION WORKS

MECHANICAL PROTECTION FOR MULTI PURPOSE WORKS

MECHANICAL PROTECTION FOR HEAVY WORKS

CHEMICAL PROTECTION

THERMAL PROTECTION

TECHNICAL INFORMATION

Criteria to choose a glove:

1.**CUT** PROTECTION	2.**MECHANICAL** PROTECTION **FOR PRECISION WORKS**	3.**MECHANICAL** PROTECTION **FOR MULTI PURPOSE WORKS**	4.**MECHANICAL** PROTECTION **FOR HEAVY WORKS**	5.**CHEMICAL** PROTECTION	6.**THERMAL** PROTECTION	7.**CRAFTSMEN** PROTECTION
Slightly sharp and **non intensive** work		Works in **dry environment**		Work with **prolonged** chemical resistance	Thermal **cold**	**DIY** Work
Slightly sharp and **long-lasting** work		Works in **wet environment**		Work with **occasional** chemical resistance	Thermal **welding**	Landscaping
Long-lasting **cut work**		Works in **oily environment**		**Disposable**	Thermal **hot**	**Children's Range**
Intense **cut work**		**Specific** works			Thermal **specific**	

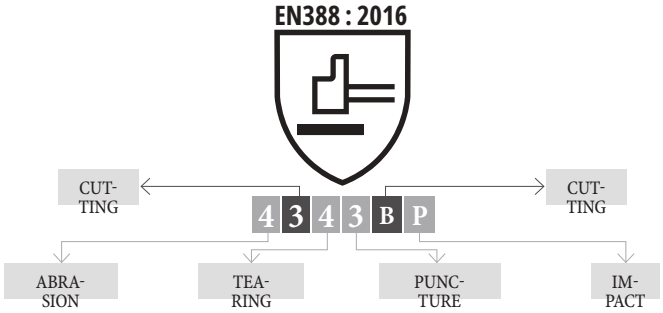
How to identify sizes ?

Color code system for gloves and certain leather gloves
Uniform sizes for easy identification.
Refer to page 366 to find the correct size

6	7	8	9	10	11	12
Red	Yellow	Brown	Black	Blue	Grey	Green

Each article falls under the EN388 standard which is the entry key for our glove range.

As a reminder, it takes into account several criteria: abrasion, cut, tear, perforation and impact (optional).

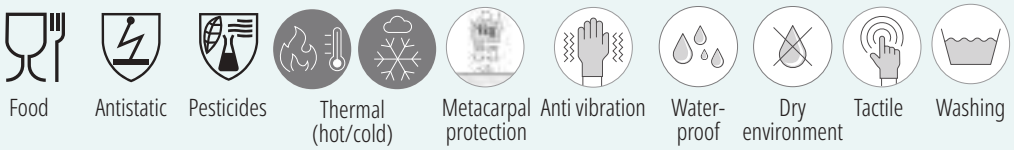


1 Identify potential risks:

Primary risks

2 Define the type of glove that best suits your needs in terms of secondary needs:

Secondary / specific needs



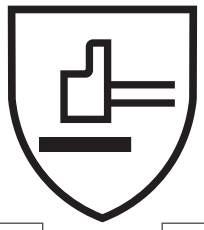
3 Select the most suitable product by using technical data and objective ergonomic criteria from our customers and users

Product ergonomics

Cut resistant gloves

CUTTING	
INDEX	LEVEL
1,2	1
2,5	2
5	3
10	4
20	5
Standard cut resistance coupe test EN388 6.2	

EN388 : 2016



CUTTING	
FORCE APPLIED (N)	LEVEL
2	A
5	B
10	C
15	D
22	E
30	F
New cut resistance TDM en ISO 13997	

4 3 4 3 B P

ABRA-SION | TEA-RING | PUNC-TURE | IM-PACT

For gloves made of very resistant materials (materials that blunt the blade during the test), the Coupe Test is no longer relevant, a TDM test becomes mandatory.
The TDM test is also more representative of work situations with high risk of cut.

The fibres

XTREMcut+

Your ally in extreme cutting conditions

- *Association of innovative fibers that guarantee optimal cut protection.*

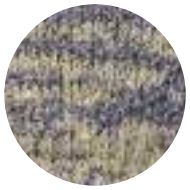
DELTAnocut®

- *Polymer **high resistance.***
- ***Maximum dexterity.***
- ***Washable:** hygienic, gloves can be re-used.*
- ***Reduced thickness:** Fine touch and better breathability.*
- ***Soft touch:** texture provides comfort and feeling of freshness all day.*

HEATnocut

For maximum safety and a good contact-heat protection

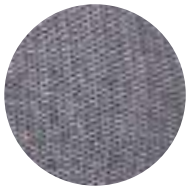
- *Cut resistance **adapted to the risk***
- *High level of **abrasion** resistance.*
- *Heat resistance u**p to 100°C or 250°C depending on the model.***



SOFTnocut

To combine safety and comfort

- *Excellent **cut** resistance.*
- *Maximum **abrasion** performance.*
- *Soft fibre: High level of **comfort.***



ECOnocut

To combine safety and «attractive price»

- *Different levels of cutting resistance.*
- *Good abrasion performance.*
- ***Economical fibre: good price.***

Full range

RECOMMENDED USES

> 5 N

- *Packing*
- *Electronics and repair*
- *Coating Finishing Tiling*
- *Assembly*

> 10 N

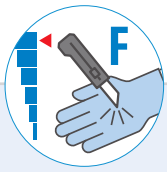
- *Automotive Assembly*
- *Home appliance assembly*
- *Maintenance and service*
- *Handling and installation of glazing*

> 15 N

- *Handling of composite materials*
- *Handling of glass plates*
- *Handling and assembly of cladding*
- *Finishing work on sharp pieces*
- *Metal work*

> 22 N

- *Handling of heavy sharp parts*
- *Handling of sharp metal parts*
- *Cutting of metals*



> 30 N

- *Intensive cutting works*
- *Assembly of heavy pieces*
- *Metal press forming*
- *Stamping*


EOS FLEX CUT B
VV921


VENICUTB05


VENICUTB07


VENICUTB01
(VENICUT32ESD)


ATON VV731


EOS FLEX CUT D
VV922


EOS NOCUT
VV910


EOS NOCUT WINTER
VV913


VENICUTD05


VENICUTD06


APOLLON WINTER CUT
VV737


XTREM HEAT
TERK500


XTREM CUT TOUCH
VENICUTF02


VENICUTB00
(VENICUT30)


VENICUTB06
(VENICUT36GR)


VENICUTB02


VENICUTC01
(VENICUT41GN)


VENICUTC02
(VENICUT42GN)


VENICUTC05
(VENICUT55)


VENICUTCM1
(VENICUT5M)


VENICUTD03
(VENICUT53)


VENICUTD04
(VENICUT54BL)


HEAT & CUT FOAM
VENICUTD01


VENICUTD02
(VENICUT52)


VENICUTDX0
(VENICUT50)


VENICUTDX1
(VENICUT5X1)


VENICUTD09


VENICUT59LP
LIGHT PLUS


KPG10


KCA15


XTREM CUT
VENICUTF01


VENICUTF03


VENICUTB03G3
(VENICUT33G3)


VENICUTB04G3
(VENICUT34G3)


VENICUTC03G3
(VENICUT43G3)

VENICUTC04G3
(VENICUT44G3)

VENICUTD07G3
(VENICUT57G3)

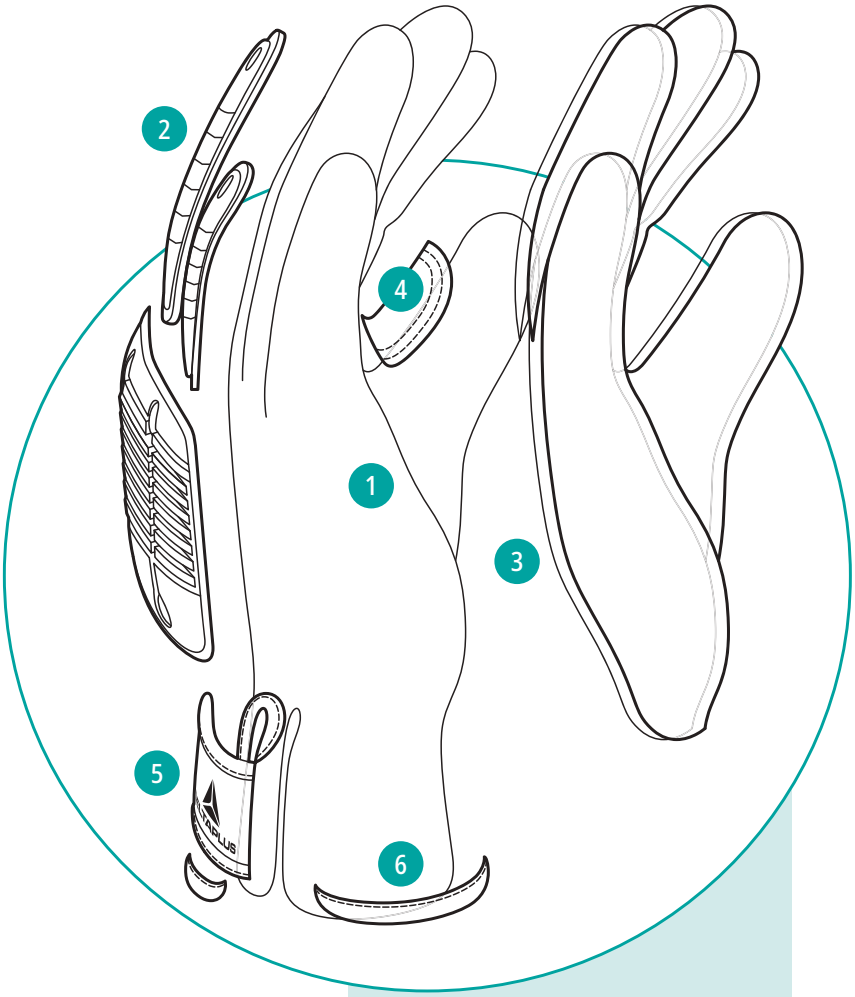
VENICUTD08G3
(VENICUT58G3)

ECONOCUTDM1
(ECONOCUT5M)

Initially, we developed this glove for targeted uses in the oil industry, but in the end, it has shown more usage possibilities ! We have combined several materials and techniques to make this "multi-protection" glove: cut resistant thread, nitrile double coating, reinforcements to protect from pinching and shocks. This versatility makes EOS NOCUT a must-have on the market.

Laetitia Guillerm, Hand Protection Product Expert

Safe, qualitative and very comfortable; the EOS NOCUT is surely one of the gloves with the most interest on the market!



1- Insert on the palm
2- Metacarpal reinforcement
3- Double coating
4- Reinforcement
5- Clamping Velcro band
6- Woven HDPE wire structure + fibreglass

Double nitrile coating for oily work
- *1st smooth nitrile coating : impermeable to oils*
- *2nd nitrile foam coating : good adhesion*

EOS NOCUT VV910
EOS NOCUT WINTER VV913

Double nitrile coating for oily workFlexible reinforcements
- *Increased protection from impacts and pinches*

EOS NOCUT VV910
EOS NOCUT WINTER VV913

Protection against impact in the metacarpal area. After an energy impact of 5J, the force transmitted to the back of the hand cannot exceed 4 kN

EOS NOCUT VV910
EOS NOCUT WINTER VV913

EOS NOCUT VV910

Reinforcement between the thumb and index finger and on the palm *(1)*
- *Increased protection*

Available only with header card *(2)*

Very good abrasion and cut resistance
- *Increased lifespan*

Kevlar® thread stitching
- *Increased lifespan*

8 cm cuff with Velcro closure
- *Perfect adjustment*
- *Reduced discomfort at the wrist, during prolonged use*

EOS NOCUT VV910	Yellow-Grey-Black	High performance polyethylene support. Thermoplastic (TPR) reinforcement on back and fingertips. Smooth nitrile coating/foam nitrile on palm and fingertips. Embossed inside reinforcement on palm. Kevlar® thread on all the seams.	08 - 09 - 10 - 11	CE	EN388 **4X43DP**	ANSI ANSI-ISEA 105 **A4**	x 60

VENICUT F XTREMCUT - VENICUTF01

Fibre Xtrem CUT

- *The highest level of cut protection on the market*
- *Comfort and flexibility for heavy work*

VENICUT F XTREM CUT - VENICUTF01	Grey-Black	Xtrem CUT high performance fibre. Gritty foam nitrile coating on palm and fingertips. Gauge 13.	06 - 07 - 08 - 09 - 10 - 11	CE	EN388 **4X43F**	ANSI ANSI-ISEA 105 **A6**	x 60

Delta Plus provides protection at work from head to toe for both women and men

VENICUTD04 (VENICUT54BL)

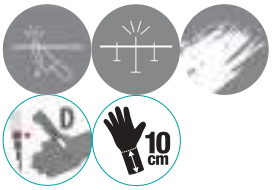
Double nitrile coating for oily work *(1)*

- *1st smooth nitrile coating : impermeable to oils*
- *2nd nitrile foam coating : good adhesion*

High coating

- *Very good protection of the hand*
- *Long life of the glove*

(1)



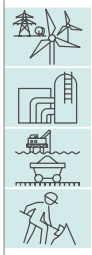
VENICUTD02 (VENICUT52)

HEATnocut high performance fibre

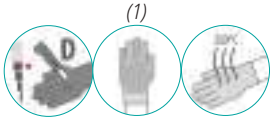
- *Contact heat (250°C for 15 seconds) and cut resistance*
- *Very good level of abrasion resistance*

Latex coating *(1)*

- *Good resistance to abrasion*
- *Rough finish for excellent grip on handled objects*

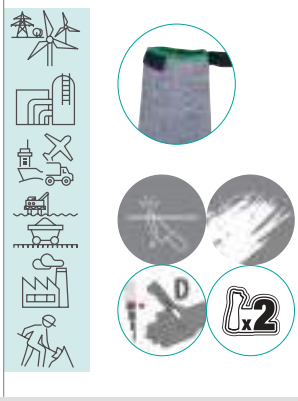


(1)



VENICUTD04 (VENICUT54BL)	Black	DELTAnocut® high performance fibre. Double nitrile coating. Gauge 13.	08 - 09 - 10 - 11	CE	EN388 **3X43D**		ANSI ANSI-ISEA 105 **A4**	x 60
VENICUTD02 (VENICUT52)	Yellow-Grey-Black	HEATnocut high performance fibre. Latex coating on palm and fingertips. Gauge 10.	07-08-09-10		EN388 **3X42D**	EN407 **X2XXXX**		

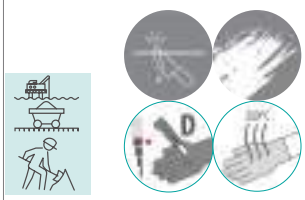
ECONOCUTDM1 (ECONOCUT5M)



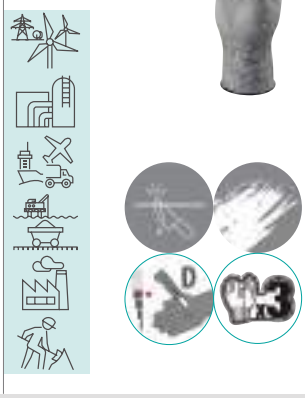
VENICUTDX0 (VENICUT50)

HEATnocut high performance fibre
- *Contact heat (250°C for 15 seconds) and cut resistance*
- *Very good level of abrasion resistance*

Split leather
- *Reinforced abrasion resistance*
- *Suitable for heavy work*



VENICUTD08 (VENICUT58)



ECONOCUTDM1 (ECONOCUT5M)	Grey	ECONOCUT high performance fibre. Knitted sleeve with thumbhole. Length 55 cm. Gauge 13. Bag of 1 pair.	One size	CE	EN388 **2X4XD**		ANSI-ISEA 105 **A4**	x 60
VENICUTDX0 (VENICUT50)	Yellow-Grey	HEATnocut high performance fibre. Cowhide leather on palm and fingertips. Gauge 10.	09 - 10		EN388 **4X42D**	EN407 **X2XXXX**		
VENICUTD08 (VENICUT58)	Grey	ECONOCUT high performance fibre. Polyurethane coating on palm and fingertips. Gauge 13. Bag of 3 pairs.	07 - 08 - 09 - 10 - 11		EN388 **4X42D**			x 40

Delta Plus provides protection at work from head to toe for both women and men

VENICUTC05 (VENICUT55)

HEATnocut high performance fibre *(1)*

- *Contact heat (100°C for 15 seconds) and cut resistance*
- *Very good level of abrasion resistance*

Food compatibility

(1)

VENICUTCM1 (VENICUT5M)

HEATnocut high performance fibre *(1)*

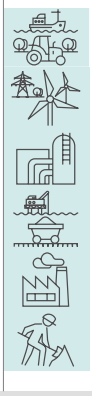
- *Contact heat (100°C for 15 seconds), and cut resistant*
- *Very good level of abrasion resistance*

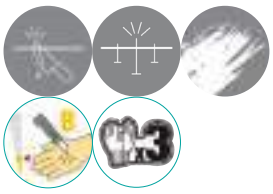
45 cm

VENICUTB04 (VENICUT34)

Also available with header card DPVECUTB04 *(1)*

VENICUTB03 (VENICUT33)





VENICUTC05 (VENICUT55)	Yellow-Grey	HEATnocut high performance fibre. Gauge 10.	07 - 09 - 10	CE	EN388 3X4XC EN407 X1XXXX	ANSI-ISEA 105 **A3** x 120
VENICUTCM1 (VENICUT5M)	Grey-Yellow	HEATnocut high performance fibre. Knitted sleeve with thumbhole. Length 45 cm. Gauge 13.	One size			ANSI-ISEA 105 **A3** x 60
VENICUTB04 VENICUT34	Grey	ECONOCUT high performance fibre. Polyurethane coating on palm and fingertips. Gauge 13.	06 - 07 - 08 - 09 - 10 - 11		EN388 3X42B	ANSI-ISEA 105 **A2** x 120
VENICUTB03 (VENICUT33)	Grey-Black	ECONOCUT high performance fibre. Nitrile coating on palm and fingertips. Gauge 13. Bag of 3 pairs.			EN388 3X43B	ANSI-ISEA 105 **A2** x 40

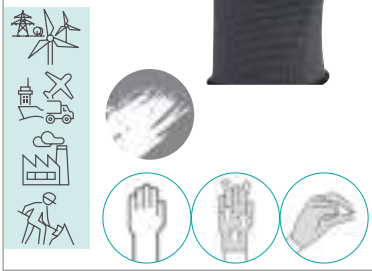
VE702GR

Seamless knit

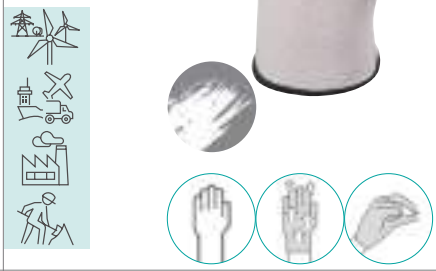
- *More comfort for prolonged glove wear*

Grey colour

- *Handling of soiled objects*



VE702



VE702PG

Also available with header card DPVE702PG *(1)*

VE702P

Also available with header card DPVE702P *(1)*

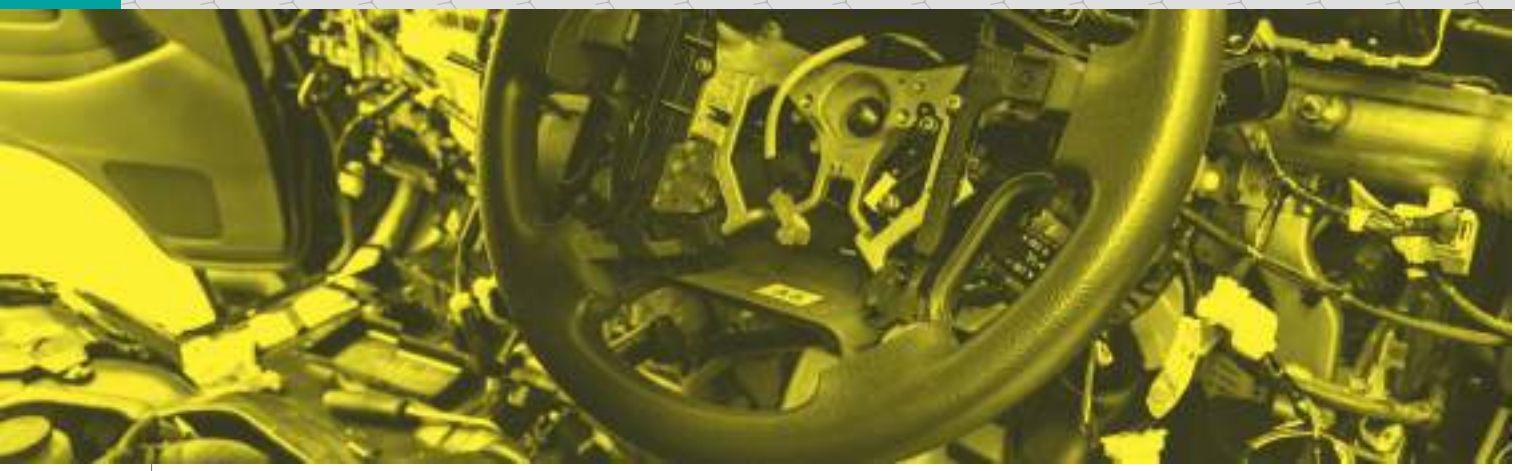
VE702PN

VE630

VE702GR	Grey	100% polyamide. Polyurethane coating on palm and fingertips. Gauge 13.	06 - 07 - 08 - 09 - 10	CE	EN388 3121X	x 240
VE702	White					
VE702PG	Grey	100% polyester. Polyurethane coating on palm and fingertips. Gauge 13.	06 - 07 - 08 - 09 - 10 - 11			
VE702P	White	100% polyester. Polyurethane coating on palm and fingertips. Gauge 13.	06 - 07 - 08 - 09 - 10			
VE702PN	Black		06 - 07 - 08 - 09 - 10 - 11			
VE630	Grey -Black	100% polyester. Latex coating on palm and fingertips. Gauge 13.	07 - 08 - 09 - 10		EN388 2131X	x 120

Delta Plus provides protection at work from head to toe for both women and men


DELTAPLUS



The range specially designed for Electrostatic Discharge (ESD) environments!

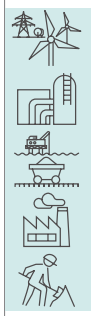
According to EN16350, electrostatic properties of protective gloves, the electrical resistance through a glove must be less than 10^8 Ω. These gloves help protect you from the risk of explosion by dissipating (as much as possible) the electro-static electricity naturally present in the human body. They must be used in conjunction with shoes and antistatic clothing. The user must also be grounded. The performance obtained on our gloves ensures a high level of efficiency.

VE702PESD

Carbon fibre

- *High electrostatic dissipation to reduce the risk of explosion*

Can be used in an ESD environment (Electrostatic discharge hazard)



VE702PESD	White	Carbon polyester. Polyurethane coating on palm and fingertips. Gauge 13.	06 - 07 - 08 - 09 - 10 - 11	CE	EN388 **3 1 2 1 A**	EN16350 **≤ 6,38 x10^5**	x 240

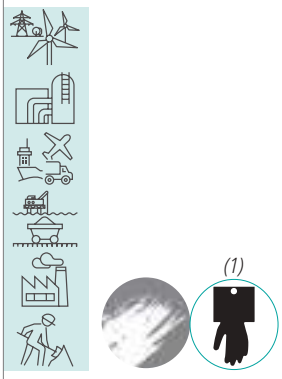
Delta Plus provides protection at work from head to toe for both women and men

VE712GR

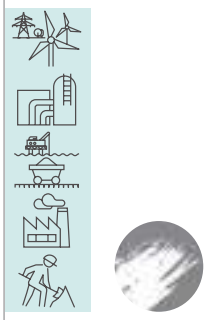
Nitrile coating

- *Very good mechanical performance*
- *Good grip in oily/ greasy environment*

Also available with header card DPVE712GR *(1)*



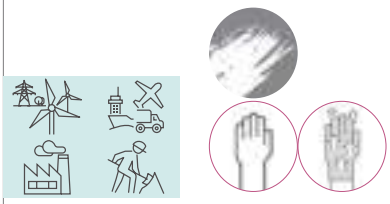
VE722



VE726

Nitrile/polyurethane coating

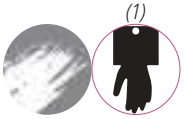
- *Oil resistance*
- *Flexibility of work and increased comfort*
- *Very good mechanical performance*



VE712GR	Black-Grey	100% polyester. Nitrile coating on palm and fingertips. Gauge 13.	07 - 08 - 09 - 10 - 11	CE	EN388 **3121X** ISO 18889 **GR**	x 240
VE722	Grey-Black	100% polyester. Foam nitrile coating on palm and fingertips. Gauge 13.	07 - 08 - 09 - 10	CE	EN388 **4121X**	x 120
VE726	Grey - Black	Polyamide/Spandex. Nitrile/Polyurethane coating on palm and fingertips. Gauge 15.	07 - 08 - 09 - 10 - 11	CE	EN388 **3121X**	x 120

FBN49

Also available with header card
DPFBN49 *(1)*



FCN29

FBN49	Natural	Cowhide full grain leather. American assembly.	07 - 08 - 09 - 10 - 11	CE	EN388 3122X	x 120
FCN29		Cowhide grain leather palm. Full index. Cowhide split leather back. American assembly.	08 - 09 - 10 - 11		EN388 2121X	

Delta Plus provides protection at work from head to toe for both women and men

VE733

PURE latex coating

- *Manufactured under conditions which respect the environment*
- *Minimises the risk of skin irritation*

Embossing finish *(1)*

- *Good grip of handled objects*
- *Very good adhesion in wet or dry environments*

Available only with header card
DPVE733VE *(2)*

VE733	Orange-Blue	100% polyester. PURE latex coating on palm and fingertips. Gauge 13.	07 - 08 - 09 - 10 - 11	CE	EN388 **2141A** / EN407 **X2XXXX**	x 120

NI170

Nitrile on cotton jersey lining
- *Not very sensitive to heat*
- *Ideal in oily and greasy environments*

Cotton jersey lining with ventilated back
- *Comfort*
- *Increased breathability*

Safety cuff 6 cm
- *Good protection of the garment*
- *Easy implementation*

NI175

Nitrile on cotton jersey lining
- *Not very sensitive to heat*
- *Ideal in oily and greasy environments*

6-cm safety cuff
- *Good protection of the garment*
- *Easy implementation*

Fully coated hand
- *Protection of the back of the hand*

NI150

Nitrile on cotton jersey lining
- *Not very sensitive to heat*
- *Ideal in oily and greasy environments*

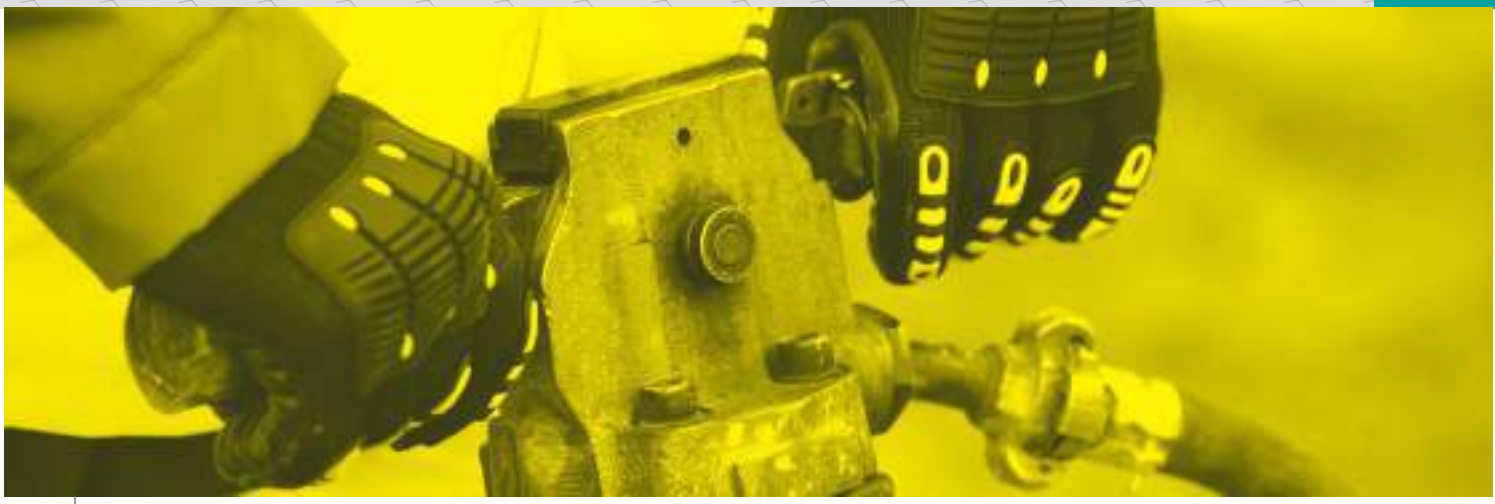
Cotton jersey lining with ventilated back
- *Comfort*
- *Increased breathability*

NI155

Nitrile on cotton jersey lining
- *Not very sensitive to heat*
- *Ideal in oily and greasy environments*

Fully coated hand
- *Protection of the back of the hand*

NI170	Blue	Nitrile on cotton jersey lining. 6-cm canvas safety cuff. Ventilated back.	10	CE	EN388 3111X	x 120
NI175		Nitrile on cotton jersey lining. 6-cm canvas safety cuff. Fully coated.	09 - 10 - 11			
NI150		Nitrile on cotton jersey lining. Knitted wrist. Ventilated back.	07 - 08 - 09 - 10			
NI155		Nitrile on cotton jersey lining. Knitted wrist. Fully coated.	10			



NYSOS VV904

Single coated glove reduces impact, shock and vibration effects *(1)*
Flexible reinforcements *(2)*
- *Increased protection from impacts and pinches*

Protection of the metacarpals 5J *(3)*
Anti-vibration *(4)*
- *Reduction of musculoskeletal disorders*

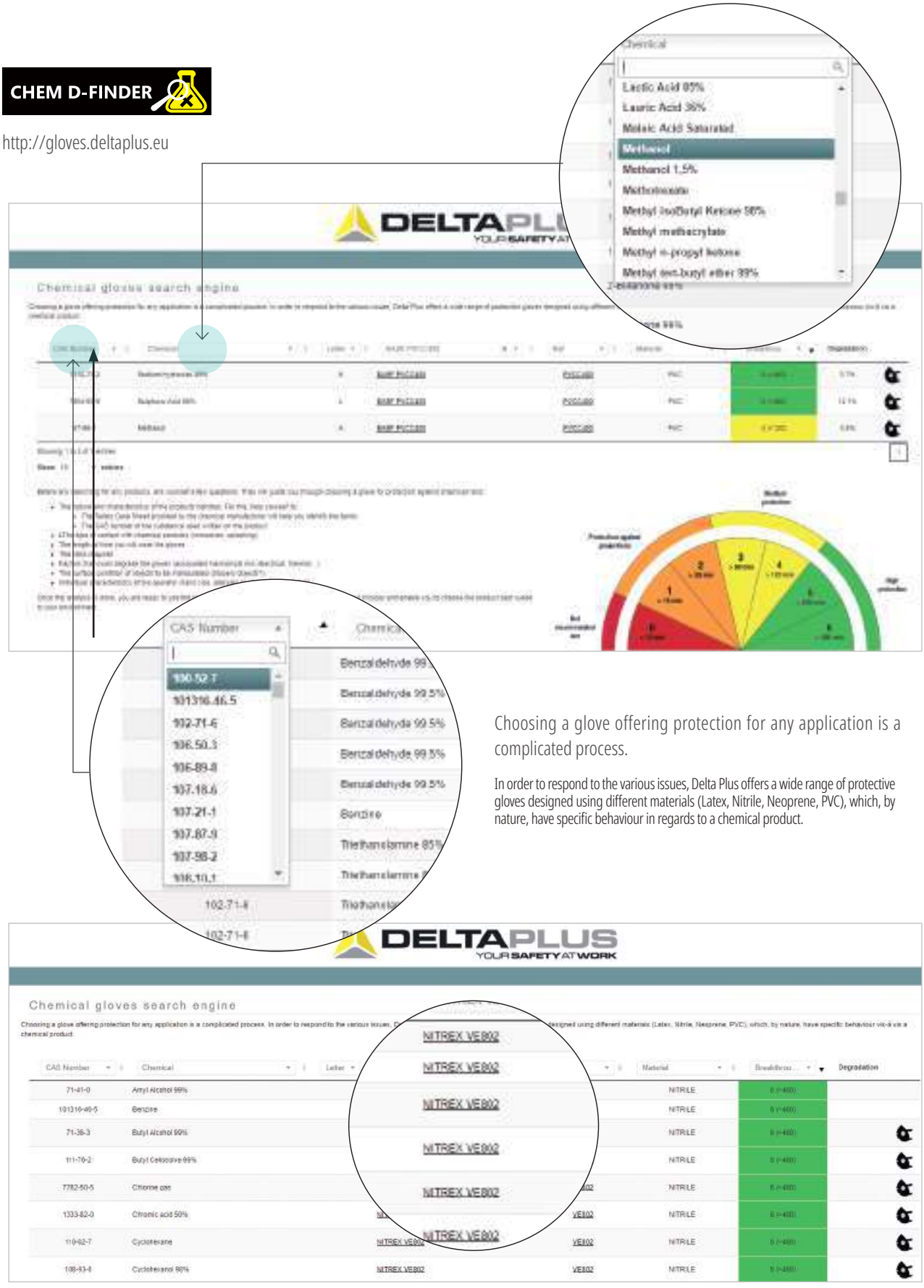
Available only with header card *(5)*
Protection against impact in the metacarpal area. After an energy impact of 5J, the force transmitted to the back of the hand cannot exceed 4 kN
Polyester support
- *Soft weave (seamless) for comfortable long wear*
- *Good dexterity and grip*

NYSOS VV904	Yellow-Black	100% Polyester. Palm and fingertips reinforced with rubber pads (0.8 cm thick). Thermoplastic (TPR) back reinforcement. Gauge 7.	10 - 11	CE	EN388 4242XP / EN ISO10819	x 60

Choose the right glove according to the chemical environment

CHEM D-FINDER

http://gloves.deltaplus.eu



Choosing a glove offering protection for any application is a complicated process.

In order to respond to the various issues, Delta Plus offers a wide range of protective gloves designed using different materials (Latex, Nitrile, Neoprene, PVC), which, by nature, have specific behaviour in regards to a chemical product.

Supported or not supported ?

Supported: what type of support ?

Cotton: Natural fibre
- *Exceptional comfort - Excellent capacity to absorb moisture - Insulating properties.*

Polyamide: Synthetic fibre, also called Nylon
- *Resistance to traction and abrasion - Elasticity and shape memory - Washable.*

Polyester: Synthetic fibre
- *Resistance to traction and abrasion - Possibility to blend with cotton to enhance comfort.*

Kevlar®: Para-aramid fibre
- *Heat and Cut Resistance - Carbonised between 425° and 475° - Self extinguishing - Softness and high dexterity - Washable.*

Non- supported:

The mould is dipped directly into the material bath.
Thus, the glove is very supple and allows high dexterity.

Different types of non supported gloves:

Flocked (finished with a deposit of cotton particles):
- *Pleasant to the touch, limits transpiration and facilitates donning and removal.*

Chlorinated (finished by washing the glove in chlorinated water):
- *Gives a velvety touch and limits the effects of latex protein allergies.*

Different types of disposable glove:

Powdered (finished with a deposit of powder) :
- *Pleasant to the touch, limits transpiration and facilitates donning and removal..*

Non powdered (finished by washing the glove in chlorinated water) :
- *Protects the handled objects while maintaining very good comfort.*

Materials

- : Not recommended • : Low •• : Good ••• : Very good

General features	Polyurethane	Latex	Nitrile	Neoprene	PVC
Abrasion	•••	••	•••	••	•••
Cutting	••	••	••	••	••
Perforation	••	•••	•••	•	•
Tearing	•••	••	•••	•	••
Elasticity / Flexibility / Dexterity	•••	•••	•	••	•
Degradation (heat contact, UV,...)	•••	•	••	•••	•••
Risks of allergy	•	•••	•	•	•
Cold environment	••	•••	• (-40°C)	•••	•••
Warm environment	••	•••	••	•••	• (>80°c)
Oily / greasy environment	•	•	•••	•••	•••

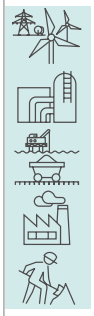
Chemical product family		Latex	Nitrile	Neoprene	PVC
Acetates	*Acetate of ethyl (I)*	-	••	••	•
Acids	*Sulfuric acid (L),*	•••	••	•••	•••
Primary alcohol	*Methanol (A)*	•••	•••	•••	••
Aldehydes (Alcohols & Ketones)	*Formaldehyde 37% (T), ...*	••	•	•	•
Amine	*Diethylamine (G),*	-	•	-	-
Bases (Lime, Sodium hydroxide)	*Caustic soda (K),*	•••	••	•••	•••
Ketone and ketone solvents	*Acetone (B)*	•••	-	•	•
Ether	*Tetrahydrofuran (H)*	-	-	-	-
Hydrocarbons and derivatives	*Acetonitrile (C), n-Heptane (J),...*	-	•••	•••	••
Aromatic solvents (styrene...)	*Toluene (F), Xylene*	-	•••	•	•
Chlorinated solvents	*Dichloromethane (D)*	-	•••	•	-
Aqueous solutions		•••	•••	•••	•••

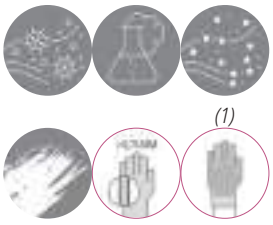
TOUTRAVO VE509

Embossed structure on palm and fingers *(1)*
- *Improved object grip*

Neoprene
- *Versatile and highly efficient material against heat, detergents, alcohols, chemicals, greases and hydrocarbons*

Flocked inside
- *Absorption of perspiration for comfort*





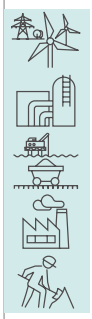
TOUTRAVO VE510

Embossed structure on palm and fingers *(1)*
- *Good grip of handled objects*

Neoprene
- *Versatile and highly efficient material against heat, detergents, alcohols, chemicals, greases and hydrocarbons*

Flocked inside
- *Absorption of perspiration for comfort*

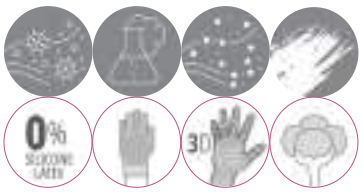
Length : 38 cm
- *Forearm protection*



TOUTRAVO VE511

Cotton knit gauge 10 *(1)*
- *Absorption of perspiration and moisture for improved comfort in everyday life*

Neoprene
- *Versatile and highly efficient material against heat, detergents, alcohols, chemicals, greases and hydrocarbons*



TOUTRAVO VE509	Black	Neoprene with cotton flocklining. Length: 30 cm. Thickness: 0,75 mm.	6/7 - 7/8 - 8/9 - 9/10 - 10/11	CE	EN388 **3110X**	EN ISO 374-1 **TYPE A AKLMNOPT**	EN ISO 374-5	x 120
TOUTRAVO VE510		Neoprene with cotton flocklining. Length: 38 cm. Thickness: 0,78 mm.						
TOUTRAVO VE511		Neoprene on cotton knitted lining gauge 10. Length: 38 cm. Thickness 1,40 mm.	9/10 - 10/11		EN388 **2132X**	EN ISO 374-1 **TYPE A AJKLMNOPT**		x 60

Delta Plus provides protection at work from head to toe for both women and men

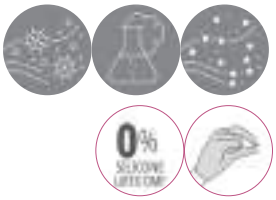
VENITACTYL V1450B100

Powder-free gloves
- *Ideal for caterers*

Nitrile
- *Airtightness and water proofing*
- *Flexibility, elasticity and tactility*
- *No risk of allergies*

Glove tested in accordance with EN ISO 371-1:2016 TYPE B
- *Protection from certain concentrated chemicals*

Black colour
- *Recommended for mechanics, tattoo artists and caterers thanks to its low messy colour*



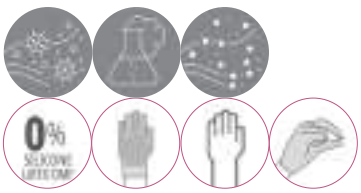
VENITACTYL V1400B100

Powder-free gloves
- *Protection from manipulated objects*

Nitrile
- *Airtightness and water proofing*
- *Flexibility, elasticity and tactility*
- *No risk of allergies*

Glove tested in accordance with EN ISO 371-1:2016 TYPE B
- *Protection from certain concentrated chemicals*

Blue colour
- *Ideal in food environment due to its easy visual identification*



VENITACTYL V1400PB100

Powdered glove
- *Easy glove implementation*

VENITACTYL V1450B100	Black	Powder-free nitrile. Suitable for food industry. AQL 1,5. Box of 100 disposable gloves.	6/7 - 7/8 - 8/9 - 9/10 - 10/11	CE	EN ISO 374-1 TYPE B JKT; EN ISO 374-5 VIRUS		x 10
VENITACTYL V1400B100	Blue		6/7 - 7/8 - 8/9 - 9/10				
VENITACTYL V1400PB100		Powdered nitrile. Suitable for food industry. AQL 1,5. Box of 100 disposable gloves.					

NITREX VE801

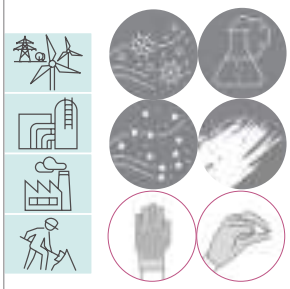
Embossed structure on palm and fingers *(1)*
- *Good grip of handled objects*

Flocked inside
- *Absorption of perspiration for comfort*

Silicone free
- *Ideal for the automotive industry*
- *No traces on the objects handled*

(1)

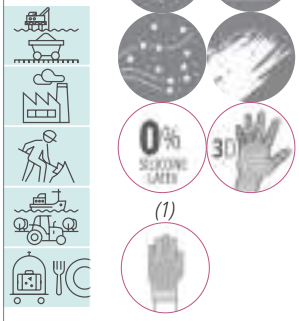
33 cm



NITREX VE802

Embossed structure on palm and fingers *(1)*
- *Good grip of handled objects*

Flocked inside
- *Absorption of perspiration for comfort*



(1)

33 cm

CHEMSAFE VV835

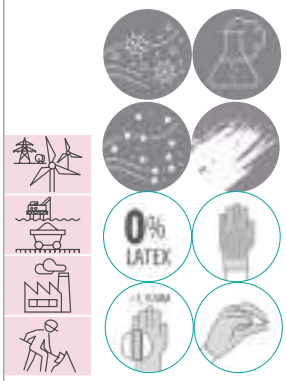
Rough structure palm *(1)*
- *Very good grip*

Triple nitrile coating
- *Good resistance to abrasion*

100% polyamide support
- *Very good comfort*

(1)

35 cm



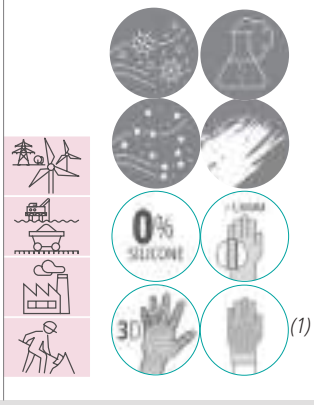
PETRO VE766

PVC
- *Good resistance to abrasion*
- *Material very resistant to oils, chemicals and petroleum derivatives*

Textured structure *(1)*
- *Good grip of handled objects*

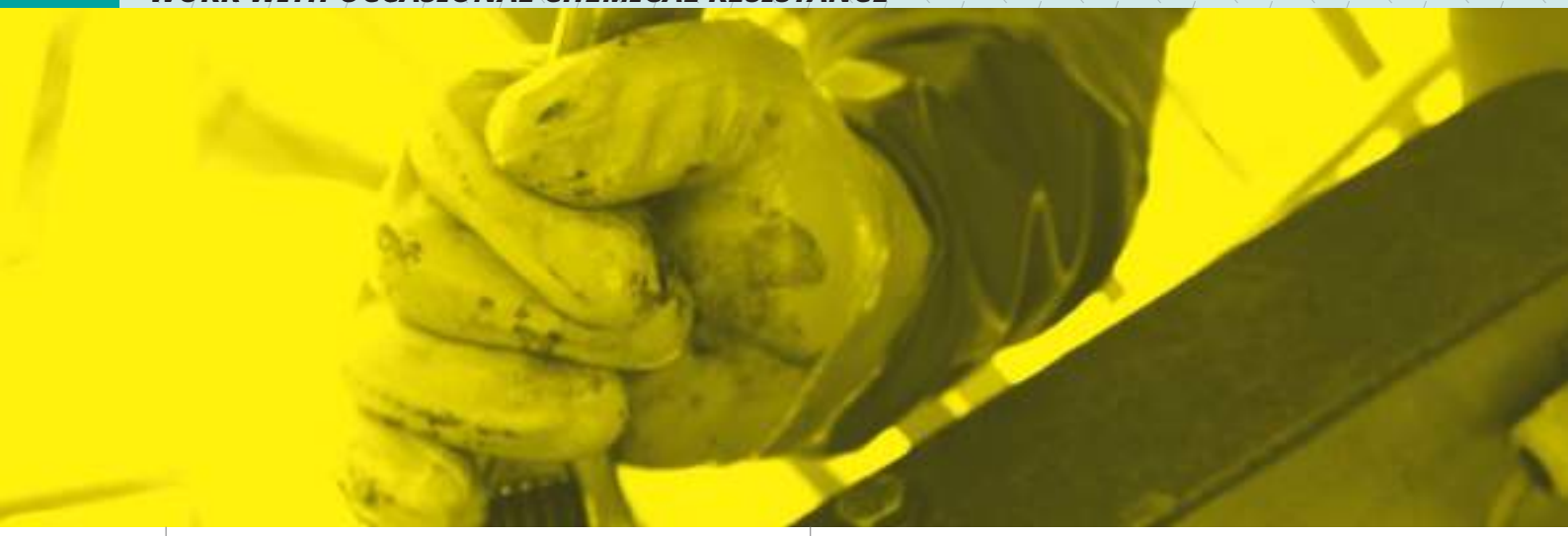
Length : 62 cm
- *Complete arm protection*

62 cm



(1)

NITREX VE801	Green	Nitrile with cotton flocklining. Length: 33 cm. Thickness: 0,40 mm.	07 - 08 - 09 - 10 - 11	CE	EN388 **3101X**; EN ISO 374-1 **TYPE B JKL**; ISO 18889 **G2**		x 120
NITREX VE802		Nitrile with cotton flocklining. Length: 33 cm. Thickness: 0,38 mm	6/7 - 7/8 - 8/9 - 9/10 - 10/11		EN388 **4101X**; EN ISO 374-1 **TYPE A AJKLMNOPT**		
CHEMSAFE VV835	Green	Double nitrile coating on polyamide lining. Third rough foam nitrile coating on palm and fingertips. Length: 35 cm. Thickness: 1.15 mm on cuff - 1.30 mm on palm.	08 - 09 - 10 - 11		EN388 **4121X**; EN ISO 374-1 **TYPE B AJKL**; EN ISO 374-5		x 60
PETRO VE766	Blue	Chemical PVC. PVC on cotton knitted lining gauge 13. Rough-textured hand. Length: 62 cm. Thickness: 1.30 mm.					x 120



DUOCOLOR VE330

30 cm

ZEPHIR VE210

30 cm

CRYOG

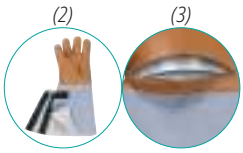
Water repellent leather *(1)*
- *Good splash protection*

Velcro tape *(2)*
- *Adjustable fit*

Aluminised polyester *(3)*
- *Thermal protection*

Tested with liquid nitrogen using method MR019 *(4)*
- *Work in all safety up to -196°C (a few seconds)*

Superior quality
- *Increased lifespan*
- *Comfortable to wear*
- *Flexibility*



40 cm

20 cm

DUOCOLOR VE330	Blue-Yellow	Latex with cotton flock lining, double-dipped. Length: 30 cm. Thickness: 0,60 mm.	6/7 - 7/8 - 8/9 - 9/10	CE	EN388 **1010X**	EN ISO 374-1 **TYPE A AKLMNPT**	EN ISO 374-5 VIRUS		×144
ZEPHIR VE210	Pink	Latex with cotton flock lining. Length: 30 cm. Thickness: 0,38 mm.			EN388 **XX1XX**	EN ISO 374-1 **TYPE C KL**			
CRYOG	Grey-Beige	Water-repellent cowhide full grain leather. Aluminized polyester insert. Cowhide split leather cuff. Hand and cuff in synthetic. American assembly. 20 cm cuff. Length: 40 cm.	10		EN388 **2222X**	EN511 **2 3 X**	EN420 4.2 **4/4 ≥ 180 mn**		x 36

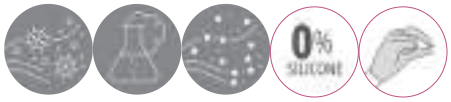
Delta Plus provides protection at work from head to toe for both women and men

VENIPLUS V1383

Powder-free gloves
- *Protection from manipulated objects*

Glove tested in accordance with EN ISO 371-1:2016 TYPE B
- *Protection from certain concentrated chemicals*

Extra long and thick glove
Thickness : 0.25 mm
- *Longer lifespan and increased safety*

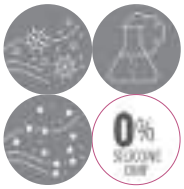


VENITACTYL V1310

Powdered glove
- *Easy glove implementation*

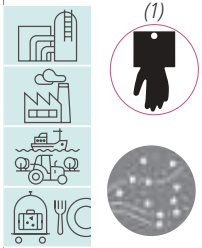
Latex
- *Airtightness and water proofing*
- *Flexibility, elasticity and tactility*

Glove tested in accordance with EN ISO 371-1:2016
TYPE C
- *Protection from splashing of weakly concentrated chemicals*



VENITACTYL V1371

Also available in a box of 10 gloves
DPV1371 *(1)*



VENIPLUS V1383	Blue	Powder-free latex, chlorinated inside. AQL 1,5. Length: 30 cm. Thickness: 0,25 mm. Box of 50 disposable gloves.	7/8 - 8/9 - 9/10 - 10/11	CE	EN ISO 374-1 TYPE B KLMPT; EN ISO 374-5 VIRUS		x 10
VENITACTYL V1310	Natural	Powdered latex. Suitable for food industry. AQL 1,5. Box of 100 disposable gloves.	6/7 - 7/8 - 8/9		EN ISO 374-1 TYPE C KT		
VENITACTYL V1371	Transparent	Powdered vinyl. Suitable for food industry. AQL 1,5. Box of 100 disposable gloves.	6/7 - 7/8 - 8/9 - 9/10				
DPV1371			7/8 - 9/10				x 60

Delta Plus provides protection at work from head to toe for both women and men

The versatility of the protections make these gloves real assets in all climatic circumstances!

Extremely cold conditions
Very light activity levels or special applications requiring additional heat

Very cold conditions
Light activity levels where the wearer generates little body heat through activity

Cool climate conditions when warmth is needed

APOLLON WINTER CUT VV737
The glove for working in extreme conditions ! A very high level of cut protection combined with protection from the cold!

ATON VV731
The multi-protection glove !

THRYM VV736
Ideal in all climatic conditions... possibly perfect glove !

It is due to listening to our users, demanding gloves assuring several simultaneous protections, including that from the cold that we worked with the convergence of several standards. This ranges from a waterproof glove performing in a cold environment with contact heat resistance to versatile glove that includes touch function or glove combining thermal hazards and cut resistance (Level B or E). Our hybrid gloves become true allies for workers !

Laetitia Guillerm, Hand Protection Product Expert

THRYM VV736

Double full latex coating *(1)*
- *1st smooth latex coating : waterproof*
- *2nd foam latex coating : good adhesion*

Very good resistance to cold and humidity *(2)*
- *Ideal in cold environments down to -30°C*

Brushed acrylic support *(3)*
- *Maintenance of warmth during outdoor work*
- *Great comfort of use*

THRYM VV736	Blue-Black	Inside: 100% acrylic gauge 10. Outside: 100% polyamide gauge 15. Full latex coating of the hand. Second foam latex coating on palm and fingertips.	09 - 10 - 11	CE	EN388 **2231X**	EN511 **1 2 1**	EN407 **X2XXXX**	x 60

Developed through KZL know-how, the Delta Plus Group's historic heat-resistance glove subsidiary, 25 years ago, this glove is still as popular with users working in a high-risk environment (foundries, .. .).
The choice and the combination of the materials were made based on specific criteria combining resistance to heat, resistance to the flame, while guaranteeing optimal quality of work.

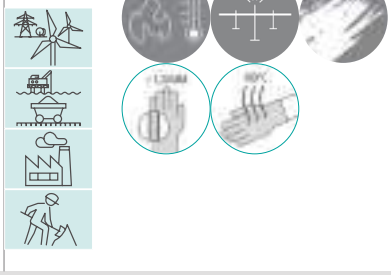
Laetitia Guillerm, Hand Protection Product Expert

Exceptional thermal results, a constant quality unmatched in its field thanks to the aluminised Preox made in France.

TERK400

Aluminised Kevlar® Preox
- *High thermal resistance to radiant heat*

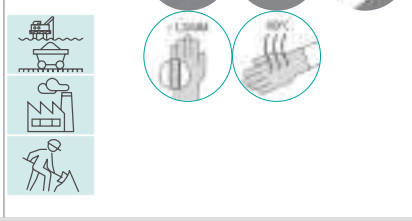
THT treated heat resistant leather
- *Decreased responsiveness to flames*
- *Increased resistance to contact heat due to its treatment*
- *High flexibility of the leather*



TER250

Kevlar® thread stitching
- *Self-extinguishing*

THT treated heat resistant leather
- *Decreased responsiveness to flames*
- *Increased resistance to contact heat due to its treatment*
- *High flexibility of the leather*



TERK400	Orange-Grey	Heat-resistant cowhide split leather palm (HR). Aluminised Kevlar Preox® back. Wool fleece lining. Kevlar® Technology sewn. American assembly. 20 cm cuff. Length: 40 cm.	10	CE	EN388 3244X EN407 413444 EN12477 TYPE A	x 36
TER250	Brown-Grey	Heat-resistant cowhide split leather palm (HR). Wool fleece lining on palm. Cuff with canvas lining. Kevlar® Technology sewn. American assembly. 20 cm cuff. Length: 40 cm.	10		EN388 3243X EN407 413X4X	x 60

Delta Plus provides protection at work from head to toe for both women and men

TC716

Welding and heat-resistant gloves
- *Resistance to flame, heat and large projections of molten metal*

15 cm heat resistant leather
- *Forearm protection*

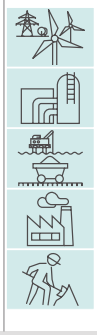
Thick leather
- *Suitable for heavy duty tasks*

Also available with header card
DPTC715 *(1)*

(1)

CA615K

Welding and heat-resistant gloves
- *Resistance to flame, heat and large projections of molten metal*
- *Forearm protection*



TC716	Grey	High quality cowhide split leather. American assembly. 15 cm cuff. Length: 35 cm.	09 - 10 - 11	CE	EN388 **4122X** EN407 **413X4X** EN12477 **TYPE A**	x 120
CA615K	Red	High quality heat-resistant split leather (HR). Cuff with canvas lining. Kevlar® Technology sewn. American assembly. Length: 35 cm.	10		EN388 **3132X** EN407 **413X4X**	x 60

We have used the best materials to create this glove that offers a guaranteed protection up to 500°C in contact heat. It is the ideal glove for the foundry and steelmaking trades.

Laetitia Guillerm, Hand Protection Product Expert

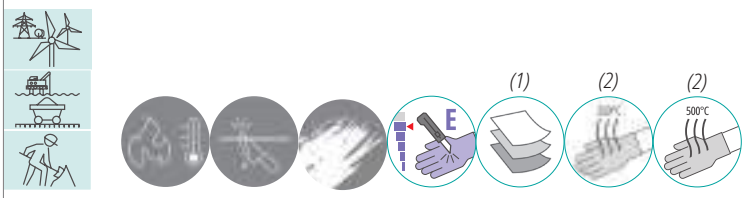
Your best ally in extreme conditions!

TERK500 XTREM HEAT

Double insulation *(1)*
- *Optimum performance for cuts and heat*

Aramid fabric cuff 16 cm
- *Forearm protection*

The construction of the glove in superposition of layers *(2)*
- *Protection from the effects of contact heat*
- *-> up to 250°C for 1 minute*
- *-> up to 500°C for 30 seconds*



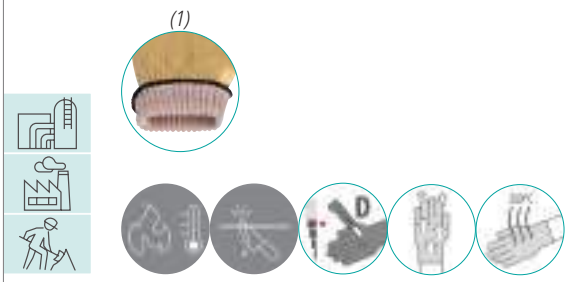
KPG10

Kevlar®/ Cotton knit *(1)*
- *Optimum performance for cuts and heat thanks to the thickness with the cotton lining*

100% textile
- *Ambidextrous*
- *Washable*

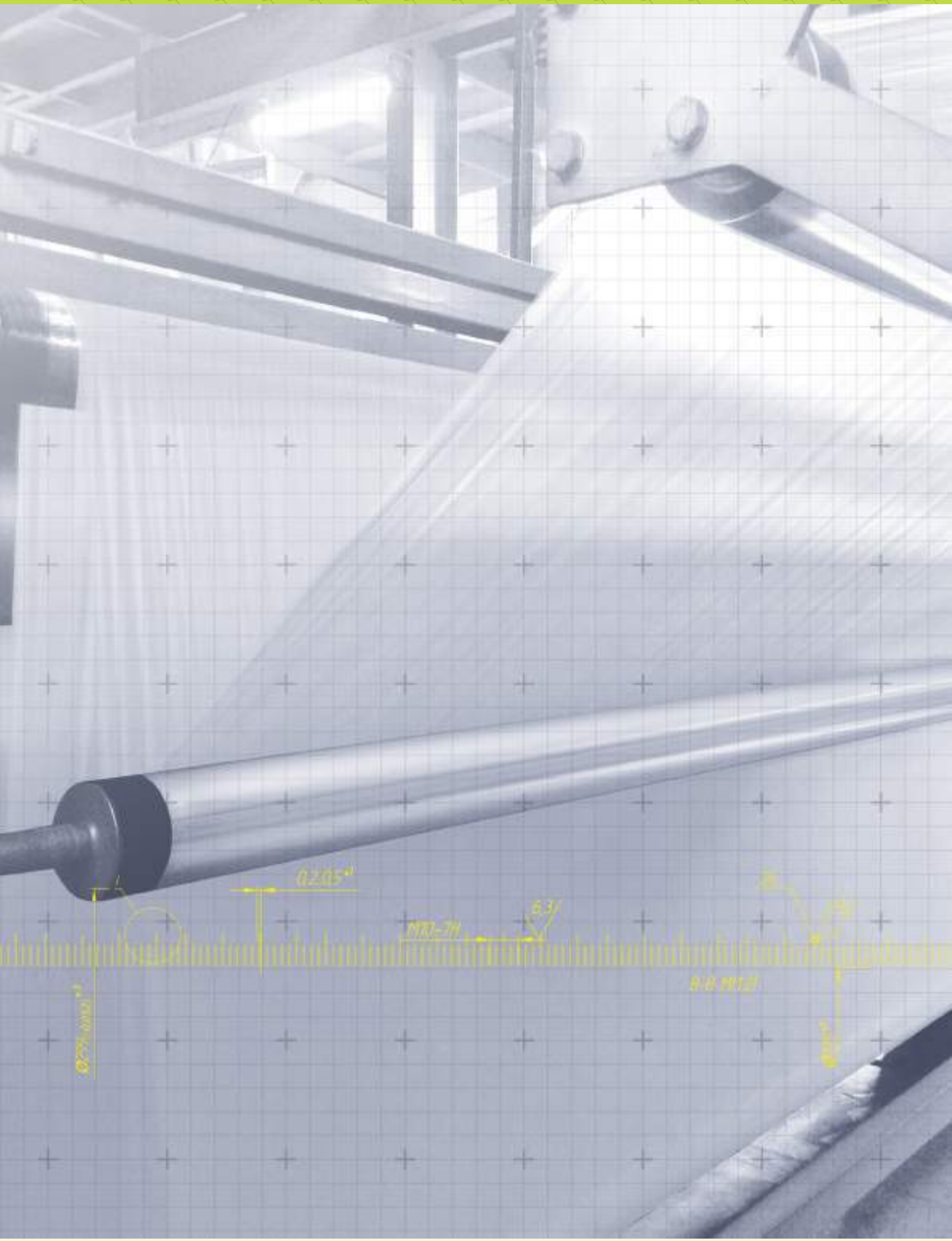
10 cm ribbed cuff
- *Better protection of the arteries*

Knit Gauge 7
- *Excellent compromise between thermal resistance and dexterity*



TERK500 XTREM HEAT	Yellow	Outside aramid fabric. 100% cotton inside. 16 cm cuff. Length: 36 cm.	One size	CE	EN388 2541E / EN407 44424X	x 36
KPG10	Yellow	Kevlar® Technology outside. 100% cotton lining. Gauge 7.	09	CE	EN388 1X4XD / EN407 42XXXX	x 36

Delta Plus provides protection at work from head to toe for both women and men



Delta Plus provides protection at work from head to toe for both women and men

BODY PROTECTION

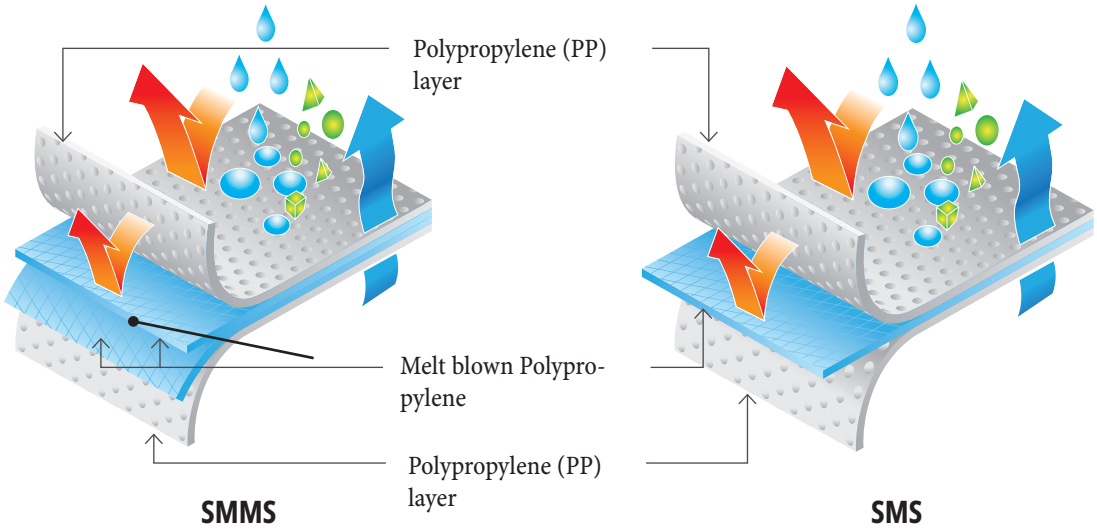
Materials

POLYETHYLENE (PE)
Is a flexible plastic fibre which provides good chemical resistances.

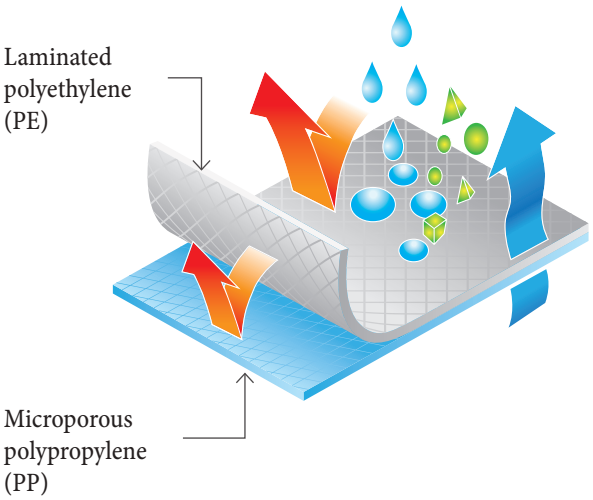
POLYPROPYLENE (PP)
Is a nonwoven breathable fibre which provides excellent comfort.

SMS/SMMS

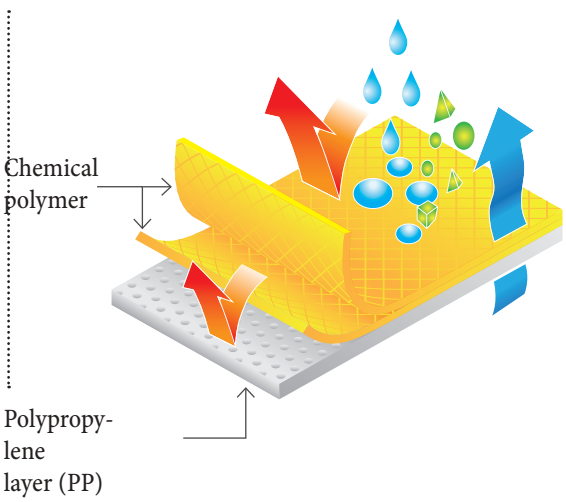
POLYPROPYLENE - MELT BLOWN POLYPROPYLENE - POLYPROPYLENE - DT2XX
The combination of the three polypropylene (PP) layers provides exceptional protection and provides a breathable non-woven material.
The melt blown is incorporated with warm air to form a chemical barrier. The other two layers make the combination flexible and breathable.



LAMINATED MICROPOROUS MATERIAL - DT1XX
The combination of a polypropylene (PP) layer and a Polyethylene layer (PE) ensures outstanding properties and excellent protection against most chemical products and particles. The non-woven material is very resistant and lint free.



DELTACHEM POLYPROPYLENE
+ CHEMICAL BARRIER - DT3XX
The combination of several high performance polymer layers (chemical barrier) combines with several polypropylene (PP) layers, which provides exceptional breathable protection. The polypropylene (PP) with the chemical barrier ensure flexible and comfort in extreme conditions.



Performances

What performance to choose according to your needs ?

PERFORMANCES +

RISKS +

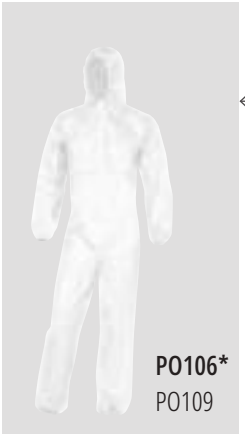
	DT215CV	DT215	DT216	DT115CV	DT115	DT125	DT223	DT221	DT117	DT119	DT250	DT300
Type 3												●
Type 4										●	●	●
Type 5	●	●	●	●	●	●	●	●	●	●	●	●
Type 6	●	●	●	●	●	●	●	●	●	●	●	●
STANDARDS												
EN13034	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
EN ISO 13982-1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
EN1149-5				✓	✓	✓	✓	✓	✓	✓	✓	✓
EN1073-2						✓	✓	✓	✓	✓	✓	✓
EN14126									✓	✓	✓	✓
EN14605										✓	✓	✓
EN ISO 14116							✓					
MATERIALS	SMS	SMS	SMS	Laminated microporous	Laminated microporous	SMS Laminated microporous	DELTATEK 6000 Protection against flame	DELTATEK 6000	DELTATEK 5000	DELTATEK 5000	PE/PP	DELTACHEM

- ● **TYPE 1 :** Gas-tight
- ● **TYPE 2 :** Not gas-tight
- ● **TYPE 3 :** Liquid-tight
- ● **TYPE 4 :** Spray-tight
- ● **TYPE 5 :** Dry particle-tight
- ● **TYPE 6 :** Against sprays (Iimited)

This list is not contractual. It is an indicative list and in no way incurs the liability of DELTA PLUS.

Carry out a risk analysis

1. Identify the chemical risk
2. Determine the exposure probability
3. Determine the exposure consequences



PO106*
PO109

Chemical protective clothing are not necessary

NO

Skin protection necessary?

YES

Liquid, gas or particles ?

Particles

Gas

TYPE 5

DT125*
DT115
DT115CV
DT117
DT119
DT215
DT215CV
DT216
DT221
DT223
DT250
DT300

TYPE 1 or 2

Liquid

Risk of exposure at vapor with hazardous concentration levels ?

YES

TYPE 1 or 2

NO

Possible exposure to liquid ?

NO

Chemical protective clothing are not necessary

YES

Liquid under pressure?

YES

TYPE 3

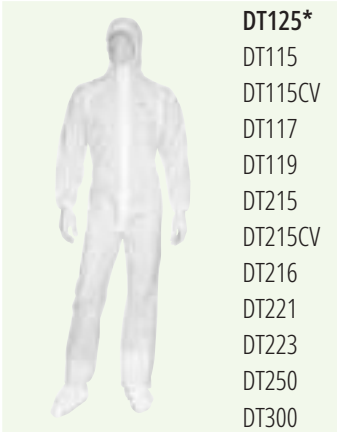
DT300

NO

Light sprays (splashes) ?

YES

TYPE 6



DT125*
DT115
DT115CV
DT117
DT119
DT215
DT215CV
DT216
DT221
DT223
DT250
DT300

NO

Important sprays?

YES

TYPE 4

DT250*
DT219

Select your disposable chemical coverall

In which environment?

Radioactive risk

DT119*
DT117
DT125
DT221
DT223
DT250
DT300

Spark risk

DT223

Antistatic risk

DT300*
DT115
DT115CV
DT117
DT119
DT125
DT221
DT223
DT250

Standards

- **EN14605** TYPE 3 — Protective clothing against liquid chemicals (sprays).
- **EN14605** TYPE 4 — Protective clothing against liquid chemicals (mists).
- **EN ISO 13982-1** TYPE 5 — Protective clothing for use against solid particles (dust - asbestos).
- **EN13034** TYPE 6 — Protective clothing against liquid chemicals (splashes).

- **EN14126** TYPE 3(B) TYPE 4(B) — Protective clothing against infective agents.
- **EN1073-2** — Protective clothing against radioactive contamination.
- **EN1149-5** — Protective clothing to dissipate static electricity.
- **EN ISO 14116** — Protective clothing against flame.
- **EN ISO 27065** — Protective clothing against pesticides

EXAMPLES OF APPLICATIONS

Applications	Risks	Level of protection	Product
Work Maintenance	*Fouling*	**Category I / Non PPE**	PO106 PO109
Industrial cleaning	*Accidental exposure to spray of chemical substances (splashes or dry particules)*	**Type 6** **Type 5**	DT115 DT221 DT115CV DT125 DT215 DT117 DT215CV
		Type 4	DT119 DT250
Removal or encapsulation asbestos work	*Exposure to dust Asbestos fibers*	**Type 5 with waterproof bands**	DT216
Work in environments with explosive risks	*Handling of products that can generate static electricity*	**Type 6** **Type 5** **EN ISO 14116** **EN 1149-5**	DT223
Agriculture and horticulture (Handling of fertilizers...)	*Contact with sprayed liquids*	**Type 4**	DT119 DT250
Agriculture and horticulture (Handling of herbicides / pesticides / fungicides)	*Contact with weakly concentrated phytosanitary sprays*	**Type 4** **EN ISO 27065**	DT119
Paint spraying (Solvents / Preparation / Mixing)	*Application of chemicals with spray gun > low pressure (Type 6) > high pressure (Type 4)*	**Type 6**	DT125 DT117
		Type 4	DT119 DT250
Industrial cleaning of dangerous products	*Risk of chemical splashes with continuous jet*	**Type 3**	DT300
Laboratories / Chemical Industries	*Projection of chemical products*	**Type 3**	DT300
Emergency / Rescue Personnel	*Bacteriological contamination*	**Type 4-B**	DT119 DT250
		Type 3-B	DT300

DT300 DELTACHEM

DELTACHEM *(1)*
- *Enhanced protection against chemicals*

3-part hood *(2)*
- *Supports head movement for increased comfort*

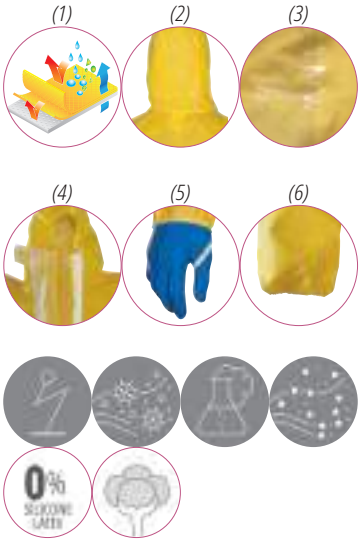
Waterproof seams *(3)*
- *Decontamination work*

Closure with double flap *(4)*
- *Total water-proofing*

Double thumb loops *(5)*
- *Good hold of the glove on the hand*

Elasticated ankles *(6)*
- *More comfort*

DELTACHEM
- *No risk of lint*



					EN14605	EN ISO 13982-1	EN13034	EN14126	EN1073-2	EN1149-5	
DT300 DELTACHEM	Yellow	Overall with three-sided elasticated hood. 3-B TYPE. Non woven Deltachem. Zip Fastening under double flap. Double elastic for thumb. Elasticated around the head, waist, cuffs and ankles. Single-use. Individual airtight pack.	M/L/ XL/XXL	CE	**TYPE 3B TYPE 4B**	**TYPE 5B**	**TYPE 6B**		**CLASS 1**		x 20

Delta Plus provides protection at work from head to toe for both women and men

DT250

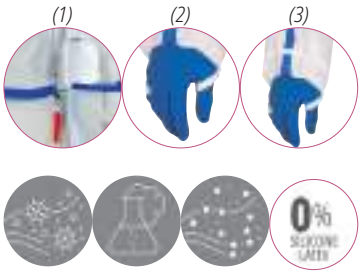
Waterproof seams
- *Decontamination work*

Closure with chin strap *(1)*
- *Very good support and reinforced protection*

Double thumb loops *(2)*
- *Very good support*

Adhesive tape to connect a glove *(3)*
- *Total water-proofing*

PE/PP material
- *No risk of lint*



DT119

DELTATek 5000

DELTATEK® 5000 *(1)*
- *Polyethylene film ensures better a resistance to chemical attack and better mechanical resistance (abrasion - tearing)*

3-part hood *(2)*
- *Supports head movement for increased comfort*

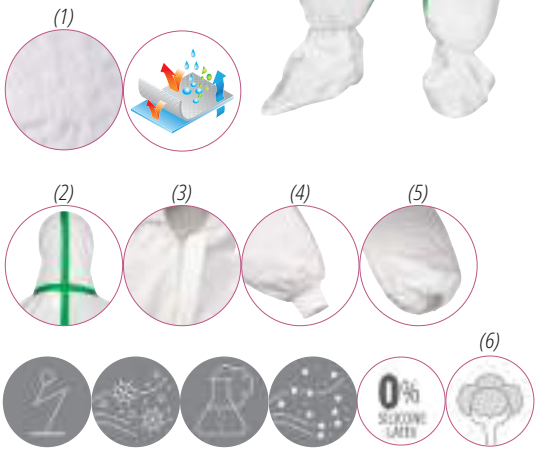
Closure with self-adhesive flap *(3)*
- *Very good seal*

Ribbed cuffs *(4)*
- *Good hold of the glove on the hand*

Elasticated ankles *(5)*

Microporous laminate *(6)*
- *No risk of lint*
- *Very soft*

Waterproof seams
- *Decontamination work*



DT250	White	Overall with integrated feet with non-slip soles and elasticated hood. 4-B TYPE. PE/PP non woven. Fastening with zip under flap. Elasticated around the head, waist, cuffs and ankles. Single-use. Individual airtight pack.	M/L/ XL/ XXL/3XL	CE	EN14605 TYPE 4B; EN ISO 13982-1 TYPE 5B; EN13034 TYPE 6B; EN14126; EN1073-2 CLASS 1; EN1149-5		x 20
DT119		Overall with elasticated hood. 4-B TYPE. Non-woven microporous laminate Deltatek 5000. Fastening with zip under adhesive flap (top and bottom opening). Elasticated waist and ankles. Knitted wrist. Antistatic. Single-use. Individual airtight pack.	M/L/ XL/XXL				

3-part hood
- *Supports head movement for increased comfort*

DT117
DT125
DT221
DT223

Closure with self-adhesive flap
- *Very good seal*

DT117
DT221

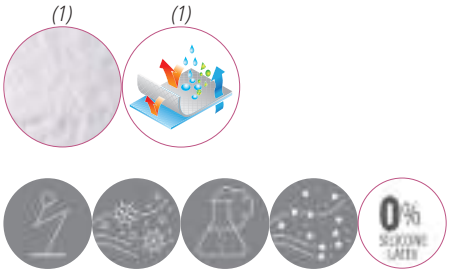
Ribbed cuffs
- *Good hold of the glove on the hand*

DT117
DT221

DT117

DELTATek 5000

DELTATEK® 5000 *(1)*
- *Polyethylene film ensures better a resistance to chemical attack and better mechanical resistance (abrasion - tearing)*



DT125

DELTATek 5000

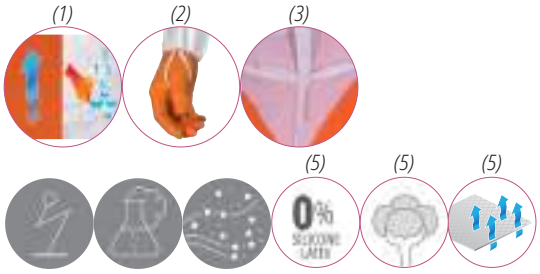
DELTATEK 5000 *(1)*
- *Polyethylene film ensures better a resistance to chemical attack and better mechanical resistance (abrasion - tearing)*

Thumb loop *(2)*
- *Good support*

Crotch reinforcement *(3)*
- *Increased resistance to tearing*

SMS and Microporous Laminate Association *(5)*
- *Optimum comfort*
- *Cooler due to the ventilated back*

Antistatic

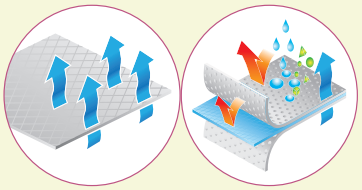


DT117	White	Overall with elasticated hood. 5-B / 6-B TYPE. Non-woven microporous laminate Deltatek 5000. Fastening with zip under adhesive flap (top and bottom opening). Elasticated waist and ankles. Knitted wrist. Antistatic. Single-use. Individual airtight pack.	M/L/XL/XXL	CE	EN ISO 13982-1 TYPE 5B; EN13034 TYPE 6B; EN14126	EN1073-2 CLASS 1	EN1149-5	x 20
DT125	White-orange	Non-woven overall with three-sided elasticated hood. 5/6 TYPE. Made in 2 materials: laminated microporous and SMS. Fastening with zip under flap. Elasticated round head, waist, cuffs and ankles. Single-use. Individual pack.	M/L/XL/ XXL/3XL		EN ISO 13982-1 TYPE 5; EN13034 TYPE 6			x 50

Delta Plus provides protection at work from head to toe for both women and men

3-part hood
- *Supports head movement for increased comfort*

DT215
DT216
DT115



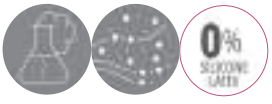
ESSENTIAL version SMS
- *Breathable*
- *Comfortable*

DT215
DT215CV
DT216

ESSENTIAL version Microporous laminate
- *Less risk of lint*

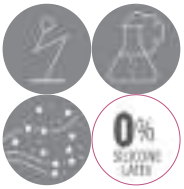
DT115
DT115CV

DT215

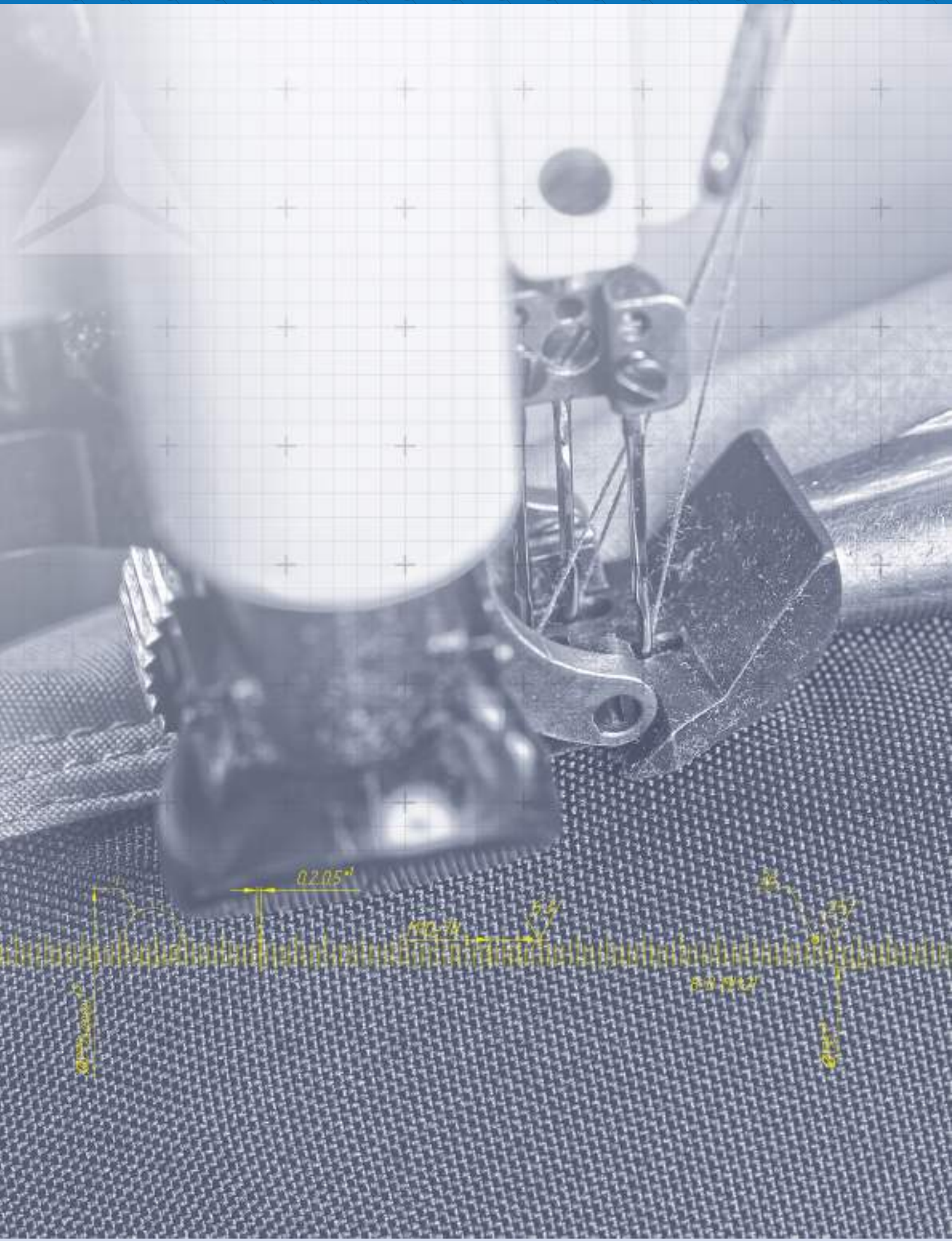


DT115

Antistatic
- *Reduces the risk of electrostatic discharge*



DT215	White	Overall with elasticated hood. 5/6 TYPE. Non woven 100% SMS. Fastening with zip under flap. Elasticated round head, waist, cuffs and ankles. Single-use. Individual pack.	M/L/XL/XXL	CE	EN ISO 13982-1 TYPE 5 / EN13034 TYPE 6 / EN1149-5	x 50
DT115	White	Overall with collar. 5/6 TYPE. Non-woven microporous laminate. Fastening with zip under flap. Elasticated round waist, cuffs and ankles. Single-use. Individual pack.	M/L/XL/XXL/3XL			



Delta Plus provides protection at work from head to toe for both women and men

M2PA3

Triple seams *(1)*

‣ *Increased lifespan*

Crotch yoke

‣ *More ease*

(1)

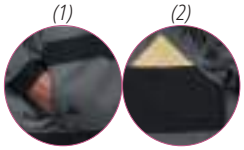
M2PA3	Grey-Orange Beige Grey-Yellow Navy blue-Royal blue Dark grey	Trousers. Regular cut. Elasticated waist on both sides. Preformed knees. 7 pockets including 1 ruler.	Twill 65% polyester 35% cotton 245 g/m².	S/M/L/XL/XXL/3XL S/M/L/XL/XXL/3XL S/M/L/XL/XXL/3XL S/M/L/XL/XXL/3XL S/M/L/XL/XXL/3XL/4XL/5XL	CE	EN14404 **TYPE 2** **LEVEL 0**	x 10

M2VE3

Hand pockets *(1)*
Inner pocket *(2)*

- *The necessary tools always at hand*

(1) *(2)*



M2VE3	Grey-Orange Beige Navy blue-Royal blue Dark grey	Jacket. Elasticated cuffs. Elasticated waist on both sides. 7 pockets including 1 inside.	Twill 65% polyester 35% cotton 245 g/m².	S/M/L/XL/XXL/3XL S/M/L/XL/XXL/3XL S/M/L/XL/XXL/3XL S/M/L/XL/XXL/3XL/4XL/5XL	CE	x 10

Delta Plus provides protection at work from head to toe for both women and men

M2C03

Triple seams

‣ *Increased lifespan (1)*

(1)

M2C03	Grey-Orange Navy blue-Royal blue Dark grey	Overalls. Regular cut. Zip fastening under bias. Elasticated waist at the back. Elasticated cuffs. Preformed knees. 9 pockets including 1 ruler.	Twill 65% polyester 35% cotton 245 g/m².	S/M/L/XL/XXL/3XL S/M/L/XL/XXL/3XL S/M/L/XL/XXL/3XL/4XL/5XL	CE	EN14404 **TYPE 2** **LEVEL 0**	x 10

400

Dorsal ventilation flap and underarm eyelets

- *Increased breathability for better evacuation of perspiration*

MA400

Decorative retro-reflective tapes (front and back) *(1)*
Dorsal ventilation flap and underarm eyelets

- *Increased breathability for better evacuation of perspiration*

(1)

304

Dorsal ventilation flap and underarm eyelets

- *Increased breathability for better evacuation of perspiration*

305

Length 1.20 m
Dorsal ventilation flap and underarm eyelets

- *Increased breathability for better evacuation of perspiration*

400	Royal blue Yellow Navy blue Green	Rain jacket and trousers. Waterproof seams. JACKET: Fastening with zip under storm flap. Fixed hood. Raglan sleeves. Adjustable cuffs with press-studs. 2 pockets. TROUSERS: Elasticated waist. Adjustable bottom of legs with press-studs. 2 hand slits.	PVC-coated polyester fabric.	M/L/XL/XXL	CE	EN343 3 1* X	x 20
MA400		Rain coat. Waterproof seams. Fixed hood. Fastening with zip under storm flap. Elasticated inside cuffs. 2 pockets.					
304	Yellow Green	Rain jacket and trousers. Sealed seams. JACKET: Fixed hood. Fastening with zip under press-studs flap. Raglan sleeves. Elasticated inside cuffs. 2 pockets. TROUSERS: Elasticated waist. Fly closed with press-studs. Adjustable bottom of legs with press-studs. 2 hand slits.	PVC-coated polyester support. Double sided coating.				x 10
305		Rain coat. Sealed seams. Fixed hood. Fastening with double press-stud flap. Raglan sleeves. Elasticated inside cuffs. 2 pockets.		M/L/XL/XXL/3XL			x 20

Delta Plus provides protection at work from head to toe for both women and men

GILP4

GILP3

COMET

GILP4	Fluorescent yellow Fluorescent orange	Vest. Fastening with velcro band. High visibility: Class 2 - Silver colour - Parallel assembly.	Polyester fabric. Retro-reflective sewn bands.	L/XXL	CE	EN ISO 20471 CLASS 2 Max. 25 x	x 100
GILM3		Mesh vest Fastening with velcro band High visibety Class 2-Siver color shoulder-belt and parallel assembly	Polyester mesh fabric Retro-reflective sean bands	L/XXL		ANSI	
COMET	Fluorescent yellow Fluorescent orange	Short sleeve tee-shirt. Round collar. High visibility: Class 2 - Silver colour - Shoulder-belt assembly.	100% polyester stitch 160 g/m². Retro-reflective sewn bands.	S/M/L/XL/ XXL/3XL		EN ISO 20471 CLASS 2	×10

FOOT PROTECTION

Delta Plus provides protection at work from head to toe for both women and men

INDOOR

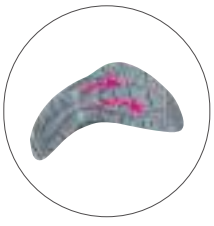
A breathable and lightweight range designed for industry

For industrial jobs, where safety shoes must be comfortable while meeting the specific needs of the business environment (Automotive, Logistics, Microelectronics Industry).

The INDOOR DELTA PLUS range offers a complete solution, whatever the need. Whether that be flexibility, lightness or optimal comfort all day long.

PANOFLEX SYSTEM

With the flexibility of the footwear being crucial for the overall comfort, DELTA PLUS has designed the PANOFLEX System, which facilitates the natural course of the step, bringing additional flexibility on the front of the foot.



ESD

The "ESD" device makes it possible to control electric discharges for manufacturing, processing, assembly, packaging, maintenance, testing, inspection, transport or handling of parts, assemblies and electrical or electronic equipment liable to be damaged by electrostatic discharges.

Comfortable at work and at home, this is what makes MIAMI a unique product. Responding to the needs of the manufacturing trades was our brief to design a range of safety footwear that is worn as if you were at home.

Boris Dodin, Foot Protection Product Expert

If you are looking for lightness, flexibility and comfort, the INDOOR range will meet these expectations throughout the day!

MIAMI S1P SRC

MIAMI S1P CAMO SRC

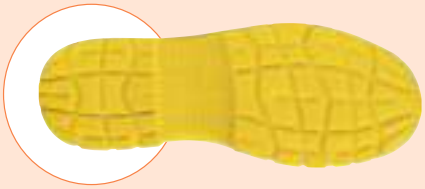
MIAMI S1P SRC	Grey-Navy blue Black	Upper: Polyester and cotton. Insock: Removable premolded - polyester on EVA. Midsole: injected - Single density PU.	35 → 48	CE	EN ISO 20345 **S1P SRC**	442 g	x 10
MIAMI S1P CAMO SRC	Khaki					460 g	

Delta Plus provides protection at work from head to toe for both women and men

PU MONO-DENSITY SOLE

- *High flexibility*

MIAMI S1P SRC
MIAMI S1P CAMO SRC
MIAMI S1P SRC ESD



TANGARA2 S1P SRC
RIMINI4 S1P SRC
FENNEC4 S1P SRC
FENNEC4 S1 SRC

TANGARA2 S1P SRC

RIMINI4 S1P SRC

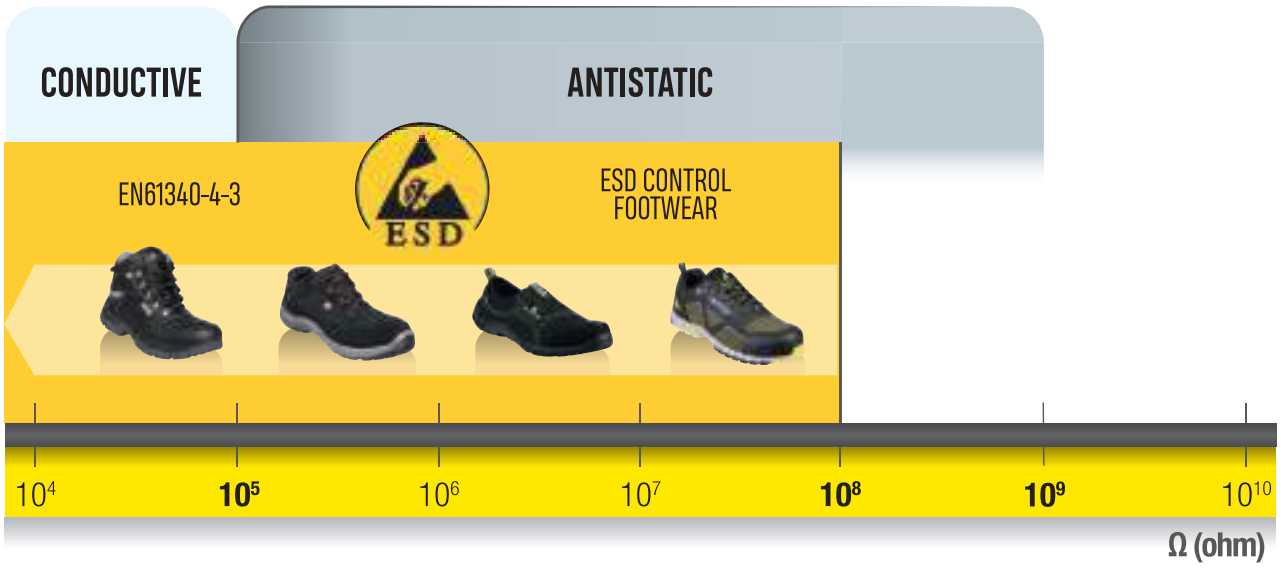
FENNEC4 S1P SRC

FENNEC4 S1 SRC

TANGARA2 S1P SRC	Grey-Yellow	Upper: Ventilated suede split leather. Lining: Polyamide absorbing. Insole: Removable premolded - Polyester on EVA. Outsole: Injected - Dual-density PU.	36 → 45 46 → 47	CE	EN ISO 20345 **S1P** **SRC**	601 g	x 10 x 5
RIMINI4 S1P SRC	Beige-Yellow Navy blue-Orange					594 g	
FENNEC4 S1P SRC	Grey	Upper: Suede split leather. Lining: Polyamide absorbing. Insole: Removable premolded - Polyester on EVA. Outsole: Injected - Dual-density PU.				628 g	
FENNEC4 S1 SRC					EN ISO 20345 **S1** **SRC**	477 g	

What does the regulation say?

The requirements for the design, establishment, implementation and maintenance of electrostatic discharge control devices (ESD) that can damage electronic components are defined by standard EN61340-5-1. The device called "ESD» is used to control electrical discharges for manufacturing, processing, assembly, packaging, maintenance, testing, inspection, transport or handling of electrical or electronic parts, assemblies and equipment that may be damaged by electrostatic discharges. To be usable in an ESD device, a shoe must at least be qualified according to the test methods of EN IEC 61340-4-3 and offer an electrical resistance lower than 10^8 Ω. SAULT2 ESD, VIAGI ESD, MIAMI ESD and MEMPHIS ESD meet this level of resistance required for compliance. These shoes, thanks to their low electrical resistance, limit the risk of electrostatic discharge.



RISK OF ELECTROSTATIC DISCHARGE (ESD*)

Static electricity present on operators must be controlled in the following areas of use, as it can :
- damage materials to sensitive electric shock: various electronic and electrical industries ...
- generate particles likely to be deposited on the paint : automotive industry, household appliances ...

The purpose of ESD control is to protect the electronic equipment being handled and not the wearer.
* Electrostatic Discharge

SAULT2 S3 SRC ESD

MIAMI S1P SRC ESD

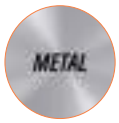
SAULT2 S3 SRC ESD	Black	Upper: Pigmented split leather, S3 water resistant treatment. Lining: Polyamide. Insock: Removable premolded - Polyamide on EVA. Outsole: Injected - Dual-density PU with bump cap.	39 → 48	CE	EN ISO 20345 **S3 SRC**	EN 61340 **ESD**	734 g	x 5
MIAMI S1P SRC ESD		Upper: Polyester and cotton. Insock: Removable premolded - polyester on EVA. Midsole: injected - Single density PU.	35 → 48		EN ISO 20345 **S1P SRC**		456 g	x 10

MIWA S3 M SRC

DUAL DENSITY PU OUTSOLE
1- Angular design of the studs and fluid drain channels
2- Lateral ladder grips
- *1- Good grip on all types of surfaces*
- *2- Secured stabilisation on ladder rungs*
- *Optimum adhesion on all types of surfaces*

MIWA S3 M SRC

MIWA S3 M SRC

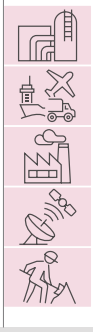


SAGA S3 SRC

BROOKLYN S3 SRC

Anti-slide on the inside of the shoe
- *Improved heel hold*
- *Reinforced rear section*

EVA outsole preformed and removable
- *Reinforced ergonomics and comfort in foot movements*
- *Easy drying*



COBRA4 S3 SRC

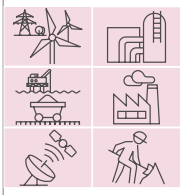
Standards EN ISO 20349-2: 2017 - WG special welders
- *Protection against thermal risks and projections*
- *Specially designed for any multi-sector welding activity*

Two elastics inside for closer fitting protection
- *Improved hold on the kick of the foot*

Leather collar and para-aramid thread
- *Enhanced heat protection*

Velcro closure
- *Fast opening*
- *Protection against projections*

Integrated flexion zones
- *Increased flexibility at the metatarsal level*
- *Work facilitated whatever the position*



MIWA S3 M SRC	Black	Upper: Pigmented Buffalo leather 1.8-2 mm, S3 water resistant treatment. Lining: Polyamide mesh. Insock: Removable premolded - Polyester on EVA. Outsole: Injected - Dual-density PU. • Integrating a protection flap with a pre-molded part to the metatarsals.	36 → 45 46 → 47	CE	EN ISO 20345 **S3 M** **SRC**	699 g	x 10 x 5
SAGA S3 SRC	Beige Black Brown	Upper: Nubuck leather, S3 water resistant treatment. Lining: Polyester. Insock: Removable - polyester on EVA. Outsole: Cemented - PU/Rubber. Non metallic footwear.	39 → 48	CE	EN ISO 20345 **S3 HRO** **SRC** ASTM F2413 **M I/75 C/75 PR SD**	699 g	x 10 x 5
BROOKLYN S3 SRC	Black-Orange	Upper: Suede split leather (cowhide), S3 water resistant treatment with front rubber reinforcement. Lining: Polyester non-woven and knitted mesh. Insock: Removable premolded - Polyester on EVA. Outsole: Cemented - Phylon. Outsole: Rubber. Non metallic shoe.	39 → 47	CE	EN ISO 20345 **S1P HRO** **SRC**	482 g	x 10
COBRA4 S3 SRC	Black	Upper: Pigmented split leather, S3 water resistant treatment. Lining: Polyester. Insock: Removable premolded - Polyamide on EVA. Outsole: Injected - PU/Rubber nitrile. • Para aramid seams. • Flap. Fastening with velcro band.	36 → 45 46 → 47	CE	EN ISO 20345 **S3 M** **SRC**	842	x 5

Delta Plus provides protection at work from head to toe for both women and men

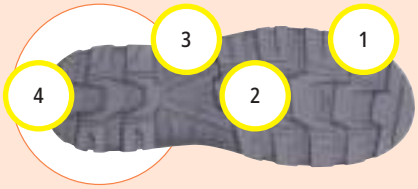
MIAMI S2 SRC

METAL

MIAMI S2 SRC	White Black	Upper: Microfibre/PU. Insock: Removable premolded - polyester on EVA. Midsole: Injected - Single density PU. •Water resistant upper in microfibre •Machine wash up to 30° C, easy to maintain	35 → 48	CE	EN ISO 20345 **S2** **SRC**	402 g	x 10

Fast lacing
- *Time saving*

PHOENIX S3 SRC
PHOCEA S3 SRC

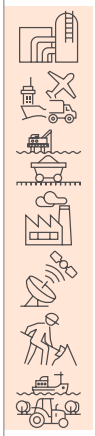


DUAL DENSITY PU OUTSOLE
1- Flex zone
2- V STAB SYSTEM
3- Lateral ladder grips
4- Studded sole, SRC standards
- *1- Foot motion improved*
- *2- Reinforced control of foot torsion*
- *3- Secured stabilisation on ladder rungs*
- *4- Good grip on all types of indoor and outdoor surfaces*

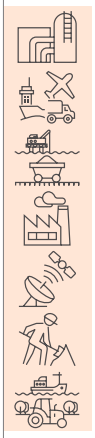
PHOENIX S3 SRC
PHOCEA S3 SRC
AURIBEAU3 S1P SRC
PERTUIS3 S1P SRC

GARGAS II S1P SRC
GOULT II S1P SRC

PHOENIX S3 SRC



PHOCEA S3 SRC

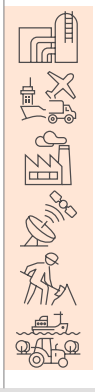


PHOENIX S3 SRC	Black	Upper: Pigmented split leather, S3 water resistant treatment. Lining: Polyamide mesh. Insock: Removable premolded - Polyamide on EVA. Outsole: Injected - PU bi-density. Non metallic footwear.	36 → 47	CE	EN ISO 20345 **S3 SRC**	590 g	x 5
PHOCEA S3 SRC						570 g	

Delta Plus provides protection at work from head to toe for both women and men

AURIBEAU3 S1P SRC

PERTUIS3 S1P SRC



AURIBEAU3 S1P SRC PERTUIS3 S1P SRC	Green-Black	Upper: Split suede leather and mesh. Lining: Polyester. Insock: Removable premolded - Polyamide on EVA. Outsole: Injected - Dual density PU. Non metallic footwear.	36 → 47	CE	EN ISO 20345 **S1P SRC**	640 g 622 g	x 5

Heel shock absorbency area

- *Optimised walking comfort*
- *Reduction of fatique and risk of skeletal muscular disorders*

GOBI S3 SRC
ATACAMA S3 SRC
TAKU S3 CI SRC

Seam reinforcement with rivet fastening

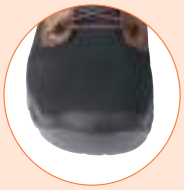
- *Best rode resistence in outdoor environments*

GOBI S3 SRC
ATACAMA S3 SRC

Quilted collar and tongue

- *Effective protection against rubble*
- *Comfort throughout the day*

GOBI S3 SRC
ATACAMA S3 SRC



PU-coated split leather

- *Improved anti-shock durability of the rod*

GOBI S3 SRC
ATACAMA S3 SRC
TAKU S3 CI SRC

GOBI S3 SRC

Air Mesh 3D polyester lining

- *Increased breathability*
- *Optimal comfort*

Anti-puncture stainless steel insert

- *Protection adapted to perforation resistance requirements in construction*

GOBI S3 SRC	Brown	Upper: Cow leather, water resistant treatment S3 and PU-coating suede split leather. Lining: Absorbent 3D mesh.Insole: Removable premolded - Polyester on EVA. Outsole: Injected - Dual-density PU.	36 → 48	CE	EN ISO 20345 **S3 SRC**	670 g	x 5

Delta Plus provides protection at work from head to toe for both women and men

DUAL DENSITY PU OUTSOLE
1- Angular design of the studs and fluid drain channels
2- Lateral ladder grips
- *1- Good grip on all types of surfaces*
- *2- Secured stabilisation on ladder rungs*

GOBI S3 SRC
ATACAMA S3 SRC
TAKU S3 CI SRC

TAKU S3 CI SRC

Safety boot specially designed for the cold *(1)*
- *Suitable for use in cold outdoor environments down to -30°C*

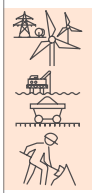
Grip handles *(2)*
- *Easy shoeing*

Anti-puncture stainless steel insert
- *Protection adapted to perforation resistance requirements in construction*

Felt insole
- *Better insulation against the cold*

(2)

(1)



ATACAMA S3 SRC

Bending fold at the back of the rod *(1)*
- *Comfort for the ankle in flexing phases*

Air Mesh 3D polyester lining
- *Increased breathability*
- *Optimal comfort*

Anti-puncture stainless steel insert
- *Protection adapted to perforation resistance requirements in construction*

(1)

TAKU S3 CI SRC	Brown	Upper: Cow leather, water resistant treatment S3 and PU-coating suede split leather. Lining: Polyester fur. Insole: Removable premolded - Polyester on EVA. Outsole: Injected - Dual-density PU. PU formula sole keeping its properties until -30°C.	36 → 48	CE	EN ISO 20345 **S3 CI SRC**	740 g	x 5
ATACAMA S3 SRC		Upper: Cow leather, water resistant treatment S3 and PU-coating suede split leather. Lining: Absorbent 3D mesh.Insole: Removable premolded - Polyester on EVA. Outsole: Injected - Dual-density PU.			EN ISO 20345 **S3 SRC**		

SHOCK ABSORBER
Dual density PU outsole

- *Decreased propagation of shock waves*

SANTANA S3 SRC
CALYPSO S3 SRC
MAESTRO S3 SRC

Wide fitting (mondo 11)

- *Hard wearing*

SANTANA S3 SRC
CALYPSO S3 SRC
MAESTRO S3 SRC

Outsole with PU protection bumper

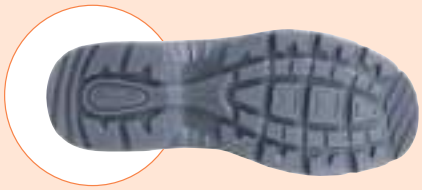
- *Reinforced protection of the forefoot*

SANTANA S3 SRC
CALYPSO S3 SRC
MAESTRO S3 SRC

Areas of integrated bending (PANOFLEX® system)

- *Less fatigue at the end of the day*
- *More comfortable walking*

SANTANA S3 SRC
CALYPSO S3 SRC
MAESTRO S3 SRC

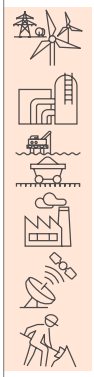


DUAL DENSITY PU OUTSOLE
1- Hear wearing outsole with toe and heel grip
2- Lateral ladder grips

- *1- Reinforced adhesion on loose ground*
- *2- Secured stabilisation on ladder rungs*

SANTANA S3 SRC
CALYPSO S3 SRC
MAESTRO S3 SRC

SANTANA S3 SRC



CALYPSO S3 SRC

MAESTRO S3 SRC

SANTANA S3 SRC	Black	Upper: Buffalo smooth leather, S3 water resistant treatment. Lining: Polyester. Insock: Removable premolded - Polyamide on EVA. Outsole: Injected - Dual-density PU with bump cap. Non metallic footwear.	39 → 48	CE	EN ISO 20345 **S3 CR SRC**	720 g	x 5
CALYPSO S3 SRC						856 g	
MAESTRO S3 SRC						670 g	

Delta Plus provides protection at work from head to toe for both women and men

Retro-reflective tapes

- *Increased visibility for better safety*

SAULT2 S3 SRC
MONTBRUN S3 SRC

SHOCK ABSORBER
Dual density PU outsole

- *Decreased propagation of shock waves*

SAULT2 S3 SRC
MONTBRUN S3 SRC

Outsole with PU protection bumper

- *Reinforced protection of the forefoot*

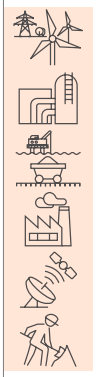
SAULT2 S3 SRC
MONTBRUN S3 SRC

Areas of integrated bending (PANOFLEX® system)

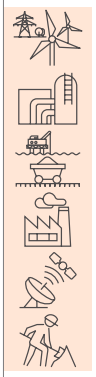
- *Less fatigue at the end of the day*
- *More comfortable walking*

SAULT2 S3 SRC
MONTBRUN S3 SRC

SAULT2 S3 SRC



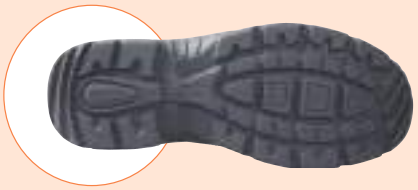
MONTBRUN S3 SRC



SAULT2 S3 SRC	Black	Upper: Pigmented split leather, S3 water resistant treatment. Lining: Polyamide. Insock: Removable premolded - Polyamide on EVA. Outsole: Injected - Dual-density PU with bump cap.	39 → 48	CE	EN ISO 20345 **S3 SRC**	736 g	x 5
MONTBRUN S3 SRC						702 g	

Wide fitting (mondo 11)
- *Hard wearing*

SAULT2 S3 SRC
MONTBRUN S3 SRC



DUAL DENSITY PU OUTSOLE
1- Hear wearing outsole with toe and heel grip
2- Lateral ladder grips
- *1- Reinforced adhesion on loose ground*
- *2- Secured stabilisation on ladder rungs*

SAULT2 S3 SRC
MONTBRUN S3 SRC

JUMPER3 S3 SRC
JET3 S3 SRC
JUMPER3 S1P SRC
JET3 S1P SRC
JUMPER3 S1SRC
JET3 S1 SRC

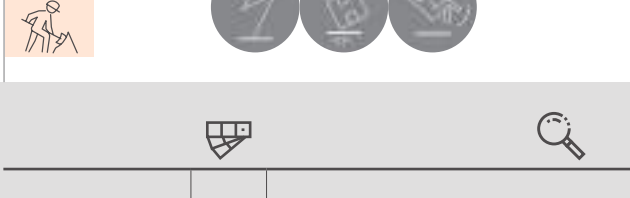
JUMPER3 S3 SRC

JET3 S3 SRC

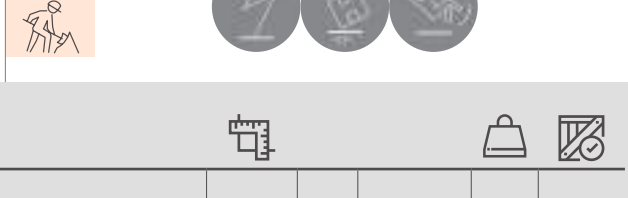
JUMPER3 S1P SRC

JET3 S1P SRC

JUMPER3 S1 SRC



JET3 S1 SRC

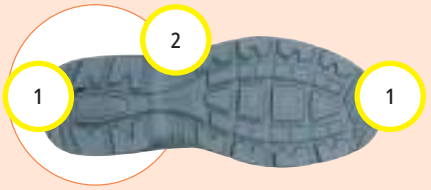


JUMPER3 S3 SRC	Black	Upper: Pigmented split leather, S3 water resistant treatment. Lining: Polyamide mesh. Insole: Removable premolded - Polyester on EVA. Outsole: Injected - Dual-density PU.	36 → 45 46 → 48	CE	EN ISO 20345 **S3 SRC**	582 g	x 10 x 5
JET3 S3 SRC						570 g	
JUMPER3 S1P SRC		Upper: Pigmented split leather. Lining: Polyamide mesh. Insole: Removable premolded - Polyester on EVA. Outsole: Injected - Dual-density PU.	36 → 45 46 → 47		EN ISO 20345 **S1P SRC**	598 g	x 10 x 5
JET3 S1P SRC						678 g	
JUMPER3 S1 SRC					EN ISO 20345 **S1 SRC**	556 g	
JET3 S1 SRC						490 g	

Delta Plus provides protection at work from head to toe for both women and men

JUMPER3 S3 FUR HC SRC
JUMPER3 S3 FUR SRC

SAMARA S3 SRC
SAKHA S3 SRC



DUAL DENSITY PU OUTSOLE
1- Hear wearing outsole with toe and heel grip
2- Lateral ladder grips
- *1- Reinforced adhesion on loose ground*
- *2- Secured stabilisation on ladder rungs*

CADEROUSSE S3 SRC

JUMPER3 S3 FUR HC SRC

JUMPER3 S3 FUR SRC

CADEROUSSE S3 SRC

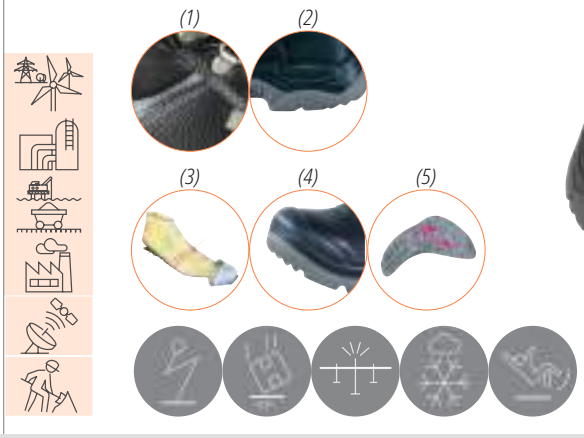
Retro-reflective tapes *(1)*
- *Increased visibility for better safety*

SHOCK ABSORBER
Dual density PU outsole *(2)*
- *Decreased propagation of shock waves*

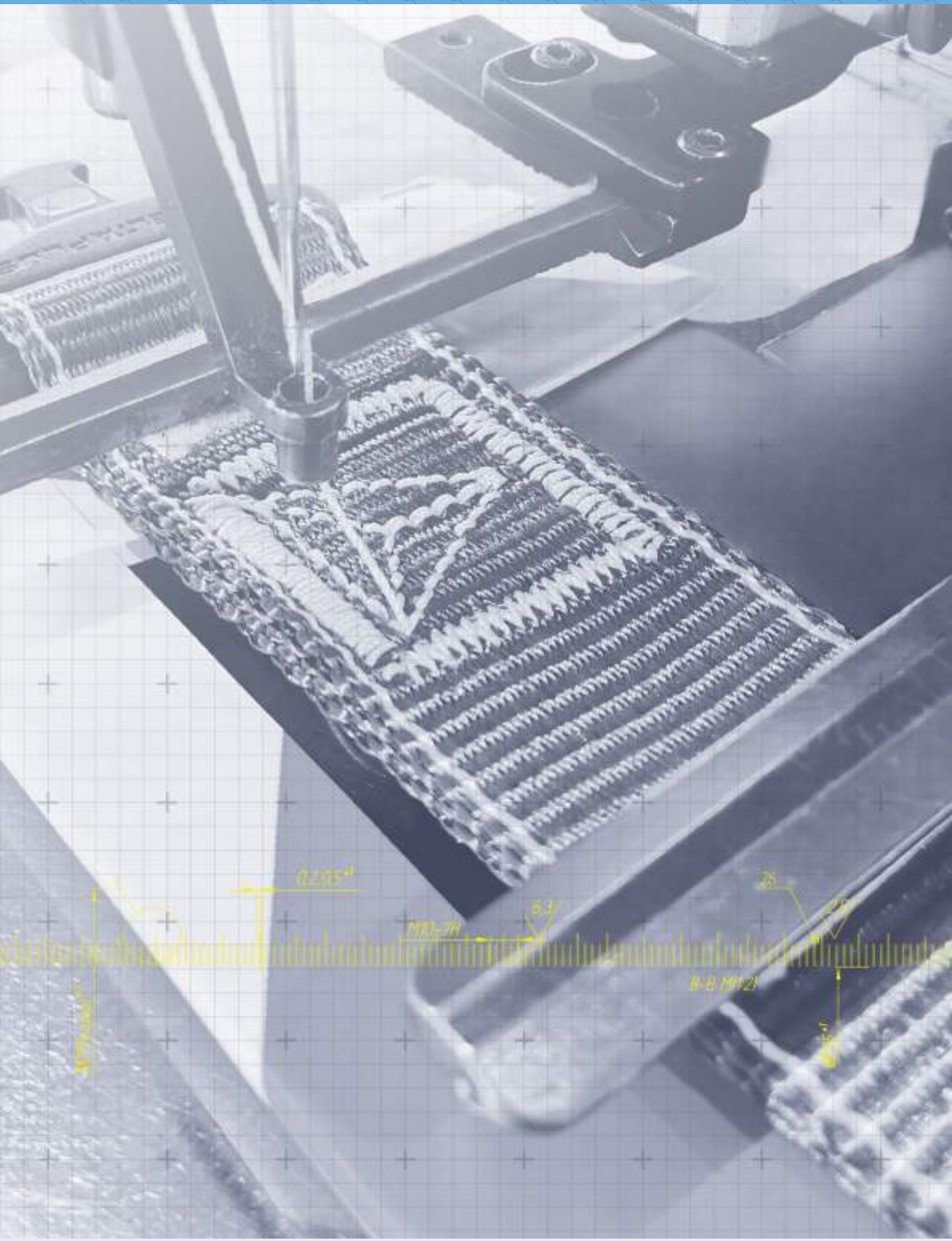
Wide fitting (mondo 11) *(3)*
- *Hard wearing*

Outsole with PU protection bumper *(4)*
- *Reinforced protection of the forefoot*

Areas of integrated bending (PANOFLEX® system) *(5)*
- *Less fatigue at the end of the day*
- *More comfortable walking*



JUMPER3 S3 FUR HC SRC	Black	Upper: Pigmented split leather, S3 water resistant treatment. Lining: Polyester fur. Insole: Removable premolded - Felt. Outsole: Injected - Dual-density PU. • PU formula sole keeping its properties until -30°C	36 → 45 46 → 48	CE	EN ISO 20345 **S3 CI** **SRC**	776 g	x 10 x 5
JUMPER3 S3 FUR SRC						611 g	
CADEROUSSE S3 SRC	Black	Upper: Full grain leather, S3 water resistant treatment. Lining: Polyester fur. Insock: Removable premolded - Felt. Outsole: Injected - Dual-density PU with bump cap.	39 → 48			852 g	x 5



Delta Plus provides protection at work from head to toe for both women and men

FALL PROTECTION

Fall arrest

HARNESSES

	5 ATTACHMENT POINTS	4 ATTACHMENT POINTS	3 ATTACHMENT POINTS	2 ATTACHMENT POINTS	1 ATTACHMENT POINT
PREMIUM					EN 361 HARNESSES EN 358 RESTRAINT
PREMIUM					
EVOLUTION					
ESSENTIAL					

ABSORBERS

EN 355

RETRACTABLES

EN 360

SLIDINGS

EN 353-1 CABLE

EN352-2 CORDE

ANCHORAGES

EN 795 A = FFIX B = MOBILE

CONFINED

EN 795 B = MOBILE

LIFE LINE

SPEEDline

CABLEline

CONNECTORS

EN 362

LANYARDS

EN 354

Delta Plus provides protection at work from head to toe for both women and men

Positioning

2
ATTACHMENT POINTS

EN 358
RESTRAINT

EN 358
RESTRAINT

Rope access work

6
ATTACHMENT POINTS

EN 361
HARNESSES
EN 567
BLOCKERS

5
ATTACHMENT POINTS

EN 358
RESTRAINT
EN 12841
ROPE ACCESS WORK

EN567
BLOCKERS
EN341-2-A
DESCENDERS
EN12841-C
ROPE ACCESS WORK

EN 1891
ROPES
EN 12278
PULLEYS

Rescue

3
ATTACHMENT POINTS

EN 361
HARNESSES

EN 1498-C
RESCUE

EN341-1-B
DESCENDERS
EN341-1-A
DESCENDERS
EN341-2-A
DESCENDERS
EN1496-B
RESCUE

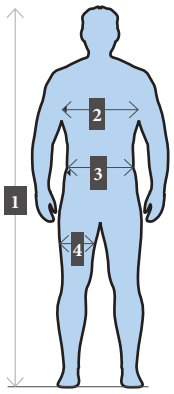
EN 1498-B
RESCUE WEBBINGS

Fall arrest

HARNESSES

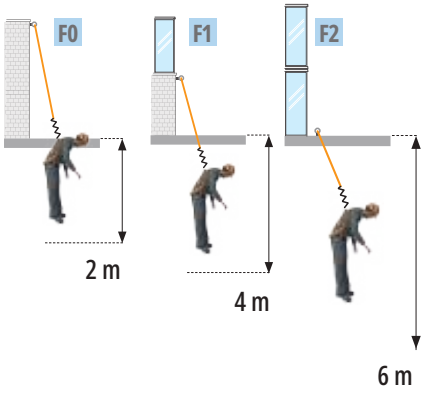
REF	SIZES	1	2
GT	S-M-L	<195 cm	<110 cm
XX	XL-XXL	>190 cm	>105 cm

		3	4
GT	S-M-L	<115 cm	<65 cm
XX	XL-XXL	>110 cm	>60 cm

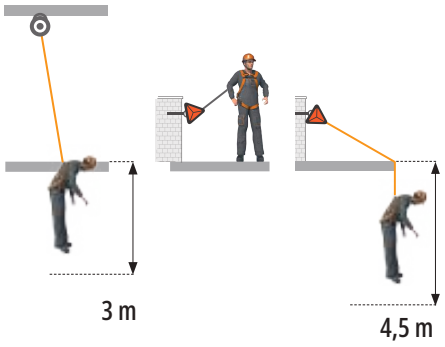


= 5 = 4 = 3 = 2 = 1

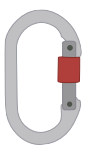
ABSORBERS



RETRACTABLES



SLIDINGS

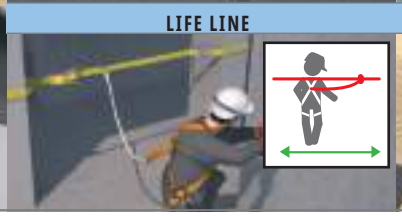


ANCHORAGES

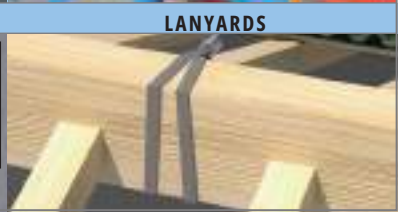
CONFINED

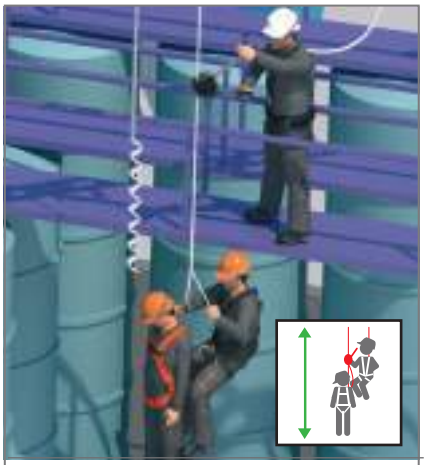
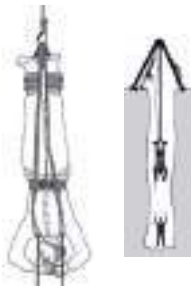
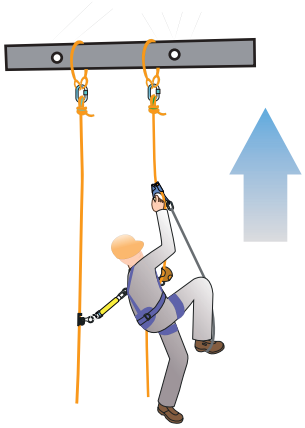
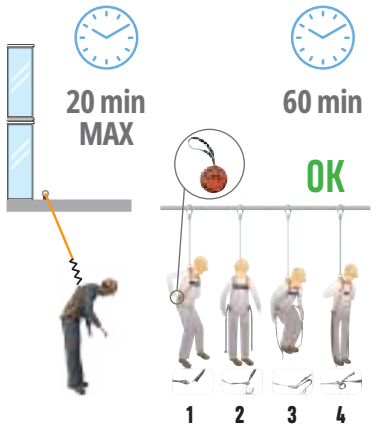
CONNECTORS

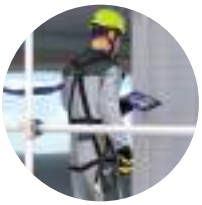
LIFE LINE



LANYARDS



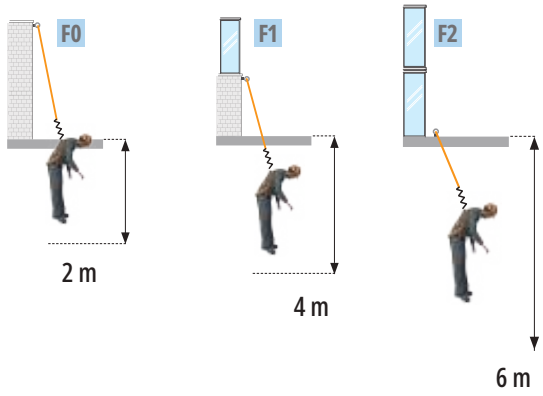
Positioning	Rope access work	Rescue
		
 = 2	 = 6 + 	 = 3
		
		



Why choose your fall arrester?

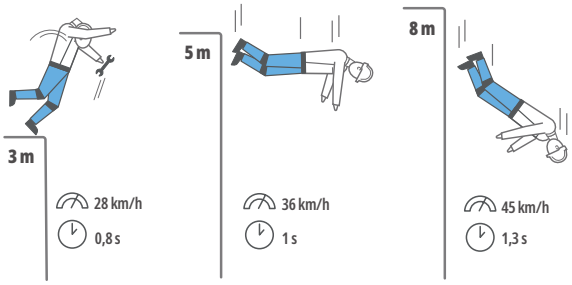
1. In order to stop the fall :

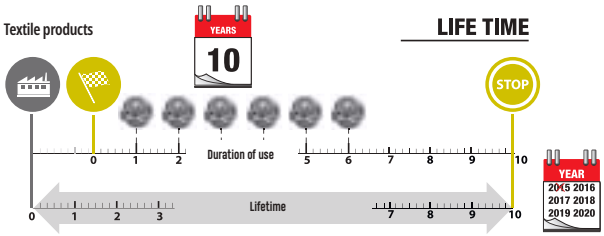
It is necessary to consider the space between the feet of user and the first encountered obstacle (called Vertical Clearance) but also consider where should be anchored my fall arrest system (called Fall Factor).

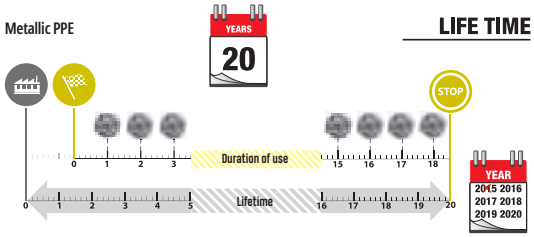


2. Limit the impact to the user

6kN : Maximum tolerance threshold for human body
10kN : Irreversible lesions, death







INSTRUCTIONS FOR PERIODIC INSPECTIONS SHALL INCLUDE:

+A recommendation for the frequency of periodic inspections, taking into account factors such as regulation, the type of equipment, frequency of use, and environmental conditions. This recommendation shall include a clause stating that the periodic inspection should be conducted at least once every twelve months;

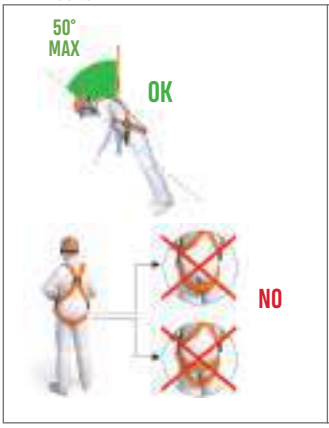
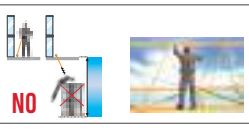
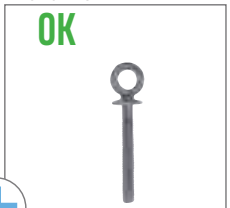
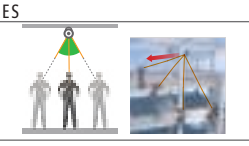
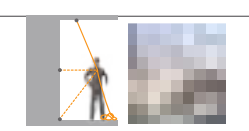
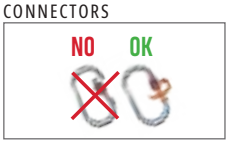
+A warning to emphasise that periodic inspections should only be carried out by a competent person in strict compliance with the manufacturer periodic inspection procedures

VISUAL INSPECTION

Harnesses, belts, lanyards, ropes, energy absorbers, self-retractable devices that cannot be dismantled (e.g. AN102), connectors, our kit components (except ELA-RA270), temporary anchors (tripod, LV201 ...)

MECHANICAL INSPECTION

Self-retractable devices that can be dismantled, rescue equipment (e.g. TC013)

FALL ARREST	POSITIONING	FALL ARREST	FALL ARREST
HARNESSES		ABSORBERS	ANCHORAGE
			
		RETRACTABLES	
			
		SLIDINGS	CONNECTORS
			

Elara kit

	ESSENTIAL	EVOLUTION		PREMIUM
				
	L-XXL 190	L 280	L 320	L-XXL 390H
				
	L-XXL 160	L-XXL 140	L 270	L-XXL 340H
				
	L-XXL 130	L 150	L-XXL 170	L-XXL 350H

Safe, Easy, Clear Affordable, Innovative

We are proud to present our innovative identity card

For all our Fall Arrest Products (except the carabiners). Since mid-2015, in addition to the compulsory printed label, our products have an electronic microchip indicating:

- **Product reference**
- **Serial number**
- **Manufactoring date**

NFC
(Near Field Communication)

Using an Android or Windows mobile phone having technology, any user can scan the tag ((N)) and download our free **"DELTA PLUS ID CARD"** APP from our Website.

Using app on your smartphone

1

After flashing NFC tag, user can write/read:

- **The wearer's product name.**
- **The commissioning date of the PPE.**

2

The Official Service Center (SAV) will write:

- **The date of each annual control.**

3

Both user and controller can check anytime:

- **The status of product controls.**

A PPE DATABASE is included to check anytime all the inventoried products.

Annual check reminder service

After creating all your products on the APP, you will receive an email 15 days before each compulsory annual control.

- A full access to a more complete PPE DATABASE is available on our website using the same login/password as on ID Card Application.
- ID Card App and Website databases are synchronized for using both tools together. It's up to you to use both or only one of them.

To facilitate the positioning of this harness, our R&D department worked on the architecture and the strap which is woven in our factories. This therefore allows the user to easily and quickly put on the harness.

David Naulin, Fall Protection Product Expert

Intuitive and quick installation for this harness dedicated to all types of application.

PUMA HAR25

2 accessory attachment holders incorporated into the belt *(1)*

- *Anchorage carabiners, lanyards and tools*

Tested at 150 kg

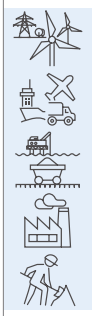
- *No problem related to the weight of the tools transported or other*

2 park lanyards

- *Ergonomic, limits the size of the lanyard when not in use*

Belt, backrest and shorts with thermocompressed padding and 3D structure mesh

- *Breathability and comfort*



(1)

	1	2	3	4	9	10
	6	7	8	9	11	12

PUMA HAR25	Harness for rope access work. 2 fall arrest anchorage points (dorsal-sternal). Positioning belt with thermoformed back and shorts. 2 work positioning or restraint attachment points (lateral). 1 suspension point (ventral). 6 adjustable buckles. 2 park lanyards.	S/M/L XL/XXL	CE	EN361 **150kg**	EN358 **150kg**	EN813 **150kg**	2.1 kg	x 5

HAR14

↕	1	2	4	5	9	10
↔	6	7	8	9	11	12

HAR12

↕	1	2	3	4	9
↔	6	7	8	9	11

HAR11

↕	1	2	4	5	9
↔	6	7	8	9	11

EX120

↕	10
↔	12

HAR14	2 fall arrester anchorage point harness (back-front).3 adjustable buckles. 2 adjustable lateral plates. Positioning belt with broad thermoformed back. Sponge lining. 2 anchorage points for work positioning.	S/M/L XL/XXL	CE	EN361 **140kg**	EN358 **140kg**	1.1g	x 10
HAR12	2 fall arrester anchorage point harness (back-front). 2 adjustment loops. 2 adjustable lateral plates.			EN361 **140kg**		730 g	
HAR11	1 fall arrester anchorage point harness (back). 2 adjustable buckles. 2 adjustable lateral plates.					624g	
EX120	Positioning belt with thermoformed back. 2 lateral anchorage points for work positioning. 1 adjustment loop. Sponge back lining.	One size			EN358 **140kg**	400g	

Delta Plus provides protection at work from head to toe for both women and men

EX030200

Non-inverting device

- *Easy installation of the slider in the right direction*

Opening with one hand

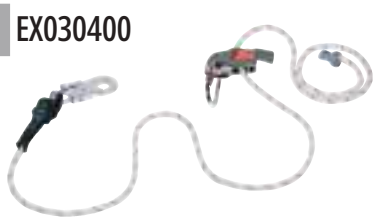
- *Ergonomics and intuitiveness for opening the product*

Fall indicator

- *Easy visual verification*

10
12

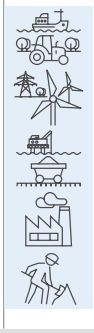
EX030400



HA200

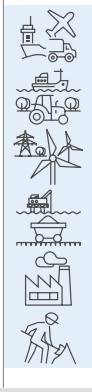
EX118

Recommended accessory for the proper use of this product : 1 connector AM002



10
12

HA204



EX030200	Lanyard tensioner equipped with a rope and 1 AM010 carabiner. The positioning device allows adjustment of the 30200 distance between the operator (with work positioning belt) and the structure. Lanyard Braided rope 10.5 mm with manufactured ends. (See AN066 description too)	00.20 ⟶ 2m	CE	EN358	998 g	x 5
EX030400		00.20 ⟶ 4m			1.2 kg	
EX118200A	Adjustable work positionning lanyard via reducer. Adjustable length. Stranded rope Ø 12 mm. Protective sheath on the splices.	00.20 ⟶ 2m 00.20 ⟶ 4m			872 g	
HA200	Tool holder. Extended length: 1 m. Maximum working load: 4 kg.	One size			60 g	x 20
HA204	Retractable tool holder. Extended length: 1.1 m. Maximum working load: 0.5 kg.				0.25 kg	

ELARA320

Storage bag

↕	4		
↔	8	11	12

ELARA280

Storage bag

↕	1	4	9
↔	8	9	12

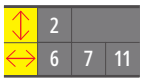
ELARA270

↕	1	2	5

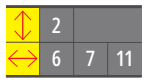
ELARA320	POSITIONNING & SCAFFOLDING - ready for use fall arrest kit: 2 fall arrester anchorage point harness (back - front). 3 adjustable buckles. 2 adjustable side plates. Positioning belt (Ref. HAR14). Adjustable work positionning lanyard via reducer. Length of 1.1 to 2 m. Stranded rope Ø 12 mm (Ref. EX021). Fall arrester with energy absorber in double stranded rope (Y) Ø 12mm. Length 2 m. 1 AM002 carabiner and 2 AM022 hooks (Ref. AN211200CDD). 2 carabiner AM002.	S/M/L	CE	EN355	EN361	EN358	EN362		3.5 kg	x 5
ELARA280	SCAFFOLDING - ready for use fall arrester kit: 2 fall arrester anchorage point harness (back - front). 2 adjustment loops. 2 adjustable side plates. (Ref. HAR12). Fall arrester with energy absorber in double stranded rope (Y) Ø 12mm. Length 2 m. 1 AM002 carabiner and 2 AM022 hooks (Ref. AN211200CDD)								2..5 kg	
ELARA270	VERTICAL 10 M - Ready for use fall arrester kit: 2 fall arrester anchorage point harness (back - front). 2 adjustment loops. 2 adjustable side plates. (Ref. HAR12). Self retractable fall arrester with steel strap. Length 10 m. ABS case. 1 automatic swivel connector and fall indicator AM016 (Ref. AN12010T). Lanyard and anchorage point in tubular strap, length 2 m (Ref. LO030200). 2 connectors AM002.			EN354		EN360		EN795 **TYPE B**	9.1 kg	x 1

Delta Plus provides protection at work from head to toe for both women and men

ELARA170
Storage bag

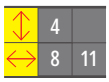


ELARA150
Storage bag



ELARA140
Storage bag

ELARA190
Storage bag



ELARA170	ROOF - Ready for use fall arrester kit: 2 fall arrester anchorage point harness (back - front). 2 adjustment loops. 2 adjustable side plates. (Ref. HAR12). Sliding non opening fall arrester set with fall indicator on stranded rope anchorage line Ø 12 mm, length 20 m. (Ref. AN063/20). 2 connectors AM002.	S/M/L XL/XXL	CE	EN353-2	EN361	EN362	3.4 kg	x 5
ELARA150	ROOF - Ready for use fall arrester kit: 2 fall arrester anchorage point harness (back - front). 2 adjustment loops. 2 adjustable side plates. (Ref. HAR12). Sliding non opening fall arrester set with fall indicator on stranded rope anchorage line Ø 12 mm, length 10 m (Ref. AN063/10). 2 connectors AM002.	S/M/L					2.4 kg	
ELARA140	VERTICAL 2.50 M - Fall arrester kit ready for use: 2 fall arrester anchorage point harness (back - front). 2 adjustment loops. 2 adjustable side plates. (Ref. HAR12). Self retractable fall arrester with 46 mm strap with energy absorber. Protection case. 1 connector AM002 (Ref. AN102). 1 connector AM002.	S/M/L XL/XXL		EN360			1.9 kg	
ELARA190	SCAFFOLDING - ready for use fall arrester kit: 2 fall arrester anchorage point harness (back - front). 2 adjustment loops. 2 adjustable side plates. (Ref. HAR12). Fall arrest with energy absorber with lanyard strap, length 2 m, equipped with 1 connector AM002 and 1 AM022 hook (Ref. AN203200CD).			EN355			1.8 kg	

One of our bestsellers, essential for work at height.

David Naulin, Fall Protection Product Expert

The ready-to-use kit that adapts to all types of work at height.

1- Lateral plates
Easy and optimal adjustment

2- Storage bag

ELARA160V2

Storage bag

4
8 11

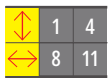
ELARA130V2

RESTRAINT KIT
Storage bag

12

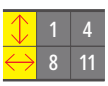
ELARA160V2	CLASSIC - Ready for use fall arrester kit: 1 fall arrester anchorage point harness (back) with energy absorbing lanyard fall arrester integrated, not removable, in polyester webbing, length 2 m. 2 adjustment buckles. 2 adjustment side plates. 1 connector AM002. 1 storage bag.	S/M/L XL/XXL	CE	EN361	EN355 EN362		1 kg	x 5
ELARA130V2	RESTRAINT - Ready for use kit: 1 fall arrester anchorage point harness (back). 2 adjustment buckles. 2 adjustable lateral plates (Ref. HAR11). Lanyard and anchorage point in tubular strap. 2 sewn loops. Width 25 mm. Length 1.50 m (Ref. LO030150). 2 connectors AM002.				EN354	EN362 **CLASS B** EN795 **TYPE B**	1.12 kg	

AN203200ZZ



↕	1		4
↔	8		11

AN203100ZZ



↕	1		4
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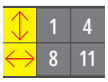
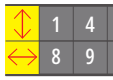
AN203200ZD



↕	1		4
↔	8		11

AN213200ZZZ



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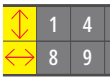
↔	8		9	11

AN213200ZDD



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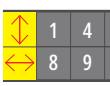
AN213100ZDD



↕	1		4	9
↔	8		9	11

AN203200ZZ	Fall arrester with energy absorber in lanyard webbing. Thimble loops.	2 m	CE	EN355	668 g	x 5
AN203100ZZ		1 m			600 g	
AN203200ZD		2 m			1 kg	
AN213200ZZZ					1.3 kg	
AN213200ZDD	Fall arrester with energy absorber in double lanyard webbing (Y). Thimble loops.				1.6 kg	
AN213100ZDD		1 m			1.3 kg	

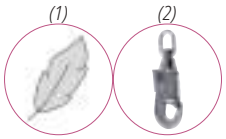
Delta Plus provides protection at work from head to toe for both women and men

MAXIBLOC AN100

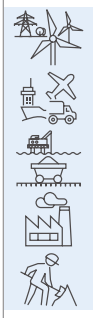
Lightweight *(1)*
- *Easy to transport and set-up*

Fall indicator *(2)*
- *Easy visual verification*

Tested at 150 kg
- *No problem related to the weight of the tools transported or other*



MINIBLOC AN102

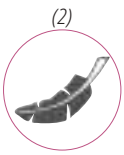


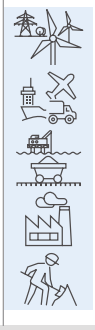
MEDBLOC AN13006C2

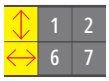
Fall indicator *(1)*
- *Easy visual verification*

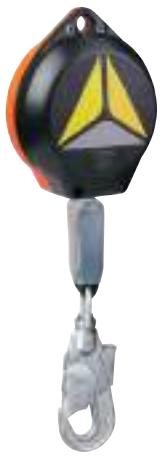
Light and compact: 1.6 kg *(2)*
- *Easy to transport and set-up*

Tested at 128 kg
- *No problem related to the weight of the tools transported or other*









MAXIBLOC AN10010T2	Self retractable fall arrester with Ø 4 mm galvanised steel cable with integrated energy absorber. ABS case. Fall indicator.	6 m 10 m 15 m		x1 AM016	CE	EN360 **150 kg**	2.8 kg 3.75 kg 4.5 kg	**x 1**
MINIBLOC AN102	Self retractable fall arrester with 46 mm strap with energy absorber. Protection case. 1 carabiner AM002.	2,50 m		x 1 AM002			1.1 kg	x 5
MEDBLOC AN13006C2	Self retractable fall arrester with polyester webbing 25 mm. ABS protection. Swivel with fall indicator. 1 carabiner AM016. Horizontal use tested.	6 m	RfU PPE-R/11.060 **128 kg HORIZONTAL CERTIFICATION**	x 1 AM016		EN360 **128 kg**	1.6 kg	

LO147150CDD

Double lanyard in braided rope Ø 10.5 mm. 3 thimble loops ends.	1,50 m	x 1 AM002	x 2 AM022	CE	EN354	1.4 kg	x 5

LO147150

Double lanyard in braided rope Ø 10.5 mm. 3 thimble loops ends.	1,50 m	CE	EN354	264 g	x 15		

LO047150AD

Lanyard in braided rope Ø 10.5 mm. 2 thimble loops ends.	1,50 m	x 1 AM010	x 1 AM022	CE	EN354	802 g	x 5

LO047100 - LO047150 - LO045200

LO047100	Lanyard in braided rope Ø 10.5 mm. 2 thimble loops ends.	1 m	CE	EN354	116 g	x 15	
LO047150		1,50 m			150 g		
LO045200		2 m			188 g		

LO007150CD

Lanyard in stranded rope Ø 12 mm. 2 thimble loops.	1,50 m	x 1 AM002	x 1 AM022	CE	EN354	850 g	x 5

LO007100 - LO007150 - LO005200

LO007100	Lanyard in stranded rope Ø 12 mm. 2 thimble loops.	1 m	CE	EN354	154 g	x 15	
LO007150		1,50 m			198 g		
LO005200		2 m			260 g		

LO030100 - LO030150 - LO030200

LO030100	Lanyard and anchorage point in tubular strap. 2 sewn loops. Width 25 mm.	1 m	CE	EN795 **TYPE B**	EN354	70 g	x 15
LO030150		1,50 m				187 g	
LO030200		2 m				218 g	

Delta Plus provides protection at work from head to toe for both women and men

TECHNICAL INFORMATION

REGULATORY FRAMEWORK

THE REGULATION (EUROPEAN UNION)

EU Regulation 2016/425 establishes the requirements applicable to the design and manufacture of personal protective equipment (PPE) intended to be made available on the market, with a view to ensuring the protection of the health and safety of users.
Compliance with the provisions and requirements of this Regulation allows the manufacturer to affix the CE marking on the PPE.
The EU Regulation 2016/425 has replaced the EEC Directive 89/686 since 21/4/2018.

STANDARDISATION

Its objective is to develop test methods and requirements in the form of standards defining the technical specifications of products. Some of them, mostly requirements standards, are harmonised with EU Regulation 2016/425. Compliance with these harmonised standards gives an assurance of compliance with the requirements of EU Regulation 2016/425.

CATEGORISATION

Taking into account the level of risk covered, the Regulation defines the PPE categories and determines the various manufacturer's obligations:

- **PPE category 1:** Protection against minor risks.
- **PPE category 2:** All PPE that are not category 1 or 3.
- **PPE category 3:** Protection against disability or fatality.

DECLARATION OF CONFORMITY

QUARTZUP3 QUARTZ UP III

CERTIFICATION PROCEDURE

- **Category 1 PPE:** Evaluation of conformity by the manufacturer (Module A)
- **PPE category 2 and 3:** EU type examination of the PPE (Module B) by a notified independent body for which compliance (with Regulation EU 2016/425) is verified using standards that are in accordance with the regulation. Issuance of the EU Type Examination Certificate (confidential document).
- **PPE category 1, 2 and 3:** CE marking on the product.
- **PPE category 3:** Control by a notified independent body that ensures compliance of the manufacture with the examined PPE:
  - either monitoring of conformity to the type based on the internal control of production and supervised controls of the product at random intervals (Module C2),
  - or conformity to the type based on quality assurance of the production method (Module D).
- **PPE category 1, 2 and 3:** Writing by the manufacturer of the EU Compliance Declaration which proves the compliance of the PPE with Regulation EU 2016/425 to the distributor and the market enforcement authorities.

The product sheet, the user instructions and the Declaration of Conformity are available online on our website: www.deltaplus.eu

OTHER ACCREDITATIONS (OUTSIDE EUROPEAN UNION)

Some of our products are accredited under the regulations of many countries.
The products concerned (and / or their bear the following markings:

USA	ANSI, ASTM, NIOSH
Argentina	AR 1983
Brazil	CA
China	Normes GB
Canada	
Ukraine	023
Common Economic Space (Russia, Belarus, Kazakhstan)	EAC

SAFETY EYEWEAR

Safety eyewear provides protection from spray and splatter from particles, liquids and dust, and chemical fumes and radiation.

HOW TO PROTECT YOURSELF?

Select the most suitable protective glasses or shields
- **Identify the type of risk:** sprays, radiation, other, ...
- **Determine the type of protection:** spectacles-type safety glasses, goggles, face mask, cover goggles, ...
- **Note the protective features:** scratch-resistant, fog-resistant, tinted, ...
- **Select the type of eye-piece:** one-piece or double lens
- **Choose the frame type:** design, classical, ...

STANDARDS

EN166 : applies to all types of individual protection of the eye which protects from hazards likely to damage the eye, except for nuclear radiation, x-rays, laser emissions and infrared emitted by low-temperature sources. Does not apply to eye protection for which separate standards exist (anti-laser eye protection, sunglasses for general use,...).

EN175 : Specifications for the safety requirements for eye and face protection equipment for welding and related techniques (filters frames/ media).

EN169 : Specifications of level numbers and requirements relating to the transmittance of filters to protect operators for welding and related techniques. Specification of requirements for welding filters with double number of levels.

EN170 : Specifications of level numbers and of requirements relating to the transmittance of the filters for protection against ultraviolet radiation.

EN172 : Specification of level numbers and requirements relating to the transmittance of filters for protection against solar radiation, industrial use.

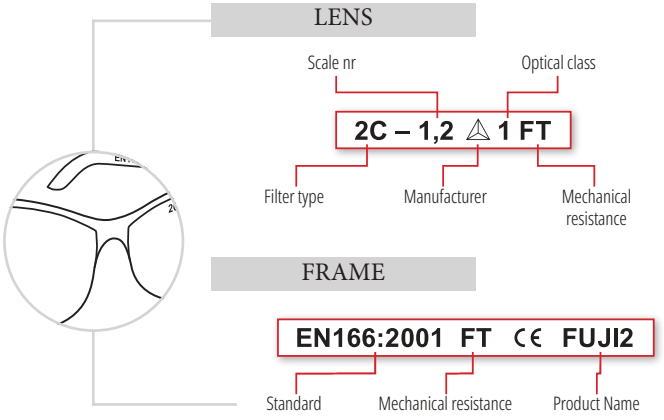
EN379 : Specification of the requirements for automatic welding filters, i.e. welding screens with automatic variation of the transmission factor. These screens are intended to protect operators during welding and related techniques..

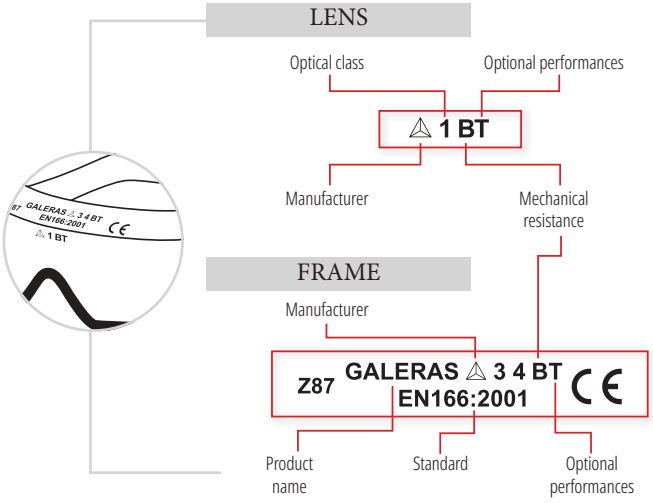
EN1731 : Material specifications, design, performance and test methods for eye and face mesh type protective, for professional use.

ANSI (US American National Standards Institute) Z87.1 : Specifications and minimum general requirements, test methods, selection, use and maintenance of eye and face protection.

GS-ET 29
Requirements, performances, test methods relating to face shields providing protection against electric arcing

MARKING





- **SYMBOL MEANING – EN166:**

1 : optical class allowing permanent wear of the spectacles

Mandatory performances

S : Increased robustness: steel ball of 22 mm diameter at 5.1 m/s. (18.36 km/h)
F : Low energy impact: steel ball of 6 mm diameter at 45 m/s. (162 km/h)
B : Medium energy impact: steel ball of 6 mm diameter at 120 m/s. (432 km/h)
A : High energy impact: steel ball of 6 mm diameter at 190 m/s. (684 km/h)

Optional performances

3 : Liquid resistance (droplets or splashes).
4 :arge dust particles resistance (size of > 5 µm).
5 : Gas and fine dust particles resistance (size < 5 µm).
8 : Short circuit electric arc resistance.
9 : Lesistance to splashes of molten metal and penetration of hot solids.
T : (F - B - A) Mechanical resistance to extreme temperatures -5°C/+55°C.
N : Resistance to fogging of lenses.
K : Resistance to surface damage by fine particles (anti-scratch).

FILTERS

Special filters can eliminate certain parts of light and a high proportion of the electro-magnetic spectrum (ultraviolet rays, infrared rays...)..

SPECTACLES LENS MARKING								
Lens colour	Minimal transmission factor of visible light	SCALE Nr	EN166					
			UV FILTERS (EN170		IR FILTERS (EN171)	SUN FILTERS (EN172)		WELDING (EN169)
			2	2C	4	5	6	
			Colours perception may be alterated	Colours perception is not alterated		Without IR protection specification	With IR protection specification	no code nr
CLEAR (INDOOR)	80,0%	1,1				5-1,1	6-1,1	
	74,4%	1,2	2-1,2	2C-1,2	4-1,2			
LIGHT SMOKE (OUTDOOR + INDOOR)	58,1%	1,4	2-1,4	2C-1,4	4-1,4	5-1,4	6-1,4	
	43,2%	1,7	2-1,7	2C-1,7	4-1,7	5-1,7	6-1,7	
	29,1%	2	2-2	2C-2	4-2	5-2	6-2	
SMOKE (OUTDOOR)	17,8%	2,5	2-2,5	2C-2,5	4-2,5	5-2,5	6-2,5	
	8,0%	3,1				5-3,1	6-3,1	
VERY DARK (FOR WELDING) (MIG-TIG)	8,5%	3	2-3	2C-3	4-3			3
	3,2%	4	2-4	2C-4	4-4	5-4,1	6-4,1	4
	1,2%	5	2-5	2C-5	4-5			5
	0,44%	6			4-6			6
	0,16%	7			4-7			7
	0,061%	8			4-8			8
	0,023%	9			4-9			9
	0,085%	10			4-10			10
	0,0032%	11						11
	0,0012%	12						12
	0,00044%	13						13
	0,00016%	14						14
	0,000061%	15						15
	0,000023%	16						16

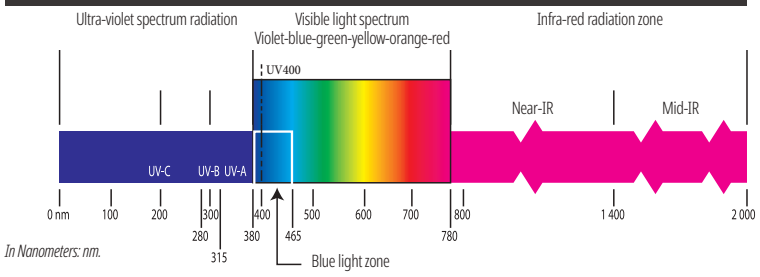
Lens marking is composed by 2 numbers (separated in the middle by a "-"):

CODE NUMBER: **from 2 to 6.** Welding lens have no code number.

STEP NUMBER: **from 1,1** (the highest % of transmission in visible light, the clearest lens). **to 16** (the lowest % of transmission in visible light, the darkest lens).

DELTA PLUS RANGE: The yellow coloured possibilities are available on DELTA PLUS range.

THE ELECTRO-MAGNETIC SPECTRUM



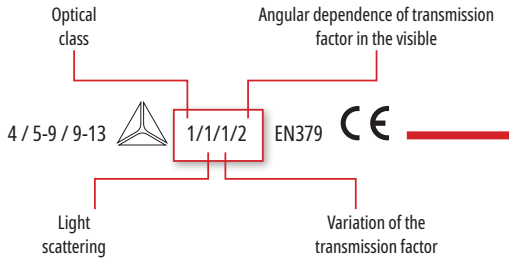
All our polycarbonate glasses filter 99.9% of UV A, B and C from 130 to 380 nm.
Our UV400 glasses carry UV filtration up to 400 nm.

RISKS TO THE EYE FROM HARMFUL RADIATION

Zone	Wave Length	Environment	Eyesight damage
UV-A	315-380 nm	Outdoor work.	Eye fatigue, partial blindness, cataract. Sunshine.
UV-B	280-315 nm	Sunlight. Industrial environment. Black light tests.	Cataract. Welder flash. Arc flash.
UV-C	100-280 nm	Industrial environment. Arc welding.	Cornea or crystalline lesions. Loss of eyesight.
Harmful blue light	380-465 nm	Industrial environment. Computer work (fatigue, VDU). Electrical installations. Outdoor work.	Retinal lesions. Loss of eyesight. Blurring degeneration (age). Retinitis pigmentosis.
Infra-red	780-1400 nm (near IR) 1400-2000 nm (IR mid)	Electric welding. Molten work (glassmaking, steel production). Micro-wave processes. Sunlight.	Retinal lesions. Blurring degeneration (age). Retinitis pigmentosis (near-IR). Crystalline and cornea lesions (mid-IR).

WELDING

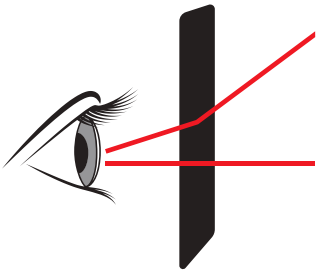
1 The highest quality
3 The lowest quality



1 Optical class:
Means the distortion of the image when viewed through the screen

2 Light scattering:
Means the clarity and sharpness of the screen. Is the image blurred?

3 Variation of the transmission factor:
Refers to the consistency of the shade of the screen when adjusted. No very dark or very light area should appear on the screen.



4 Angular dependence of transmission factor in the visible:
The clarity of the screen must remain the same depending on the angle between our view and the self-obscuring screen.

ARC WELDING

RECOMMENDED USE OF DIFFERENT GRADE NUMBERS FOR ARC WELDING ACCORDING TO STANDARDS EN169/EN175

Process	A Current amperage																				
	1.5	6	10	15	30	40	60	70	100	125	150	175	200	225	250	300	350	400	450	500	600
MMA	8							9	10		11			12			13			14	
MAG	8							9	10		11			12			13			14	
TIG	8					9		10		11				12		13					
MIG (heavy metals)	9									10			11			12		13	14		
MIG (light metals)	10												11		12		13		14		
Arc air gouging	10												11		12		13		14		15
Plasma cutting	9										10	11		12			13				
Micro plasma welding	4		5		6		7		8	9		10		11		12					

This table is valid under normal conditions of use, in which the distance between the eye of the user and the mass of molten metal is approx. 50 cm and average light is approx. 100 lux.

SKULL PROTECTION

HOW TO PROTECT YOURSELF?

To choose the correct safety helmet.

To identify the risk: falling bumps or combined risks (hearing protection and face protection).

The safety helmet has three functions:
Antipenetration for an effective skull protection.

Shock absorber because the cap and the harness absorb shocks.

Deflector thanks to a suitable design which makes it possible to deflect the fall of an object from the top of the head.

There is in addition a selection of accessories which offers face and hearing protection.

STANDARDS

EN397	Protective helmets for industry	MANDATORY	**Impact*:** force transmitted to the headform must not exceed 5 kN at the fall of an object of 5 kg from a 1 m height. The impact energy of the helmet at the end of the test is 49 J. **Penetration*:** the tip of the mass used in the test (3 kg over 1 m) must not come into contact with the skull. **Flammability:** the helmet should not burn with flame emission more than 5 seconds after removal of the flame. ** The impact and penetration tests are performed at room temperature, **at 50°C and at -10°C.***
		OPTIONAL	**In extreme temperatures:** impact and penetration tests are conducted at room temperature **at 150°C, at -20°C or -30°C.** Protects against accidental short-term contact with a live **electrical conductor up to 440 VAC.** Protects against **lateral compression.** The maximum deformation of the helmet should be ≤ 40 mm. Resistance to **molten metal splashes**
EN50365	Electrical insulation helmets for use in low voltage environment	MANDATORY	**Electrically insulating helmets** for use near energised equipment not exceeding **1000 VAC or 1500 VDC** (appliance class 0). Used simultaneously with other electrically insulating protective equipment, these helmets prevent dangerous currents passing through to the person's head. These optional electrical insulation tests are more stringent than the EN397 and they complement them. (2 triangle marking, Class 0).
ANSI/ISEA Z89.1	(American National Standards Institute) American standard for industrial head protection	MANDATORY OPTIONAL	Depending on the type and class of the helmet: Protection against mechanical risk (impact, penetration, crushing), flammability, electrical insulation.
EN812	Bump caps for industry	MANDATORY	**Impact*:** This PPE protects against impacts from knocks against structures or objects. It does not protect from the impact of a falling object at all. The impact energy of the cap at the end of the test reached 12.25 J. **Penetration*:** the tip of the mass used in the test (0.5 kg over 0.5 m) must not come into contact with the skull. ** The impact and penetration tests are performed at room temperature, at **50°C and at -10°C.*** Should in no way be a substitute for an industry type helmet (EN397).
		OPTIONAL	**In extreme temperatures:** impact and penetration tests are conducted at room temperature **at -20°C or -30°C.** Protects against accidental short-term contact with **a live electrical conductor up to 440 VAC.** **Flammability:** the helmet must not burn with flame emission more than 5 seconds after removal of the flame (F marking).

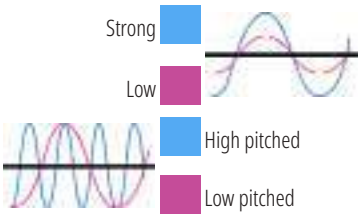
HELMET MARKING ILLUSTRATION

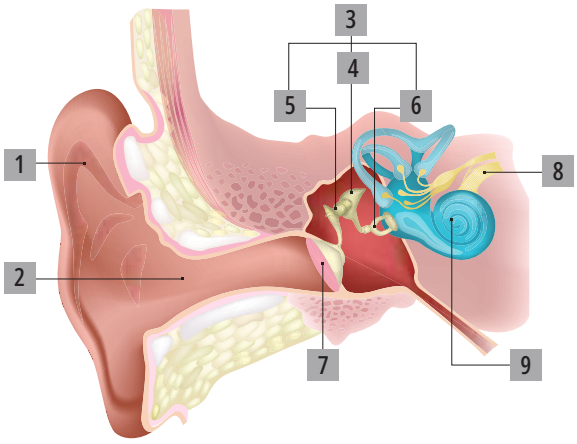
Delta Plus provides protection at work from head to toe for both women and men

HEARING PROTECTION

Noise-related hearing loss is the most common occupational disease in Europe and North America, accounting for almost one-third of all work-related illnesses. These disorders can lead to long-lasting effects causing stress, fatigue or isolation that significantly increases the risk of work-related accidents caused by other factors. Hearing loss is irreversible and often detected late, so PPE covering this risk is classified as Category III.

THE EAR AND SOUND





1 Pinna
2 Ear canal
3 Small bones
4 Anvil
5 Hammer
6 Stirrup
7 Eardrum
8 Auditory nerve
9 Cochlea

Noise, as a vibratory phenomenon is Characterised by:
• **Its intensity** (in decibels [dB]) corresponds to the amplitude of the vibrations emitted by the sound source. 0 dB corresponds to the minimum sound level audible by the human ear. The pain threshold is 120 dB and the ear can be damaged from 85 dB.
• **Its frequency** (in Hertz [Hz]) which will define the perceived height. The higher the frequency and the higher pitched the sound, the lower it is and the lower pitched it will be. The human ear is able to perceive sounds at frequencies between 20 Hz (very low pitch) and 20,000 Hz (very high pitch).
• **Its duration and its variation**, which makes it possible to differentiate very brief sounds, of a duration in the order of a second, such as impulse noises (a shot, impacts) of sounds that have longer durations (hours, or a day) for which it is important to consider the resulting dose of noise received.

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The ear can be broken down into three distinct parts:
• **The outer ear** consisting of the horn and the ear canal
• **The middle ear** between the eardrum and the inner ear. It is filled with air and allows, using the ossicles, to transform the aerial vibrations into structure borne vibrations that can be analyzed by the inner ear.
• **The inner ear**, the heart of the auditory system, consisting of a cavity filled with liquid containing the cochlea where the body of Corti is found. Within it, the vibrations of the liquid transmitted to the ossicles are picked up by the hair cells which select them by frequency. The information is then conducted by the auditory nerve to the cerebral cortex which can interpret it.

DB(A)

The human ear has a particular sensitivity to each frequency range. At moderate sound levels, it is less sensitive to low pitched sounds. To represent this particular sensitivity, the noise measurements and standards use a weighting of the measured sound levels called weighting A. The thus weighted decibels are denoted dB (A).

HOW TO PROTECT YOURSELF?

To choose the correct product for hearing protection.

- **Identify the nature of the noise:** stable, fluctuating, intermittent, pulse.
- **Measure the noise at the working station:** intensity (dB) and volume (Hz).
- **Determine the exposure time**
- **Calculate the reduction** necessary to return on an acceptable ambient level (see Directive 2003/10/CE).

Requirements Directive 2003/10/EC: Minimum requirements for the protection of workers against the risks related to noise exposure		
8 hours exposure time at ≥ 85 dB(A)	8 hours exposure time at ≥ 80 dB(A) and < 85 dB(A)	8 hours exposure time at > 75 dB(A) and < 80 dB(A)
Obligatory hearing protection	Hearing protectors available to the worker	Hearing protection recommended

The performance of the hearing protector (its attenuation level) must be adapted to the risk assessment of the workplace. It should bring the noise level to a level that is not harmful to health, while avoiding overprotection would cut the operator from his environment (warnings, communication...)

REGULATORY DAILY DOSE AUTHORISED ACCORDING TO THE SOUND LEVEL:

Continuous sounds	Equivalent continuous sound pressure level in dB (A)	85 dB(A)	91 dB(A)	100 dB(A)	112 dB(A)
	Daily exposure duration equivalent to an exposure of 85 dB	8 hours	2 hours	15 minutes	1 minute
Impulse sounds	Peak sound pressure level in dB	135 dB	115 dB	95 dB	90 dB
	Limited number of pulses or shocks for 8 hours	1	100	10 000	30 000

WEARING RATE

Hearing protection decreases very rapidly when the protector is not worn continuously

2 mn of non-wearing (over 8h) => reduction of efficacy of the protector by 25%

2 hours of non-wearing (over 8 hours) => loss of efficacy of the protector by 75%

WEARING METHOD:

When hearing protection equipment can be worn in several ways (on the head and under the chin for example), it must be tested for each method of wearing.

OTH :  Over the head

UTC :  Under the chin

BTH :  Behind the head

STANDARDS

- **EN352 :** Exigences of safety and tests.
- **EN352-1 :** the ear-muffs.
- **EN352-2 :** the earplugs.
- **EN352-3 :** the adjustable head defenders for the safety helmets.
- **EN352-4 :** Noise cancelling headphones with level dependent attenuation.
- **EN352-6 :** Earmuffs with electrical audio input.
- **EN352-8 :** Audio enabled earmuffs.

hese standards establish requirements with regards to the manufacture, the design, performances and test methods. They stipulate the putting at disposal relative to the characteristics.

- **EN458 :** Hearing protection

Recommendations for selection, use and maintenance.

- **ANSI (US American National Standards Institute) S3.19 - 1974**

This standard specifies the test method for determining the level of noise attenuation (NRR Noise Reduction Rating) of the hearing protection, as recommended by the EPA (U.S. Environmental Protection Agency).

SOUND LEVEL MITIGATION VALUES

HOW DO YOU USE THE ATTENUATION VALUES?

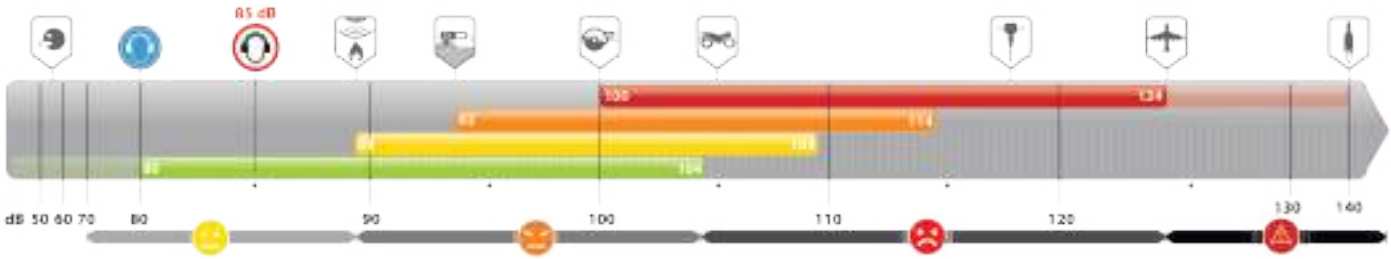
3 indicators, from the simplest to the most precise are made available to the user:

- **SNR (Single Number Rating) :** Single average value of attenuation.
- **HML :** Attenuation values expressed in terms of average levels of frequency:
  - **H :** Attenuation of PPE at high frequencies (pitched noises)
  - **M :** Attenuation of PPE at medium frequencies
  - **L :** Attenuation of PPE at low frequencies (bass sounds)
- **APV (Assumed Protection Value) :** Attenuation values expressed on 8 specific frequency levels *(see the data sheet of the hearing protector).*

DOUBLE PROTECTION:

When wearing a single hearing protector is not enough, it is possible to combine them. The attenuation resulting from the simultaneous wearing of earplugs with a B SNR and a noise-cancelling headset with an ST SNR is calculated by the following formula: $33 \times log\ ((0.4 \times B) + (0.1 \times ST))$

LEVEL OF NOISE



RESPIRATORY PROTECTION

European Directives: End user's obligations
89/391: Identify and assess the risk, take preventive and protective measures, inform and train the workers.
2004/37: Risks related to exposure to carcinogens or mutagens at work: hazard identification, «limit values», respiratory protection.
89/656: Select and use the appropriate and compliant PPE, inform and train people, check and replace the PPE when necessary.
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STANDARDS

The main standards concerning the respiratory apparatuses.

• EN136 : overall masks
It contains laboratory tests and practical performance tests to check the conformity with resistance to temperature, to impacts, to flame, to thermal radiation, to traction, resistance to cleansers and disinfectants. Furthermore, the visual inspection must concern the marking and the manufacturers' information guide.

• EN140 : half-masks and quarter-masks
It contains laboratory tests and practical performance tests to check the conformity with resistance to impacts, to cleaners and disinfectants, to temperature, to flame and respiratory resistance.

• EN14387 : gas filters and compound filters
It contains laboratory tests to check the conformity with resistance to impacts, to temperature, to humidity and corrosive atmospheres, and with mechanical and respiratory resistance.

• EN143 : filters against particles
It contains laboratory tests to check the conformity with resistance to impacts, to temperature, to humidity and corrosive atmospheres and with mechanical and respiratory resistance.

• EN149 : filtering half-masks
It contains laboratory tests to check the conformity with resistance to impacts, to cleansers and disinfectants, to temperature, to flame and with respiratory resistance.

• EN405 : half-masks fitted with valves and gas filters or compound filters
It contains laboratory tests to check the conformity with resistance to handling and wear, to impacts, to flame and with respiratory resistance.

• EN148-1 : standard threaded joint
This standard is specific to the standard connection system of the cartridge for full face masks.

• NIOSH (US National Institute for Occupational Safety)
42 CFR Part84 Filtering facial parts, multiple levels of protection
(non exhaustive list):

• N95 : Filter at least 95% of the particles (non-oily) suspended in the air.

• N99 : Filter at least 99% of the particles (non-oily) suspended in the air.

PRODUCTS	STANDARDS	TOTAL INWARD LEAKAGE** (%)	NOMINAL PROTECTION FACTOR*
FFP1	EN149	22	4
FFP2	EN149	8	12
FFP3	EN149	2	50
½ mask P1 ½ mask gas XP1	EN140 EN14387 EN143 + A1	22	4
½ mask P2 ½ mask gas XP2	EN140 EN14387 EN143 + A1	8	12
½ mask P3 ½ mask gas XP3	EN140 EN14387 EN143 + A1	2	48
½ mask gas X	EN140 EN14387	2	50
Full Face Mask P3	EN136 EN143 + A1	0,1	1000
Full Face Mask gas XP3	EN136 EN14387 EN143 + A1	0,1	1000
Full Face Mask gas X	EN136	0,05	2000

*NPF : Nominal Protection Factor corresponds to the level of protection tested in the laboratory. The Level of APF, Assigned Protection Factor, might be different according local regulations
**TIL: Leakage of the ambient atmosphere into the respiratory interface measured in laboratory

http://respiratory.deltaplus.eu

RESPIRATORY PROTECTION

MARKING

V The valve provides better comfort. It facilitates exhalation, decreases CO2 content, and reduces heat and humidity inside the mask.

P Horizontal folding.
B Vertical folding.

NR Non-Reusable.
The mask should not be used for more than 8 hours.

D Optional test of the EN149:2001 + A1: 2009 standard for clogging the Dolomite.
This test indicates that the mask has a greater resistance to clogging: Extended respiratory comfort.

FFP1
Protection level of the mask according to the filtration ability of the filter medium.
Filtering **F**ace **P**iece **P**articles =
Filtering **F**ace **P**iece from **P**articles.

No. of the quality control laboratory.

Instructions inside the packaging

Storage conditions

W Protection against unpleasant odours.

Colour code filter

Date of expiration (AAAA/MM)

Standard

GAS AND VAPOUR FILTER

Each filter or cartridge is identified with a colour code.

TYPE	TYPE OF PROTECTION	GAS AND VAPOUR
A	Protects from organic gases and vapours whose boiling point is > 65°C	Alcohol, acetic acid, ether, hexane, toluene, xylene, white spirits, thiophenol...*
AX	Protects from organic gases and vapours whose boiling point is ≤ 65°C	Acetone, acetaldehyde, ethyl ether, butane, methanol, trichloromethane...*
B	Protects from inorganic gases and vapours	Chlorine, chlorine dioxide, fluorine, formaldehyde, phosphine...*
E	Protects from sulphur dioxide and some acid vapours and gases	Sulphur dioxide...*
K	Protects from ammoniac and some amine derivatives	Ammonia, ethylamine, methylamine...*
Hg	Protection from mercury vapours	Mercury and mercury compounds*

FILTER ABSORPTION CLASS FOR GASES AND VAPOURS	
Class 1	Low capacity filter (pollutant concentration < 0.1% or 1000 ppm).
Class 2	Average capacity filter (pollutant concentration < 0.5% or 5000 ppm).
Class 3	High capacity filter (pollutant concentration < 0.1% or 10,000 ppm).
ppm	Concentration in parts per million.

DUST AND AEROSOL FILTERS

TYPE	PROTECTION	PARTICULES
P1	Protects from non-toxic dust and / or water-based aerosols.	Cement dust, flour, calcium carbonate (chalk), graphite, cotton, concrete...*
P2	Protects from slightly toxic or irritating solid aerosols and / or liquids.	Untreated softwood, grinding, cutting, welding, milling, coal, fibre glass, mineral fibre, graphite, pesticide powder...*
P3	Protects from solid aerosols and / or liquids listed as toxic.	Asbestos (without manipulation), pesticide powder, biological agents, pharmaceutical powder, treated wood, hard wood (exotic), chrome, lime, lead, graphite...*
		Manganese, kaolin, sodium hydroxide (caustic soda), quartz, silica...*

*This type of usage is indicative and cannot engage Delta Plus Responsibility.

CHEM D-FINDER
http://respiratory.deltaplus.eu

USER GUIDE FOR BREATHING APPARATUS FILTER FOR POLLUTING SUBSTANCES

OEL
OCCUPATIONAL **E**XPOSURE **L**IMIT

TWA
TIME **W**EIGHTED **A**VERAGE
Average Exposure limit over an **8 hour** time period

1 WORKING DAY

STEL
SHORT **T**ERM **E**XPOSURE **L**IMIT
Should not be longer than**15 minutes**
Should not occur more than 4 times per day with at least 60 minutes between exposures

Substances	Chemical formula	CAS number	Gas filter	Particles filter	MC/DM*	OEL	Unit of measurement
1- chloro- 2,3- epoxy- propane	C3H5OCl	106-89-8	A	P3	MC	VLE=2	ppm
1,1,1-Trifluoro-2-bromo-2-chloroethane	CF3CHBrCl	151-67-7			ARI or A AIR	2,000	ppm
1,1,2,2- tetrabromoethane	CHBr2CHBr2	79-27-6	A	P3	MC	1	ppm
1,1'-Ethylene-2,2'-bipyridyllium dibromide	C12H12N2Br2	85-00-7		P3	MC	0,50	mg/m3
1,2,3,4,5,6,7,8-octachloronaphthalene	C10Cl8	2234-13-1	A	P3	MC	0	mg/m3
1,2,4- Trichlorobenzene	C6H3Cl3	120-82-1	A	P3	MC	5,00	ppm
1,2,4-Benzenetricarboxylic anhydride	C9H4O5	552-30-7	A	P3	MC	0,04	mg/m3
1,2-Benzenedicarboxylic anhydride	C6H4(CO)2O	85-44-9		P3	MC	1,00	ppm
1,2-Dibromo-2,2-dichloroethyl dimethyl phosphate	(CH3O)2P(O)OCHBrCBrCl2	300-76-5	A	P3	MC	3,00	mg/m3
1,2-dichloroethane	ClCH2CH2Cl	107-06-2	A		MC	10,00	ppm
1,2-Dihydroxybenzene	C6H4(OH)2	120-80-9	A	P3	MC	5	mg/m3
1,2-Ethanediamine	NH2CH2CH2NH2	107-15-3	K		MC	10,00	ppm
1,2-ethanediol	HOCH2CH2OH	107-21-1	A	P3	MC	50,00	ppm
1,3- butadiene	CH2=CHCH=CH2	106-99-0	AX		MC	VLE= 1	ppm
1,4- dichlorobenzene	C6 H4 Cl2	106-46-7	A		MC	75,00	ppm
1,4-benzenediamine	C6H4(NH2)2	106-50-3	A	P3	MC	0	mg/m3
1,4-dihydroxybenzene	C6H4(OH)2	123-31-9	A	P3	MC	2	mg/m3
1,4-dinitrobenzene	C6H4(NO2)2	100-25-4	A	P3	DM or MC	1,000	mg/m3
1,5-diisocyanatonaphthalene	C10H6(NCO)2	3173-72-6	A2B2	P3	MC	0,10	mg/m3
1,5-pentanedial	OCH(CH2)3CHO	111-30-8	A2	P3	MC	0,20	ppm
1,6- hexanolactam	C6H11NO	105-60-2	A	P3	MC	0,22	ppm
1-Chloro-2-methylbenzene	ClC6H4CH3	95-49-8	A		MC	50,00	ppm
1-Chloro-2-propene	CH2=CHCH2Cl	107-05-1	AX		MC	1,00	ppm
1-Hydroxybutane	CH3CH2CH2CH2OH	71-36-3	A		MC	50,00	ppm
1-Methoxy-2-propanol	CH3OCH2CHCH3	107-98-2	A		MC	100	ppm
1-Methylpropyl acetate	CH3COOCH(CH3)CH2CH3	105-46-4	A	P3	DM or MC	200	ppm
1-Propen-3-ol	CH2=CHCH2OH	107-18-6	A		MC	2	ppm
1-Propyn-3-ol	C3H3OH	107-19-7	A		MC	1	ppm
2- butoxyethanol	C4H9OCH2CH2OH	111-76-2	A	P3	MC	25,00	ppm
2- Diethylaminoethanol	(C2H5)2NCH2CH2OH	100-37-8	K		MC	10,00	ppm
2- ethoxyethyl acetate	CH3COOCH2CH2OCH2CH3	111-15-9	A		MC	1	ppm
2- ethylhexyl chloroformate	Cl1 C7 O2 H12	24468-13-1	A	P3	DM or MC	1	ppm
2- furaldehyde	C5H4O2	98-01-1	A		MC	2,00	ppm
2- Methoxyethyl acetate	CH3COOCH2CH2OCH3	110-49-6	A		MC	0	ppm
2- Methylaziridine	C3H7N	75-55-8	K	P3	MC	2,00	ppm
2- methylpentane- 2,4- diol	(CH3)2COHCH2CHOHCH3	107-41-5	A		DM or MC	25	ppm
2- nitronaphthalene	C10H7NO2	581-89-5	A	P	DM or MC		
2- Pyridylamine	NH2C5H4N	504-29-0	A	P3	DM or MC	2	mg/m3
2,2'-Diaminodiethylamine	NH2CH2CH2)2NH	111-40-0	ABEK	P3	MC	1,00	ppm
2,2'-dihydroxydiethyamine	(HOCH2CH2)2NH	111-42-2	K	P3	MC	3	ppm
2,2-Dichlorovinyl dimethyl phosphate	(CH3O)2P(O)OCH=CCl2	62-73-7	A	P3	MC	0,10	ppm
2,3- epoxypropyl isopropyl ether	C6H12O2	4016-14-2	A		MC	50	ppm
2,3,4,5,6-pentachlorophenol	C6Cl5OH	87-86-5	A	P3	MC	1	mg/m3
2,3-Dihydro-2,2-dimethyl-7-benzofuranyl							
2,4- dichlorophenoxyacetic acid	Cl2C6H3OCH2COOH	94-75-7		P3	MC	10	mg/m3
2,4,5-Trichlorophenoxyacetic acid	Cl3C6H2OCH2COOH	93-76-5		P3	DM or MC	10	mg/m3
2,4,6- trinitrophenol	(NO2)3C6H2OH	88-89-1		P3	MC	0	mg/m3
2,4,6-tetryl	(NO2)3C6H2N(NO2)CH3	479-45-8	A	P3	MC	2	mg/m3
2,5-Furanedione	C4 H2 O3	108-31-6	A	P3	MC	0,25	ppm
2-Aminotoluene	CH3C6H4NH2	95-53-4	A	P3	MC	2,00	ppm
2-butanol	CH3CH(OH)CH2CH3	78-92-2	A		MC	100,00	ppm
2-Carbomethoxy-1-methylvinyl dimethyl phosphate	C7H13PO6	7786-34-7	A	P3	MC	0	ppm
2-Chloro-1,1,2-Trifluoroethyl difluoromethyl ether	CHF2OCF2CHClF	13838-16-9			ARI or A AIR	2,000	ppm
2-Chloro-1,3-butadiene	CH2=CClCH=CH2	126-99-8	AX	P3	MC	VLE = 1	ppm
2-chloroacetaldehyde	ClCH2CHO	107-20-0	A		MC	1,00	ppm
2-Chloroethanol	CH2ClCH2OH	107-07-3	A		MC	1,00	ppm
2-hydroxymethylfuran	C5H6O2	98-00-0	A		MC	10,00	ppm
2-Isopropoxy propane	(CH3)2CHOCH(CH3)2	108-20-3	A		MC	500,00	ppm
2-Mercaptoacetic acid	HSCH2COOH	68-11-1	A2B2	P3	MC	1	ppm
2-methoxyethanol	CH3OCH2CH2OH	109-86-4	A		MC	5,00	ppm
2-Methylacrylic acid	CH2=C(CH3)COOH	79-41-4	A	P3	MC	20	ppm
2-methylpropenenitrile	CH2=C(CH3)CN	126-98-7	AB 450	P3	MC	1	ppm
2-Methylpropyl acetate	CH3COOCH2CH(CH3)2	110-19-0	A		MC	150.00	ppm
2-Oxetanone	C3H4O2	57-57-8			ARI or A AIR		
2-Pentanol acetate	CH3COOCH(CH3)C3H7	626-38-0	A		MC	125	ppm
2-Phenyl propylene	C6H5C(CH3)=CH2	98-83-9	A		MC	50,00	ppm
2-propenamide	CH2=CHCONH2	79-06-1	A	P3	MC	0,30	mg/m3
2-propenenitrile	CH2=CHCN	107-13-1	A	P3	MC	2,00	ppm
2-Propenoic acid	CH2=CHCOOH	79-10-7	A		DM or MC	2,000	ppm
2-Propyl acetate	CH3COOCH(CH3)2	108-21-4	A		MC	250.00 (ST)	ppm
2-Propynyl alcohol	C3H3OH	107-19-7	A		MC	1	ppm
3,3'- dichlorobenzidine salts	NH2ClC6H3C6H3ClNH2	91-94-1	A	P3	MC		
3,3'-dimethylbenzidine	C14H16N2	119-93-7	A	P3	MC	0,02	mg/m3
3,5,5- trimethylcyclohex- 2- enone	C9H14O	78-59-1	A		MC	4,00	ppm
3a,4,7,7a-Tetrahydro-4,7-methanoindene	C10 H12	77-73-6	A	P3	MC	5,00	ppm
3-Heptanone	CH3CH2CO[CH2]3CH3	106-35-4	A		MC	50	ppm
3-Methyl-1-butanol acetate	CH3COOCH2CH2CH(CH3)2	123-92-2	A		DM or MC	100	ppm
3-Methyl-5-heptanone	C2H5COCH2CH(CH3)CH2CH3	541-85-5	A		MC	25	ppm
4- Methylpentan- 2- One	CH3COCH2CH(CH3)2	108-10-1	A		MC	50	ppm

Substances	Chemical formula	CAS number	Gas filter	Particles filter	MC/DM*	OEL	Unit of measurement
4,4'- Methylenedianiline (mda)	CH2(C6H4NH2)2	101-77-9	A	P3	MC	0,01	ppm
4-Hydroxy-4-Methyl-2-Pentanone	CH3COCH2C(CH3)2OH	123-42-2	A		MC	50	ppm
4-Nitroaniline	C6 H6 N2 O2	100-01-6	A	P3	MC	6	mg/m3
4-nitrochlorobenzene	ClC6H4NO2	100-00-5	AB	P3	MC	1,00	mg/m3
5-Methyl-2-hexanone	CH3COCH2CH2CH(CH3)2	110-12-3	A		MC	50	ppm
6,9-methano- 2,4,3-benzo-dioxathiepin-3-oxide	C9H6Cl6O3S	115-29-7	A	P3	MC	0	mg/m3
Acetaldehyde	CH3CHO	75-07-0	AX		MC	100	ppm
Acetic acid	CH3COOH	64-19-7	A	P3	MC	10.00	ppm
Acetic ester	CH3COOC2H5	141-78-6	A		MC	400.00	ppm
Acetic oxide	(CH3CO)2O	108-24-7	A		MC	5	ppm
Acetylene	C2H2	74-86-2			ARI or A AIR	2500	ppm
Acraldehyde	CH2=CHCHO	107-02-8	AX 450		MC	0	ppm
Age	C6H10O2	106-92-3	A		MC	5	ppm
Aldrin	C12H8Cl6	309-00-2	AB	P3	DM or MC	0.25	mg/m3
Alpha- chlorotoluene	C6H5CH2Cl	100-44-7	A		MC	1	ppm
Alpha-chloroacetophenone	C6H5COCH2Cl	532-27-4	ABEK	P3	MC	0,30	ppm
Alpha-starch	(C6H10O5)n	9005-25-8		P3	MC	5,00	mg/m3
Aluminium metal (respirable dust)	Al	7429-90-5		P2/P3	DM or MC	5,000	mg/m3
Aluminum trioxide	Al2O3	1344-28-1		P3	DM or MC	4	mg/m3
Amidocyanogen	NH2CN	420-04-2		P3	DM or MC	2,000	mg/m3
Aminocyclohexane	C6H11NH2	108-91-8	A		DM or MC	10,000	ppm
Aminodimethylbenzene	(CH3)2C6H3NH2	1300-73-8	K		DM or MC	2	ppm
Aminomethane	CH3NH2	74-89-5	K		MC	10	ppm
Ammonia	NH3	7664-41-7	K		MC	25	ppm
Ammonium amidosulfonate	NH4OSO2NH2	7773-06-0		P3	MC	5,00	mg/m3
Ammonium chloride	NH4Cl	12125-02-9	K	P	MC	10	mg/m3
Amyl acetic ether	CH3COO[CH2]4CH3	628-63-7	A		MC	100	ppm
Anhydrous hydrogen bromide;	H Br	10035-10-6	B	P3	MC	3	ppm
Anone	C6H10O	108-94-1	A		DM or MC	25,000	ppm
Antimony and compounds (as sb)	Sb	7440-36-0		P3	MC	MEL	mg/m3
Antimony hydride	SbH3	7803-52-3			ARI or A AIR	0	ppm
Antimony trioxide	O3 Sb2	1309-64-4		P3	DM or MC	0,500	mg/m3
Argon	Ar	7440-37-1			ARI or A AIR		ppm
Arsenic & compounds except arsine	As	7440-38-2		P3	MC	0,15	mg/m3
Arsenic trihydride	AsH3	7784-42-1			ARI or A AIR	0,020	ppm
Arsenic trioxide	As2O3	1327-53-3			ARI or A AIR	0,200	mg/m3
Artificial barite	BaSO4	7727-43-7		P3	MC	0,50	mg/m3
ASBESTOS, amiante	Hydrated mineral silicates	1332-21-4	PAPR	P3	MC	MEL	fibres/ml
Asphalt, petroleum fumes	n/ a	8052-42-4			ARI or A AIR	5	mg/m3
Atrazine (iso)	C8H14ClN5	1912-24-9		P3	DM or MC	5,000	mg/m3
Azimethylene	CH2N2	334-88-3	ABEK	P3	MC	0,20	ppm
Azirane	C2H5N	151-56-4	K 450		MC		ppm
Azium	NaN3	26628-22-8		P3	DM or MC	0	mg/m3
Azodicarbonamide	C2H4N4O2/NH2CON=NCONH2	123-77-3	A	P3	MC	MEL	mg/m3
Barium compounds soluble (as ba)	Ba	7440-39-3		P2/P3	DM or MC	1	mg/m3
Basudin®	C12H21N2O3PS	333-41-5	BE	P3	MC	0,10	mg/m3
BCME [Bis (chloromethyl) ETHER]	(CH2Cl)2O	542-88-1	A2	P3	MC	0,05	mg/m3
Benomyl (iso)	C14H18N4O3	17804-35-2	A	P3	DM or MC	5,000	mg/m3
Benzenamine	C6H5NH2	62-53-3	A	P3	MC	2,00	ppm
Benzene	C6H6	71-43-2	A 450		MC	1,00	ppm
Benzene chloride	C6H5Cl	108-90-7	A		DM or MC	75,000	ppm
Benzene hexahydride	C6 H12	110-82-7	A		DM or MC	300,000	ppm
Benzyl butyl phthalate	C19 H20 O4	85-68-7	A	P	DM or MC	5,000	mg/m3
Beryllium and compounds	Be	7440-41-7		P3	MC	VLE	mg/m3
Beta-Aminoethyl alcohol	NH2CH2CH2OH	141-43-5	A		MC	3	ppm
Beta-Hydroxypropyl acrylate	CH2=CHCOOCH2CHOHCH3	999-61-1	A		MC	1	ppm
BGE	C7 H14 O2	2426-08-6	A		MC	5,60	ppm
Biotite	H2KAl3(SiO4)3	12001-26-2		P3	DM or MC	3,000	mg/m3
Bipotassium chromate	K2 Cr O4	7789-00-6			ARI or A AIR		mg/m3
Bis(2- ethylhexyl) phthalate	C24H38O4	117-81-7	A	P3	DM or MC	5,000	mg/m3
Bis(2,3- epoxypropyl) ether	C6H10O3	2238-07-5	A	P3	MC	0,10	ppm
Bismuth telluride	Bi2Te3	1304-82-1		P3	MC	5,00	mg/m3
Borates, (tetra) sodium salts	Na2B4O7	1330-43-4		P3	DM or MC	1,000	mg/m3
Borax decahydrate	Na2B4O7 • 10H2O	1303-96-4		P3	MC	5,00	mg/m3
Boric anhydride	B2O3	1303-86-2		P3	DM or MC	10,000	mg/m3
Bornan- 2- one	C10H16O	76-22-2	A	P3	DM or MC	2,000	mg/m3
Boron fluoride	BF3	7637 07 02			ARI or A AIR	1,000	ppm
Boron hydride	B2H6	19287-45-7	B	P3	MC	0,10	ppm
Bromacil (iso)	C9H13BrN2O2	314-40-9	AB	P3	DM or MC	1,000	ppm
Bromine	Br2	7726-95-6	B	P3	MC	0,10	ppm
Bromine fluoride	BrF5	7789-30-2	AX		MC	0,10	ppm
Bromoethane	CH3CH2Br	74-96-4	AX		MC	200,00	ppm
Bromoethylene	CH2=CHBr	593-60-2	AX		DM or MC	5,000	ppm
Bromoform	CHBr3	75-25-2	A		MC	0,50	ppm
Bromomethane	CH3Br	74-83-9	AX		MC	5	ppm
Butane	CH3CH2CH2CH3	106-97-8	AX		DM or MC	600,000	ppm
Butyl acrylate	CH2=CHCOOC4H9	141-32-2	A		MC	10,00	ppm
Butyl ester of 2-hydroxypropanoic acid	CH3CH(OH)COOC4H9	138-22-7	A	P3	DM or MC	5,000	ppm
Butyl ethanoate	CH3COO[CH2]3CH3	123-86-4	A		MC	150	ppm

*MC/DM = Overall masks / Half-mask

This list is not contractual. It is an indicative list and in no way incurs the liability of DELTA PLUS.

Substances	Chemical formula	CAS number	Gas filter	Particles filter	MC/DM*	OEL	Unit of measurement
Butyl methyl ketone /MBK	CH3CO[CH2]3CH3	591-78-6	A		MC	5,00	ppm
Butylamine	CH3CH2CH2CH2NH2	109-73-9	BK		MC	5,00	ppm
Cadmium	Cd S	7440-43-9		P3	DM or MC	VLE=0,05	mg/m3
Caesium hydroxide	CsOH	21351-79-1	B		DM or MC	2,000	mg/m3
Calcium carbimide	CaCN2	156-62-7			ARI or A AIR	0,500	mg/m3
Calcium carbonate	CaCO3	1317-65-3		P3	DM or MC	5,000	mg/m3
Calcium hydrate	Ca(OH)2	1305-62-0		P3	DM or MC	5,000	mg/m3
Calcium monosilicate	CaSiO3	1344-95-2		P2/P3	DM or MC	5,000	mg/m3
Calcium sulfate hemihydrate	CaSO4 • 0.5H2O	26499-65-0		P3	DM or MC	5,000	mg/m3
Captafol (iso)	C10H9Cl14NO2S	2425-06-1	A		MC	0,10	mg/m3
Carbaryl (iso)	CH3NHCOOC10H7	63-25-2	A		DM or MC	5,000	mg/m3
Carbofuran (iso)	C12H15NO3	1563-66-2	A	P3	DM or MC	0,100	mg/m3
Carbolic acid	C6H5OH	108-95-2	A	P3	MC	5	ppm
Carbon black	C	1333-86-4		P3	MC	3,50	mg/m3
Carbon dioxide	CO2	124-38-9			ARI or A AIR	5000,000	ppm
Carbon disulphide	C S2	75-15-0	AX		MC	10,00	ppm
Carbon hexachloride	Cl3CCCl3	67-72-1	A	P3	MC	1,00	ppm
Carbon monoxide	CO	630-08-0			ARI or A AIR	30,000	ppm
Carbon tetrachloride	CCl4	56-23-5	A		MC	2,00	ppm
Carbonyl chloride	COCl2	75-44-5	B	P3	MC	0,10	ppm
Carboxyethane	CH3CH2COOH	79-09-4	A	P3	MC	10	ppm
CB	CH2BrCl	74-97-5	A		MC	200,00	ppm
Cd: Cadmium	CdO/Cd	1306-19-0		P3	MC	VLE=0,05	mg/m3
Cellosolve®	C2H5OCH2CH2OH	110-80-5	A		MC	0,50	ppm
Cellulose	(C6H10O5)n	9004-34-6		P3	DM or MC	5,000	mg/m3
Cement	as Portland Cement	65997-15-1		P2/P3	DM or MC	10,000	mg/m3
Chlordan	C10H6Cl8	57-74-9	A	P3	DM or MC	0,500	mg/m3
Chlorine	Cl2	7782-50-5	B		MC	0,50	ppm
Chlorine fluoride	ClF3	7790-91-2	B		MC	0,10	ppm
Chlorine oxide	Cl O2	10049-04-4	B		DM or MC	0,100	ppm
Chloroacetic acid chloride	ClCH2COCl	79-04-9	A	P3	MC	0,05	ppm
Chlorocyanide	ClCN	506-77-4	B 450		MC	0,30	ppm
Chlorodimethyl ether	CH3OCH2Cl	107-30-2			ARI or A AIR		
Chloroethane	CH3CH2Cl	75-00-3	AX		DM or MC	1000,000	ppm
Chloréthanoic acid	ClCH2COOH	79-11-8	A	P3	MC	0	ppm
Chloroethene	CH2=CHCl	75-01-4	AX		MC	1,00	ppm
Chloroform	CHCl3	67-66-3	AX		MC	2,00	ppm
Chloromethane	CH3Cl	74-87-3			ARI or A AIR	100,000	ppm
Chloropicrin	CCl3NO2	76-06-2	A	P3	MC	0,10	ppm
Chlorosulfuric acid	HClO3S	7790-94-5	E	P3	MC	1,00	mg/m3
Chlorothene	CH3CCl3	71-55-6	A		MC	300,00	ppm
Chlorpyrifos	C9H11Cl3NO3PS	2921-88-2	A	P3	DM or MC	0,200	mg/m3
Chromic acid (cro3)	CrO3	1333-82-0	BE	P3	MC	0,05	mg/m3
Chromium	Cr	7440-47-3		P3	MC	0,50	mg/m3
Cobalt and compounds (as co)	Co	7440-48-4		P2/P3	DM or MC	VLE	mg/m3
Copper, dusts and mists	Cu	7440-50-8		P3	MC	1,00	mg/m3
Crag® herbicide No. 1	C6H3Cl2OCH2CH2OSO3Na	136-78-7		P3	MC	5,00	mg/m3
Cresols (all isomers)	C7 H8 O	1319-77-2	A	P3	MC	5,00	ppm
Cumene	C6H5CH(CH3)2	98-82-8	A		MC	50,00	ppm
Cyanogen chloride, (as -cn)	C- N	57-12-5	B	P3	MC	5,00	mg/m3
Cyclohexene	C6 H10	110-83-8	A		DM or MC	300,000	ppm
Cyclohexylmethane	CH3C6H11	108-87-2	A		DM or MC	400,000	ppm
DBP	C6H4(COOC4H9)2	84-74-2	A	P3	MC	5,00	mg/m3
Dca	C2Cl2	7572-29-4			ARI or A AIR	0,100	ppm
DDH	C5H6Cl2N2O2	118-52-5	ABEK	P3	MC	0,20	mg/m3
DDT	(C6H4Cl)2CHCCl3	50-29-3		P3	MC	1	mg/m3
Di- N- Butyl Phoshate	(C4H9O)2(OH)PO	107-66-4	A	P3	MC	1,00	ppm
Diallyl phthalate	C14 H14 O4	131-17-9	A	P3	DM or MC	5,000	ppm
Diammonium peroxodisulphate	N2 H8 S2 O8	7727-54-0	A	P3	MC	1,00	mg/m3
Dianiline (mboca)	CH2(C6H4ClNH2)2	101-14-4	A	P3	MC	0,00	mg/m3
Diatomaceous earth, natural, respirable dust	SiO2	68855-54-9		P3	MC	1,20	mg/m3
DIBENZ(a, h) ANTHRACENE	C22 H14	65996-93-2	A	P3	MC	0,10	mg/m3
Dibenzoyl peroxide	(C6H5CO)2O2	94-36-0	A	P3	DM or MC	5,000	mg/m3
Dibromochloropropane	CH2BrCHBrCH2Cl	96-12-8			ARI or A AIR	0,001	ppm
Dibutyl phosphate	(C4H9O)2(OH)PO	107-66-4	A	P3	MC	1,00	ppm
Dibutylated hydroxytoluene	[C(CH3)3]2CH3C6H2OH	128-37-0		P	MC	10,00	mg/m3
Dichloromethane	CH2Cl2	75-09-2	AX		MC	50,00	ppm
Dichloromethyl ether	(CH2Cl)2O	542-88-1	A2	P3	MC	0,05	mg/m3
Dicyanogen	NCCN	460-19-5	BK		DM or MC	10,000	ppm
Dicyclohexyl phthalate	C20 H26 O4	84-61-7	A	P3	DM or MC	5,000	ppm
Dieldrin (iso)	C12H8Cl6O	60-57-1	A	P3	DM or MC	0,250	mg/m3
Diethyl ether	C2H5OC2H5	60-29-7	AX		MC	400,00	ppm
Diethyl phthalate	C6H4(COOC2H5)2	84-66-2	A	P3	DM or MC	5,000	mg/m3
Diethyl sulphate	C4 H10 O4 S	64-67-5	A	P3	MC	VLE	ppm
Diethylene imidoxide	C4H9ON	110-91-8	A		MC	20	ppm
Difluorodibromomethane	CBr2F2	75-61-6			ARI or A AIR	100,000	ppm
Diisodecyl phthalate	C28 H46 O4	26761-40-0	A	P3	DM or MC	5,000	mg/m3
Diisononyl phthalate	C26 H42 O4	28553-12-0	A	P3	DM or MC	5,000	mg/m3
Diisooctyl phthalate	C24 H38 O2	27554-26-3	A	P3	DM or MC	5,000	mg/m3
Diisopropylamine	[(CH3)2CH]2NH	108-18-9	K		MC	5	ppm
Dimethyl carbinol	(CH3)2CHOH	67-63-0	A		MC	400	ppm
Dimethyl ester of 1,2-benzenedicarboxylic acid	C6H4(COOCH3)2	131-11-3	A	P3	MC	5,00	mg/m3
Dimethyl ether	H6 C2 O	115-10-6			ARI or A AIR	400,000	ppm
Dimethyl methane	CH3CH2CH3	74-98-6			ARI or A AIR	1000,000	ppm
Dimethyl sulphate	(CH3)2SO4	77-78-1	A	P3	MC	0,10	ppm
Dimethylacetone	CH3CH2COCH2CH3	96-22-0	A		DM or MC	200,000	ppm
Dimethylaminoethanol	C4H11NO/(CH3)2NCH2CH2OH	108-01-0	A		MC	2	ppm
Dimethylnitromethane	(CH3)2CH(NO2)	79-46-9	A	P3	MC	10,00	ppm
Dinitrogen tetroxide (N2O4),	N O2	10102-44-0	NO		MC	3,00	ppm
Diphenyl	C6H5C6H5	92-52-4	A	P3	MC	0,20	ppm
Diphenyl ether (vapor)	C6H5OC6H5	101-84-8	A	P3	MC	1,00	ppm
Dipotassium peroxodisulphate (measured as s2o8)*	H2 K2 O8 S2	7727-21-1	AB	P	MC	1,00	mg/m3
Direx®	C6H3Cl2NHCON(CH3)2	330-54-1		P3	DM or MC	10,000	mg/m3
Disodium peroxodisulphate (measured as s2o8)	Na2 O8 S2	7775-27-1	A	P3	MC	1,00	mg/m3

Substances	Chemical formula	CAS number	Gas filter	Particles filter	MC/DM*	OEL	Unit of measurement
Disodium tetraborate, decahydrate	Na2B4O7 • 10H2O	1303-96-4		P3	MC	5,00	mg/m3
Disodium tetraborate, pentahydrate	B4 O7 2Na 10H 2O	11130-12-4	A	P3	DM or MC	1,000	mg/m3
Disulfoton (iso)	C8H19O2PS3	298-04-4	ABE	P3	MC	0,10	mg/m3
Disulphur dichloride	S2 Cl2	10025-67-9	B	P3	MC	1,00	ppm
Divanadium pentaoxide (as v)	V2O5	1314-62-1		P3	MC	VLE=0,005	mg/m3
DMAC	CH3CON(CH3)2	127-19-5	A		DM or MC	10,000	ppm
DMF	HCON(CH3)2	68-12-2	A		MC	10,00	ppm
DMH	(CH3)2NNH2	57-14-7	K 450		MC	0,06	ppm
Eca	C6H7NO2	7085-85-0	AXB	P3	MC	2	mg/m3
Elemental selenium	Se	7782-49-2		P3	MC	0	mg/m3
Endrine	C12H8Cl6O	72-20-8		P3	MC	0,10	mg/m3
Ethane	C2 H6	74-84-0			ARI or A AIR		ppm
Ethanedioic acid	HOOCCOOH • 2H2O	144-62-7		P3	MC	1	mg/m3
Ethanethiol	CH3CH2SH	75-08-1	AX	P3	MC	1	ppm
Ethyl acetone	CH3COCH2CH2CH3	107-87-9	A		MC	200	ppm
Ethyl acrylate	CH2=CHCOOC2H5	140-88-5	A		MC	5,00	ppm
Ethyl alcohol	CH3CH2OH	64-17-5	A		MC	1000	ppm
Ethyl chloroformate	C3H5ClO2 / ClCOOC2H5	541-41-3			ARI or A AIR	1	ppm
Ethyl ester of formic acid	CH3CH2OCHO	109-94-4	AX		MC	100	ppm
Ethyl methyl ketone	CH3COCH2CH3	78-93-3	A		MC	200,00	ppm
Ethyl nitrile	CH3CN	75-05-8	A		MC	40	ppm
Ethyl parathion	(C2H5O)2P(S)OC6H4NO2	56-38-2	A2	P3	MC	0	mg/m3
Ethylamine	CH3CH2NH2	75-04-7	K		MC	10,00	ppm
Ethylbenzene	CH3CH2C6H5	100-41-4	A		MC	100	ppm
Ethylene	C2 H4	74-85-1			ARI or A AIR		ppm
Ethylene bromide	BrCH2CH2Br	106-93-4	A		MC	0,05	ppm
Ethylene oxide	C2H4O	75-21-8	AX		MC	5,00	ppm
Ferbam (iso)	[(CH3)2NCS2]3Fe	14484-64-1		P3	MC	10	mg/m3
Ferrocene	C10 H10 Fe	102-54-5	A	P	MC	10	mg/m3
Fluoride (as f)	F	16984-48-8	AB	P3	DM or MC	3	mg/m3
Fluorine-19	F2	7782-41-4	B		MC	1,00	ppm
Formal	CH3OCH2OCH3	109-87-5	AX		MC	1000,00	ppm
Formaldehyde	HCHO	50-00-0	ABE		MC	0,50	ppm
Formamide	HCONH2	75-12-7	A	P3	MC	10,00	ppm
Formic acid	HCOOH	64-18-6	B / BE	P3	MC	5	ppm
Formonitrile	HCN	74-90-8	B	P3	MC	2,00	ppm
Freon® 112	CCl2FCCl2F	76-12-0	A		MC	500,00	ppm
Freon® 112a	CCl3CClF2	76-11-9	A		MC	500,00	ppm
Freon® 113	CCl2FCClF2	76-13-1			ARI or A AIR	1000	ppm
Freon® 114	CClF2CClF2	76-14-2			ARI or A AIR	1000,000	ppm
Freon® 12	CCl2F2	75-71-8			ARI or A AIR	1000,000	ppm
Freon® 21	CHCl2F	75-43-4			ARI or A AIR	10,000	ppm
Freon® 22	CHClF2	75-45-6			ARI or A AIR	1000,000	ppm
Germanium tetrahydride	GeH4	7782-65-2			ARI or A AIR	0	ppm
Glycerol	HOCH2CH(OH)CH2OH	56-81-5	A	P3	MC	5,00	mg/m3
Glycidyl phenyl ether	C9H10O2	122-60-1	A		MC	1	ppm
Glycol dinitrate	O2NOCH2CH2ONO2	628-96-6	A	P	MC	0,20	ppm
Graphite	C	7440-44-0		P2/P3	DM or MC	5,000	mg/m3
Guthion®	C10H12O3PS2N3	86-50-0	A	P3	DM or MC	0	mg/m3
Gypsum	Ca S O6 H4	10101-41-4		P3	MC	4	mg/m3
Hafnium	Hf	7440-58-6		P3	MC	1	mg/m3
Halon® 1301	CBrF3	75-63-8			ARI or A AIR	1000,000	ppm
Helium	He				ARI or A AIR		ppm
Heptan- 2- one	CH3CO[CH2]4CH3	110-43-0	A		MC	100	ppm
Hexachlorobenzene	C6 Cl6	118-74-1	A	P3	MC	0,03	mg/m3
Hexahydromethylphenol	CH3C6H10OH	25639-42-3	A		MC	50	ppm
Hexalin	C6H11OH	108-93-0	A		MC	50,00	ppm
Hexamethyl phosphoramide	[(CH3) 2N] 3PO	680-31-9			ARI ou A AIR		
Hexane	CH3[CH2]4CH3	110-54-3	A		DM ou MC	50	ppm
Hydrated lime	Ca(OH)2	1305-62-0		P3	DM or MC	5,000	mg/m3
Hydrazine	H2NNH2	302-01-2	K	P3	MC	0,10	ppm
Hydrazinobenzene	C6H5NHNH2	100-63-0	A	P3	DM or MC	0,140	ppm
Hydrazoic acid (as vapour)	H N3	7782-79-8	K	P3	MC	0	ppm
Hydrogen	H2	1333-74-0 ?			ARI or A AIR		ppm
Hydrogen chloride	H Cl	7647-01-0	B	P3	MC	5,00	ppm
Hydrogen fluoride (as f)	H F	7664-39-3	B 450	P3	MC	3.00 (ST)	ppm
Hydrogen nitrate	HNO3	7697-37-2	B/BE/NO	P3	MC	2	ppm
Hydrogen peroxide	H2O2	7722-84-1	AB	P3	MC	1	ppm
Hydrogen phosphide	PH3	7803-51-2	B		MC	0,10	ppm
Hydrogen sulfate	H2SO4	7664-93-9	BE 450	P3	MC	1	mg/m3
Hydrogen sulphide	H2 S	7783-06-4	B		MC	10	ppm
Hydroquinone monomethyl ether	CH3OC6H4OH	150-76-5		P3	MC	5	mg/m3
Hydrous magnesium silicate	Mg3Si4O10(OH)2	14807-96-6		P3	MC	2,00	mg/m3
Hyponitrous acid anhydride	N2 O	10024-97-2	NO		MC	25,000	ppm
Impure corundum	Al2O3	1302-74-5		P3	DM or MC	5	mg/m3
Indium and compounds (as in)	In	7440-74-6		P3	MC	0	mg/m3
Indonaphthene	C9 H8	95-13-6	A		MC	10	ppm
Iodine	I2	7553-56-2	IPR	P3	MC	0,10	ppm
Iodomethane	CH3I	74-88-4	AX		MC	VLE=2	ppm
Iron (III) oxide	Fe2O3	1309-37-1		P3	DM or MC	5	mg/m3
Iron oxide, fume (as fe)	Fe2O3	1309-37-1		P3	DM or MC	5	mg/m3
Iron pentacarbonyl	Fe(CO)5	13463-40-6	A	P3	MC	0	ppm
Isobutanol	(CH3)2CHCH2OH	78-83-1	A		MC	50	ppm
Isobutenyl methyl ketone	(CH3)2C=CHCOCH3	141-79-7	A		MC	10,00	ppm
Isoflurane	C3 F5 H2 Cl O	26675-46-7			ARI or A AIR	50	ppm
Isophorone diamine diisocyanate	C12H18N2O2	4098-71-9	A		MC	VLE=0,01	ppm
Isopropyl chloroformate	C4H7ClO2/(CH3)2CHOCOCl	108-23-6	A	P3	MC	1.00	ppm
Isovalerone	[(CH3)2CHCH2]2CO	108-83-8	A		MC	25,00	ppm
Jasmolin I or II	C20H28O3 / C21H28O5 C21H30O3 / C22H30O5 C21H28O3 / C22H28O5	8003-34-7	A	P3	MC	5.00	mg/m3
Kaolin	(Al2Si2O5(OH)4)2	1332-58-7		P3	DM or MC	5	mg/m3
Keto-ethylene	CH2=CO	463-51-4			ARI or A AIR	1	ppm
Ketone propane	(CH3)2CO	67-64-1	AX		MC	500	ppm
Lead and compounds (except lead alkyls)	Pb	7439-92-1		P3	MC	150,00	µg/ m3

Substances	Chemical formula	CAS number	Gas filter	Particles filter	MC/DM*	OEL	Unit of measurement
Lepidolite	n/ a	12001-26-2		P3	DM or MC	3,000	mg/m3
Lime	CaO	1305-78-8		P2/P3	MC	2,00	mg/m3
Lithium hydroxide	LiOH	1310-65-2		P3	MC	1.00 (ST)	mg/m3
Lithium monohydride*	LiH	7580-67-8	A	P3	MC	0,025	mg/m3
LPG (Liquefied Petroleum Gas)	Mix : C3 H6; C3 H8; C4 H8; C4 H10	68476-85-7			ARI or A AIR	1000.00	ppm
Magnesite	MgCO3	546-93-0		P3	DM or MC	5,000	mg/m3
Magnesium oxide, fume and dust (as mg)	MgO	1309-48-4		P3	DM or MC	15	mg/m3
Malathion (iso)	C10H19O6PS2	121-75-5	A	P3	MC	10	mg/m3
Manganese and compounds (as mn)	Mn	7439-96-5		P2/P3	DM or MC	1,000	mg/m3
Manganese tetroxide	Mn3O4	1317-35-7		P3	DM or MC	1	mg/m3
Manganese tricarbonylmethylcyclopentadieny	CH3C5H4Mn(CO)3	12108-13-3	A	P3	MC	0	mg/m3
Margarite	n/ a	12001-26-2		P3	DM or MC	3,000	mg/m3
MD	C5H5Mn(CO)3	12079-65-1	A	P3	DM or MC	0,100	mg/m3
MDI	CH2(C6H4NCO)3	101-68-8	A	P3	MC	0,01	ppm
Mecrylate	CH2=C(CN)COOCH3	137-05-3	A	P3	MC	2,00	ppm
Mercury & its inorganic divalent compounds	Hg	7439-97-6	Hg	P3	DM or MC	0,050	mg/m3
Mesitylene	C6H3(CH3)3	108-67-8	A		MC	25	ppm
Methacrylate monomer	CH2=C(CH3)COOCH3	80-62-6	A		MC	100	ppm
Methane	C H4	74-82-8			ARI or A AIR		ppm
Methane tetrabromide	CBr4	558-13-4	A		DM or MC	1,400	mg/m3
Methane tetramethylol	C(CH2OH)4	115-77-5	A	P3	MC	5	mg/m3
Methanethiol	CH3SH	74-93-1	AXB		MC	0,50	ppm
Methanol	CH3OH	67-56-1	AX		MC	200	ppm
Methomyl (iso)	CH3C(SCH3)NOC(O)NHCH3	16752-77-5		P3	MC	3	mg/m3
Methoxy-dtt	(C6H4OCH3)2CHCCl3	72-43-5	A	P3	DM or MC	15,000	mg/m3
Methyl acetate	CH3COOCH3	79-20-9	AX		MC	200.00	ppm
Methyl ester of formic acid	HCOOCH3	107-31-3	AX		MC	100	ppm
Methyl ester of isocyanic acid	CH3NCO	624-83-9	B	P3	MC	VLE=0,02	mg/m3
Methyl ethylene oxide	C3H6O	75-56-9	AX 450		MC	100,00	ppm
Methyl parathion	(CH3O)2P(S)OC6H4NO2	298-00-0	A2	P3	MC	0	mg/m3
Methyl phosphite	(CH3O)3P	121-45-9	A	P3	MC	2	ppm
Methyl propenoate	CH2=CHCOOCH3	96-33-3	A		MC	10	ppm
METHYL- t- BUTYL ETHER	C5 H12 O	1634-04-4	AX	P3	MC	25	ppm
Methylene oxide	HCHO	50-00-0	ABE		MC	0,50	ppm
Methylstyrene	CH2=CHC6H4CH3	25013-15-4	A		MC	100	ppm
Miak	CH3COCH2CH2CH(CH3)2	110-12-3	A		MC	50	ppm
Mibc	(CH3)2CHCH2CH(OH)CH3	108-11-2	A		MC	25	ppm
MMH	CH3NHNH2	60-34-4	AK	P3	MC	0,04	ppm
Molybdenum compounds (as mo)	Mo	7439-98-7		P3	MC	5	mg/m3
Monochloropentafluoroethane	CClF2CF3	76-15-3			ARI or A AIR	1000,000	ppm
Monofluorotrichloromethane	CCl3F	75-69-4			ARI or A AIR	1000	ppm
N- Butyl chloroformate	C5 H10 CL O2	592-34-7	A	P3	MC	1,00	ppm
N- propyl acetate	CH3COOCH2CH2CH3	109-60-4	A		MC	200.00	ppm
N, n- dimethylaniline	C6H5N(CH3)2	121-69-7	A	P3	MC	5,00	ppm
N,N'-Dimethyl-4,4'-bipyridinium dichloride	CH3(C5H4N)2CH3 • 2Cl	1910-42-5	A	P3	MC	0,10	mg/m3
Naphthalene	C10H8	91-20-3	A	P3	MC	10,00	ppm
Navadel®	C4H6O2[SPS(OC2H5)2]2	78-34-2	A	P3	MC	0,20	mg/m3
Neon	Ne	7440 01 9			ARI or A AIR		ppm
N-Ethylethanamine	(C2H5)2NH	109-89-7	K+450		MC	10,00	ppm
N-Ethylmorpholine	C6 H13 N O	100-74-3	A	P3	MC	5.00	ppm
Ng	CH2NO3CHNO3CH2NO3	55-63-0	A	P3	DM or MC	0,100	mg/m3
Nickel and inorganic compounds	Ni	7440-02-0		P3	DM or MC	1,000	mg/m3
Nickel carbonyl	Ni(CO)4	13463-39-3			ARI or A AIR	0.10 (ST)	ppm
Nicotine	C5H4NC4H7NCH3	54-11-5	A	P3	DM or MC	1	mg/m3
Nitrapyrin	Cl5C5H3NCCl3	1929-82-4	AB	P3	MC	5,00	mg/m3
Nitric oxide	N O	10102-43-9			ARI or A AIR	25	ppm
Nitrocarbol	CH3NO2	75-52-5	A	P3	MC	100	ppm
Nitroethane	CH3CH2NO2	79-24-3	A	P3	MC	100	ppm
Nitrogen	N2	7727-37-9			ARI or A AIR		ppm
Nitrogen trifluoride	NF3	7783-54-2			ARI or A AIR	10	ppm
Nitropropane	CH3CH2CH2NO2	108-03-2	A	P3	MC	25	ppm
N-methylmethanamine	(CH3)2NH	124-40-3	K		MC	10,00	ppm
NN- Dimethylethylamine	C4 H11 N	598-56-1	K	P3	MC	5,00	ppm
N-Nitroso-N,N-dimethylamine	(CH3)2N2O	62-75-9	A	P3	MC		
N-octane	CH3[CH2]6CH3	111-65-9	A		MC	75,00	mg/m3
Nonyphenols	C15H24O	25154-52-3	A	P3	MC		
N-phenylmethylamine	C6H5NHCH3	100-61-8	A		DM or MC	1	ppm
N-Trichloromethylmercapto-4-cyclohexene 1,2-dicarboximide	C9H8Cl3NO2S	133-06-2	A	P3	DM or MC	5,000	mg/m3
Nux vomica	C21H22N2O2	57-24-9		P3	MC	0	mg/m3
O- acetylsalicylic acid	CH3COOC6H4COOH	50-78-2		P2/P3	DM or MC	5.00	mg/m3
O-anisidine	NH2C6H4OCH3	90-04-0	A	P3	MC	1	mg/m3
O-dianisidine	(NH2C6H3OCH3)2	119-90-4		P3	DM or MC		
O-diphenylbenzene	C6H5C6H4C6H5	84-15-1		P3	DM or MC	1	ppm
Oil mist, mineral		8012-95-1		P3	MC	5	mg/m3
Oil of mirbane	C6H5NO2	98-95-3	A	P3	MC	1	ppm
O-nitrotoluene	NO2C6H4CH3	88-72-2	A	P3	MC	2,00	ppm
Ortho-dichlorobenzene	C6H4Cl2	95-50-1	A		MC	50,00	ppm
Orthophosphoric acid	H3PO4	7664-38-2	B	P3	MC	1.00 (ST)	mg/m3
O-sec-Butylphenol	CH3CH2CH(CH3)C6H4OH	89-72-5	A		MC	5,00	ppm
Osmium oxide	OsO4	20816-12-0	B	P3	MC	0	mg/m3
Oxooctyl alcohol	C7H15CH2OH	26952-21-6	A		MC	50	ppm
Ozone	O3	10028-15-6	AXB2	P3	MC	0	ppm
P - Aramid respirable fibres	(C14 H10 O2 N2) n	26125-61-1		P3	DM or MC	0. 50	fibres/ml
P- toluenesulphonyl chloride	C7 H7 S O2 Cl	98-59-9	AB	P3	DM or MC	5.00 (ST)	mg/m3
Paracetamol	C8 H9 N O2	103-90-2		P3	DM or MC	10	mg/m3
P-Dioxane	C4H8O2	123-91-1	A	P3	MC	10,00	ppm
Pentachlorophosphorus	PCl5	10026-13-8	B	P3	MC	1,00	mg/m3
Pentane	CH3[CH2]3CH3	109-66-0	AX		MC	120	ppm
Peracetic acid	C2H4O3	79-21-0	AB	P3	DM or MC		ppm
Peroxide de 2-Butanone	C8H16O4	1338-23-4	A	P3	MC	VLE=0,2	ppm
Phenyl phosphate	(C6H5O)3PO	115-86-6	A	P3	MC	3	mg/m3
Phenylaniline	(C6H5)2NH	122-39-4	A	P3	MC	10,00	mg/m3
Phenylethylene	C6H5CH=CH2	100-42-5	A		MC	50,00	ppm

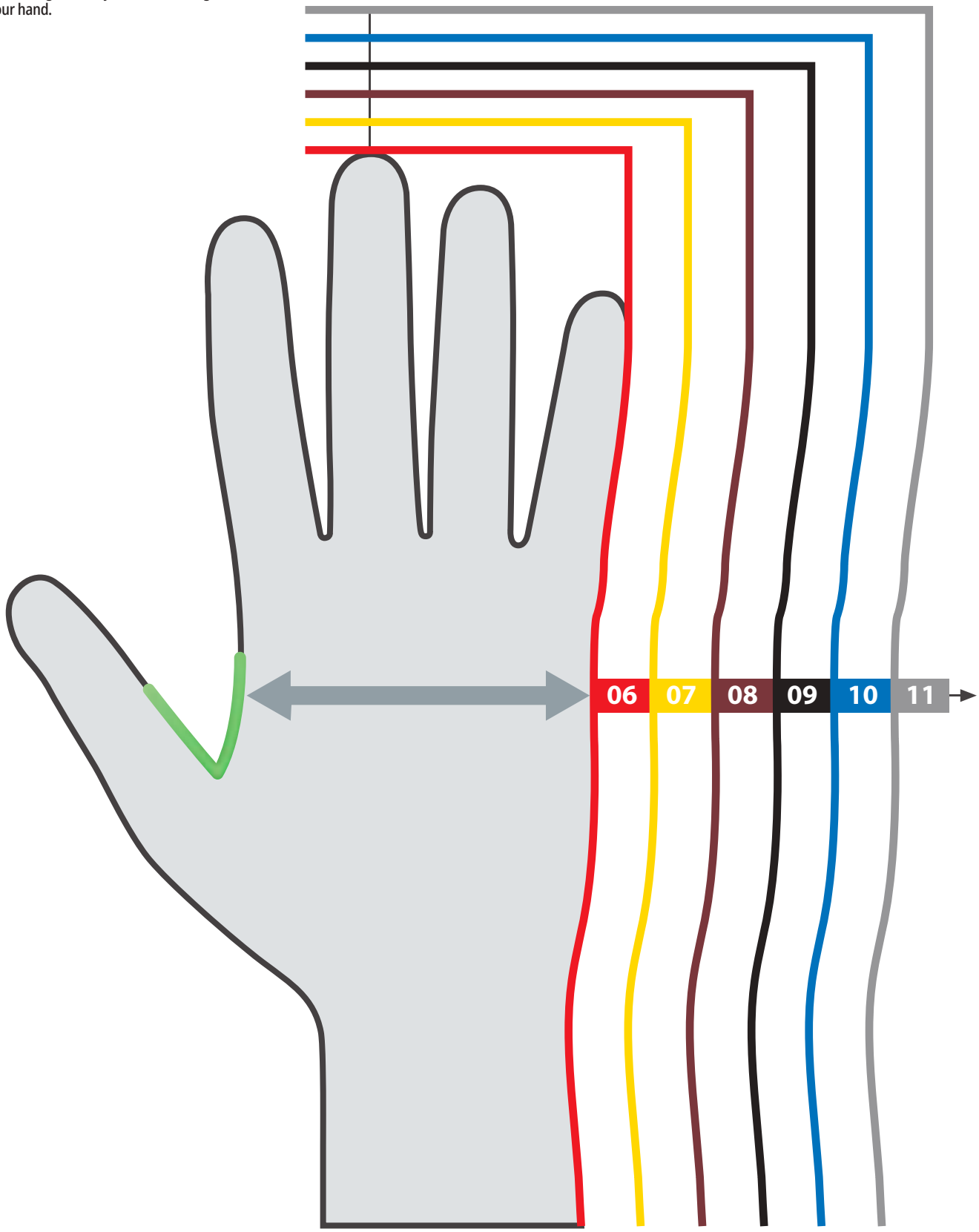
*MC/DM = Overall masks / Half-mask

Substances	Chemical formula	CAS number	Gas filter	Particles filter	MC/DM*	OEL	Unit of measurement
Phorate	(C2H5O)2P(S)SCH2SC2H5	298-02-2	A	P3	MC	0	mg/m3
Phosphorus oxychoride	POCl3	10025-87-3	B	P3	MC	0	ppm
Phosphorus pentasulphide	P2S5/P4S10	1314-80-3	B 450	P3	MC	1,00	mg/m3
Phosphorus pentoxide		1314-56-3	A	P3	DM or MC	2.00 (ST)	mg/m3
Phosphorus trichloride	PCl3	7719- 12 2	B 450	P3	MC	0	ppm
Phosphorus, yellow	P4	7723-14-0			ARI or A AIR	0	mg/m3
Picloram (iso)	C6H3Cl3O2N2	1918-02-1	AB	P3	MC	5,00	mg/m3
Piperazine hydrochloride	C4H10N2 HCl	142-64-3		P3	MC	5.00	mg/m3
Piperidine	CH2(CH2)4NH	110-89-4	A		DM or MC	?	ppm
Platinum metal	Pt	7440 06 4		P2/P3	DM or MC	5	mg/m3
Polychlorinated biphenyl	C6H3Cl2C6H2Cl3	11097-69-1	AB	P3	MC	0,10	mg/m3
Polychlorinated biphenyls (pcb's)	C12 H(10- x) Clx	1336-36-3			ARI or A AIR	0,500	mg/m3
Potassium bromate	K Br O3	7789-01-2		P3	DM or MC		
Potassium hydroxide	KOH	1310-58-3		P3	MC	2.00 (ST)	mg/m3
P-quinone	OC6H4O	106-51-4	A	P3	MC	0,10	ppm
Primary isoamyl alcohol	(CH3)2CHCH2CH2OH	123-51-3	A		MC	100	ppm
Propranolol	C16 H21 N O2	525-66-6	A	P3	DM or MC	2	mg/m3
Propylene	C3 H6	115-07-1			ARI or A AIR		ppm
Propylene glycol	as Propane- 1,2- diol	57-55-6	A	P3	DM or MC	150	ppm
Propylene glycol-1,2-dinitrate	CH3CNO2OHCHNO2OH	6423-43-4	A	P3	MC	0	ppm
Pvc (polyvinyl chloride) (resp. Dust)	(C2 H3 Cl) N	9002-86-2		P3	MC	4	mg/m3
Pyridine	C5H5N	110-86-1	A	P3	MC	5	ppm
Pyrophosphate	Na4P2O7	7722-88-5		P3	MC	5	mg/m3
Quartz	SiO2	14808-60-7		P3	DM or MC	0,050	mg/m3
RDX	C3H6N6O6	121-82-4		P3	DM or MC	1,500	mg/m3
Resorcinol	C6H4(OH)2	108-46-3	A	P3	MC	10	ppm
Rhodium (as rh) metal fume and dust	Rh	7440-16-6		P2/P3	DM or MC	0	mg/m3
Rotenone (iso)	C23 H22 O6	83-79-4	A	P3	MC	5	mg/m3
Saccarose	C12H22O11	57-50-1		P2/P3	DM or MC	10	mg/m3
Sec-Hexyl acetate	C8 H16 O2	108-84-9	A		MC	50	ppm
Seekay wax	C10H4Cl4	1335-88-2	A	P3	DM or MC	2	mg/m3
Selenium dihydride	H2 Se	7783-07-5			ARI or A AIR	0	ppm
Silica, amorphous (resp. Dust)	SiO2	7631-86-9		P3	MC	6,00	mg/m3
Silica, fused (resp. Dust)	O2 Si	60676-86-0		P3	MC	0	mg/m3
Silicane	SiH4	7803-62-5			ARI or A AIR	5,000	ppm
Silicon (resp. Dust)	Si	7440-21-3		P3	MC	4	mg/m3
Silicon monocarbide	SiC	409-21-2		P3	DM or MC	5,000	mg/m3
Silver, metallic	Ag	7440-22-4		P3	MC	0	mg/m3
Sodium bisulphite	NaHSO3	7631-90-5		P2/P3	MC	5	mg/m3
Sodium hydroxide	NaOH	1310-73-2		P3	MC	2.00 (ST)	mg/m3
Sodium metabisulphite	Na2S2O5	7681-57-4	B	P3	MC	5,00	mg/m3
Sodium monofluoroacetate	FCH2COONa	62-74-8		P3	DM or MC	0	mg/m3
Subtilisins	Bacillus subtilis	1395-21-7			ARI or A AIR	0	mg/m3
Sulfur fluoride	SF6	2551-62-4	BE	P3	MC	1000	ppm
Sulfurous oxychloride	SOCl2	7719-09-7	B	P3	MC	1.00 (ST)	ppm
Sulphur dioxide	SO2	7446-09-5	E		MC	2	ppm
Sulphur pentafluoride	S2F10	5714-22-7	B	P3	MC	0,01	ppm
Sulphur tetrafluoride	SF4	7783-60-0			ARI or A AIR	0	ppm
Sulphuryl difluoride	SO2F2	2699-79-8	BE 450		MC	5	ppm
Sym-dichloroethylene	ClCH=CHCl	540-59-0	AX		MC	200,00	ppm
Tantalum	Ta	7440-25-7		P3	MC	5	mg/m3
TCP	(CH3C6H4O)3PO	78-30-8	A	P3	DM or MC	0	mg/m3
TDI	CH3C6H3(NCO)2	584-84-9	A2B2	P3	MC	VLE=0,01	ppm
TEA	(C2H5)3N	121-44-8			MC	10,00	ppm
Tedp	[(CH3CH2O)2PS]2O	3689-24-5	ABE	P3	MC	0	mg/m3
Tellurium & compounds	Te	13494-80-9		P2/P3	DM or MC	0	mg/m3
Tellurium fluoride	TeF6	7783-80-4			ARI or A AIR	0	ppm
Tepp (iso)	[(CH3CH2O)2PO]2O	107-49-3	A	P3	MC	0	mg/m3
Tert-Butyl ester of acetic acid	CH3COOC(CH3)3	540-88-5	A		DM or MC	200	ppm
Tetrachloroethylene	Cl2C=CCl2	127-18-4	A		MC	50,00	ppm
Tetraethyl silicate	(C2H5)4SiO4	78-10-4	A		MC	10	ppm
Tetramethyl silicate	(CH3O)4Si	681-84-5	A		MC	1	ppm
Tetramethyl succinodinitrile	(CH3)2C(CN)C(CN)(CH3)2	3333-52-6	A	P3	DM or MC	1	ppm
Thallium, soluble compounds (as tl)	Tl	7440-28-0		P3	MC	0	mg/m3
THF	C4H8O	109-99-9	A		MC	200	ppm
Thio-4,4' bis (tert-butyl-6m-crésol)	[CH3(OH)C6H2C(CH3)3]2S	96-69-5		P3	DM or MC	5,000	mg/m3
Thiophenol	C6H5SH	108-98-5	A		MC	0	ppm
Thiram (iso)	C6H12N2S4	137-26-8	A	P	MC	5	mg/m3
Tin compounds, inorganic, except snh4 (as sn)	Sn	7440-31-5		P3	MC	2	mg/m3
Titanium peroxide	TiO2	13463-67-7		P3	MC	4	mg/m3
TMA	(CH3)3N	75-50-3	K		MC	10	ppm
Toluene	C6H5CH3	108-88-3	A		MC	100,00	ppm
Tributyl ester of phosphoric acid	(CH3[CH2]3O)3PO	126-73-8	A	P3	MC	2,50	mg/m3
Trichloroethanoic acid	CCl3COOH	76-03-9	B	P3	MC	1	ppm
Trichlorohydrin	CH2ClCHClCH2Cl	96-18-4	A		MC	10,00	ppm
Tricyclohexyltin hydroxide	(C6H11)3Sn0H	13121-70-5	A	P3	MC	5,00	mg/m3
Triglycidyl isocyanurate (tgic)	C12 H15 N3 O6	2451-62-9	AB	P3	DM or MC	VLE	mg/m3
Triiodomethane	CHI3	75-47-8	A		MC	0,60	ppm
Trilene	ClCH=CCl2	79-01-6	A		MC	75,00	ppm
Trimethyl carbinol	(CH3)3COH	75-65-0	A		MC	100	ppm
Trinitrotoluol	CH3C6H2(NO2)3	118-96-7	A	P3	MC	1	mg/m3
Tungsten & compounds (as w) (soluble)	W	7440-33-7		P3	MC	1	mg/m3
Turpentine	C10 H16 (approx)	8006-64-2	A		MC	100	ppm
Uranium compounds, natural, soluble (as u)	U	7440-61-1		P3	MC	0	mg/m3
Vac	CH2=CHOOCCH3	108-05-4	A		MC	VLE =4	ppm
VDC	CH2=CCl	75-35-4	AX	P3	MC	VLE	ppm
Warfarin (iso)	C19H16O4	81-81-2		P2/P3	DM or MC	0	mg/m3
White spirit	n/ a	8052-41-3	A		MC	350,00	mg/m3
Xylene (all isomers)	C8H10	1330-20-7	A		MC	100	ppm
Y- BHC (iso)	C6H6Cl6	58-89-9	B	P3	MC	1	mg/m3
Yttrium	Y	7440-65-5		P3	MC	1	mg/m3
Zinc chloride, fume	ZnCl2	7646-85-7		P3	MC	1	mg/m3
Zinc distearate (resp. Dust)	Zn(C18H35O2)2	557-05-1		P3	MC	5,00	mg/m3
Zinc oxide fume	ZnO	1314-13-2		P3	DM or MC	5	mg/m3
Zirconium compounds (as zr)	Zr	7440-67-7		P2/P3	DM or MC	5	mg/m3

HAND MEASURING

CHECK YOUR SIZE:

Place your hand as shown on the drawing, with the green line between the thumb and the index finger. Read your size to the right of your hand.



THE EUROPEAN STANDARDS

EN ISO 21420 GENERAL REQUIREMENTS

The reference standard, cannot be used alone, but only in combination with another standard containing protection performance requirements.

- **Conform to harmlessness** (pH, chrome VI levels, etc...).
- **Conform to the size charts** (see chart on below).
- **Assess the dexterity, breathability, and comfort.**
- **Conform to the labelling, information and identification instructions.**

SIZES AS PER STANDARD EN ISO 21420		
Glove size	Palm circumference (mm)	Length (mm)
6	152	160
7	178	171
8	203	182
9	229	192
10	254	204
11	279	215
12	304	226

STANDARDISED LABELING/IDENTIFICATION

Each protective glove is clearly identified by a Standardised label, containing the following elements:

- Our brand logo;
- The product reference or the trade name;
- The size;
- An information tag indicating that instructions are available for the product;
- The Standardised pictogram(s) with their performance ratings.
- The batch number LOT and/or date of manufacture.
- If applicable, the expiry date.

EN16350 ELECTROSTATIC PROPERTIES

Standard EN16350 provides additional requirements for protective gloves that are worn in areas where flammable or explosive areas exist or might be present.

Further electrostatic properties can be determined through EN1149-1 (surface electrostatic properties) or EN1149-3 (charge decay), but cannot be used for electrostatic dissipative protective gloves.

EN511 HEAT AND FIRE RISK

The EN511 standard defines the requirements and test methods for cold protection gloves from cold transmitted by convection or conduction down to -30°C (optionally up to -50°C). This cold can be from climatic conditions or industrial activity.

The selection process of a cold protection glove must take into account several parameters such as the ambient temperature, the health of the person, the duration of exposure, and the level of activities...

PERFORMANCE LEVELS REQUIREMENTS

1 to 4 1 to 4 1

- IMPERMEABILITY TO WATER
- RESISTANCE TO CONTACT COLD
  Measurement of the thermal insulation of the palm of a glove with respect to contact with an object of low temperature
- RESISTANCE TO CONVECTIVE COLD
  Measurement of the thermal insulation of a glove with respect to an ambient atmosphere..

PERFORMANCE LEVEL	INTENSE ACTIVITY	AVERAGE ACTIVITY	SLOW ACTIVITY
1	-10°C ≤ T < 0°C		
2	-30°C < T	0°C ≤ T < 10°C	
3		-15°C < T	5°C < T
4		-30°C < T	-10°C < T

EN407 HEAT AND FIRE RISK

The EN407 standard specifies the test methods, the general requirements, the thermal performance and the labelling of gloves and cuffs to protect from heat and fire.

It applies to all gloves which must protect hands from heat and/or flames in any one or several of the following forms: fire, contact heat, convective heat, radiating heat, small spray of molten metal or large spray of melting metal.

PERFORMANCE LEVELS REQUIREMENTS

1 to 4 1 to 4 1 to 4 1 to 4 1 to 4 1 to 4

- RESISTANCE TO LARGE METLING METAL SPRAY
  Amount of spray required to cause damage.
- RESISTANCE TO SMALL MELTING METAL SPRAY
  Amount of spray required to raise the glove to a certain temperature.
- RESISTANCE TO RADIATING HEAT
  Time required to raise to a given temperature level.
- RESISTANCE TO CONVECTIVE HEAT
  Time during which the glove is able to delay the transfer of the heat of a flame.
- RESISTANCE TO CONTACT HEAT
  Temperature (within the range of 100°C to 500°C) at which the person wearing the gloves will not feel any pain (for a period of at least 15 seconds).
- RESISTANCE TO FLAMMABILITY
  Time during which the material remains lighted and continues to be consumed after the ignition source has been eliminated.

If the product claims flammability resistance, the pictogram will be

If the product does not claim any resistance to flammability (0 or X), the pictogram will be

PERFORMANCE LEVEL	CONTACT TEMPERATURE °C	THRESHOLD TIME (second)
1	100° C	≥ 15 s
2	250° C	≥ 15 s
3	350° C	≥ 15 s
4	500° C	≥ 15 s

EN12477 WELDERS RISK

Requirements and test methods for gloves used for manual welding of metals, for cutting and related techniques. Welder gloves are ranked in two types: B when great dexterity is required (e.g.: TIG welding), and A for other welding processes.

EN ISO 374-1 ▶ AGAINST THE RISKS OF MICRO-ORGANISMS & CHEMICAL RISKS

Standard EN ISO374-1, protective gloves against chemicals and micro-organisms, specifies the performance requirements required for gloves for protecting users against chemical products and/or micro-organisms and defines the terms to be used:

- **Penetration** (tested as per standard EN374-2):
  Diffusion of water or air, to check the impermeability, on a non-molecular level, of a chemical product and/or micro-organism through the porosities, seams, micro-holes or other imperfections present in the material of the protective glove.
- **Degradation** (tested as per standard EN374-4):
  Determination of the physical resistance of materials to degradation after continuous contact with hazardous chemicals.
- **Permeation** (tested as per standard EN374-3 or EN16523):
  Process by which a chemical product diffuses through the material of a protective glove, by continuous contact, on a molecular level.

The EN ISO version of standard 374-1, introduces the concept of three types of protection against the permeation of chemicals:

- Type A: The glove gives a performance index to permeation at least equal to 2 for 6 chemical test substances taken from the list of chemicals specified in the standard.

- Type B : The glove gives a performance index to permeation at least equal to 2 for 3 chemical test substances taken from the list of chemicals specified in the standard.

- Type C : The glove gives a performance index to permeation at least equal to 1 for 1 chemical test substances taken from the list of chemicals specified in the standard.

CODE LETTER	CHEMICAL PRODUCT	CAS number
A	Methanol	67-56-1
B	Acetone	67-64-1
C	Acetonitrile	75-05-8
D	Dichloromethane	75-09-2
E	Carbon disulfide	75-15-0
F	Toluene	108-88-3
G	Diethylamine	109-89-7
H	Tetrahydrofurane	109-99-9
I	Ethyl acetate	141-78-6
J	n-Heptane	142-82-5
K	Caustic soda 40 % (NaOH or sodium hydroxide)	1310-73-2
L	Sulphuric acid 96 %	7664-93-9
M	Nitric acid 65%	7697-37-2
N	Acetic acid 99%	64-19-7
O	Ammonium hydroxide 25%	1336-21-6
P	Hydrogen peroxide 30%	7722-84-1
S	Hydrofluoric acid 40%	7664-39-3
T	Formaldehyde 37%	50-00-0

PASSAGE TIME MEASURED (MN)	PERFORMANCE INDEX TO PERMEATION
> 10 mn	1
> 30 mn	2
> 60 mn	3
> 120 mn	4
> 240 mn	5
> 480 mn	6

EN ISO 374-5 ▶ AGAINST THE DANGERS OF MICRO-ORGANISMS

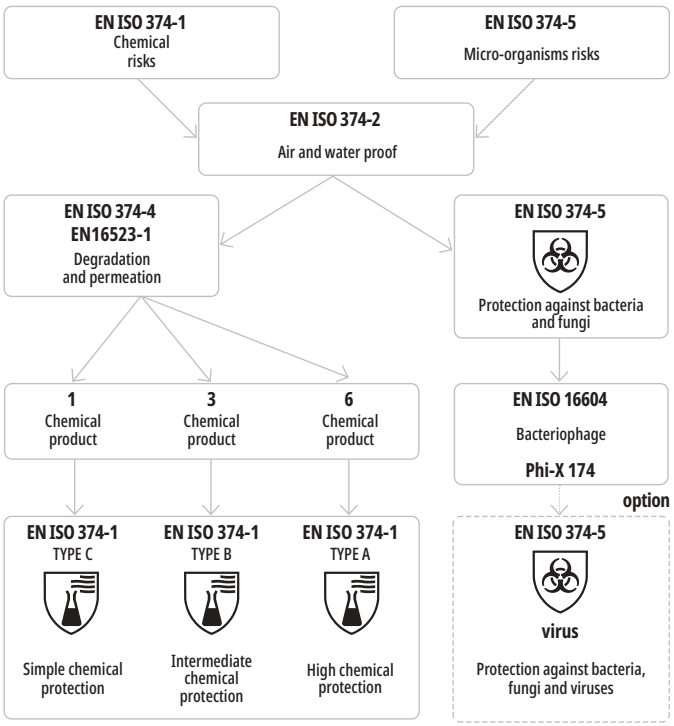
EN ISO 374-5 specifies the requirements and test methods for protective gloves intended to protect the user against microorganisms (mold and bacteria, potentially viruses).

Penetration of molds and bacteria (tested according to EN374-2): Test by which the water and airtightness of a glove is checked.

Penetration of viruses (tested according to method B of ISO 16604): Process that determines the resistance to penetration by blood-borne pathogens.

- Test method using Phi-X174 bacteriophage.

The glove, depending on its type, will bear the following pictogram:



Examples of application:

The field of use is decisive because, depending on the case, the glove may have to combine several properties in order to meet the necessary protection requirements. It is therefore very important to refer to the recommended areas of use and the results of the laboratory tests found in the instructions for use. However, it is recommended to check that the gloves are suitable for the intended purpose by carrying out tests beforehand, because the conditions at the workplace may differ from those of the standard test, depending on the temperature, abrasion and degradation.

ISO 18889 ▶ AGAINST PESTICIDE RISKS

Standard ISO 18889 specifies the performance requirements of protective gloves for pesticide operators and re-entry workers.

G1 gloves are suitable when the potential risk is relatively low. These gloves are not suitable for use with concentrated pesticide formulations and/or for scenarios where mechanical risks exist. G1 gloves are typically single use gloves.

G2 gloves are suitable when the potential risk is higher. These gloves are suitable for use with diluted as well as concentrated pesticides. G2 gloves also meet the minimum mechanical resistance requirements and are therefore suitable for activities that require gloves with minimum mechanical strength.

GR gloves provide protection only to the palm-side of the hand for a re-entry worker who is in contact with dry and partially dry pesticide residues that remain on the plant surface after pesticide application.

EN421 AGAINST IONISING RADIATION AND RADIOACTIVE CONTAMINATION

This standard provides requirements for protective gloves that are worn in an environment producing ionising radiation or in an environment containing radioactive substances.

A glove protecting against radioactive contamination must be waterproof according to EN374-2.

A glove that protects against ionising radiation must, in addition to being waterproof according to EN374-2, contain a certain amount of heavy metal such as lead.

EN388 ISO 23 388 MECHANICAL RISKS

The EN388 standard applies to all types of protective gloves with respect to physical and mechanical aggression from abrasion, cutting from slicing, perforation and tearing. Since the 2016 version of the standard, new optional performance have appeared.

PERFORMANCE LEVELS
1 to 4 1 to 5 1 to 4 1 to 4 A to F ø or P

REQUIREMENTS

RESISTANCE IMPACT ON THE METACARPAL AREA
Minimum attenuation of the impact force transmitted to the hand

RESISTANCE TO CUTTING BY BLADE (TDM test)
Force necessary for a straight blade to cut the sample on a movement of 20 mm.

RESISTANCE TO PERFORATION
Force required to pierce the sample with a standardized punch.

RESISTANCE TO TEARING
Maximum force required to tear the sample.

RESISTANCE TO CUTTING WITH A BLADE
Number of cycles required with a circular blade to cut the sample at constant speed.

ABRASION RESISTANCE
Number of cycles required to damage the sample at constant speed.

Impact resistance on the metacarpal area: if this performance is claimed, the "P" mark appears.

TEST	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
ABRASION RESISTANCE (Number of cycles)	100	500	2 000	8 000	-
BLADE CUTTING 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	-

Marking example:

4233X P

TEST CUT RESISTANCE EN ISO 13997 (TDM)	LEVEL A	LEVEL B	LEVEL C	LEVEL D	LEVEL E	LEVEL F
APPLIED FORCE (N)	2	5	10	15	22	30

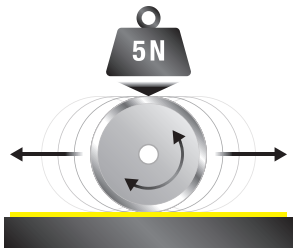
Examples of marking:

4543D or 4X43D

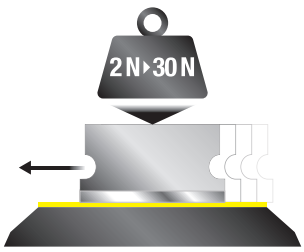
Cut by blade, 2 test methods:

EN388 6.2. : For low to middle risk of cutting. A circular blade on which a constant force of 5 N is applied, moves back and forth until the sample is cut. It measures the number of completed cycles and is credited with the corresponding level.

EN ISO 13997 : For materials that blunt the blade during the EN388 6.2 test and/ or are particularly resistant, for high risk of cutting. A straight blade makes a single movement of 20 mm with a force of 2N, the test is repeated with a different force as many times as necessary until the sample is cut. A level corresponding to the force required to cut the sample is assigned. This method better represents the usage situations that present a high risk of cutting.



EN388 6.2.



EN ISO 13997

ANSI ISEA (US American National Standards Institute) 105 Classification and specifications for the protection of the hand. Part 5.11. cut resistance
Weight necessary for a straight blade to cut the sample in a single movement.

Weight (g)	≥ 200	≥ 500	≥ 1000	≥ 1500	≥ 2200	≥ 3000	≥ 4000	≥ 5000	≥ 6000
2011 version - levels	1	2	3	4	5	-	-	-	-
2016 version - levels	A1	A2	A3	A4	A5	A6	A7	A8	A9

EN ISO 10819 VIBRATION-REDUCING EFFECTS

Standard **EN ISO 10819** specifies performance requirements for vibration attenuation through gloves. The vibration-reducing material must also satisfy thickness and consistency requirements. It should be noted that these gloves can reduce but not eliminate health risks associated with hand-transmitted vibration exposure.

Vibration transmissibility in one-third-octave frequency bands from 25 to 200Hz must be equal to or less than 0.90. The one calculated in one-third-octave frequency bands from 200 to 1250 Hz must be equal to or less than 0.60.

CHEMICAL RESISTANCE TABLE

CHEM D-FINDER
http://gloves.deltaplus.eu

This table provides only general information. Be careful! Glove resistance is influenced by other factors such as temperature, chemical product concentration, thickness, immersion time, and others.
For specific use conditions, we recommend testing the glove prior to use.

	CAS number	Natural latex	Neoprene	Nitrile	PVC vinyl
20% nitric acid	7697-37-2	**	**	*	*
30% and 5% hydrochloric acid	7647-01-0	***	***	***	**
30% formaldehyde	50-00-0	***	***	***	***
30% hydrofluoric acid	7664-39-3	**	***	***	**
50% acetic anhydride acid	/	***	***	***	***
85% lactic acid	/	*	***	***	***
85% triethanolamine	102-71-6	***	***	***	***
90% formic acid	64-18-6		**	*	*
Acetaldehyde	75-07-0	***	***	*	
Acetone	67-64-1	***	**		
Alcoholic beverages	/	***	***	***	***
Ammonium acetate	631-61-8	***	***	***	***
Ammonium carbonate	10361-29-2	***	***	***	***
Ammonium chloride	12125-02-9	***	***	***	***
Amyl acetate	/		*	*	*
Amyl alcohol	71-41-0	***	***	***	***
Aniline	62-53-3	**	**	*	
Animal fats	/	*	***	***	
Asphalt	/		*	***	
Beet-root	/	***	***	***	***
Benzaldehyde	100-52-7			*	
Benzene	71-43-2			*	
Benzyl alcohol	100-51-6	*	**	**	**
Bichromate of potash	7778-50-9	*	***	***	***
Bleach	/	***	***	***	***
Borax	/	***	***	***	***
Brake oils (lockheed)	/	*	***	***	*
Bromides	/	***	***	***	
Butter	/		***	***	*
Butyl acetate	123-86-4		*	*	*
Butyl alcohol (or n-butanol)	71-36-3	***	***	***	***
Calcium acetate	62-54-4	***	***	***	***
Calcium chloride	10043-52-4	***	***	***	***
Calcium fluophosphate	/	***	***	***	***
Calcium hydrate	1305-62-0	***	***	***	***
Calcium nitrate	10124-37-5	***	***	***	***
Carbolic acid	/	*	**	**	**
Carbon tetrachloride	56-23-5		*	**	*
Castor oil	/		***	***	
Chlorinated lime	7778-54-3	***	***	***	***
Chlorine	7782-50-5		***	***	***
Chloroacetone	/	***	***		
Chloroform	67-66-3		*	**	
Chromic acid	7738-94-5			*	**
Citric acid	77-92-9	***	***	***	***
Concentrated ammonia (aqueous solution)	1336-21-6	***	***	***	***
Concentrated boric acid	10043-35-3	***	***	***	***
Concentrated laundry potash	/	***	***	**	***
Concentrated laundry soda	/	***	***	*	*
Concentrated sulphuric acid	7664-93-9		*		**
Creosote	8001-58-9	*	***	***	***
Cresol	1319-77-3		***	***	***
Crystallisable acetic acid	64-19-7	***	***	**	*
Cutting oils	/		***	***	***
Cyclohexane	110-82-7		*	**	
Cyclohexanol	108-93-0	***	***	***	***
Cyclohexanon	108-94-1	*	*		
Diacetone alcohol	/	***	***		*
Dibutyl ether	142-96-1		*	***	
Dibutyl phtalate	84-74-2	**	*	***	
Diehanolamine	111-42-2	***	***	***	***
Diesel oils	/		*	***	*
Diluted sulfphuric acid (battery)	/	***	***	***	***
Dioctylphtalate	117-81-7	**	***	***	
Dyes (hair dyes)	/	***	***	***	***
Ethyl acetate	141-78-6		*	*	*
Ethyl alcohol (or ethanol)	64-17-5	***	***	***	***
Ethylamine	75-04-7	*	*	***	*
Ethylaniline	/	*	***	***	*
Ethylene dichloride	107-06-2			*	
Ethylene glycol	107-21-1	***	***	***	***
Fertilisers	/	***	***	***	***
Fish and shellfish	/	*	***	***	*
Fixing agents	/	***	***	***	***
Fluorides	/	***	***	***	***
Formaldehyde	50-00-0	***	***	***	***
Fuel oil	/		*	***	*
Fuels	/		*	***	*
Furol (furfural or furaldehyde)	98-01-1	***	**		
Gas-oil	/		*	***	*
Gasoline	/		**	***	*
Glycerin	56-81-5	***	***	***	***
Glyceropthalic paint	/		*	***	*
Glycols	107-21-1	***	***	***	***
Hair bleaching agents	/	***	***	***	***
Hair-curling products	/	***	***	***	***
Hexane	110-54-3		*	***	*
Household detergents	/	**	***	**	**
Hydraulic fluids (esters)	/	***	***	***	*
Hydraulic oils (petrol)	/		*	***	*
Hydrobromic acid	10035-10-6	***	*	*	*
Hydrogen peroxide	/	*	***	***	
Isobutyl alcohol (Isobutanol)	78-83-1	***	***	***	***
Isobutyl ketone	/	***	***		
Kerosene	/		*	***	*
Lard oil	/		***	***	*
Linseed oil	/		***	***	*
Lubricants oils	/		*	***	*
Magnesia	1309-48-4	***	***	***	***
Methyl acetate	79-20-9	*	***	*	*
Methyl alcohol (or methanol)	67-56-1	***	***	***	***
Methyl ethyl ketone	/	***	**		
Methyl isobutyl ketone	/	**	*		
Methyl salicylate	119-36-8	***	***	***	***
Methylamine	74-89-5	***	**	***	***
Methylaniline	100-61-8	*	*	***	***
Methylcyclopentane	96-37-7		*	***	*
Methylene chloride	75-09-2		*	*	
Methylformiate	/	*	***	*	*
Milk and dairy products	/	*	***	***	
Mineral greases	/		*	***	*
Mono ethanol amine	141-43-5	***	***	***	***
Naphta	/		*	***	*
Naphtalene	91-20-3		*	**	*
N-butylamine	109-73-9	***	***	***	***
Nickel chloride	7718-54-9	***	***	***	***
Nitrate of ammonium	6484-52-2	***	***	***	***
Nitrate of potassium	7757-79-1	***	***	***	***
Nitrobenzene	98-95-3		*	*	
Nitrohydrochloric acid	/		**	*	*
Nitropropane	/	***	**	*	
Non-alcoholic beverages	/	***	***	***	***
Octyl alcohol	111-87-5	*	***	***	*
Oleic acid	112-80-1	*	***	***	*
Olive oil	/		***	***	*
Oxalic acid	144-62-7	***	***	***	***
Paraffin oil	/		*	***	*
Peanut oil	/		***	***	*
Perfumes and essences	/	***	***	***	***
Petroleum ether	/		**	***	
Petroleum products	/		*	**	*
Petroleum spirit	/		**	***	*
Phenyl chloride	108-90-7		*	*	
Phosphates of calcium	10103-46-5	***	***	***	***
Phosphoric acid	7664-38-2	***	***	***	***
Polyester resins	/		*	**	*
Potash flakes	/	***	***	**	***
Potassium acetate	127-08-2	***	***	***	***
Potassium bicarbonate	298-14-6	***	***	***	***
Potassium carbonate	584-08-7	***	***	***	***
Potassium chloride	7447-40-7	***	***	***	***
Potassium cyanide	151-50-8	***	***	***	***
Potassium manganate	7722-64-7	***	***	***	***
Potassium phosphates	/	***	***	***	***
Potassium sulphate	7778-80-5	***	***	***	***
Poultry	/	*	***	***	
Propylene dichloride	78-87-5			*	
Quick lime	/	***	***	***	***
Shampoos	/	***	***	***	***
Silicates	/	***	***	***	***
Slaked lime	/	***	***	***	***
Soda flakes	/	***	***	*	*
Sodium bicarbonate	144-55-8	***	***	***	***
Sodium bisulphite	7631-90-5	***	***	***	***
Sodium carbonate	497-19-8	***	***	***	***
Sodium chloride	7647-14-5	***	***	***	***
Sodium chlorite	7681-52-9	***	***	***	***
Sodium nitrate	7631-99-4	***	***	***	***
Sodium phosphates	/	***	***	***	***
Sodium sulphate	7757-82-6	***	***	***	***
Soybean oil	/		***	***	*
Stannic chloride	/	*	***	***	***
Stearic acid	57-11-4	**	***	**	**
Styrene	100-42-5		*	*	*
Sulphites, bisulphites, hyposulphites	/	***	***	***	***
Sulphuric ether (pharmacy)	/	*	***	***	*
Tartaric acid	/	***	***	***	***
Tetrachloroethylene	127-18-4		*	**	
THF = tetrahydrofurane	109-99-9	**	*		
Toluen	108-88-3	*	*	**	*
Tributyl phosphate	126-73-8	*	**	**	*
Trichlorethylene	79-01-6		*	*	
Tricresyl phosphate	1330-78-5	***	**	***	**
Trinitrobenzene	/		*	**	*
Trinitrotoluol	/		*	**	*
Triphenyl phosphate	115-86-6	*	***	***	*
Turbine oils	/		*	***	*
Turnipseed oil	/		*	***	
Turpentine	/		*	***	*
Vinegar and condiments	/	***	***	***	**
Washing powders	/	***	***	***	***
Water paint	/	***	***	***	***
Weed killers	/	***	***	***	***
Wood turpentine	/		*	***	*
Xylene	/		*	**	
Xylophene	/		*	***	*
Zinc sulphate	7733-02-0	***	***	***	***

Not recommended Average * Good ** Very good ***

FOOD COMPATIBILITY

FOOD COMPATIBILITY IS GOVERNED BY:

Regulation (EC) N° 1935/2004 of the European Parliament and of the Council of 27th October 2004 on materials and articles intended to come into contact with foodstuffs.

Materials and articles must be manufactured in compliance with good manufacturing practice so that, under normal or foreseeable conditions of use, they do not transfer their constituents to food in quantities which could:

- Endanger human health ;
- Bring about an unacceptable change in the composition of the food or a deterioration in the organoleptic characteristics thereof.

Food contact of plastic materials is governed by Regulation (EU) No 10/2011 and the related requirements.

Materials PVC/Vinyl or even Latex/Nitrile gloves (unless local legislation exists) are directly subject to these regulations.

They define:

- Positives lists of authorized constituents;
- The purity criteria applicable to some of these constituents;
- Special migration limits in foodstuffs for certain constituents;
- Maximum residual quantities of some constituents in the material;
- An overall migration limit in foods.
- A limit of metal content for plastic materials and objects.

Annex III of Regulation (EU) 10/2011 provides the list of stimulants to be used for testing migration of constituents of plastic materials and articles intended to come into contact with foodstuffs:

- Aqueous foods (pH > 4.5): Simulants A, B and C.
- Acid food (pH ≤ 4.5): Simulant B;
- Alcoholic foods (≤ 20%): Simulant C;
- Alcoholic foods (> 20%): Simulant D1.
- Fatty foods: Simulants D1 and D2.
- Foods containing free surface fats: Simulant D2.
- Dry foods: Stimulant E.

DISPOSABLE GLOVES

Standard EN455 defines the quality requirements for non-reusable medical gloves.

1 - Detection of holes: Airtightness test.

2 - Physical properties: Verification of the size, thickness and strength of the glove.

3 - Biological evaluation: Verification of the conformity of the materials.

INTERNATIONAL MAINTENANCE CODE FOR ARTICLES

TEXTILE	
	No treatment.
	Moderate treatment.
	Very light treatment.
WASHING	
	Maximum temperature 40°C. Normal mechanical treatment. Normal temperature rinsing. Normal spinning.
	Maximum temperature 40°C. Reduced mechanical treatment. Rinse at gradually decreasing temperature. Reduced spinning.
	Wash by hand. No machine washing. Maximum temperature 40°C. Treat with care.
	Do not wash. Treat with care when wet.
DRYING	
	Can be dried in rotating drum dryer. Normal program.
	Can be dried in rotating drum dryer. Moderate, low temperature program
	Do not dry in rotating drum dryer.
CHLORINATION	
	Chlorination (chlorine bleach).
	Chlorination possible solely in cold, diluted solution.
	No chlorination.
IRONING	
	Iron at the maximum iron sole plate temperature of 200°C.
	Iron at the maximum iron sole plate temperature of 150°C.
	Iron at maximum iron sole plate temperature of 110°C. Steam treatment presents risks.
	Do not iron. Steam treatment is forbidden.
DRY-CLEANING	
	Dry cleaning. The circle stands for dry-cleaning for textile articles (leather and fur articles are excluded). It contains information on the various dry cleaning treatments.
	Dry-cleaning prohibited.

CHEMICAL PROTECTIVE CLOTHING

EN14126

PROTECTIVE CLOTHING AGAINST INFECTIVE AGENTS

This standard specifies the requirements and test methods concerning reusable protective clothing for limited use providing protection against infective agents.
Associated with standards for protective clothing against chemical products, the letter B is added after the garment type.
Examples: TYPE 6-B / TYPE 5-B / TYPE 4-B / TYPE 3-B

EN13034
TYPE 6

PROTECTIVE CLOTHING AGAINST LIQUID CHEMICALS

Requirements for chemical protection clothing offering limited performance against liquid chemical products (type 6 equipment), including clothing for partial body protection (Type PB [6]).
This standard sets out the minimum requirements for limited use and reusable limited performance chemical protective clothing. Limited use chemical protective clothing is intended for use in cases of a potential exposure to **light sprays, liquid aerosols** or low-pressure, **low-volume splashes,** against which a complete liquid permeation barrier (at the molecular level) is not required.

EN ISO 13982-1
TYPE 5

PROTECTIVE CLOTHING AGAINST SOLID PARTICLES

Performance requirements for protective clothing against chemical products offering full body protection against air-borne solid particulates (type 5 clothing).
This standard sets out the minimum requirements for chemical protection clothing resisting penetration of solid particulates suspended in air (type 5). This clothing offers full body protection, including the torso, arms and legs, such as one or two-piece coveralls, with or without hood or face-shield, with or without foot protection.

EN14605
TYPE 4
TYPE 3

PROTECTIVE CLOTHING AGAINST LIQUID CHEMICALS

Requirements for chemical protection clothing with liquid-tight **(type 3)** or spray-tight **(type 4)** connections, including items providing only partial body protection **(types PB [3] and PB [4]).**

This standard sets out the minimum requirements for the following types of limited use and re-useable chemical protective clothing:

- Clothing protecting the full body with liquid-tight connections between the various clothing parts **(Type 3: liquid-tight clothing) ;**

- Clothing protecting the full body with spray-tight connections between the various clothing parts **(Type 4: spray-tight clothing) ;**

Note: These standards were formerly entitled EN1512 (Type 4) and EN1511 (Type 3).

STANDARD	TYPE CHEMICAL	PROTECTION
EN13034	6	Against splashes
EN ISO 13982-1	5	Against dust (asbestos)
EN14605	4	Against mists
EN14605	3	Against sprays

EXAMPLES OF APPLICATIONS

Applications	Risks	Level of protection	Product
Work/Maintenance	Fouling	Category I / Non EPI	PO106 PO109
Industrial cleaning	Accidental exposure to spray of chemical substances (splashes or dry particules)	Type 6 Type 5	DT115 DT221 DT115CV DT125 DT215 DT117 DT215CV
		Type 4	DT119 DT250
Removal or encapsulation asbestos work	Exposure to dust Asbestos fibers	Type 5 with waterproof bands	DT216
Work in environments with explosive risks	Handling of products that can generate static electricity	Type 6 Type 5 EN ISO 14116 EN 1149-5	DT223
Agriculture and horticulture (Handling of fertilizers...)	Contact with sprayed liquids	Type 4	DT119 DT250
Agriculture and horticulture (Handling of herbicides / pesticides / fungicides)	Contact with weakly concentrated phytosanitary sprays	Type 4 EN ISO 27065	DT119
Paint spraying (Solvents / Preparation / Mixing)	Application of chemicals with spray gun > low pressure (Type 6) > high pressure (Type 4)	Type 6	DT125 DT117
		Type 4	DT119 DT250
Industrial cleaning of dangerous products	Risk of chemical splashes with continuous jet	Type 3	DT300
Laboratories / Chemical Industries	Risk of chemical splashes with continuous jet	Type 3	DT300
Emergency / Rescue Personnel	Bacteriological contamination	Type 4-B	DT119 DT250
		Type 3-B	DT300

Delta Plus provides protection at work from head to toe for both women and men

TESTS					
General performance	Tests & Specific performance	Level of protection			
		3[a]	4[a]	5	6[a]
Performance requirements for the whole garment	Internal pressure	-	-	-	-
	Penetration by a jet of liquid	-	-	X	-
	Penetration by a jet of liquid	X	-	-	-
	Penetration by a spray (liquid spraying)	-	X	-	-
	Against solid particles	-	-	X	-
	Penetration by a spray (light spraying)	-	-	-	X
Performance requirements for seams and joints	Mechanical resistance	X	X	X	X
	Resistance to permeation and penetration by liquids	X	X	-	-
Performance requirements for the constituent materials of the garment	Abrasion / Tearing / Perforation	X	X	X	X
	Resistance to tensile strength	X	X	-	X
	Resistance to cracking by bending	X	X	X	-
	Resistance to cracking by bending at -30°C	X Optional	X Optional	-	-
	Resistance to penetration by liquids	X	X	-	-
	Impermeability to liquids (repulsion)	-	-	-	X
	Repulsion to liquids	-	-	-	X

a - When the protection equipment only protects certain parts of the body (torso, arms, legs), only the performance requirements for the constituent materials of the garment are required (type 6, 4 and 3).

EN ISO 27065 PROTECTIVE CLOTHING WORN BY OPERATORS APPLYING LIQUID PESTICIDES.

Level C1 protective clothing is suitable when the potential risk is relatively low. Level **C1** protective clothing provides the minimum protection and is not suitable for the handling of concentrated pesticide formulations. It can be used as basic protective clothing with other items when the potential risk is relatively higher.

Level **C2** protective clothing, including partial body protection, is suitable when it has been determined that the protection required is greater than that provided by level C1 protective clothing. C2 level protective clothing generally offers a balance between comfort and protection. This protective clothing is not suitable for the handling of concentrated pesticide formulations. It can be used as basic protective clothing with other items when the potential risk is relatively higher.

Level **C3** protective clothing, including partial body protection, is suitable when it has been determined that the potential risk is high. For level C3 protective clothing, precautionary measures, such as short-term use, are necessary, as these clothing can generate excessive heat, leading to exhaustion and heat stress. Level C3 protective clothing, including partial body protection, is suitable for the handling of diluted pesticides as well as concentrated pesticides.

The risk incurred should be assessed according to the toxicity of the phytosanitary product (refer to its labelling) and the degree of exposure to the operator. For example, it is easy to understand that the degree of operator exposure will be much higher with aerial spraying towed by an open cab tractor than with manual trigger spraying.

HEAT PROTECTIVE CLOTHING

EN ISO 11611

A1 Class 2

PROTECTION USED IN WELDING AND ALLIED PROCESSES

This standard specifies the performance requirements for protective clothing for use by operators in welding and allied processes with comparable risks.
This type of protective clothing is intended to protect the wearer against molten metal splash, short contact with flame and UV radiation. It is intended to be worn at ambient temperature, continuously for up to 8 hours.
.

Class 1	protection against low risks during welding techniques and situations producing fewer projections and low radiant heat.
Class 2	protection against higher risks during welding techniques and situations producing more projections and a higher radiant heat.

EN ISO 14116 PROTECTION AGAINST FLAME

The standard specifies the performance requirements for materials, material assemblies, and protective clothing with limited flame spreading to reduce the risk that a garment will burn on occasional and short term contact with small flames, thus constituting a hazard in itself.
This standard is not appropriate where, in addition to flame protection, heat protection is required. Instead, international standards such as ISO 11612 should be used.
The performance level is indicated and explained on the garment's label

EN ISO 11612

A1 B1 C1 D1 E1 F1

PROTECTION AGAINST HEAT AND FLAME

Protection against heat and flame.
This standard specifies the performance requirements of materials and protective clothing against heat and flames. They apply to clothing made of soft material, designed to protect the human body except the hands against heat and/or flame.

Tested are:

Test	Code	Performances
Limited flame spread	A	A1 and/or A2
Convective heat	B	B1 to B3
Radiant heat	C	C1 to C4
Molten aluminium splash	D	D1 to D3
Molten metal splash	E	E1 to E3
Contact heat	F	F1 to F3

TECHNICAL PROTECTIVE CLOTHING

EN ISO 13688 GENERAL REQUIREMENTS

Reference standard, not for use alone, but only in association with another standard containing the protection performance requirements.

This standard specifies general performance requirements for ergonomics, innocuousness, size designation, durability, ageing, compatibility and marking of protective clothing and the information to be supplied by the manufacturer with the protective clothing.

EN1149-5 PROTECTIVE CLOTHING TO DISSIPATE STATIC ELECTRICITY

This European Standard specifies requirements for materials and the design of protective electrostatic dissipation clothing used in conjunction with a grounded system in order to prevent incendiary discharges. WARNING: These requirements may be insufficient in oxygen enriched flammable environments. This standard is not applicable for protection against mains voltages.

The control of undesirable static electricity on the person is often necessary.

The electrostatic potential may, indeed, have serious consequences on the charged individual, because it can be high enough to cause dangerous sparks.

After a risk assessment, the wearing of protective electrical dissipation clothing may be necessary. The use of clothing certified according to EN1149-5 is then adapted.

The ATEX Directive 1999/92/EC, in its Annex II-A-2.3, requests that workers be equipped with work clothes made of materials that do not produce electrostatic discharges that can ignite explosive environments.

The electrostatic potential can also affect equipment sensitive to electric discharge. Antistatic clothing is often used on electronic manufacturing sites, assembling semiconductors for example. Finally, they are used on sites with controlled atmospheres such as automotive paint workshops, to avoid the emission of particles that may be deposited on the body paint.

The antistatic charge dissipation can be provided by a process limiting the build up of charge, or by adding carbon or metal wires. People wearing protective electrostatic charge dissipation clothing must always be grounded with a resistance of less than $10^8\Omega$, for example, by wearing appropriate footwear such as the safety shoes stated in EN ISO 20345, or by other suitable means.

EN ISO 11393 PROTECTION FOR USERS OF HAND-HELD CHAINSAWS

This standard specifies the requirements to be used to assess the resistance of protective clothing to cutting by hand-held chainsaws. It is divided into several parts:

EN ISO 11393-1 : Specifies the cutting tests following 4 speeds
EN ISO 11393-2 : Specifies the requirements for leg protectors
EN ISO 11393-3 : Specifies the requirements for protective footwear
EN ISO 11393-4 : Specifies the requirements for protective gloves
EN ISO 11393-5 : Specifies the requirements for protective gaiters
EN ISO 11393-6 : Specifies the requirements for upper body protectors

The cut tests are conducted using 4 chain speeds:

16 m/s	**Class 0**
20 m/s	**Class 1**
24 m/s	**Class 2**
28 m/s	**Class 3**

The protective zone on leg protectors is coded using three letters A, B or C, corresponding to the coverage surface of the cut-proof material (Type A, Type B or Type C).

Marquages :

EPICEA 3	MELEZE 3
	
EN ISO 11393-6	EN ISO 11393-2
Class 0	Type A - Class 1

EN1073-2 PROTECTIVE CLOTHING AGAINST RADIOACTIVE CONTAMINATION

This standard specifies the requirements and test methods for non-ventilated protective clothing against radioactive contamination in the form of particles. Clothing of this type is designed only to protect the body, the arms and the legs of the wearer, but it may be used with accessories that protect other parts of the wearer's body (for example, boots, gloves, respiratory protective device - APR).

The garments are classified according to their nominal protection factor (ratio between the concentration of test particles in the ambient atmosphere and the concentration of test particles inside the garment), determined in relation to the total inward leakage (ratio between the concentrations of test particles insider the garment and inside the test chamber).

The classes are as follows:

CLASS	NOMINAL PROTECTION FACTOR
3	500
2	50
1	5

EN ISO 20471 HIGH VISIBILITY CLOTHING

This standard specifies the requirements for protective clothing aiming to signal the presence of the wearer visually, so that he may be detected and seen in hazardous situations, in all conditions of daylight, and night under illumination of car headlights.
There are three classes of high-visibility clothing. Each class must have minimum surfaces of visible material constituting the garment; the higher the class, the more visible the garment:

	CLASS 3	CLASS 2	CLASS 1
Background material (Fluorescent)	0,80 m^2	0,50 m^2	0,14 m^2
Retroreflective material (Bands)	0,20 m^2	0,13 m^2	0,10 m^2

Marking:
X : Class of high visibility surface (from 1 to 3)

EN ISO 20471

2
Max. 25x

EN ISO 20471
2 : Class of the visibility surface (1 to 3)
Max. 25x: Optional marking, number of maximum washes authorized for the model.
On this example: 25 washes maximum (see indication of service temperature on the garment tag).

EN17353 IMPROVED VISIBILITY EQUIPMENT FOR MEDIUM RISK SITUATIONS

This standard specifies the requirements for enhanced visibility equipment in the form of a garment, or device, capable of visually signalling the presence of the user.
Enhanced Visibility Equipment is intended to provide visibility of the wearer in low or medium risk situations in all daylight conditions and/or under the illumination of vehicle headlights or headlights in the dark. This standard does not apply to high visibility equipment in high risk situations which are covered by EN ISO 20471.

TYPE A	TYPE B	TYPE AB
Daylight	Dark conditions	Daylight, twilight and dark conditions
Equipment using fluorescent material	Equipment using retroreflective material	Equipment using fluorescent material and retroreflective or combined performance material
	B1 (free hanging)	
	B2 (limbs)	AB2
	B3 (on torso or torso and limbs)	AB3

Minimum surface in m^2 for B1 and B2 type:

	B1	B2
Retroreflective material	0,003	0,018

Minimum surface in m^2 for type A, B3 and AB type:

	A	B3	AB	A	B3	AB
Height h of the user	h < 140 cm			h > 140 cm		
Fluorescent material	0,14	-	0,14	0,24	-	0,24
Retroreflective material	-	0,06	0,06	-	0,08	0,08
Combined performance material	-	-	0,14	-	-	0,24

FOUL WEATHER PROTECTIVE CLOTHING

EN342 PROTECTIVE CLOTHING AGAINST COLD

This standard specifies the requirements and performance test methods for protective clothing against cold **at temperatures lower than -5°C** (cold store / extreme cold workers).
There are two types of garment:
Garments: covering part of the body, e.g. parka, jacket, coat.
Suits: covering the whole body (trunk + legs), e.g. coveralls, parka & dungarees.

X (undergarment B/C/R) : / $_{cler}$ of the garment
X : Class of air permeability, **AP**
X : Class of resistance to water penetration **WP** (Optional)

NORDLAND

EN342

0,358 m^2.K/W (B)
3
X

Insulation I_{cler} M^2.K/W	Wearer in movement with an activity							
	Light 115 W/m^2		Medium 170 W/m^2					
	Air speed							
	0.4 m/s		3 m/s		0.4 m/s		3 m/s	
	8h	1h	8h	1h	8h	1h	8h	1h
0.265	3	-12	9	-3	-12	-28	-2	-16
0.310	-2	-18	6	-8	-18	-36	-7	-22
0.390	-9	-28	0	-16	-29	-49	-16	-33
0.470	-17	-38	-6	-24	-40	-60	-24	-43
0.540	-24	-45	-11	-30	-49	-71	-32	-52
0.620	-31	-55	-17	-38	-60	-84	-40	-61

EN14058 PROTECTIVE CLOTHING AGAINST COOL ENVIRONMENTS

This standard specifies the requirements and performance test methods for protective garments (vests, jackets, coats, trousers) against cool environments. These garments are for use in moderate low temperatures **(-5°C and over)** to protect against local body cooling. Not only for outdoor use such as in the construction industry; may also be used for indoor activities, such as in the food processing industry. These garments are not always necessarily made of air impermeable or watertight materials. Therefore, in this European standard, these requirements are optional.

X : Class of heat resistance, $\mathbf{R_{ct}}$
X : Class of air permeability, **AP**
X : $/_{cler}$ of the garment (Optional)
X : Class of resistance to water penetration **WP** (Optional)

ALASKA2
EN14058
3 3 0,285 m².K/W X

Insulation I_{cler} M².K/W	Wearer standing still, 75 W/m²			
	Air speed			
	0.4 m/s		3 m/s	
	8h	1h	8h	1h
0.170	21	9	24	15
0.265	13	0	19	7
0.310	10	-4	17	3

EN343 PROTECTIVE CLOTHING AGAINST RAIN

This standard specifies the requirements and test methods applicable to the materials and seams of protective clothing against foul weather (for example precipitation in the form of rain or snow), fog and ground humidity.

y : Class of resistance to water penetration (1 to 4), **Wp**
y : Class of water vapour resistance (1 to 4), $\mathbf{R_{et}}$
R : Water tower test on whole garment (optional)

FINNMARK2
EN343
3 1 X

DEFINITIONS :

THERMAL RESISTANCE (R_{ct}) IN M².K/W:

Measurement of the thermal insulation provided.
Divided into 4 classes (from 1 to 4) from the least insulating to the most insulating. The higher the value, the greater the thermal insulation

AIR PERMEABILITY (AP) IN MM/S:

Determines the complex's permeability to air.
Divided into 3 classes (from 1 to 3) from the least airtight to the most airtight.

RESULTANT EFFECTIVE THERMAL INSULATION:

Measured on moving dummy ($/_{cler}$) .
The thermal insulation coefficient, expressed in m².K/W, is used to determine the optimum usage temperature of the garment in relation to the individual's activity and his exposure time.

Thermal insulation is measured with undergarments of type:
- (B) for ensembles (Undershirt with long sleeves, long underpants, socks, bootee + thermojacket, thermopants, knitted gloves, balaclava)
- (R) for garments (Undershirt with long sleeves, long underpants, socks, bootees, jacket, trousers, shirt, knitted gloves, balaclava)
- (C) provided by the manufacturer

WATER VAPOUR RESISTANCE (R_{et}) IN (M².PA)/W :

Measures the evaporative resistance, i.e. the product's obstacle to the passage of water vapour, or the barrier it offers to evaporation of transpiration on the surface of the skin. The higher a product's water vapour resistance, the greater this product's barrier to the passage of water vapour:
A breathing product has a low water vapour resistance.
Divided into 4 levels (from 1 to 4) from the least breathable to the most breathable.

Water vapour resistance R_{et} Classe	Classe			
	1	2	3	4
$\frac{M2 - Pa}{W}$	$R_{et} > 40$	$25 < R_{et} > 40$	$15 < R_{et} > 25$	$R_{et} \leq 15$

RESISTANCE TO WATER PENETRATION (WP) IN PASCAL:

Measurement of the outer material and seams' resistance to water penetration under a water pressure of (980+/-50) Pa/min.
Divided into 4 levels (1 to 4) from the least impermeable to the most impermeable.

Water penetration resistance WP	Classe			
	1	2	3	4
Specimen to be tested Material before treatment Material after each pre-treatment	WP ≥ 8 000 Pa	WP ≥ 8 000 Pa	WP ≥ 13 000 Pa	WP ≥ 20 000 Pa
Seams before pre-treatment	WP ≥ 8 000 Pa	WP ≥ 8 000 Pa	WP ≥ 13 000 Pa	-
Seams after pre-treatment by cleaning	-	-	-	WP ≥ 20 000 Pa

TOWER TEST:

Wicking length on sleeves and lower hems	Max 5 cm
Wicking length on trouser hems	Max 10 cm
Wicking length on hood hems	Max 4 cm
Wet tricot area on manikin	0 cm²

KNEE PROTECTION

EN14404 KNEE PROTECTION

This European Standard provides the requirements and test methods for protective knee devices used by people that have kneel to carry out their work. This standard does not apply to the knee protection that are medical devices and are designed for sport.

KNEE PROTECTION	
Type 1	Knee protection independent of other product and attached around the leg
Type 2	Plastic foam or other padding inserted in the pockets of trousers or permanently attached to the trousers
Type 3	Devices that are not attached to the body but implemented during the movement of the user. They can be provided for each knee or both knees together
Type 4	Protection of one or both knees, part of devices with additional functions, such as helping to stand or kneel. The knees protection can be worn on the body or independently

Level 0		Knee protectors are supposed to be adapted to flat floors and no resistance to penetration is required
Level 1		Knee protectors are supposed to be suitable for flat floors and resistance to penetration under a force of at least 100 (+/-5) N is required
Level 2		Knee protectors are supposed to be suitable for difficult conditions and resistance to penetration under a force of at least 250 (+/-5) N is required

SAFETY SHOES-BOOTS

STANDARDS

EN ISO 20344 TEST METHODS FOR FOOTWEAR

This standard defines the test methods for safety footwear, protective footwear, and occupational shoes.

It may be used only in conjunction with standards EN ISO 20345 and EN ISO 20347, which specify the requirements for the shoes as a function of specific levels of risk involved.

EN ISO 20345 BASIC REQUIREMENTS FOR SAFETY FOOTWEAR

In reference to standard EN ISO 20344, this European standard defines the basic and the additional (optional) requirements for safety footwear for the workplace, marked «S». The safety shoe is equipped with safety toe caps designed to withstand a maximum impact of 200 joules and crushing up to 15 kN.

EN ISO 20347 BASIC REQUIREMENTS FOR OCCUPATIONAL FOOTWEAR

These shoes are different from safety/protective footwear in that they have no protective toe cap for impact and crushing.

EN ISO 61340-5-1 GENERAL REQUIREMENTS - ESD CONTROL FOOTWEAR

This standard specifies the requirements and tests for electrostatic shoes with specific applications. It describes the test methods used to determine the electrical resistance of shoes used to control the electrostatic potential of the user's workstation.

EN ISO 20349-1 EN ISO 20349-2 REQUIREMENTS AND TEST METHODS FOR PROTECTION AGAINST RISKS IN WELDING AND ALLIED PROCESSES.

This standard specifies the requirements and tests for protective shoes against heat risks and molten metal splashes as in foundries or welding.

THE PARTS OF A SHOE

SIZE CORRESPONDANCE TABLE

EU	35	36	37	38	39	40	41	42	43	44	45	46	47	48
UK	2	3	4	5	6	6.5	7	8	9	10	10.5	11	12	13
US	3	4	5	6	7	7.5	8	9	10	11	11.5	12	13	14
cm	23.1	23.7	24.4	25.1	25.7	26.4	27.1	27.8	28.4	29.1	29.7	30.3	31	31.6
mm	231	237	244	251	257	264	271	278	284	291	297	303	310	316

• SB OR S1 TO S5 OR SBH (SAFETY FOOTWEAR) • OB OR O1 TO O5 OR OBH (OCCUPATIONAL SHOES)

CLASS 1 or 2	EN ISO 20345	EN ISO 20347
ALL MATERIALS	**SB** : basic properties	**OB** : basic properties
CLASS 1 - Assembled shoes Leather shoes and other materials, except rubber or polymer shoes	**S1** : basic properties plus: - closed back - anti-static - energy absorbing heel - outsole resistance against hydrocarbons	**O1** : basic properties plus: - closed back - hydrocarbon-resistant sole - anti-static - energy absorbing heel
	S2 : the same as S1 plus: - waterproof	**O2** : the same as O1 plus: - waterproof
	S3 : the same as S2 plus: - puncture resistant sole - studded sole	**O3** : the same as O2 plus: - puncture resistant sole - studded sole
CLASS 2 - Fully moulded shoes All rubber shoes (fully cured*) or all polymer	**S4** : basic properties plus: - closed back - anti-static - energy absorbing heel - outsole resistance against hydrocarbons	**O4** :basic properties plus: - anti-static - energy absorbing heel
	S5 : the same as S4 plus: - puncture resistant sole - studded sole	**O5** : the same as O4 plus: - puncture resistant sole - studded sole
HYBRID SHOES Rubber foot (fully cured) or all polymer (fully moulded) / Top leather upper and other materials	**SBH** : properties specific to hybrid safety shoes	**OBH** : properties specific to hybrid work shoes

SYMBOLS FOR INDIVIDUAL SPECIFICATIONS EN ISO 20345 / EN ISO 20347 (without toe cap)

Whole shoe or boot	Puncture resistant sole	P
	Electrical properties: Conductive shoe	C
	Antistatic shoe	A
	Insulating shoe	See EN50321
	Resistance to aggressive environments: Heat-insulated sole 150°C sandbox test, 30 minutes of exposure.	HI
	Sole insulated against cold Box test at -17°C for 30 minutes	CI
	Energy absorbing heel	E
	Water-resistant of the whole shoe (waterproof shoes in leather and other materials, class 1)	WR
	Metatarsal impact protection	M
	Ankle protection	AN
Upper	Cut-resistant upper	CR
	Resistance of the rod penetration and water absorption (shoes in leather and other materials, class 1)	WRU
Outsole	Contact-heat resistant outsole 300°C for 60s	HRO
	Oil-resistant outsole	FO

SYMBOLS FOR INDIVIDUAL SPECIFICATIONS EN ISO 20349-1 EN ISO 20349-2

Floor types Symbols	Symbols
Resistance to molten metal splashes, with use of aluminum as molten metal during the test. (EN ISO 20349-1)	AL
Resistance to molten metal splashes, with use of cast-iron as molten metal during the test. (EN ISO 20349-1).	FE
250°C sandbox test, 40 minutes of exposure (HI-3). (EN ISO 20349-1)	HI
WG indicates that the footwear complies with the requirements defined for welding footwear. (EN ISO 20349-2)	WG

RESISTANCE TO SLIPPING

Floor types	Symbols
Hard industrial floors, for indoor use (such as food industry tiled flooring)	SRA
Hard industrial type floors for indoor or outdoor uses (paint or resin type flooring in industry)	SRB
All types of hard floors for multiple uses indoors or outdoors	SRC

THE FALL ARREST SYSTEM

If there is a risk of falling, it is compulsory to use a protective device against falls from a height. In order of priority: collective type protection (see DELTA PLUS SYSTEMS catalogue), then individual type protection if the first one is not possible.

An **INDIVIDUAL ANTI-FALL SYSTEM** is comprised of at least three elements

A HARNESS

+

B FALL ARRESTER

+

C ANCHORAGE POINTS

FALL ARREST EQUIPMENT

EN363

Describes the elements and situations of personal protection against falls from height.

EN364 TEST METHOD

Describes the equipment and test methods for PPE against falls from height.

EN365 GENERAL REQUIREMENTS FOR THE INSTRUCTIONS FOR USE AND THE MARKING

Describes the markings and information (operating instructions) on or accompanying the PPE against falls from a height.

A HARNESS

EN361 FULL BODY HARNESS

Body securing device intended to stop falls. The full body harness can be made of straps, buckles and other elements; set and adjusted in a right way on the body of an individual to secure him during a fall and afterwards.

B FALL ARRESTER

EN355 ENERGY ABSORBER

Component of a fall arrest equipment, which guarantees the stop of a fall from a height in safety by reducing the impact of the shock.

WARNING: If we associate a lanyard energy absorber, the total length of the entire device must not exceed 2 m.

EN360 SELF-RETRACTABLE FALL

Fall arrester with self-locking device and a self-retractable system for the lanyard.
An energy reducer (absorber) can be built-in in the equipment.

EN353-1 MOBILE FALL ARRESTER ON RIGID ANCHORAGE LINE

Equipment consisting of a mobile fall arrester with self-locking, integral with its rigid anchorage line (rail, cable...). An energy reducer can be built-in on the equipment.

EN353-2 MOBILE FALL ARRESTER ON FLEXIBLE ANCHORAGE LINE

Equipment consisting of a mobile fall arrester with self-locking, integral with its flexible anchorage line (rope, cable...). An energy reducer (absorber) can be built-in in the equipment.

ANCHORAGE POINTS

EN795 2012 ANCHORAGE DEVICES

Element of a fall arrester system to which a personal protective equipment can be fastened.

Type A - NON PPE : Anchor device with one or more stationary anchor points with the need of a structural anchor.

Type B: Anchor device with one or more stationary anchor points without the need of a structural anchor.

Type C - NON PPE : Anchor device employing a flexible anchor line with maximum deviation of 15°.

Type D - NON PPE : Anchor device employing a rigid anchor line with maximum deviation of 15°.

Type E: Anchor device for use on surfaces with a maximum slope of 5°.

EN362 CONNECTOR

Connection element or equipment component. A connector can be karabiner or a snap hook.

Class A: Anchorage connector, automatic lock used as the component and designed to be connected directly to a specific type of anchorage.

Class B: Primary connector with automatic lock used as the component.

Class M: Multi-purpose connector, primary or quick opening, used as a component, which can be loaded along its major axis or minor axis.

Class Q: Quick opening connector used in long-term or permanent applications, screw lock. When completely screwed this part is a supporting part of the connector.

Class T: Manufactured end connector, automatic lock, designed as part of a subsystem for attachment so that the load is carried in a predetermined direction.

WORK SITUATIONS

WORK POSITIONING SYSTEM

EN358 WORK POSITIONING OR RESTRAINING BELTS AND LANYARDS

A work positioning system consists of components (work positioning belt and lanyard) linked to one another to form a complete equipment.

RETENUE

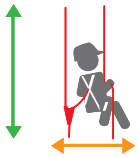
EN358 WORK POSITIONING OR RESTRAINING BELTS AND LANYARDS

EN354 LANYARDS

Connection elements or equipment component. A lanyard can be in rope made of synthetic fibres, in metallic rope, in strap or in chain.

CAUTION: A lanyard without energy absorber must not be used as a fall arrest equipment.

ROPE ACCESS SYSTEM



EN12841 ROPE ACCESS SYSTEM

A rope device for work positioning. There are several types of device:

Type : Rope adjuster device for safety support that accompanies the user during his changes in position and/or to adjust the safety support length and which automatically locks on the safety support under a static or dynamic load action.

Type B: Ascent device for work support, manually operated rope adjustment device which, when attached to a safety support, locks under the action of a load in one direction and slides freely in the opposite direction. A type B device must be used in conjunction with a type A device connected to a separate safety support.

Type C: Descending device for work support, manually operated rope adjustment device with friction which allows the user to perform a controlled downward movement and to stop, by releasing, anywhere on the safety support. A type C device must be used in conjunction with a type A device connected to a separate safety support.

EN813 SEAT HARNESSES

Belts equipped with a ventral point allowing a system of support, restraint, or access by ropes.

EN358 WORK POSITIONING OR RESTRAINING BELTS AND LANYARDS

EN354 LANYARDS

EN12275 MOUNTAINEERING AND CLIMBING EQUIPMENT - CONNECTORS

Safety requirements and test methods.

Type B: Primary connector with automatic lock with enough strength to be used anywhere on a safety system.

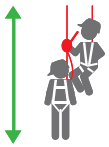
Type H: HMS self-closing connector, usually pear-shaped, used to link a mountaineer to a Via Ferrata anchoring system.

Type K: Via Ferrata self-closing connector, used primarily for dynamic belaying, HMS type.

Type D: Directional connector or combination of one or more connectors with automatic lock and straps, used to ensure that the load is carried in a predetermined direction.

Type A: Special anchorage automatic lock connector only used to be directly connected to a special type of anchorage.

Type Q (Quicklink): Connector with screw lock. When completely screwed this part is a supporting part of the connector.

ROPE ACCESS SYSTEM	**EN12278** ▶ **MOUNTAINEERING AND CLIMBING EQUIPMENT - PULLEYS** Safety requirements and test methods **EN1891** ▶ **SHEATHED BRAIDED ROPE WITH A LOW COEFFICIENT OF ELONGATION (STATIC ROPES)** **EN341** ▶ **PPE AGAINST FALLS FROM HEIGHT** Descending devices, classified according to the following data **Class A:** Descent energy W up to 7,5 x 10^6 J **Class B:** Descent energy W up to 1,5 x 10^6 J **Class C:** Descent energy W up to 0,5 x 10^6 J **Class D:** For a single descent. The descent energy depends on the maximum descent height and the maximum nominal load.
RESCUE 	**EN1496** ▶ **RESCUE EQUIPMENT** Rescue lifting devices. There are several device classes: **Class A:** Component or subset of a rescue equipment for the lifting of a person with the help of a rescuer, or on its own from a low point to a high point. **Class B:** Analogue device of class A device, but with an additional function of manual control for descent to lower a person over a limited distance of 2 m. **EN1498** ▶ **RESCUE STRAP** **EN341** ▶ **DESCENDING DEVICES**

OTHER QUALIFYING STANDARDS

Recommandations for severals users	**CEN/TS 16415** It is not a standard but a recommendation to test the anchors used by 2 or more persons. This technical specification was approved by CEN (European Committee for Standardisation) on July 30, 2012 for a provisional application and allows the use of an anchor by several people simultaneously.
Mountaineering and climbing	**EN567** ▶ **EQUIPMENT FOR MOUNTAINEERING AND CLIMBING** Safety requirements and test methods for blockers. **EN12275** ▶ **MOUNTAINEERING AND CLIMBING EQUIPMENT - CONNECTORS** **EN12278** ▶ **MOUNTAINEERING AND CLIMBING EQUIPMENT - PULLEYS**
Load securing	**DIRECTIVE 2006/42/CE FOR THE MACHINES OR EQUIPMENTS WITH MOBILE FUNCTION.**
Medical devices	**DIRECTIVE 93/42/CEE - EU REGULATION 2017/745 FOR THE MEDICAL DEVICES OR ACCESSORIES.**
Waterproofing	**EN60529:1991 + A1:2000 + A2:2013** The protection index (IP) Classifies the level of protection offered by a material from solid and liquid intrusion. The index format is IPxx where the 1st digit indicates the protection from dust, the 2nd digit the protection from water intrusion.

HEAD PROTECTION

HAND PROTECTION

DISPOSABLE WEAR

WORK WEAR

OUTDOOR WEAR

TECHNICAL WEAR

FOOT PROTECTION

FALL PROTECTION

YOUR SAFETY AT WORK

DELTAPLUS

HEAD OFFICE:

EN 34, 6 & 7th Floor, Sector V, Saltlake City, Kolkata - 700091, India.
Tel : +91 33 4016 0300 - **Fax :** +91 33 4016 0317
E-mail : sales@deltaplus.in **Website** www.deltaplus.in

MANUFACTURING UNIT:

Unit-2: Plot 3, 5, & 6 Sector I, Falta SEZ, 24 Parganas(S), Pin - 743504, W. B., India.
Tel : +91 3174 222278/79

WAREHOUSE:

Unit-1: Falta SEZ, Sector II, Beside DC Building, 24 Parganas(S), Pin - 743504, W.B., India
Fax : +91 3174 222723

www.deltaplus.in