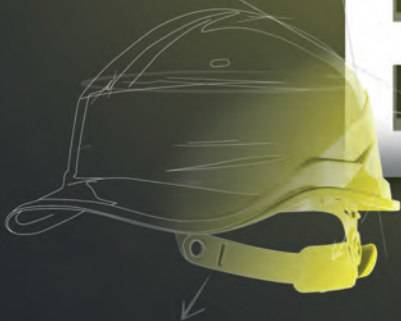




**DELTA PLUS**  
YOUR SAFETY AT WORK

# THE SAFETY BOOK



# OFFERING THE BEST PPE SOLUTION AT THE BEST PRICE

From the most technical need to the most standard, Delta Plus offers PPE solutions offering the best adaptation to the work area.



To easily find the best PPE solution: There are 3 lines of research needed

RISKS



JOBS

	<b>AGRICULTURE/GREEN AREAS</b>	Farmers - Woodcutters - Gardeners ...
	<b>CONSTRUCTION/CIVIL ENGINEERING</b>	Structural work - Construction
	<b>SECOND WORK/CRAFTSMAN</b>	Electricians - Plumbers - Heating specialists - Painters ...
	<b>HEAVY INDUSTRY</b>	Metal construction - Petrochemical ...
	<b>LIGHT INDUSTRY</b>	Automotive - Aerospace - Industrial Subcontracting ...
	<b>SERVICES/LOGISTICS</b>	Logistics - Transportation - Airport - Distribution ...
	<b>HYGIENE ENVIRONMENT</b>	Food industry - Pharmacy - Hospitals - Restaurants Communities ...
	<b>OIL/GAS</b>	Petrochemical industry - Refinery - Off shore - Exploration Pipelines
	<b>MINING</b>	Mines (exploration, extraction ...) - Stone-pit
	<b>WIND ENERGY</b>	

LEVELS OF THE RANGE

## PREMIUM

High Tech products for specialised uses

## EVOLUTION

Powerful multi-purpose products

## ESSENTIAL

Standard multi-purpose products



# SUMMARY THE GLOBAL OFFER

## THE GLOBAL OFFER

**001 • HEAD PROTECTION**

**066 • HAND PROTECTION**

**140 • DISPOSABLE WEAR**

**160 • WORK WEAR**

**204 • OUTDOOR WEAR**

**244 • TECHNICAL WEAR**

**268 • FOOT PROTECTION**

**308 • FALL PROTECTION**

**374 • PACKAGING**

**376 • MERCHANDISING**

**380 • ALPIC - DPG TRAINING**

**381 • TECHNICAL INFORMATION**

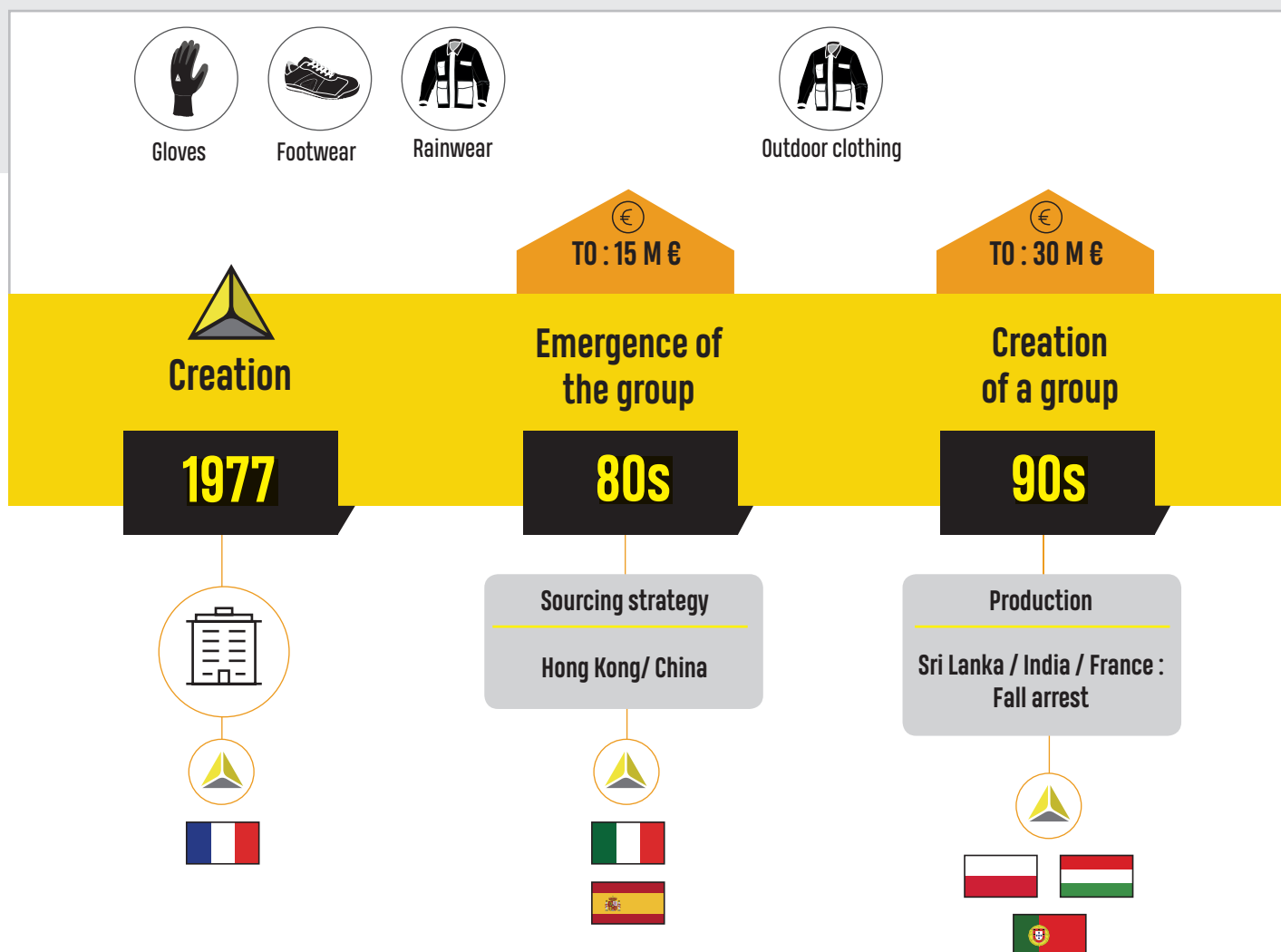
**409 • GLOSSARY**

**423 • INDEX**



# DELTA PLUS A DYNAMIC HISTORY

Delta Plus's mission is to protect the man at work. To achieve it, the **Delta Plus team** has mobilized its know-how, its imagination, adaptability and pioneering spirit for over 40 years.



# Head to toe for all: 5 families of products



Workwear



Shoes



Fall Arrest



Head



1999

Initial public offering

Production turning point  
Globalisation

2000s

Production

China : head protection  
China: safety footwear  
India: safety footwear  
Middle East: Fall arrest



Technical and  
geographical expansion

2010s

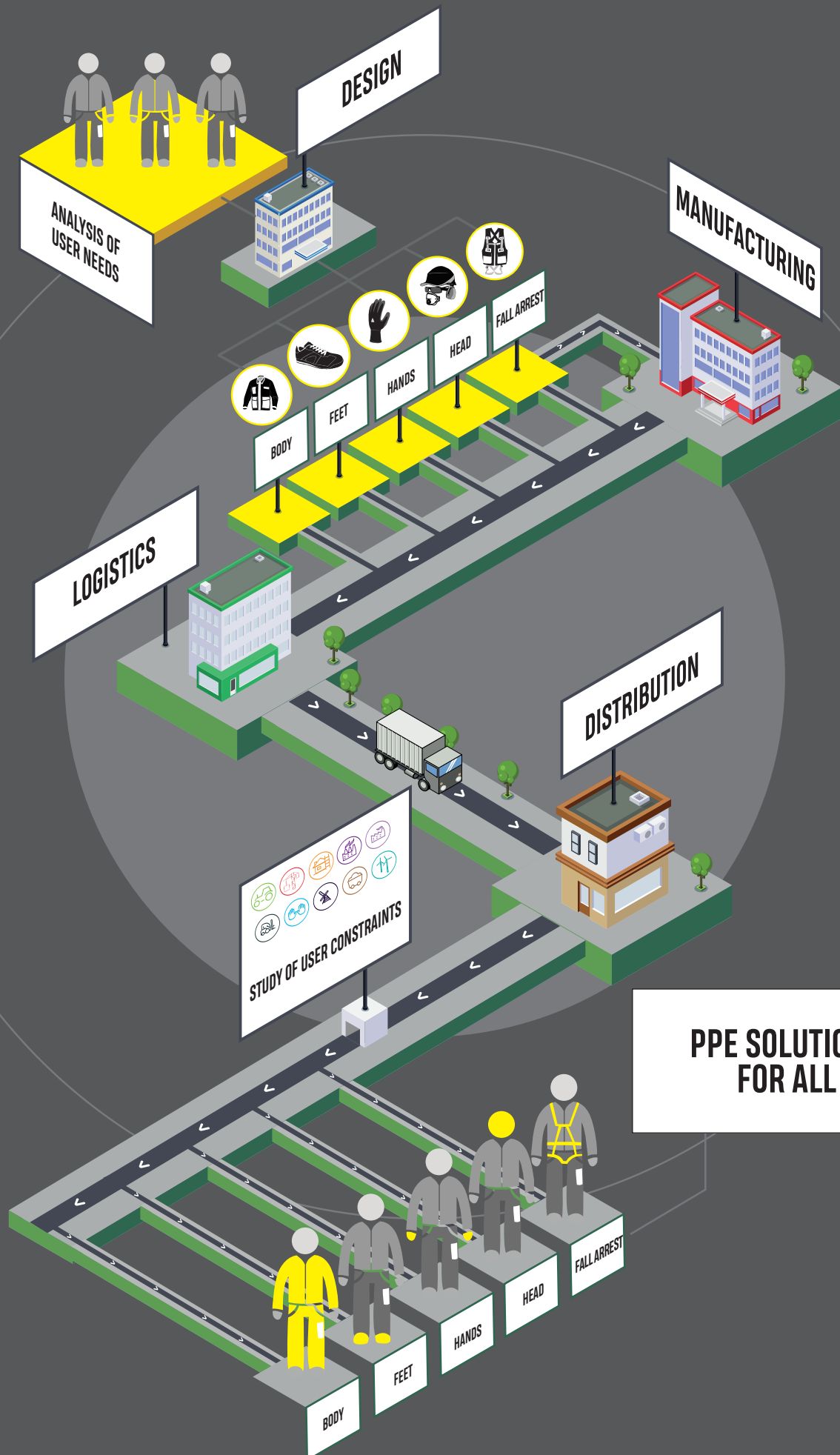
Production

Argentina: Fall arrest equipment  
Brazil : head production  
Canada : Head production



30 distribution subsidiaries  
8 production sites  
5 logistics platforms  
1,900 employees

# DELTA PLUS THE MISSION



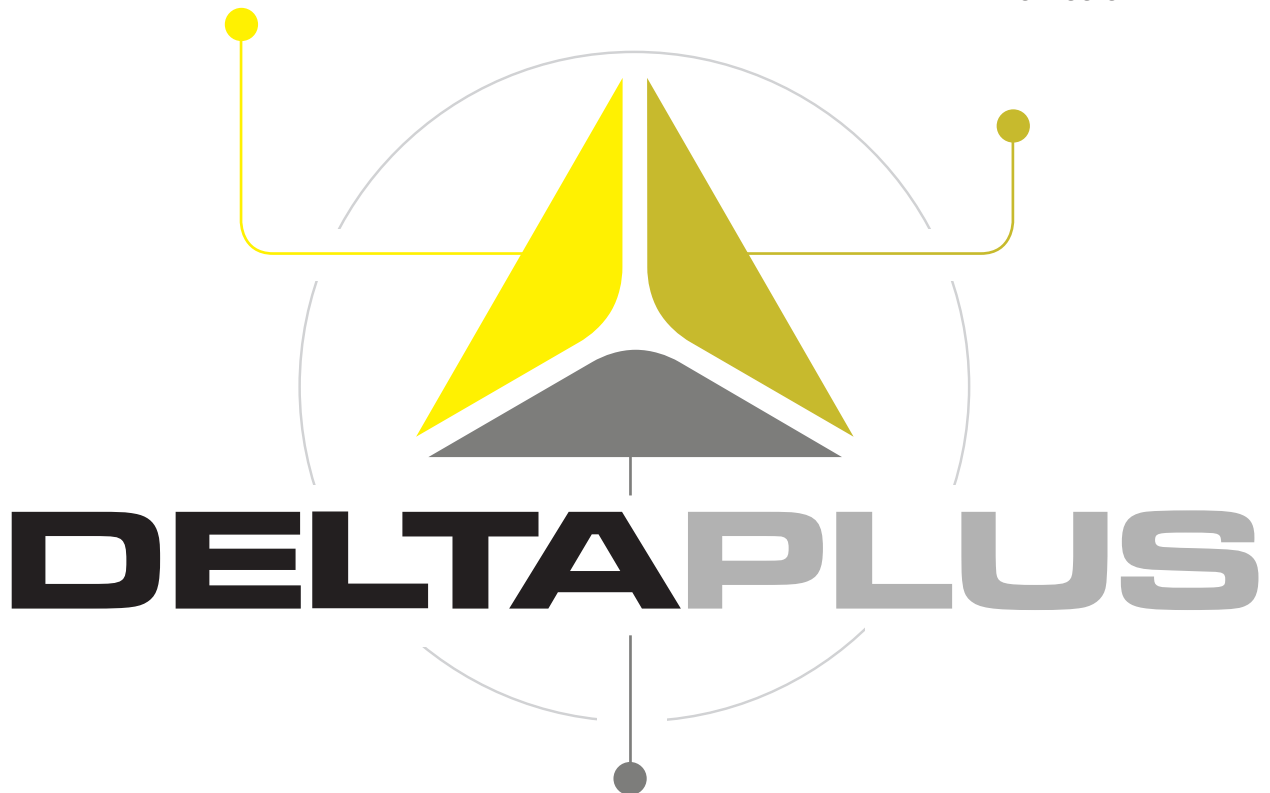
**PPE SOLUTIONS  
FOR ALL**

# SUPPLY

A UNIQUE DIFFERENTIATED OFFERING AROUND  
THE CONCEPTS "VALUE PRODUCTS" AND  
GLOBAL OFFER

# SERVICE

A SERVICE THAT SETS A STANDARD  
IN THE PROFESSION



**DELTA PLUS**

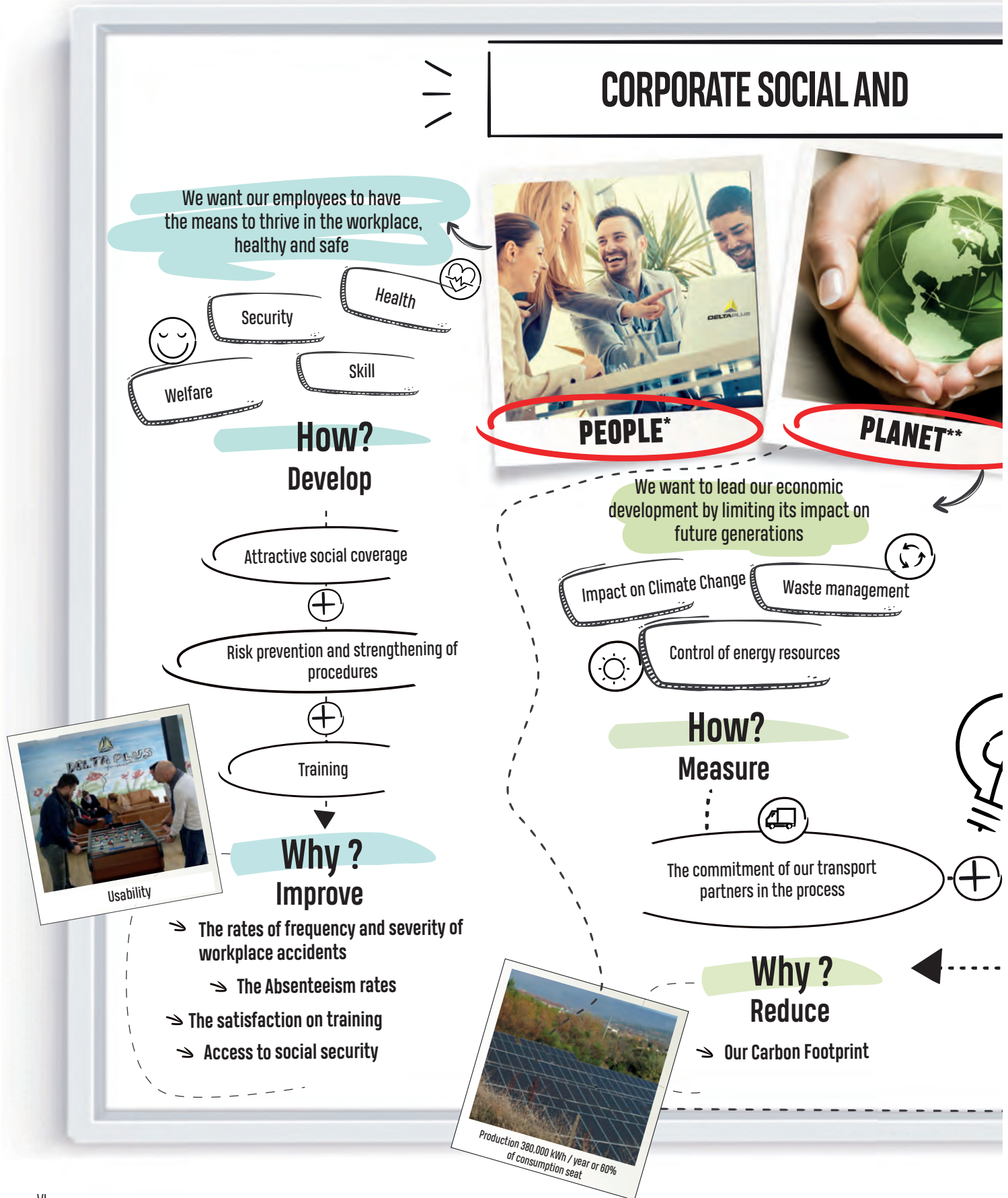
# PROXIMITY

CUSTOMER PROXIMITY WITH THE DAILY SUPPORT OF DISTRIBUTORS  
AND USERS THROUGH OUR EXPERTS.



# DELTA PLUS THE CSR APPROACH

Building on 10 years of commitment, we are intensifying our efforts to improve our impact on society and the environment. In addition, we obtained ISO14001 certification level 1 in 2018.



# ENVIRONMENTAL RESPONSABILITY

ISO 14001

We want our business to maintain a secure environment, ethically and responsible

SUSTAINABLE ECONOMY\*\*\*

Protection of internal resources

Local actors

Fair practices

Suppliers

How?  
Investing in

The rational use of material resources

Involving suppliers in our approach

A code of conduct anti-corruption

Economic support to local initiatives

Why?  
Ensure

- The protection of our material resources
- The accession of our suppliers to approach
- Fair practices stakeholders
- Our positive impact on the local economy

Our waste emissions

Our energy consumption

world skills  
France  
PROUD OFFICIAL PARTNER

\* People \*\* Planet \*\*\* Sustainable economy

# DELTA PLUS NEAR YOU



TRAINING



HOTLINES



JOINT VISITS



TECHNICAL CONSULTATION



A TEAM OF 280 EXPERT PPE SPECIALISTS ACROSS FIELD AND  
ADMINISTRATION ARE AVAILABLE TO YOU



A GLOBAL DISTRIBUTION NETWORK:  
THE DELTA PLUS OFFER ACCESSIBLE ANYWHERE



30 distribution  
subsidiaries



Our Products are in  
more than 140 countries



# DELTA PLUS THE WEBSITE



**Product  
information**

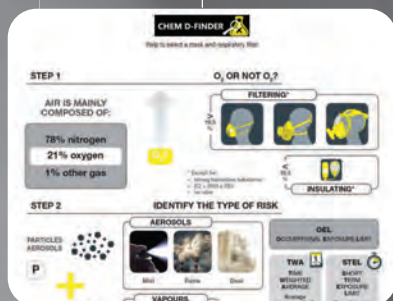
**Social  
networks**



**Download  
documentation**



**Educational  
selection aid**



**Fall arrest  
3D ride-along**





## Professional space access



Orders



Promotion



Surveys



Download area



## Training



## Multi-format image bank



## Virtual catalogue Product information



## Fall arrest verification



## Videos, animations and tutorials



## CHEM D-FINDER



## Chemical protection search engine



# DELTA PLUS AN INNOVATIVE OFFERING

Delta Plus offers **PPE solutions** that provide the best fit for the workplace, from the most technical to the most standard requirements



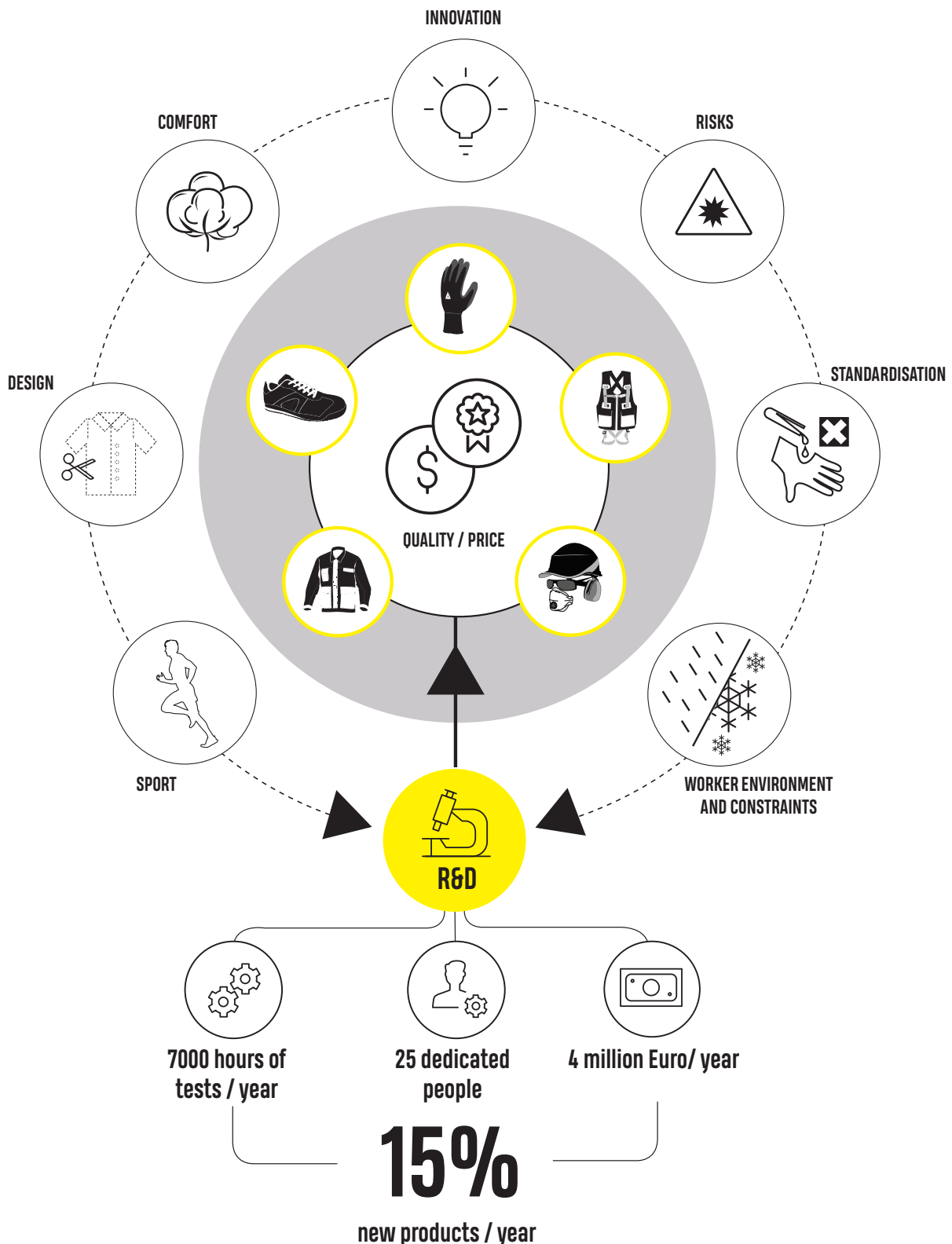
Listening to the customer



Estimating his risks and needs

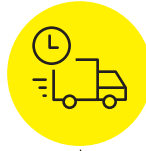


The right PPE solution



# A SUCCESSFULLY INTEGRATED SUPPLY CHAIN

Through this organisation, **DELTA PLUS** offers you access to its range wherever you are in the world with the most efficient service level on the worldwide PPE market.



**90%** of customers are satisfied with our delivery periods



**8 000** references stored



**10,000** distributors



**55,000** M<sup>2</sup> of storage

## EUROPE 30,000 M<sup>2</sup>



### 3 logistics platforms

- France (Apt)
- Poland (Siemianowice Śląskie)
- United Kingdom (Manchester)

### 2 intermediate warehouses

- Croatia (Zagreb)
- Greece (Markopoulo Attica)

## OUTSIDE EUROPE 10,000 M<sup>2</sup>



### 12 intermediate warehouses

- Argentina (Buenos Aires)
- Brazil (Sao Paulo)
- Canada (Toronto)
- Colombia (Bogota)
- Peru (Lima)
- Costa Rica (San José)
- USA (Shelton CT)
- Philippines (Manila)
- United Arab Emirates (Dubai)
- Russia (Moscow)
- Ukraine (Kiev)
- Turkey (Istanbul)

## ASIA 15,000 M<sup>2</sup>



### 2 logistics platforms

- China (Wujiang)
- India (Calcutta)

- Deliveries on the 2 local markets
- Intermediate storage of production
- Optimisation of lead times for European platforms
- Direct shipments of complete multi-product containers worldwide

# MADE IN DELTA PLUS

Delta Plus's organisation enables it to develop its ranges by optimising its industrial strategy, between its **8 production sites** and its partner's factories.



CANADA  
Toronto



FRANCE  
Apt  
Bernin



INDIA  
Near Calcutta



BRAZIL  
São Paulo



MIDDLE EAST  
Dubai



ARGENTINA  
Buenos Aires



CHINA  
Wujiang

# QUALITY AND INTEGRATED OR CONTROLLED PRODUCTION

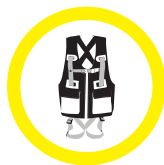
**Delta Plus ensures the quality and manufacturing control of its products** whether in their own factories or their partners' by imposing:

- Compliance with their common manufacturing charter
- The constraints of their technical specifications
- A series of ongoing tests and the end of production (our internal laboratories have a fleet of almost 200 machines and test equipment)

All the group production sites operate under the certified quality system ISO 9001.

All the concerned sites are certified according to the module D of the European Regulation 2016/425 (PPE Category III disabling or fatal risks).

## An increasingly integrated manufacture:



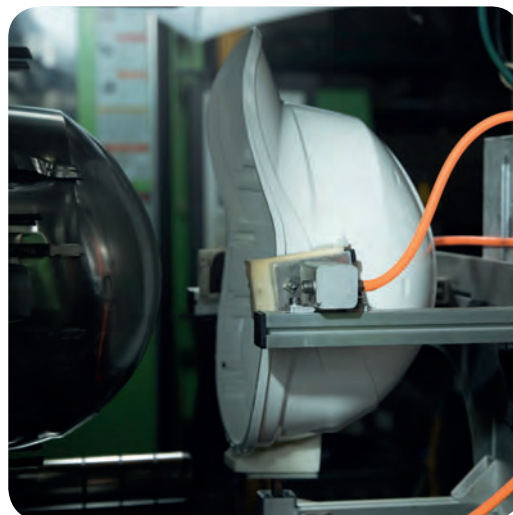
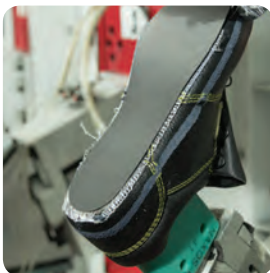
**100%**  
of our fall arrest range



**70%**  
of our head range  
protection



**60%**  
of our footwear range





# DESIGNING MANUFACTURING YOUR SAFETY AT WORK



# HEAD PROTECTION



## EYEWEAR PROTECTION

- 004 • Safety glasses - Help with choice
- 005 • Safety glasses
- 020 • Safety goggles
- 022 • Welding - Help with choice
- 023 • Welding
- 026 • Safety visors- Help with choice
- 027 • Safety visors

## SKULL PROTECTION

- 032 • Safety helmets - Help with choice
- 033 • Safety helmets
- 041 • Helmets accessories - Marking
- 042 • Bump cap

## HEARING PROTECTION

- 044 • Ear defenders - Help with choice
- 045 • Ear defenders
- 049 • Reusable earplugs
- 050 • Disposable earplugs

## RESPIRATORY PROTECTION

- 052 • Help with choice
- 054 • Disposable respiratory
- 061 • Reusable respiratory

## 382 • TECHNICAL INFORMATION

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HEAD PROTECTION

## EYEWEAR PROTECTION

		AGRICULTURE/ GREEN AREAS	CONSTRUCTION/ CIVIL ENGINEERING	SECOND WORK/ CRAFTSMAN	HEAVY INDUSTRY	LIGHT INDUSTRY	SERVICES/ LOGISTICS	HYGIENE ENVIRONMENT	OIL / GAS	MINING	WIND ENERGY		
PREMIUM	SAFETY GLASSES											BLOW2 CLEAR	5
												BLOW2 MIRROR	5
												BLOW2 LIGHT MIRROR	5
												RIMFIRE POLARIZED	6
												RIMFIRE CLEAR	6
												RIMFIRE MIRROR	6
												ASO2 CLEAR	7
												GO-SPECS TEC CLEAR	7
												ASO2 SMOKE	7
												PACAYA CLEAR LYVIZ	8
SAFETY VISORS	WELDING											PACAYA CLEAR STRAP LYVIZ	8
												PACAYA SMOKE LYVIZ	8
												PACAYA CLEAR	10
												PACAYA CLEAR STRAP	10
												PACAYA SMOKE	10
												PACAYA T5	10
												FUJIZ CLEAR	11
												THUNDER CLEAR	11
												FUJIZ GRADIENT	11
												THUNDER SMOKE	11
EVOLUTION	SAFETY GOGGLES											SAJAMA	21
												BARRIER 2	23
												BARRIER PLATE 2	23
												VISOR TORIC CLEAR	27
												VISOR TORIC T5	27
												VISOR FLASH	28
												VISONYXPR	34
												HELIUM BLUE BLOCKER	12
												HELIUM DETECTABLE	12
												KISKA2 CLEAR	14
SAFETY VISORS	WELDING											KISKA2 SMOKE	14
												FUEGO	14
												LIPARIZ CLEAR	15
												LIPARIZ T5	15
												VULCANO2 PLUS CLEAR	15
												VULCANO2 CLEAR	15
												VULCANO2 SMOKE	15
												EGON CLEAR	16
												HEKLA2 CLEAR	16
												EGON YELLOW	16
SAFETY VISORS	WELDING											EGON LIGHT MIRROR	16
												EGON SMOKE	16
												GALERAS CLEAR	20
												GALERAS SMOKE	20
												SCREEN	24
												SCREEN PLATE	24
												BASWELD	24
												CASOUD2HE	25
												TOBA 3 T5	25
												VISOR T-GUARD	27
SAFETY VISORS	WELDING											VISORPC	30
												VISORPC MINI	30
												VISORG	30
												VISORG MINI	30
												BALBI 2	31
												VISOR-H	31
												VISOR HOLDER	31
												PICO 2	31
												VISOR-U	31
												VISOR-HOLD MINI	31

		AGRICULTURE/ GREEN AREAS	CONSTRUCTION/ CIVIL ENGINEERING	SECOND WORK/ CRAFTSMAN	HEAVY INDUSTRY	LIGHT INDUSTRY	SERVICES/ LOGISTICS	HYGIENE ENVIRONMENT	OIL / GAS	MINING	WIND ENERGY		
ESSENTIEL	SAFETY GLASSES											MILO CLEAR	17
												MEIA CLEAR	17
												MILO SMOKE	17
												MEIA YELLOW	17
												MEIA SMOKE	17
												BRAVA2 CLEAR	18
												BRAVA2 YELLOW	18
												BRAVA2 LIGHT MIRROR	18
												BRAVA2 MIRROR	18
												BRAVA2 SMOKE	18
SAFETY GOGGLES	WELDING											KILIMANDJARO CLEAR AB	19
												PITON 2 CLEAR	19
												KILIMANDJARO CLEAR	19
												KILIMANDJARO SMOKE	19
												PITON CLEAR	19
												FILM GOGGLE	20
												RUIZ 1 ACETATE	21
												RUIZ 1	21
												MURIA 1	21
												CASOUD 3	25
SAFETY VISORS	WELDING											FILTER-IN	25
												FILTER 11	25

## SKULL PROTECTION

		AGRICULTURE/ GREEN AREAS	CONSTRUCTION/ CIVIL ENGINEERING	SECOND WORK/ CRAFTSMAN	HEAVY INDUSTRY	LIGHT INDUSTRY	SERVICES/ LOGISTICS	HYGIENE ENVIRONMENT	OIL / GAS	MINING	WIND ENERGY		
PREMIUM	SAFETY HELMETS											GRANITE WIND	33
												GRANITE PEAK	33
												ONYX	34
												BASEBALL DIAMOND V	36
												BASEBALL DIAMOND V UP	36
												KAIZIO	42
												QUARTZ UP IV	38
												QUARTZ UP III	38
												SUPER QUARTZ	39
												AIR COLTAN	43
EVOLUTION	SAFETY HELMETS											FORESTIER 3	39
												QUARTZ I	40
												ZIRCON 1	40
												WINTER CAP	40
												COLTAN	43
SAFETY VISORS	WELDING												



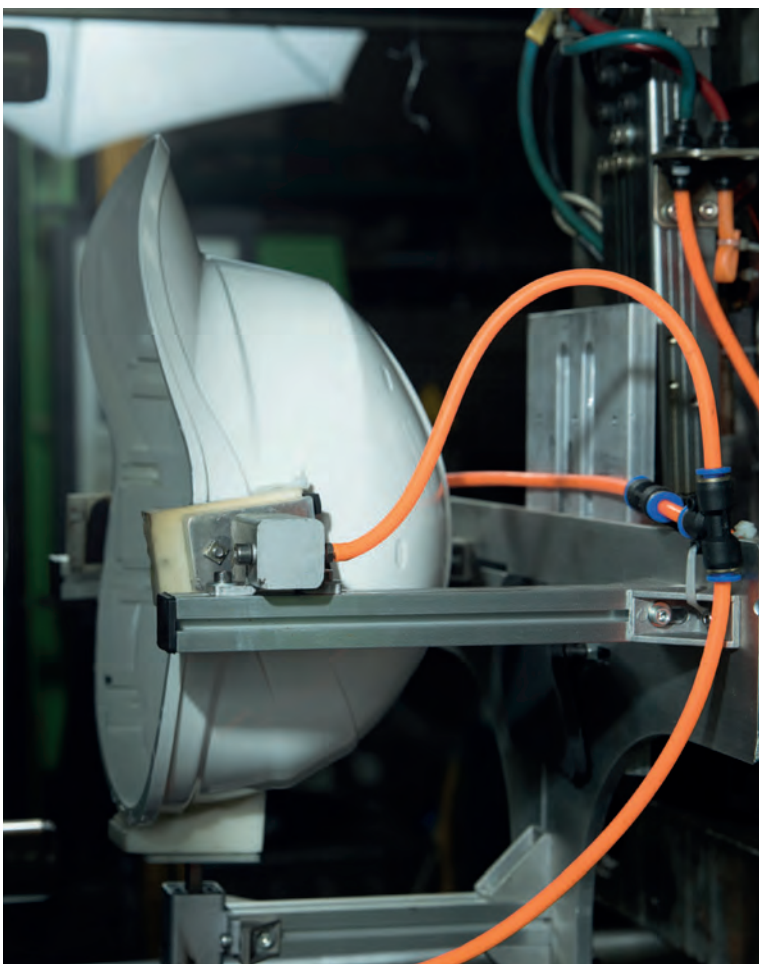


## HEARING PROTECTION

		AGRICULTURE/ GREEN AREAS	CONSTRUCTION/ CIVIL ENGINEERING	SECOND WORK/ CRAFTSMAN	HEAVY INDUSTRY	LIGHT INDUSTRY	SERVICES/ LOGISTICS	HYGIENE ENVIRONMENT	OIL / GAS	MINING	WIND ENERGY	Suitable protection	PAGES
PREMIUM	EAR DEFENDERS											EZ-COM	45
	EARPLUGS											PIT-RADIO 3	45
												MAGNY-COURS 2	48
												MAGNY-HELMET 2	48
EVOLUTION	EAR DEFENDERS											CONICFIR050	49
	EARPLUGS											CONICFIRDE010	49
												CONICFIR010	49
												CONICMOVE01	50
ESSENTIEL	EAR DEFENDERS											CONICMOVE01BR	50
	EARPLUGS											CONICPLUS200	50
												CONICCOPLUS200	50
												INTERLAGOS	46
PREMIUM	EAR DEFENDERS											YAS MARINA	46
	EARPLUGS											INTERHYKIT	46
												SILVERSTONE 2	47
												SEPANG 2	47
EVOLUTION	EAR DEFENDERS											CONICFIT010	49
	EARPLUGS											CONICSOFO10	49
												CONICAP01	50
												CONICAP01BR	50
ESSENTIEL	EAR DEFENDERS											CONICDE010	51
	EARPLUGS											CONICCO200	51
												CONIC DISPLAY	51
												SPA 3	48
PREMIUM	EAR DEFENDERS											SUZUKA 2	48
	EARPLUGS											CONIC010	51
												CONIC200	51
												CONIC500	51
EVOLUTION	EAR DEFENDERS											DEAR BOX	51
	EARPLUGS												

## RESPIRATORY PROTECTION

		AGRICULTURE/ GREEN AREAS	CONSTRUCTION/ CIVIL ENGINEERING	SECOND WORK/ CRAFTSMAN	HEAVY INDUSTRY	LIGHT INDUSTRY	SERVICES/ LOGISTICS	HYGIENE ENVIRONMENT	OIL / GAS	MINING	WIND ENERGY	Suitable protection	PAGES
PREMIUM	DISPOSABLE RESPIRATORY											SPIDERMASK P3 X5	54
												SPIDER REFILL FFP3	54
												SPIDERMASK P2 X5	54
												SPIDERMASK P2W X5	54
EVOLUTION	DISPOSABLE RESPIRATORY											SPIDER REFILL FFP2	54
												SPIDER REFILL FFP2W	54
												M1300V	57
												M1200VPLUS	57
ESSENTIEL	DISPOSABLE RESPIRATORY											M2FP3V	57
												M2FP2VPLW	57
												M9000E A2	61
												M9000E A2P3	61
PREMIUM	DISPOSABLE RESPIRATORY											M9000E A2B2E2K2	61
												M9000E A2B2E2K2P3	61
												M9000 P3	61
												M9000E A2B2	61
EVOLUTION	DISPOSABLE RESPIRATORY											M9000E A2B2P3	61
												M9000E A2B2E2P3	61
												M9000E A2B2E2KHGP3	61
												M9000E AX	61
ESSENTIEL	DISPOSABLE RESPIRATORY											M9000E AXP3	61
												M9000E B2	61
												M9000E B2P3	61
												M9000E E2	61
PREMIUM	DISPOSABLE RESPIRATORY											M9000E E2P3	61
												M9000E K2	61
												M9000E K2P3	61
												M9000E A2B2E2	61
EVOLUTION	DISPOSABLE RESPIRATORY											M9200 - ROTOR GALAXY	62
												M9300 - STRAP GALAXY	62
												M6200 JUPITER	64
												M6100 JUPITER	64
ESSENTIEL	DISPOSABLE RESPIRATORY											M1304V	58
												M1304VW	58
												M1104	58
												M1204V	58
PREMIUM	DISPOSABLE RESPIRATORY											M1204	58
												M1300V2	58
												M1200V	58
												M2FP2V	58
EVOLUTION	DISPOSABLE RESPIRATORY											M1200VW	58
												M2FP2VW	58
												M1100V	58
												M1300VB	59
ESSENTIEL	DISPOSABLE RESPIRATORY											M1200VB	59
												M1200VBW	59
												M1100VB	59
												M1300VP	59
PREMIUM	DISPOSABLE RESPIRATORY											M1200VPW	59
												M6400 JUPITER	64
												M6400 MARS KIT	65
												M6400 SPRAY KIT	65
EVOLUTION	DISPOSABLE RESPIRATORY											M6400 CHEM KIT	65
												M6000 A1	65
												M6000E A2	65
												M6000E ABEK1	65
ESSENTIEL	DISPOSABLE RESPIRATORY											M6000E PREP2	65
												M6000E PREP3	65
												M6000 P2 CLIP	65
												M6000 P2	65
PREMIUM	DISPOSABLE RESPIRATORY											M6000 P3	65
												M1200	58
												M1100	58
												M3FP1	58



## HELP WITH CHOICE



## — Glasses

INDOOR  
 OUTDOOR  
 OUTDOOR / INDOOR

EN170

PREMIUM

BLOW2 CLEAR

BLOW2 MIRROR

BLOW2 LIGHT MIRROR

RIMFIRE CLEAR

RIMFIRE POLARIZED

RIMFIRE MIRROR

ASO2 CLEAR

ASO2 SMOKE

GO-SPECS TEC CLEAR

PACAYA CLEAR LVIZ

PACAYA CLEAR STRAP LVIZ

PACAYA SMOKE LVIZ

EN170

EN172

ANSI Z87.1

EN170

PREMIUM

PACAYA CLEAR

PACAYA CLEAR STRAP

PACAYA SMOKE

FUJIZ CLEAR

FUJIZ GRADIENT

THUNDER CLEAR

THUNDER SMOKE

HELIUM BLUE BLOCKER

HELIUM DETECTABLE

KISKA2 CLEAR

KISKA2 SMOKE

FUEGO

EN170

EN172

ANSI Z87.1

EN170

EVOLUTION

EGON CLEAR

EGON LIGHT MIRROR

EGON SMOKE

EGON YELLOW

LIPARIZ CLEAR

HEKLA2 CLEAR

VULCANO2 PLUS CLEAR

VULCANO2 CLEAR

VULCANO2 SMOKE

MILO CLEAR

MILO SMOKE

MEIA CLEAR

EN170

EN172

ANSI Z87.1

EN170

ESSENTIAL

MEIA SMOKE

MEIA YELLOW

BRAVA2 CLEAR

BRAVA2 YELLOW

BRAVA2 LIGHT MIRROR

BRAVA2 MIRROR

BRAVA2 SMOKE

KILIMANDJARO CLEAR

KILIMANDJARO CLEAR AB

KILIMANDJARO SMOKE

PITON2 CLEAR

PITON CLEAR

EN170

EN172

ANSI Z87.1








## — Goggles

		PREMIUM	EVOLUTION			ESSENTIAL		
		SAJAMA	GALERAS CLEAR	GALERAS SMOKE	TACANA SPORT	RUIZI ACETATE	RUIZI	MURIA1
EN166								
ANSI Z87.1								

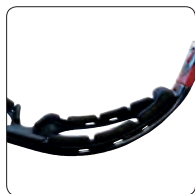
All our polycarbonate glasses filter 99.9% of UV A, B or C (130 - 300 nm). Our UV400 glasses filter up to 400 nm.



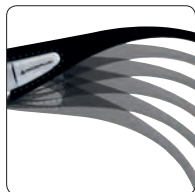


						
BLOW2 CLEAR	Clear	2 in 1 polycarbonate glasses - Interchangeable arms/Elastic. Twin material curved arms. Removable foam. Wide field of vision.	 EN166 1 FT / FT	EN170 UV 2C-1.2	38 g	x100
BLOW2 MIRROR	Mirror			EN172 UV 5-3.1		
BLOW2 LIGHT MIRROR				EN170 UV 2C-1.7		

## BLOW2 CLEAR



Ventilation  
→ Minimises fogging



Tilting arms  
→ Perfect fit to the shape of the face



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



Interchangeable attachment :  
Arms/Elastic  
→ Suitable solution for any type of work environment



Extra large field of vision  
→ Guaranteed maximum visual comfort









## BLOW2 LIGHT MIRROR



## BLOW2 MIRROR



## SAFETY GLASSES

								
RIMFIRE POLARIZED	Polarized	Polycarbonate glasses. Sport design. Polycarbonate frame with matt finish for better comfort and durability.		EN166 1F / F	EN172 5-3.1		28 g	x 100
RIMFIRE MIRROR	Mirror				EN172 5-3.1			
RIMFIRE CLEAR	Clear				EN170 2C-1.2	ANSI Z87.1 Z87+ U6		

## RIMFIRE POLARIZED



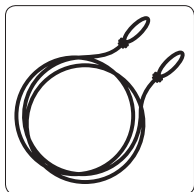
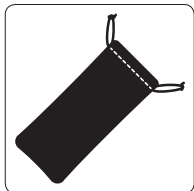
FlexGrip™ nasal bridge

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



Polycarbonate frame with matte finish

- ➔ Better comfort and reinforced strength



Without polarised lenses

Polarised glasses  
➔ Reduction of glare and reflections from reflective surfaces (road, water, snow...)

## RIMFIRE CLEAR











## RIMFIRE MIRROR



Sport look



							
AS02 CLEAR	Clear	Polycarbonate glasses. Sport design. Polycarbonate/ TPR bi-material flexible arms. Nose piece suitable for all body shapes.		EN166 1 FT K N / FT	EN170 2C-1.2	ANSI Z87.1 Z87+ U6	28 g
AS02 SMOKE	Smoke			EN172 5-2.5	 ANSI Z87.1 Z87+ U6 L2.5	x 100	
GO-SPECS TEC CLEAR	Clear	Polycarbonate single lens glasses. Frame with TPE seal. Neoprene elastic strap with adjustable buckle. Tilting. Side protection.		EN166 1 FT / FT	EN170 2C-1.2		ANSI Z87.1 Z87+ U6 D3

## AS02 CLEAR



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



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



Curved eyepiece  
 ➤ Maximum protection  
 ➤ Extended field of view



Indirect ventilation  
 ➤ Minimises the appearance of mist

## GO-SPECS TEC CLEAR



Ergonomic hybrid solution  
 ➤ Ideal alternative to eye masks: more compact, lighter, more comfortable



Flexible TPE seal  
 ➤ Protects against solid or liquid projections



Indirect ventilation  
 ➤ Minimises the appearance of mist

Tilting arms  
 ➤ Perfect fit to the shape of the face

Neoprene strap  
 ➤ Resistance to chemical projections  
 ➤ Washable

UV filtration A, B and C at 99.9% (130-380 nm)

Reinforced impact resistance





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

### PACAYA CLEAR STRAP LVIZ



LVIZ™



### PACAYA SMOKE LVIZ

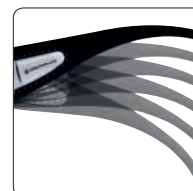


LVIZ™



Removable foam protection

- Very good sealing in dusty environments
- Increased comfort in case of shock



Tilting arms

- Perfect fit to the shape of the face



<https://www.youtube.com/watch?v=-q64s0LI9I4>





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

## PACAYA CLEAR LYVIZ



LYVIZ™



Coating  
Oleophobic  
&  
Hydrophobic  
by Delta Plus



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

Helps workers see their task clearly to ensure their safety at work.



Highly oleophobic & hydrophobic  
the contact angle remains greater than 105°



More resistance to abrasion  
20% > regular test











Ultra-low vapour effect  
less than 0.11% increase in fog after abrasion



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.

Marie Pourcher, Head Protection Product Expert

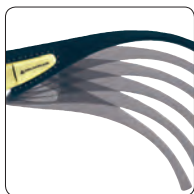
## SAFETY GLASSES

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

## PACAYA CLEAR



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



Tilting arms  
 ➔ Perfect fit to the shape of the face

## PACAYA T5



## PACAYA CLEAR STRAP



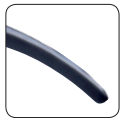
## PACAYA SMOKE





FUJ12 CLEAR	Clear	CE EN166 1 FT / FT	EN170 UV 2C-1.2	28 g  x 100  30 g
FUJ12 GRADIENT	Gradient		ANSI Z87.1 Z87+	
THUNDER CLEAR	Clear		EN172 UV 5-1.4 : 5-1.7	
THUNDER SMOKE	Smoke		EN170 UV 2C-1.2	
			EN172 UV 5-3.1	

## FUJ12 CLEAR



Non-slip rubber sections  
 ➔ Increased comfort  
 ➔ Very good hold on the head (or on a helmet)



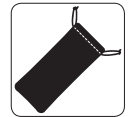
Without mount in lower part  
 ➔ No visual discomfort



Extra flexible TPE nose bridge  
 ➔ Optimised comfort  
 ➔ Perfect fit for all body types



## FUJ12 GRADIENT



## THUNDER CLEAR



Extra comfort soft ends  
 ➔ Increased comfort  
 ➔ Very good hold on the head (or on a helmet)











Nasal bridge TPE soft extra comfort  
 ➔ Optimised comfort  
 ➔ Perfect fit for all body types



## THUNDER SMOKE





							
HELIUM BLUE BLOCKER	Brown	Ultra light polycarbonate single lens glasses. Extra fine frame. Suitable for long duration wear.	 EN166 1 FT / FT	EN170 2C-1.4	 ANSI Z87.1 Z87+ U6 L1.5	15 g	x 100
HELIUM DETECTABLE	Blue			EN170 UV 2C-1.2			

## HELIUM DETECTABLE



Metallically charged blue frame visually detectable by X-ray and magnetism

→ Suitable for the food industry

Blue tint with excellent transmission factor (80%)

→ Comfortable for indoor use



Extra fine frame

→ Compatibility with noise cancelling headphones

Eye piece that filters 65% of blue light to protect the eyes from the harmful radiation from screens

→ Reduction of eye strain

Ultra-light : 15 g





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

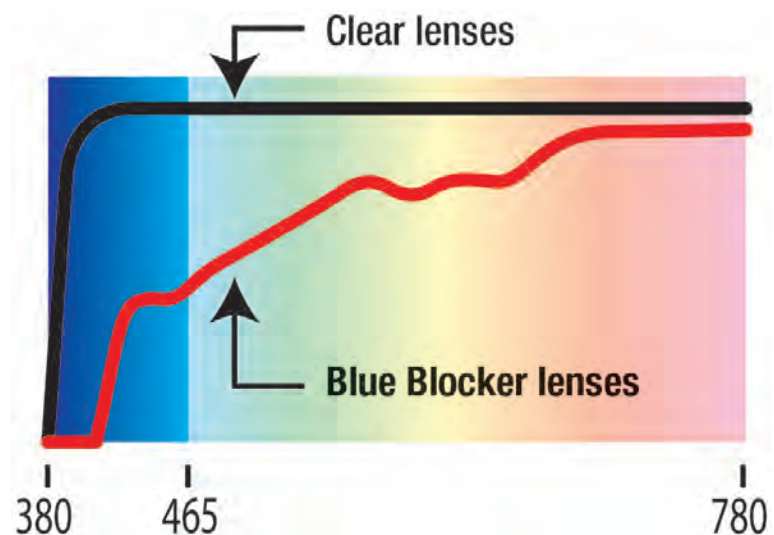
## HELIUM BLUE BLOCKER



Helium featherweight models are ideal solutions for workers who are reluctant to wear heavy eye protection.

Ergofit ultra-flat sections feature particles with magnetic properties that are detectable and compatible with the simultaneous wearing of hearing protectors and other PPE.







The blue-violet light (between 380 and 465 nm) present in the solar spectrum and emitted by screens or LEDs to which we are more and more exposed, generates harmful effects on the retina and the macula. The shade of these glasses is designed to filter 65% of the blue light while transmitting more than 65% of the visible light and is an excellent compromise for your protection and your eyes.



Lightness and ergonomics are two axes of product development that are used more and more by users. PPE must allow itself to be forgotten to be worn all day without any discomfort. The Helium with its enveloping design and weight of 15g can be forgotten. We chose to make it even more efficient with two innovative functions on the market: blue light filtration and detection.

Marie Pourcher, Head Protection Product Expert

## SAFETY GLASSES

				
KISKA2 CLEAR	Clear	 <b>EN166</b> 1 FT / FT	<b>EN170</b> UV 2C-1.2	20 g
KISKA2 SMOKE	Smoke		<b>EN172</b> UV 5-3.1	
FUEGO	Clear		<b>EN170</b> UV 2C-1.2	34 g
		x 100		

Ultra light one-piece polycarbonate glasses. Extra fine rimless frame and extra soft polycarbonate nose bridge. Suitable for long duration wear.

Clear polycarbonate single lens glasses to use as an accessory for safety helmet. Wraparound design for maximum protection. Folding system in the helmet when it is not used, for intermittent use. Very convenient. Branches foldable for easy positioning in the helmet. Suitable for our range of safety helmet.

## KISKA2 CLEAR



Non metallic hinge



Extra soft nose bridge



## KISKA2 SMOKE



Extra fine metal free frame  
Ultra lightweight frame  
Ultra-light : 20 g











## FUEGO



Adjustable arms





							
LIPARI2 CLEAR	Clear	Polycarbonate single lens glasses. Adjustable and tilting nylon arms. Spatula tips. Integrated TPE nose piece. Side protection.		EN166 1 FT / FT	EN170 UV 2C-1.2	34 g	x 100
LIPARI2 T5	Shade 5			EN169 UV 5			
VULCANO2 PLUS CLEAR	Clear			EN166 1 FT K N / FT	EN170 UV 2C-1.2	 <b>ANSI Z87.1</b> Z87+	
VULCANO2 CLEAR				EN170 UV 2C-1.2	26 g		
VULCANO2 SMOKE	Smoke			EN166 1 FT / FT	EN172 UV 5-3.1		

## LIPARI2 CLEAR



## LIPARI2 T5



## VULCANO2 PLUS CLEAR



## VULCANO2 CLEAR



## VULCANO2 SMOKE



# SAFETY GLASSES

							
EGON CLEAR	Clear	 EN166 1 FT / FT	EN170 UV 2C-1.2	 ANSI Z87.1 Z87+	32 g	x100	
EGON YELLOW	Yellow		Ergonomic glasses. Polycarbonate lens. Sport look. Twin material arms. Extra comfort soft TPE nose piece.				EN170 UV 2C-1.7
EGON LIGHT MIRROR	Mirror						EN172 UV 5-3.1
EGON SMOKE	Smoke						
HEKLA2 CLEAR	Clear	Single lens polycarbonate over glasses. Side shields. Integrated polycarbonate nose piece. Flexible polycarbonate arms. Suitable for all types of prescription glasses.		EN170 UV 2C-1.2			

## EGON CLEAR



Side shields



Extra temple sections



Nasal bridge TPE soft extra comfort



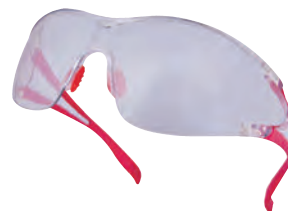
## HEKLA2 CLEAR



## EGON YELLOW



## EGON LIGHT MIRROR



## EGON SMOKE





MILO CLEAR	Clear	EN166 1 FT / FT	EN170 UV 2.C-1.2	18 g
MILO SMOKE	Smoke		EN172 UV 5-3.1	
MEIA CLEAR	Clear		EN170 UV 2.C-1.2	x 100
MEIA YELLOW	Yellow		EN172 UV 5-3.1	
MEIA SMOKE	Smoke		EN172 UV 5-3.1	

## MILO CLEAR



## MILO SMOKE



## MEIA CLEAR



## MEIA YELLOW











## MEIA SMOKE





## SAFETY GLASSES

							
BRAVA2 CLEAR	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.	 EN166 1 FT / FT	EN170 UV 2C-1.2	 ANSI Z87.1 Z87+	25 g	x 100
BRAVA2 YELLOW	Yellow			EN170 UV 2C-1.7			
BRAVA2 LIGHT MIRROR	Mirror			EN172 UV 5-2.5			
BRAVA2 MIRROR				EN172 UV 5-3.1			
BRAVA2 SMOKE	Smoke						

## BRAVA2 CLEAR



## BRAVA2 YELLOW



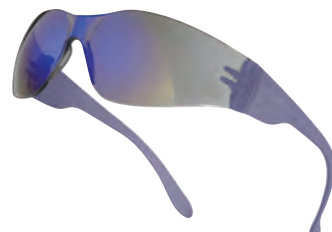
## BRAVA2 LIGHT MIRROR











## BRAVA2 SMOKE



## BRAVA2 MIRROR





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

## KILIMANDJARO CLEAR AB



## KILIMANDJARO CLEAR



## KILIMANDJARO SMOKE



## PITON 2 CLEAR



## PITON CLEAR



## SAFETY GOGGLES

GALERAS CLEAR	Clear	Polycarbonate goggles. Indirect ventilation. Flexible PVC and nylon frame. Panoramic screen. Adapted to wear with glasses and disposable respiratory half-masks. Wide elastic strap.	EN166 1 BT / 34 BT	ANSI Z87.1 Z87+	104 g x 60
GALERAS SMOKE	Smoke		EN166 1 BT / 34 BT EN172 UV 5-3.1		
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 x 10

## GALERAS CLEAR



Tilting elastic  
→ Very good support

## GALERAS SMOKE



Marking (EN166)

1 = the best optical class

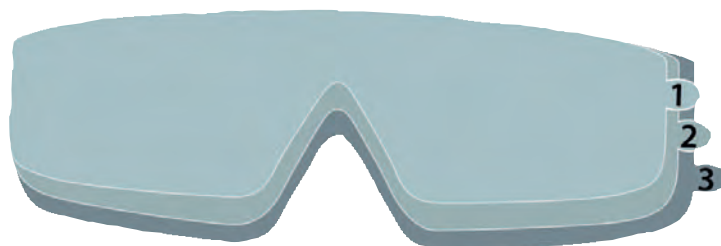
B = resistance to medium energy impacts

T = impact resistance at extreme temperatures

3 = resistance to liquid splashes

4 = resistance to large dust particles

## FILM GOGGLE





SAJAMA	Clear	EN166 1 BT / 3 BT	ANSI Z87.1 Z87+	92 g
RUIZ 1 ACETATE		EN166 1 FT / 3 FT		86 g
RUIZ 1		EN166 1 B / 3 B	ANSI Z87.1 Z87	
MURIA 1		EN166 1 B / B		60 g

## SAJAMA



Soft frame made of TPE  
→ Prolonged comfort of use

PVC free and phthalate free  
→ Reduced risk of allergy

## RUIZ 1 ACETATE



## RUIZ 1












## MURIA 1













## — Welding

	EVOLUTION					EVOLUTION		
	PREMIUM BARRIER2	SCREEN	CASOUD2HE	ESSENTIAL CASOUD3		TOBA3 T5	LIPARI2 T5	PACAYA T5
								
EN169								
EN175	●	●	●	●		●	●	●
EN379	●	●						
ANSI Z87.1	+	+						

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

Welding	MMA	MIG	MAG	TIG	Torch	Plasma	Laser
<b>Process</b>	Electric arc + Electrode 			Electric arc + Electrode Tungsten 	Torch flame 	Electric arc + Electrode 	Laser ray 
<b>Gas supply</b>	No	Inert protective gas (Argon or Helium)	Active protective gas (Argon/CO <sub>2</sub> 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	
<b>Metal supply</b>	Yes (melting electrode)	Yes (metal coil)		Yes (Filler metal rod)	Yes	No	No
<b>Example of jobs using these process</b>	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
<b>Materials</b>	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
<b>Thickness</b>	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
<b>Features</b>	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	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.	EN166 1 B EN379 1/1/1/2 / 4/5-9/9-13 CE EN175 B	ANSI 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.	EN166 1 B		38 g x 100
BASWELD	Black	Bag of 10 sweat bands for BARRIER 2 and SCREEN welding shields.			5 g x 20

## BARRIER 2



High performance optical class  
➔ Less visual fatigue



Replaceable exterior protection screen  
➔ Easy replacement of damaged screens



Field of view 100 x 67 mm  
➔ Guaranteed maximum visual comfort

## BARRIER PLATE 2



Settings: sensitivity, hue selection, switching time  
➔ Guaranteed user comfort for all types of welding

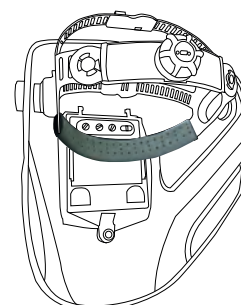
Grinding/soldering mode  
➔ 2 applications for a single product









4 independent sensors  
➔ Increased product reactivity in all positions and in confined spaces



## BASWELD



					
SCREEN	Black	Helmet for electric arc welding with self-obscuring screen. Can be used for MIG, MAG, TIG and plasma welding requiring DIN9 to DIN13 shade protection.	EN166 1F EN379 1/1/1/2 / 4/9-13 EN175 F CE	ANSI Z87.1 Z87 W4/9-13	474 g x 6
SCREEN PLATE	Clear	Pack of 5 exterior spare screens for SCREEN helmet in polycarbonate.	EN166 1F		14 g x 150
BASWELD	Black	Bag of 10 sweat bands for BARRIER 2 and SCREEN welding shields.			5 g x 20

## SCREEN



High performance optical class



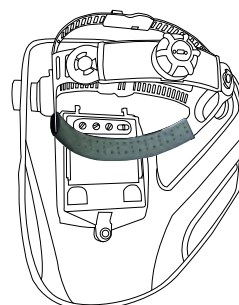
External adjustment of the shade  
 ➔ One-handed adjustment with or without gloves

















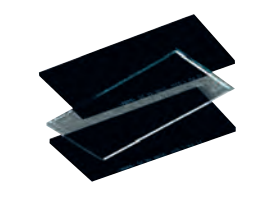



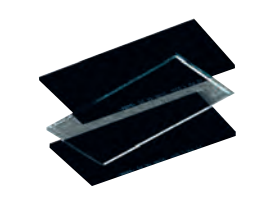



























## SCREEN PLATE



## BASWELD





 <b>CASOUD2HE</b> 	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.    	Adjustable	 <b>EN166</b> 1F / S <b>EN169</b> 11 <b>EN175</b> S	304 g x 10
<b>CASOUD 3</b> 	Black	Helmet for all types of welding that requires shade DIN11 protection. Headband. Sold ready to use: fixed screen equipped with one clear polycarbonate filter (FILTER-IN), flip-up screen equipped with one DIN11 filter (FILTER-11), protected by one clear polycarbonate filter (FILTER-IN). Dimensions of the filters: 108 x 51 mm.    	Adjustable	 <b>EN166</b> 1F / F <b>EN169</b> 11 <b>EN175</b> F	415 g x 6
<b>FILTER-IN</b> 	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.  		 <b>EN166</b> 1F / F	140 g x 20
<b>FILTER 11</b> 	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.  		 <b>EN166</b> 1 <b>EN169</b> 11	240 g x 20
<b>TOBA 3 T5</b> 	Red	Welding goggles. Flip-up screen. Flexible PVC frame. Indirect ventilation. Elastic strap. Clear polycarbonate inside lens. Shade 5 polycarbonate upper lens with clear polycarbonate reinforcement lens.    	Adjustable	 <b>EN166</b> 1FT / FT <b>EN169</b> 5 <b>EN175</b> FT	132 g x 60
<b>PACAYA T5</b> 	Shade 5	Polycarbonate single lens glasses. Integrated polycarbonate nose piece. Adjustable nylon arms. Side protection.      		 <b>EN166</b> 1FT / FT <b>EN169</b> UV 5	32 g x 100
<b>LIPARI2 T5</b> 	Shade 5	Polycarbonate single lens glasses. Adjustable and tilting nylon arms. Spatula tips. Integrated TPE nose piece. Side protection.       		 <b>EN166</b> 1FT / FT <b>EN169</b> UV 5  <b>ANSI Z87.1</b> Z87+	34 g x 100



# EYEWEAR PROTECTION HELP WITH CHOICE

— Visor

	PREMIUM				EVOLUTION									
	VISONYXPR	VISOR FLASH	VISOR TORIC	VISOR TORIC T5	VISORPC	VISORPC MINI	VISORG	VISORG MINI	BALB12	PIC02	VISOR H	VISOR U	VISOR HOLDER	VISOR-HOLD MINI
EN169														
EN170														
EN1731														
EN166														

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

		VISOR H	VISOR HOLDER	VISOR-HOLDER MINI	VISOR U
			 EN166 EN1731	 EN166 EN1731	 EN166 EN1731
VISOR FLASH	 EN170 UV 2C-17		 GS-ET 29 1 FT 8-1-1 CLASS 1 (3.2 CAL/CM²)		 GS-ET 29 1 FT 8-2-1 CLASS 2 (10.1 CAL/CM²) ASTM F2178 14 CAL/CM²
VISOR TORIC CLEAR	 EN170 UV 2C-12	 1AT 3 8 9	 1AT 3 8 9		 1AT 3 8 9
VISOR TORIC T5	 EN169 5	 1AT 3 9	 1AT 3 9		 1AT 3 9
VISORPC		 BALB12 1BT 3	 1BT 3	 1BT 3	
VISORPC MINI		 1BT		 1BT 3	
VISORG		 PIC02 F	 F	 F	
VISORG MINI		 F		 F	



VISOR TORIC CLEAR	Clear	EN166 1AT 89 EN170 UV 2C-1.2	162 g	x 20
VISOR TORIC T5	Green shade 5	EN166 1AT 9 EN169 5		
VISOR T-GUARD	Clear	Polycarbonate chin protection to be fixed on VISOR TORIC visor.	46 g	

## VISOR TORIC CLEAR



Marking (EN166)  
1 = the best optical class  
A = the highest impact resistance  
T = impact resistance at extreme temperatures  
8 = short-circuit electrical arc resistance  
9 = resistance to the projection of molten metals

Marking (EN170)  
2C-1,2 = UV resistance

## VISOR T-GUARD



## VISOR TORIC T5



Marking (EN166)  
1 = the best optical class  
A = the highest impact resistance  
T = impact resistance at extreme temperatures  
9 = resistance to the projection of molten metals

Marking (EN169)  
5 = UV and IR resistance



Anti-scratch  
➔ Increased lifespan

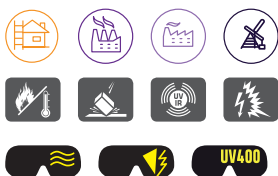
Spherical visor  
➔ Extra large field of vision

Injected polycarbonate  
➔ Maximum impact resistance

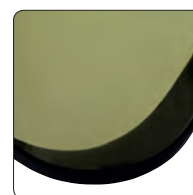


VISOR FLASH	Green	Polycarbonate injected visor, against electric arc and thermal risk. Green shade for better transmission of light.	EN166 1FT 8 EN170 UV 2C-1.7 GS-ET 29 VISOR-U 8-2-1 VISOR-HOLDER 8-1-1	230 g x 25

## VISOR FLASH



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



Curved chin protector  
 ➔ No discomfort in the user's movements



Injected polycarbonate  
 ➔ 2 to 2.3 mm thick  
 ➔ Maximum resistance to impact and radiant heat

Protection : 14 cal/ cm<sup>2</sup> (ASTM)  
 ➔ Maximum protection from electric arcs

UV filtration A, B and C at 99.9% (130-380 nm)  
 ➔ Guaranteed protection from ultraviolet light



## Protecting the face against the risk of electric arcs adapted to DELTA PLUS safety helmets (except Granite 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.

### 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.

### 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.









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



## SAFETY VISORS

					
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	100 g	x 20
VISORG	Black	Pack of 2 gauze visors with plastic edge. Universal fixing. Suitable for BALBI2, PICO2, VISOR-H and VISOR HOLDER faceshield holder. 39 x 20 cm.	CE EN1731 F		
VISORPC MINI	Clear	Pack of 2 clear polycarbonate visors with plastic edge. Universal fixing. Suitable for VISOR-HOLD MINI. 36 x 17 cm.	EN166 1BT	84 g	
VISORG MINI	Black	Pack of 2 gauze visors with plastic edge. Universal fixing. Suitable for VISOR-HOLD MINI. 36 x 17 cm.	EN1731 S	94 g	

## VISORPC



## VISORG



## VISORPC MINI



## VISORG MINI







BALBI 2	Yellow	Faceshield with front protection + VISORPC visor: clear polycarbonate visor with plastic edge. 39 x 20 cm.	EN166 1BT / 3BT	260 g	x 20
PICO 2	Yellow-Black	Faceshield with front protection + VISORG visor: gauze visor with plastic edge. 39 x 20 cm.	EN1731 F / F	262 g	
VISOR-H	Grey	Faceshield with front protection. Innovative adjustable ROTOR system: head sizes 53 to 63 cm.	EN166 EN1731	180 g	x 25
VISOR-U	Black	Dielectric faceshield holder suitable for safety helmets and visors.	CE		x 100
VISOR HOLDER		Faceshield holder suitable for ZIRCON, QUARTZ and BASEBALL DIAMOND safety helmets. To combine with VISORPC, VISORG, VISOR-TORIC and VISOR FLASH visors, universal fixing.		EN166 EN1731 GS-ET 29	
VISOR-HOLD MINI		Faceshield holder suitable for GRANITE WIND and GRANITE PEAK safety helmets. To combine with VISORPCMINI and VISORGMINI.		EN166 EN1731	x 20

## BALBI 2



## PICO 2



## VISOR-H



## VISOR-U



## VISOR HOLDER



Compatible with earmuffs

## VISOR-HOLD MINI



Compatible with earmuffs

# SKULL PROTECTION HELP WITH CHOICE

## — Helmet

All our helmets have standard fitting for all accessories.

EN 397		PREMIUM					EVOLUTION				ESSENTIAL	
		ONYX	GRANITE WIND	GRANITE PEAK	DIAMOND V UP	BASEBALL DIAMOND V	SUPER QUARTZ	QUARTZ UP IV	QUARTZ UP III	FORESTIER2	QUARTZ I	ZIRCON I
	COLOURS											
	ADJUSTMENT											
	VENTILATION											
	ELECTRICAL INSULATION											
	MM											
	LD											
	TEMPERATURE											
EN 50365	ELECTRICAL INSULATION											

## — Bump cap

EN 812		PREMIUM	EVOLUTION		ESSENTIAL
		KAIZIO	AIR COLTAN	COLTAN	COLTAN
	COLOURS				
	VISOR LENGTH (CM)		5	3/5/7 5/7 3/7 7	3/5/7

## Customize your safety helmets!

- The logo sent must be in vectorized format (.eps, .ai, or .pdf) and must not have a different colour background to the chosen helmet.
- For logos in colours, please indicate the pantone reference for each colour.
- Warning: the colours of the logos can be slightly changed according to the colour of helmets. To have the same colour as your logo, we recommend that you choose white helmets.
- It is impossible to do gradient colours in pad printing.
- Minimum of order: 40 pieces per colour for all orders in Europe.
- Maximum number of colours: 4
- The space to put the logo may not exceed dimensions shown on the table below:



	ZIRCON	QUARTZ - SUPER QUARTZ	GRANITE	BASEBALL DIAMOND	ONYX
Front					
	70 x 40 mm	70 x 40 mm	70 x 40 mm	70 x 40 mm	
Back					
	60 x 20 mm	60 x 35 mm		60 x 20 mm	60 x 35 mm
Sides			Printing zone Maximum logo size		
	40 x 20 mm	60 x 20 mm		70 x 40 mm	

## BADGEH

Badge holder for BASEBALL DIAMOND and BASEBALL DIAMOND UP

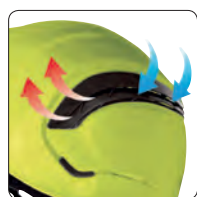
- Minimum of order: 20 pieces per colour for all orders in Europe





GRANITE WIND	White Blue Yellow Orange Red	Ventilated ABS safety helmet. Mountain helmet style: without visor for the best vertical vision. Less encumbrance. Light. Polyamide cradle: 3 textile bands with 8 fixing points. Thermoformed sweat band. Innovative adjustable ROTOR system : head sizes 53 to 63 cm. Sold with 3 point chin strap.	EN397 MM -20°C +50°C	368 g	
GRANITE PEAK	White Blue Yellow	ABS safety helmet. Mountain helmet style: without visor for the best vertical vision. Less encumbrance. Light. Polyamide cradle: 3 textile bands with 8 fixing points. Thermoformed sweat band. Innovative adjustable ROTOR system : head sizes 53 to 63 cm. Sold with 3 point chin strap. Specially designed for working at height. Electrical insulation up to 1 000 V.A.C. or 1 500 V.D.C.	CE EN397 MM -20°C +50°C 440VAC EN50365 CLASS 0	350 g	x 10
BASGAMMA		Bag of 5 thermoformed sweat bands. Suitable for QUARTZ UP, SUPER QUARTZ, BASEBALL DIAMOND and GRANITE safety helmets.		4 g	
JUGGAMMA	Black	Bag of 5 chin straps with 3 fixing points. Safety-breaking system. Suitable for GRANITE PEAK and GRANITE WIND safety helmets.		19 g	x 20

## GRANITE WIND



**Fins system**  
 ➔ Optimised ventilation with increased protection from projections



**One-D Rotor ergonomic clamping system**  
 ➔ One-handed adjustment with or without gloves



**Chin Strap 3 removable attachment points**  
 ➔ Optimal support of the helmet  
 ➔ High comfort



## GRANITE PEAK



**Replaceable thermoformed sweat band**  
 ➔ Increased comfort  
 ➔ Good absorption of perspiration



**Polyamide cradle : 3 fabric bands with 8 attachment points**  
 ➔ Comfort of use guaranteed



## BASGAMMA



## JUGGAMMA



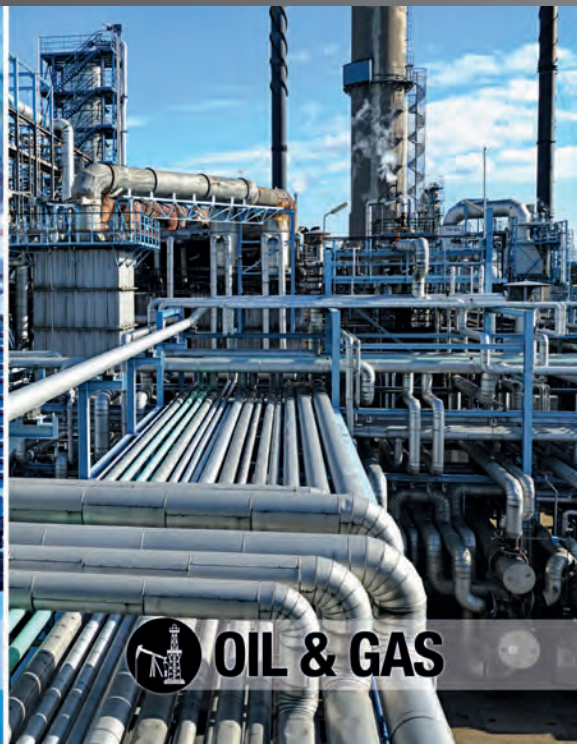
**Design without visor**  
 ➔ For work at height with an optimal field of vision



# SAFETY HELMETS



 **ENERGY**

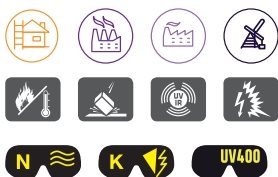


 **OIL & GAS**



 **INDUSTRY**

## ONYX



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

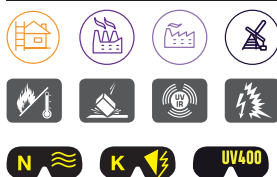
Integrated visor  
 ➔ Compact and combined solution



## HARNESS 0



## VISIONYXPR



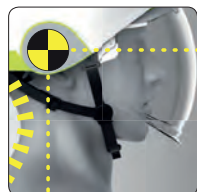
## DYNAMIC JUGBETA



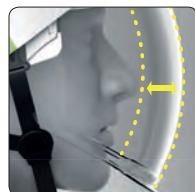


**A modern design inspired by the world of sport offering dual protection for harsh work environments and electric hazards at a price accessible to all users.**

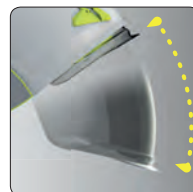
ONYX	White	ABS dual shell safety helmet with PC retractable visor. Sport and dynamic design. 3 textile straps with 6 fixing points. Foam sweat band. One-D Rotor clamping system: head size 53 to 63 cm. 2 possible positions of the headband (top/low) for a better comfort. Retro-reflective stickers. Electrical 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.	<b>CE</b> <b>EN397</b> LD MM -20°C +50°C 440VAC <b>EN50365</b> CLASS 0	<b>EN166</b> 1AT 8 9 KN / 3 8 9 AT <b>EN170</b> 2C-1.2 <b>GS-ET 29</b> 8-1-0 x 6
HARNESS 0	Black	Bag of 6 spare harnesses for ONYX safety helmet. Textile lining, foam sweat band, adjustment with One-D Rotor knob system.		x 10
VISIONYXPR	Clear	Spare polycarbonate injected visor for double-shell ONYX helmet.	<b>CE</b> <b>EN166</b> 1AT 8 9 KN / 3 8 9 AT <b>EN170</b> 2C-1.2	<b>GS-ET 29</b> 8-1-0 x 20
DYNAMIC JUGBETA	Black	Bag of 10 chin straps. 4 fixing points for work at height. Safety-breaking system. Suitable for ONYX safety helmet.		



Balanced centre of gravity  
 ➤ For a prolonged use  
 ➤ Reduction of musculoskeletal disorders (MSDs)



Comfortable distance between the visor and the user's face  
 ➤ Good ventilation, prevents fogging  
 ➤ Compatible with glasses



Easy locking of the visor in two positions  
 ➤ Optimum safety : The visor does not rise or fall unexpectedly



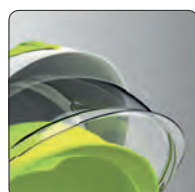
Optimised visor grip area  
 ➤ Guaranteed use and manoeuvrability with or without gloves



Lateral reflectivity  
 ➤ For more visible workers



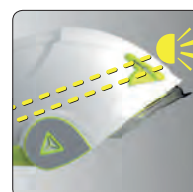
One-D Rotor ergonomic clamping system  
 ➤ One-handed adjustment with or without gloves



ABS double shell  
 ➤ Improved robustness, resistance to lateral deformation: increased protection



Replaceable visor  
 ➤ Easy replacement of damaged visors



Clips to hold a headlamp  
 ➤ Designed to attach a headlamp with an elastic headband



Microfibre storage bag  
 ➤ Easy storage for a longer product life

EUROPEAN STANDARD : EN166 - 8  
 GS-ET 29  
 Class 1 : 4 kA - 155 kJ.m<sup>2</sup> (3.7 cal.cm<sup>2</sup>)



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.

Marie Pourcher, Head Protection Product Expert



# SAFETY HELMETS



## BASEBALL DIAMOND V



Button tightening  
→ Easy adjustment with a simple push  
BASEBALL DIAMOND V



Neon colours and silver band  
→ To be better seen at your workstation  
BASEBALL DIAMOND V  
BASEBALL DIAMOND V UP



Very curved visor  
→ Best field of view at height  
BASEBALL DIAMOND V  
BASEBALL DIAMOND V UP



Also certified for wearing backwards down  
→ Maximum field of vision without visor  
BASEBALL DIAMOND V  
BASEBALL DIAMOND V UP



## HARNESS V



## BASEBALL DIAMOND V UP



One-D Rotor ergonomic clamping system  
→ One-handed adjustment with or without gloves  
BASEBALL DIAMOND V UP










Retro-reflective tapes  
→ To be better seen at your workstation



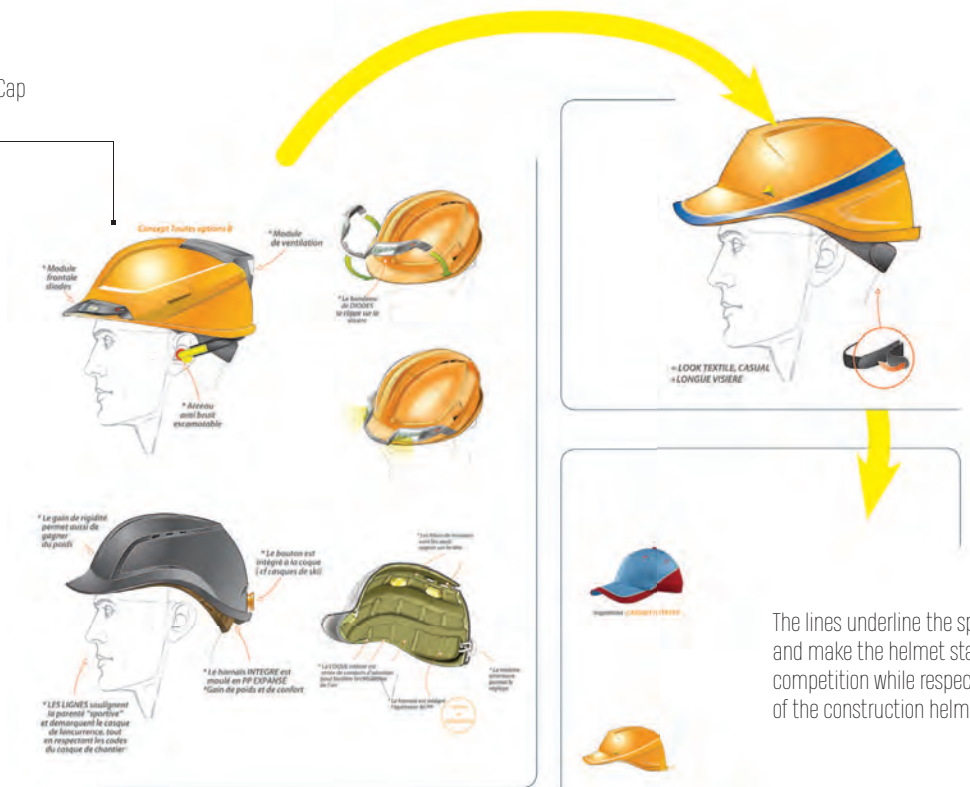
Polyamide cradle : 3 fabric bands with 8 attachment points  
→ Comfort of use guaranteed



**The iconic helmet in construction and industry with its unique design.**

					
BASEBALL DIAMOND V	White Blue Grey-Yellow Yellow Black Orange Red Green	ABS safety helmet. Innovative "baseball cap" shape to improve vision when looking up. Also tested for front 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 1 000 V.A.C. or 1 500 V.D.C.	 <b>EN397</b> MM LD -30°C +50°C 440 VAC <b>EN50365</b> CLASS 0	375 g	
BASEBALL DIAMOND V UP	White Blue Yellow Orange Red Green	ABS safety helmet with innovative design. Tested in "reverse" position. Polyamide cradle: 3 fabric bands with 8 attachment points. Foam sweat band. Rotor clamping system : head size 53 to 63 cm. 2 possible positions around the head (high/low) for better comfort. Retro-reflective band. Electrical insulation 1000 VAC/1500 VDC. Sold with 4 points chinstrap.		400 g	x 20
HARNESS V	Black	Bag of 10 spare harnesses for BASEBALL DIAMOND safety helmet. Textile lining, foam sweat band, adjustment with button.		7 g	x 10

Inspiration: Baseball Cap  
Casual Textile Look



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



Users are sometimes bothered by the very classic look of the market's safety helmets. In 2009, we jostled an overly uniform market by launching our PREMIUM helmet : the BASEBALL DIAMOND with a shape inspired by baseball caps. To date, we remain the only players on the market to offer a headset with a contrast colour and a particular look while ensuring a maximum level of protection.

Marie Pourcher, Head Protection Product Expert

# SAFETY HELMETS

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.	EN397 MM -30°C +50°C	350 g	
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 1 000 V.A.C. or 1 500 V.D.C.	CE EN397 MM -30°C +50°C 440VAC EN50365 CLASS 0	354 g	x 40

## QUARTZ UP IV



Adjustable ventilation  
→ Optimised ventilation  
QUARTZ UP IV



One-D Rotor ergonomic clamping system  
→ One-handed adjustment with or without gloves



## QUARTZ UP III



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





FORESTIER 3	Orange	Forester's type helmet consisting of: ZIRCON safety helmet: UV-resistant high density polyethylene (HDPE) or polypropylene (PP). Sweat band. Low density (LDPE) polyethylene cradle with 8 fixing points. SUZUKA2 ear defenders. VISOR HOLDER faceshield holder. VISORG gauze visor. Cardboard packaging.	EN397 -10°C +50°C 440VAC EN50365 CLASS 0 EN1731 F	EN352-3 SNR 24 dB H 27 M 21 L 14 S/M/L	810 g x 12
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 1500 V.D.C.	EN397 MM LD -30°C +150°C 440VAC	EN50365 CLASS 0	410 g x 40

## FORESTIER 3



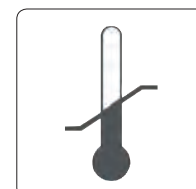
SNR 24 dB



## SUPER QUARTZ



Button tightening  
→ Easy adjustment with a simple push
















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



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



# SAFETY HELMETS

					
<b>QUARTZ I</b>	White Blue Yellow	<p>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.</p>	 <b>EN397</b> -10°C +50°C	322 g	x 40
					
<b>ZIRCON 1</b>	White Blue Grey Yellow Orange Red Green	<p>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.</p>	 <b>EN397</b> -10°C +50°C 440VAC <b>EN50365</b> CLASS 0	330 g	x 40
					
<b>WINTER CAP</b>	Black	<p>Lining placed inside the helmet. Accessory for extreme cold protection, easy to remove. User instructions included. Suitable for our range of helmets. This is not PPE.</p>		125 g	x 40
					
<b>FUEGO</b>	Clear	<p>Clear polycarbonate single lens glasses to use as an accessory for safety helmet. Wraparound design for maximum protection. Folding system in the helmet when it is not used, for intermittent use. Very convenient. Branches foldable for easy positioning in the helmet. Suitable for our range of safety helmet.</p>	 <b>EN166</b> 1 FT / FT <b>EN170</b> UV 2C-1.2	34 g	x 100
					











<b>JUGGAMMA</b> 	Black	Bag of 5 chin straps with 3 fixing points. Safety-breaking system. Suitable for GRANITE PEAK and GRANITE WIND safety helmets.	Adjustable	x 20
<b>BASGAMMA</b> 	Black	Bag of 5 thermoformed sweat bands. Suitable for QUARTZ UP, SUPER QUARTZ, BASEBALL DIAMOND and GRANITE safety helmets.		x 20
<b>DYNAMIC JUGBETA</b> 	Black	Bag of 10 chin straps. 4 fixing points for work at height. Safety-breaking system. Suitable for ONYX safety helmet.	Adjustable	x 20
<b>DYNAMIC JUGALPHA</b> 	Black	Bag of 10 chin straps. 4 fixing points for work at height. Safety-breaking system. Suitable for ZIRCON, QUARTZ, QUARTZ UP, SUPER QUARTZ and BASEBALL DIAMOND safety helmets.	Adjustable	x 20
<b>MENTALPHA</b> 	Black	Bag of 10 elastic chin straps with chin protector. Safety-breaking system. Suitable for ZIRCON, QUARTZ, QUARTZ UP, SUPER QUARTZ and BASEBALL DIAMOND safety helmets.	Adjustable	x 20
<b>JUGALPHA</b> 	Black	Bag of 10 chin straps. Safety-breaking system. Suitable for ZIRCON, QUARTZ, QUARTZ UP, SUPER QUARTZ and BASEBALL DIAMOND safety helmets.	Adjustable	x 20
<b>BASALPHA</b> 	Black	Bag of 10 foam sweat bands. Suitable for ZIRCON, QUARTZ, QUARTZ UP, SUPER QUARTZ, BASEBALL DIAMOND and GRANITE safety helmets and for BALBIZ, PICO2 and VISOR-H faceshields.		x 20
<b>NECKALPHA</b> 	Fluorescent orange	Bag of 2 neck protections adaptable on ZIRCON, QUARTZ, BASEBALL DIAMOND, GRANITE and ONYX safety helmets. High-visibility. Protects from the Sun's radiations and from dust.	Adjustable	
<b>HESTICKER</b> 	Metal grey Red	Bag of stickers for DELTA PLUS safety helmets.	One size	x 240



# SKULL PROTECTION BUMP CAP

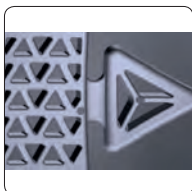
A new generation protection cap: The protective shell and the absorbent foam are one!

					
KAIZIO	Grey-Black	Ergonomic bump cap suitable for all. Polyester / cotton fabric with ventilated mesh. Equipped with an inner shell in PP molded of a TPE cellular band for better shock absorption and longer lifespan.	CE EN812	185 g	x 20

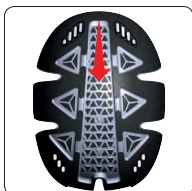
## KAIZIO



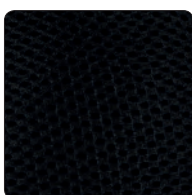
TPE Multi-block over-moulding protection pad with 7 independent pads  
 ➔ Limits the "helmet" effect by reducing contact with the skull and improves airflow



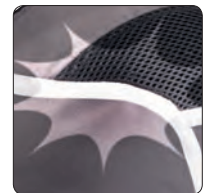
Triangles form small closed cells that allow the heat to not stay in contact with the skull  
 ➔ More comfort when carrying



Over-moulding of the TPE foam on the PP shell  
 ➔ Increased longevity : Zero risk of detachment on wear  
 ➔ Washable



Perforated area under the mesh fabric forming air entrances and outlets allow the heat not to stay in contact with the skull  
 ➔ Reduction of perspiration



Retro-reflective tapes  
 ➔ To be better seen at your workstation



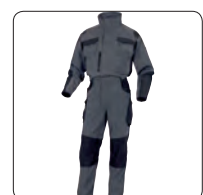
Visor 5 cm  
 ➔ Guaranteed visual comfort



Adjustable buckle with Velcro strap closure  
 ➔ Easy adjustment with a simple push



Universal fit  
 ➔ One size for all



Matched to the MACH 5 clothing range  
 ➔ Total look



Our goal has been to design a "system" of pads for breathability while ensuring increased durability. So we opted for a pad in TPE (+ hygienic) and with good mechanical shock absorption - cf. curve) over moulded on the PP shell (better durability).

Marie Pourcher, Head Protection Product Expert



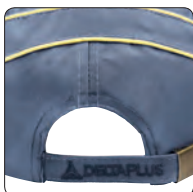
AIR COLTAN	Navy blue-Orange Grey-Yellow Fluorescent yellow-Grey Black-Red	Impact resistant baseball style bump cap. Highly ventilated polyester/cotton with mesh fabric on top part for more comfort. Lined with polyethylene and comfortable EVA foam shell to absorb shocks. Adjustable size by buckle 55/62 cm.	CE EN812	176 g	x 20
COLTAN	Navy blue			150 g	

## AIR COLTAN



Bi-material


Polyethylene shell with 18 holes  
→ Ventilation

Ventilated Mesh fabric  
→ Reduction of perspiration

Rear tightening  
→ Easy adjustment


COLTAAIJAF - 7 cm


Assorted colours available  
to match the MACH 2  
CORPORATE clothing range  
- PANOSTYLE HV - DMACH


COLTAAIBMSH - 5 cm



COLTAAIBM - 7 cm



COLTAAIGRMI - 3 cm



COLTAAIGR - 7 cm



COLTAAINOMI - 3 cm



COLTAAINOSH - 5 cm



COLTAAINOLG - 7 cm

## COLTAN



COLTABMMI - 3 cm



COLTABMSH - 5 cm

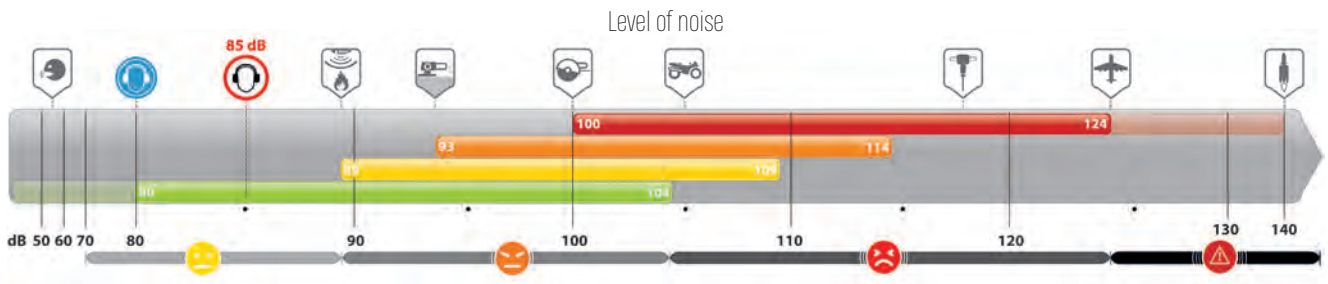


COLTABL - 7 cm

# HEARING PROTECTION HELP WITH CHOICE

## EAR DEFENDERS AND EARPLUGS

		SPA3	SUZUKA2	SEPANG2	PIT RADIO3	INTERLAGOS	SILVERSTONE2	YAS MARINA	MAGNY COURSE2	MAGNY HELMET2
CE EN352	100 - 124 dB									
	93 - 114 dB					30 dB		30 dB		
	89 - 109 dB			26 dB	27 dB					
	80 - 104 dB	23 dB	24 dB							
	HML	H 24 M 20 L 13	H 27 M 21 L 14	H 30 M 24 L 15	H 31 M 24 L 16	H 30 M 28 L 20		H 33 M 29 L 19		
	Weight	155 g	252 g	208 g	343 g	286 g	240 g	299 g	338 g	286 g
	Description	Light	HV colour	Comfort headband	AM FM Radio	HV colour reinforced headband	Adjustment behind the head	Reinforced headband Foldable		



Attenuation values for noise



NOISE	SNR
80 - 104 dB	20 - 24 dB
89 - 109 dB	25 - 29 dB
93 - 114 dB	30 - 35 dB
100 - 124 dB	36 - 39 dB



		CONICSOFT	CONICAP	CONICFIRDE	CONICFIR	CONICMOVE	CONICFIT	CONICPLUS	CONICCOPLUS	CONICDE	CONICCO	CONIC
CE EN352	100 - 124 dB									36 dB	36 dB	36 dB
	93 - 114 dB						32 dB	35 dB	35 dB			
	89 - 109 dB	26 dB	28 dB	28 dB	29 dB	29 dB						
	80 - 104 dB											
	HML	H 25 M 23 L 22	H 29 M 24 L 22	H 27 M 25 L 23	H 29 M 27 L 24	H 31 M 25 L 23	H 32 M 29 L 28	H 35 M 33 L 30	H 35 M 33 L 30	H 34 M 34 L 31	H 34 M 34 L 31	H 34 M 34 L 31
	Material	Silicone	PU	TPR	TPR	PU	Silicone	PU	PU	PU	PU	PU
	Ø	8-10 mm	8-18 mm	7 - 11 mm	7-11 mm	12-17 mm	8-12 mm	6-15 mm	6-15 mm	7-12 mm	7-12 mm	7-12 mm
	Cord	Textile	Foldable headband	Textile	Textile	Ergonomic headband	Textile	-	Plastic	Plastic	Plastic	-
	Uses	Reusable	Reusable	Reusable Detectable	Reusable	Reusable	Reusable	Disposable	Disposable	Disposable Detectable	Disposable	Disposable
	Packaging	x10 x1	x1	x10 x1	x10 x1	x1	x10 x1	x200 x200	x200 x200	x10 x1	x200 x200	x10 x200 x500





EZ-COM	Black-Grey	Bluetooth 3.0 hands-free kit. Adaptable for safety helmets and ear defenders. "EZ to EZ" peering for simultaneous conversation. Autonomy in use: 10 h. Mounting bracket for safety helmet and ear defender included. USB charging cable included.	2014/53/UE	71 g	x 10
PIT-RADIO 3	Black-Red	Electronic ear defender, equipped with a radio system. Allows you to listen to the radio in the FM band (87-108 MHz), while protecting hearing, in an efficient and enjoyable way. Requires 2 AA batteries not included.	CE EN352-1 SNR 27 dB H 31 M 24 L 16 S/M/L EN352-6 EN352-8	ANSI ANSI S3.19 NRR 22 dB	388 g x 20

EZ-COM: Safely and easily communicate handsfree at work.

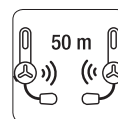
## EZ-COM



Attachment kit on ear defender  
 ↳ Communicates while remaining protected from harmful noises



Attachment kit on a safety helmet  
 ↳ Communicates while remaining protected from shocks



2 users  
 ↳ Intracom System : Autonomous communication system  
 ↳ Conversation with 2 in full duplex



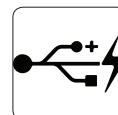
Reduction of ambient noise by DSP  
 ↳ Keeps an audible conversation in any type of environment



Bluetooth  
 ↳ Compatible with all Bluetooth communicating systems



Resistance to water and dust  
 ↳ Use in aggressive environments



With Lithium battery  
 ↳ USB cable included  
 ↳ Battery rechargeable in 2 hours



Autonomy : 10 am in communication  
 ↳ Over a day of autonomous work

## PIT-RADIO 3



SNR 27 dB



Operates with AA battery  
 ↳ Not included



AUX-IN jack  
 ↳ MP3 connection





# EAR DEFENDERS

INTERLAGOS	Grey Fluorescent yellow	Ear defenders with ABS cups. Pads filled with synthetic foam. Double plastic headband (POM), adjustable in height, with soft reinforcement for a better comfort.	EN352-1 SNR 30 dB H 30 M 28 L 20 S/M/L	ANSI S3.19 NRR 28 dB	290 g
YAS MARINA	Grey-Orange	Foldable ear defenders with ABS cups. Pads filled with synthetic foam. Double plastic headband (POM), adjustable in height, with foam reinforcement for a better comfort.	EN352-1 SNR 30 dB H 33 M 29 L 19 S/M/L		299 g
INTERHYKIT		5 Hygiene Kits (cushions + foam inserts) for INTERLAGOS, YAS-MARINA, SILVERSTONE2 and SEPANG2 earmuffs.			175 g x 5

## INTERLAGOS



Double headband  
➔ Greater flexibility and comfort



Ear defender holder tool included on the belt  
➔ Hearing protection always at your fingertips



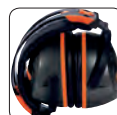
HV colour  
➔ To be better seen at your workstation

Colour identification  
➔ Indicates the level of protection

## YAS MARINA



Double headband  
➔ Greater flexibility and comfort

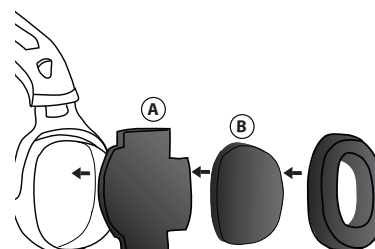


Foldable hoop  
➔ Less space, easier storage



Ear defender holder tool included on the belt  
➔ Hearing protection always at your fingertips

## INTERHYKIT



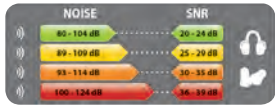


SILVERSTONE 2	Fluorescent yellow	Ear defenders for wearing around the neck. Metal arch and ABS cups, padded with synthetic foam.	EN352-1	270 g	x 20
SEPANG 2	Orange	Ear defenders with ABS and synthetic foam cups. Polycarbonate headband, adjustable in height, padded and flexible.	CE EN352-1 SNR 26 dB H 30 M 24 L 15 S/M/L	ANSI S3.19 NRR 21 dB	208 g x 50

SILVERSTONE 2



SNR 30 dB



Without headband  
→ Easy to wear with all safety helmets and caps



SEPANG 2



SNR 26 dB



# EAR DEFENDERS

MAGNY-COURS 2		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.	EN352-1 SNR 33 dB H 34 M 32 L 25 S/M/L	ANSI S3.19 NRR 26 dB	
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.	EN352-3 SNR 30 dB H 32 M 28 L 22 S/M/L	ANSI S3.19 NRR 25 dB	x 20
SPA 3	Blue-Black	Ear defenders with polystyrene (PS) and synthetic foam cups. ABS headband, adjustable in height. Low pressure pads.	EN352-1 SNR 23 dB H 24 M 20 L 13 S/M/L		154 g x 50
SUZUKA 2	Fluorescent yellow Black	Ear defenders for safety helmets. Adjustable in height. High flexibility ABS arms and cups. Cups padded with synthetic foam. Can be used on their own or with «VISOR HOLDER» faceshield holder. Suitable for GRANITE, SUPER QUARTZ, QUARTZ, ZIRCON and BASEBALL DIAMOND safety helmets.	EN352-3 SNR 24 dB H 27 M 21 L 14 S/M/L	ANSI S3.19 NRR 21 dB	254 g x 20

## MAGNY-COURS 2



SNR 30 dB


Metallic headgear  
→ More robustness


## MAGNY HELMET 2



SNR 33 dB



## SPA 3



SNR 23 dB



## SUZUKA 2



SNR 24 dB



## REUSABLE EARPLUGS

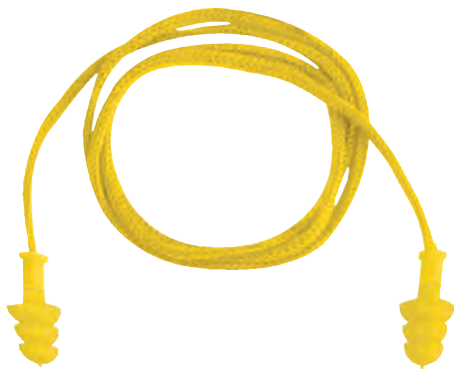


CONICFIR050		Box of 50 pairs of reusable TPR earplugs with fabric cord.		x 20
CONICFIR010	Yellow	Bag of 10 pairs of reusable thermoplastic (TPR) earplugs with textile cord. Can be used with or without cord (9 pairs in bag + 1 pair in storage plastic box).	EN352-2 SNR 29 dB H 29 M 27 L 24 Ø 7-11 mm ANSI S3.19 NRR 25 dB	
CONICFIRDE010	Blue-Yellow	Bag of 10 pairs of detectable and reusable TPR earplugs with textile cord. Metal insert, suitable for food industry. Can be used with or without cord (9 pairs in bag + 1 pair in storage plastic box).	CE EN352-2 SNR 28 dB H 27 M 25 L 23 Ø 7-11 mm	x 100
CONICFIT010	Orange	Bag of 10 pairs of reusable silicone earplugs with nylon cord. Can be used with or without cord (9 pairs in bag + 1 pair in storage plastic box).	EN352-2 SNR 32 dB H 32 M 29 L 28 Ø 8-12 mm ANSI S3.19 NRR 26 dB	
CONICSOF010	Yellow	Bag of 10 pairs of reusable silicone earplugs with textile cord. Can be used with or without cord (9 pairs in bag + 1 pair in storage plastic box).	EN352-2 SNR 28 dB H 25 M 23 L 22 Ø 8-10 mm ANSI S3.19 NRR 22 dB	

## CONICFIR050

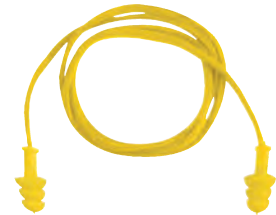


x 50



Silicone free product  
 ➤ Ideal for the automotive industry

Profiled design with 3 fins: more material in contact with the ear canal  
 ➤ Optimised sealing and noise attenuation



x 1

## CONICFIR010

## CONICFIRDE010



x 1



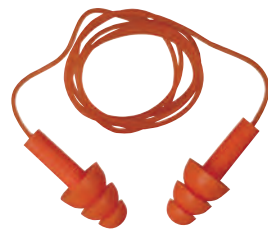
Magnetically detectable product  
 ➤ Suitable for the food industry

Profiled design with 3 fins: more material in contact with the ear canal  
 ➤ Optimised sealing and noise attenuation

## CONICFIT010



x 1











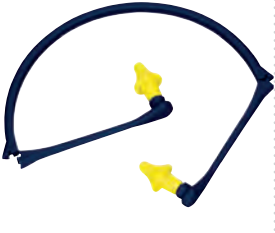

















x 1

## CONICSOF010



## DISPOSABLE EARPLUGS

 <b>CONICMOVE01</b> 	 Blue-Yellow	 PU earplugs with headband in polypropylene which can be worn under the chin. Ideal for intermittent or occasional wear. Very stable ergonomic headband ➤ Very good performance in use Very comfortable round plugs ➤ Extended use 	 <b>EN352-2</b> SNR 29 dB H 31 M 25 L 23 Ø 12-17 mm  <b>ANSI S3.19</b> NRR 23 dB	 x 100
<b>CONICMOVE01BR</b> 	Yellow	Bag of 10 pairs of spare earplugs for CONICMOVE01. 		x 200
<b>CONICAP01</b> 	Blue-Yellow	PU earplugs with headband in polypropylene which can be worn under the chin. Ideal for intermittent or occasional wear. Individual pack. 	 <b>EN352-2</b> SNR 28 dB H 29 M 24 L 22 Ø 8-18 mm  <b>ANSI S3.19</b> NRR 21 dB	x 200
<b>CONICAP01BR</b> 	Yellow	Bag of 10 pairs of spare earplugs for CONICAP01. 		x 200
<b>CONICPLUS200</b> 	Fluorescent orange	Dispenser box of 200 pairs HV disposable PU earplugs. Ergonomic design for more comfort with DELTA EASYFIT integrated system for easier insertion in the ear canal. Individual plastic bag of 2 earplugs.  Ergonomic shape ➤ Optimal placement in the auditory canal Orange colour ➤ Indicates the level of protection in the workplace 	 <b>EN352-2</b> SNR 35 dB H 35 M 33 L 30 Ø 6-15 mm  <b>ANSI S3.19</b> NRR 32 dB	x 5
<b>CONICCOPLUS200</b> 	Fluorescent orange	Dispenser box of 200 pairs HV disposable PU earplugs with plastic cord. Ergonomic design for more comfort. Individual plastic bag of 2 earplugs.  Ergonomic shape ➤ Optimal placement in the auditory canal Orange colour ➤ Indicates the level of protection in the workplace 	 <b>EN352-2</b> SNR 35 dB H 35 M 33 L 30 Ø 6-15 mm  <b>ANSI S3.19</b> NRR 32 dB	x 5



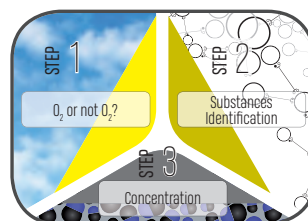


<b>CONICDE010</b>   x1	Blue	<p>Bag of 10 pairs of detectable polyurethane earplugs with plastic cord. Metal insert, suitable for food industry. (9 pairs in bag + 1 pair in storage plastic box).</p>	<b>EN352-2</b> SNR 36 dB H 34 M 34 L 31 Ø 7-12 mm <b>ANSI S3.19</b> NRR 33 dB	x 100
<b>CONICC0200</b> 	Red	<p>Dispenser box of 200 pairs disposable polyurethane earplugs with plastic cord. Individual plastic bag of 2 earplugs.</p>	<b>EN352-2</b> SNR 36 dB H 34 M 34 L 31 Ø 7-12 mm <b>ANSI S3.19</b> NRR 33 dB	x 5
<b>CONIC010</b> 	Red	<p>Bag of 10 pairs of disposable polyurethane earplugs. Individual plastic bag of 2 earplugs.</p>	<b>EN352-2</b> SNR 36 dB H 34 M 34 L 31 Ø 7-12 mm <b>ANSI S3.19</b> NRR 33 dB	x 200
<b>CONIC200</b> 	Red	<p>Dispenser box of 200 pairs disposable polyurethane earplugs. Individual plastic bag of 2 earplugs.</p>	<b>EN352-2</b> SNR 36 dB H 34 M 34 L 31 Ø 7-12 mm <b>ANSI S3.19</b> NRR 33 dB	x 5
<b>CONIC500</b> 	Red	<p>Box of 500 pairs disposable polyurethane earplugs. Refill unit for CONICDISPLAY.</p>	<b>EN352-2</b> SNR 36 dB H 34 M 34 L 31 Ø 7-12 mm <b>ANSI S3.19</b> NRR 33 dB	x 5
<b>CONIC DISPLAY</b> 	Grey	<p>Dispenser for earplugs including a refill of 500 pairs of CONIC500 earplugs.          CONIC500 refill          Attachment system included          ➤ Attaches to the wall or sits</p> <b>EN352-2</b> SNR 36 dB H 34 M 34 L 31 Ø 7-12 mm <b>ANSI S3.19</b> NRR 33 dB	x 4	
<b>DEAR BOX</b> 		<p>Display box for DELTA PLUS earplugs range.</p>		x 40

# RESPIRATORY PROTECTION HELP WITH CHOICE

**CHEM D-FINDER** 

<http://respiratory.deltaplus.eu>



## STEP 1

**O<sub>2</sub> OR NOT O<sub>2</sub>?**

AIR IS MAINLY  
COMPOSED OF:

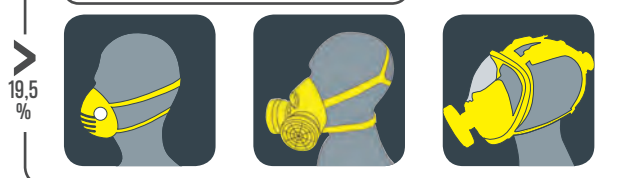
78 % Nitrogen

21 % Oxygen

1 % Other gas

O<sub>2</sub>?

**FILTERING\***



> 19,5 %

\*Except for :  
- strong hazardous substance  
- [C] > 2000 x OEL  
- no odor



**INSULATING\***

## STEP 2

**IDENTIFY THE TYPE OF RISK**

PARTICLES  
AEROSOLS



P



GAS  
VAPOURS



A

B

E

K

Hg

**AEROSOLS**



Mist



Fume



Dust

**VAPOURS**



Vapours



Gases

**OEL**

**OCCUPATIONAL EXPOSURE LIMIT**

**TWA**   
**TIME WEIGHTED  
AVERAGE**

Average  
exposure limit  
over an 8 hour  
time period

**STEL** 

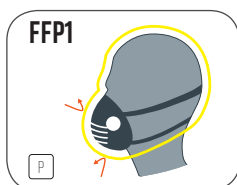
**SHORT TERM  
EXPOSURE LIMIT**

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

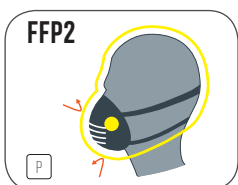
## STEP 3

**CONCENTRATION**

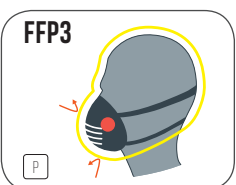
in ppm or mg/m<sup>3</sup>



PROTECTION FACTOR x 4



PROTECTION FACTOR x 12



PROTECTION FACTOR x 50



PROTECTION FACTOR x 50



PROTECTION FACTOR x 2000

<2000 x OEL  
= **FILTERING SYSTEM**

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

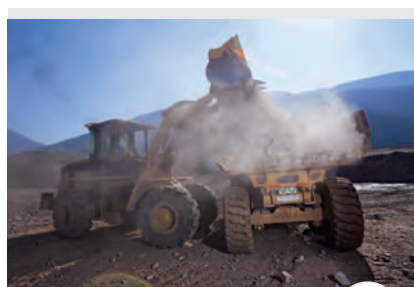
**(Concentration)**

>2000 x OEL  
= **INSULATING SYSTEM**

**NPF: Nominal Protection Factor** means the level of protection tested in laboratory  
The Level of APF, Assigned Protection Factor, might be different according local regulations



# DISPOSABLE RESPIRATORY PROTECTION



## FFP1

8h

Nominal protection factor\* x 4

Cement dust, flour, calcium carbonate, (chalk), graphite, cotton, concrete... \*\*



## FFP2

8h

Nominal protection factor\* x 12

Untreated softwood, grinding, cutting, welding, milling, coal, glass fibre, mineral fibre, graphite, powdered pesticide... \*\*

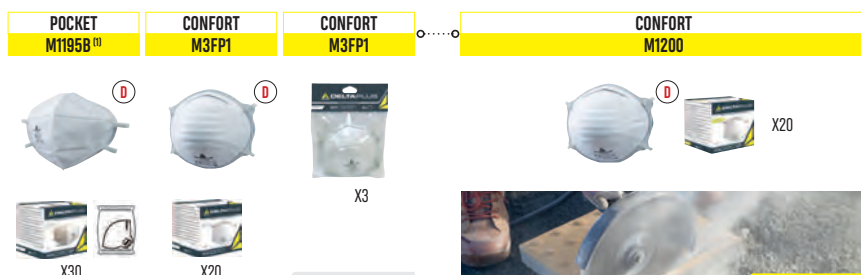
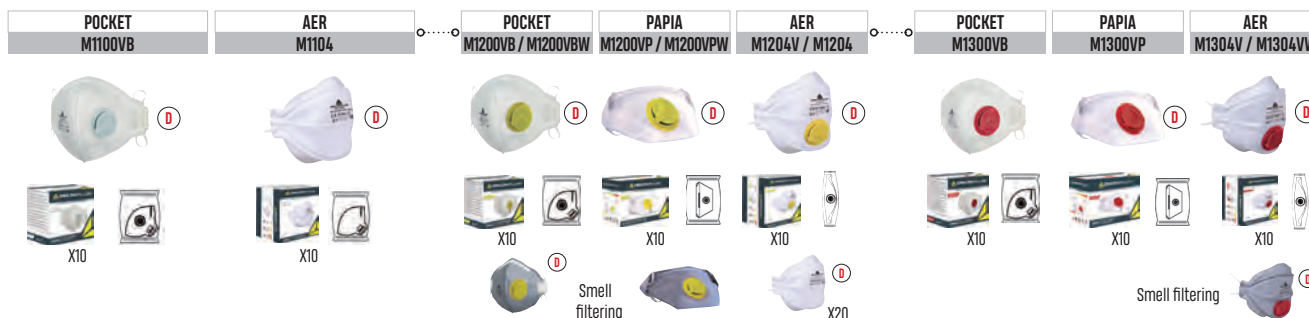
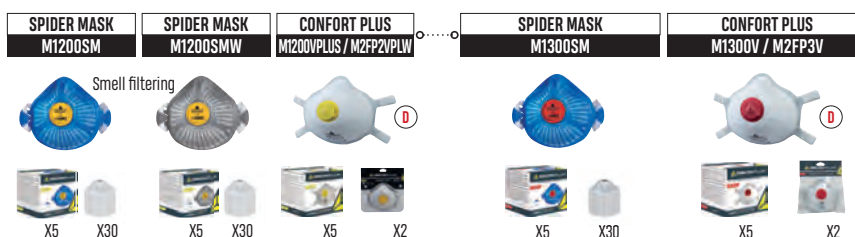


## FFP3

8h

Nominal protection factor\* x 50

Asbestos (without manipulation), powdered pesticide, biological agents, pharmaceutical powder, treated wood, hard wood (exotic), chromium, lime, lead... \*\*



## FFP1

## FFP2

## FFP3

Optional test of EN149: 2001 standard for clogging of dolomite dust.  
\*The Assigned Protection Factor, might be different according local regulations.  
\* This list is indicative but not contractual and can not engage the responsibility of DELTA PLUS.

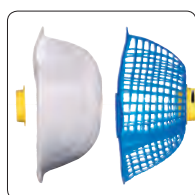


# DISPOSABLE RESPIRATORY

## SPIDER MASK



### SPIDERMASK P3 X5



High performance exhalation valve  
➔ Better evacuation of moisture and heat for extended comfort of use

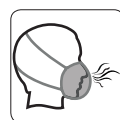


Clip closure at the back with textile elastic  
➔ Easy to set-up and remove

### SPIDERMASK P2 X5



### SPIDERMASK P2W X5



Activated charcoal  
➔ Protection from nuisance odours



Very soft and comfortable TPE shell

➔ Even after crushing the mask systematically returns to its original shape for a perfect fit on the face

Screw system to change the filtering facepiece

➔ Economical and ecological solution with the replacement of filter media only

### SPIDER REFILL FFP3



### SPIDER REFILL FFP2



### SPIDER REFILL FFP2W







## An economical and ecological solution while ensuring maximum user comfort.

SPIDERMASK P3 X5	Blue	Box of 5 reusable FFP3 dust mask. 5 Reusable moulded mask shells in TPE. Replaceable non woven synthetic fibre disposable filter (SPIDERREFILL FFP3). High performance valve which unscrews to allow the user to change the mask filter. Adjustable straps. Back fixing with clip.	EN149	x 10
SPIDERMASK P2 X5		Box of 5 reusable FFP2 dust mask. 5 Reusable moulded mask shells in TPE. Replaceable non woven synthetic fibre disposable filter (SPIDERREFILL FFP2). High performance valve which unscrews to allow the user to change the mask filter. Adjustable straps. Back fixing with clip.		
SPIDERMASK P2W X5	Grey	Box of 5 reusable FFP2W dust mask. 5 Reusable moulded mask shells in TPE. Active carbon non woven synthetic fibre disposable masks for organic vapours (for concentration < VME). Protection against harmful odours (welding fumes for example). Replaceable. High performance valve which unscrews to allow the user to change the mask filter (SPIDERREFILL FFP2W). Adjustable straps. Back fastening with clip.		
SPIDER REFILL FFP3	White	Box of 30 pieces of non woven synthetic fibre disposable masks FFP3 protection. Spare parts for SPIDER MASK.		
SPIDER REFILL FFP2		Box of 30 pieces of non woven synthetic fibre disposable masks FFP2 protection. Spare parts for SPIDER MASK.		
SPIDER REFILL FFP2W	Grey	Box of 30 pieces of active charcoal non woven synthetic fibre disposable masks FFP2W for organic vapours (for concentration < VME). Protection against harmful odours (welding fumes for example). Spare parts for SPIDER MASK.		



Less waste : Re-use of the valve, the elastics, and TPE shell.

More economical : Replacing of the filter media without discarding the other components of the mask.

Comfort superior to a classic disposable mask : Adjustment of the elastic via the rear clip.



Ecology a topic at the heart of the news. And at the heart of PPE? DELTA PLUS offers a green alternative to disposable masks : SPIDERMASK, a disposable mask with 70% of its components reusable for 1 month !

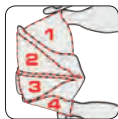
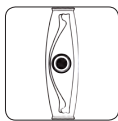
Marie Pourcher, Head Protection Product Expert

## DISPOSABLE RESPIRATORY

AER

M1304V	White	Box of 10 non woven synthetic fibre disposable masks FFP3. Mask with 4 foldable parts suitable for all faces. Nose clip for adjustment. Foam edge under nose clip. High performance exhalation valve. Hygienic individual plastic bag. DOLOMIA optional test for longer continuous wear time.		
M1304VW	Grey	Box of 10 active charcoal non woven synthetic fibre disposable masks FFP3 for organic vapours (for concentration < VME). Protection against harmful odours (welding fumes for example). Mask with 4 foldable parts suitable for all faces. Nose clip for adjustment. Foam edge under nose clip. High performance exhalation valve. Hygienic individual plastic bag. DOLOMIA optional test for longer continuous wear time.		
M1204V		Box of 10 non woven synthetic fibre disposable masks FFP2. Mask with 4 foldable parts suitable for all faces. Nose clip for adjustment. Foam edge under nose clip. High performance exhalation valve. Hygienic individual plastic bag. DOLOMIA optional test for longer continuous wear time.	CE EN149	x 10
M1104	White	Box of 20 non woven synthetic fibre disposable masks FFP1. Mask with 4 foldable parts suitable for all faces. Nose clip for adjustment. Foam edge under nose clip. Hygienic individual plastic bag. DOLOMIA optional test for longer continuous wear time.		
M1204		Box of 20 non woven synthetic fibre disposable masks FFP2. Mask with 4 foldable parts suitable for all faces. Nose clip for adjustment. Foam edge under nose clip. Hygienic individual plastic bag. DOLOMIA optional test for longer continuous wear time.		

## M1304V



Without staples



High performance exhalation valve  
 ↳ Minimises moisture inside the mask



Tubular textile elastic  
 ↳ Very comfortable to wear

## M1304VW



## M1204V



## M1104



## M1204



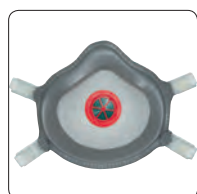
# DISPOSABLE RESPIRATORY

## CONFORT PLUS



M1300V		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.		x 10
M2FP3V	White	Pack of 2 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.	EN149 NIOSH N99	x 36
M1200VPLUS		Box of 5 non woven synthetic fibre disposable masks FFP2. Wide adjustable straps. Moulded mask. Nose clip for adjustment. Complete ultra-soft face joint ring. High performance exhalation valve.		x 10
M2FP2VPLW		Pack of 2 active charcoal non woven synthetic fibre disposable masks FFP2 for organic vapours (for concentration < VME). Flame retardant. Wide adjustable straps. Moulded mask. Nose clip for adjustment. Foam edge under nose clip. High performance exhalation valve. DOLOMIA optional test for longer continuous wear time.	EN149 NIOSH N95 or N99	x 40

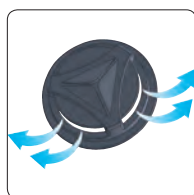
### M1300V



Ultra-soft full facial seal  
 ➔ Increased comfort and optimal sealing



Wide adjustable straps  
 ➔ Precise tightening and adjustment

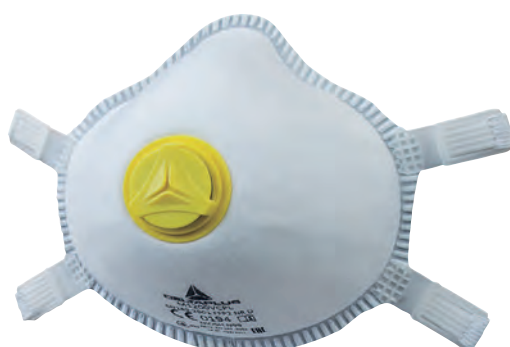


High performance exhalation valve  
 ➔ Minimises moisture inside the mask

### M2FP3V



### M1200VPLUS








































### M2FP2VPLW



Flame retardant  
 ➔ Ideal for nuisance odours or soldering

## DISPOSABLE RESPIRATORY

CONFORT

				
<b>M1300V2</b> 	White	Box of 10 non woven synthetic fibre disposable masks FFP3. Moulded mask. Nose clip for adjustment. EVA edge for extra comfort under nose clip. High performance exhalation valve. DOLOMIA optional test for longer continuous wear time. 	 EN149	x 10
<b>M1200V</b> 	White	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. 	 EN149 	x 10
<b>M2FP2V</b> 	White	Pack of 2 non woven synthetic fibre disposable masks FFP2. Moulded mask. Nose clip for adjustment. Reinforced foam edge under nose clip. High performance exhalation valve. DOLOMIA optional test for longer continuous wear time. 	 EN149 	x 36
<b>M1200VW</b> 	Grey	Box of 10 active charcoal non woven synthetic fibre disposable masks FFP2 for organic vapours (for concentration < VME). Protection against harmful odours (welding fumes for example). Moulded mask. Nose clip for adjustment. Foam edge under nose clip. High performance exhalation valve. DOLOMIA optional test for longer continuous wear time. 	 EN149 	x 10
<b>M2FP2VW</b> 	White	Pack of 2 active charcoal non woven synthetic fibre disposable masks FFP2 for organic vapours (for concentration < VME). Protection against harmful odours (welding fumes for example). Moulded mask. Nose clip for adjustment. Foam edge under nose clip. High performance exhalation valve. Hygienic individual plastic bag. DOLOMIA optional test for longer continuous wear time. 	 EN149 	x 36
<b>M1100V</b> 	White	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. 	 EN149	x 10
<b>M1200</b> 	White	Box of 20 non woven synthetic fibre disposable masks FFP2. Moulded mask. Nose clip for adjustment. Foam edge under nose clip. DOLOMIA optional test for longer continuous wear time. 	 EN149 	x 10
<b>M1100</b> 	White	Box of 20 non woven synthetic fibre disposable masks FFP1. Moulded mask. Nose clip for adjustment. Foam edge under nose clip. DOLOMIA optional test for longer continuous wear time. 	 EN149	x 10
<b>M3FP1</b> 	White	Pack of 3 non woven synthetic fibre disposable masks FFP1. Without valve. Moulded mask. Nose clip for adjustment. Foam edge under nose clip. DOLOMIA optional test for longer continuous wear time. 	 EN149	x 36



## DISPOSABLE RESPIRATORY

POCKET - PAPIA



<b>M1300VB</b> 	White	Box of 10 non woven synthetic fibre disposable masks FFP3. Nose clip for adjustment. High performance exhalation valve. Hygienic individual plastic bag.	CE EN149	x 10
<b>M1200VB</b> 	White	Box of 10 non woven synthetic fibre disposable masks FFP2. Nose clip for adjustment. High performance exhalation valve. Hygienic individual plastic bag. DOLOMIA optional test for longer continuous wear time.	CE EN149 NIOSH N95	x 10
<b>M1200VBW</b> 	Grey	Box of 10 active charcoal non woven synthetic fibre disposable masks FFP2 for organic vapours (for concentration < VME). Protection against harmful odours (welding fumes for example). Nose clip for adjustment. High performance exhalation valve. Hygienic individual plastic bag. DOLOMIA optional test for longer continuous wear time.	CE EN149	x 10
<b>M1100VB</b> 	White	Box of 10 non woven synthetic fibre disposable masks FFP1. Nose clip for adjustment. High performance exhalation valve. Hygienic individual plastic bag. DOLOMIA optional test for longer continuous wear time.	CE EN149	x 10
<b>M1300VP</b> 	White	Box of 10 non woven synthetic fibre disposable masks FFP3. Nose clip for adjustment. Complete foam face joint ring. High performance exhalation valve. Hygienic individual plastic bag. DOLOMIA optional test for longer continuous wear time.	CE EN149	x 10
<b>M1200VP</b> 	White	Box of 10 non woven synthetic fibre disposable masks FFP2. Nose clip for adjustment. Foam edge under nose clip. High performance exhalation valve. Hygienic individual plastic bag. DOLOMIA optional test for longer continuous wear time.	CE EN149 NIOSH N95	x 10
<b>M1200VPW</b> 	Grey	Box of 10 active charcoal non woven synthetic fibre disposable masks FFP2 for organic vapours (for concentration < VME). Protection against harmful odours (welding fumes for example). Nose clip for adjustment. Foam edge under nose clip. High performance exhalation valve. Hygienic individual plastic bag. DOLOMIA optional test for longer continuous wear time.	CE EN149 NIOSH N95	x 10

# RESPIRATORY PROTECTION HELP WITH CHOICE

## REUSABLE RESPIRATORY PROTECTION



GAS  
VAPOURS

**A B E K Hg**

EN14387

PARTICLES  
AEROSOLS

**P**

EN143/A1



EN136

PREMIUM

M9200 - ROTOR GALAXY

M9300 - STRAP GALAXY



- Rotor® registered mark
- Adjustable size
- Wide vision (210°)



- 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 B2  
M9000E B2P3  
M9000E E2  
M9000E E2P3



M9000E A2



M9000E A2B2E2K2



M9000E A2P3



M9000E A2B2E2K2P3



X4



M9000 P3



EN140

EVOLUTION

M6400 - JUPITER

M6200 - JUPITER



- Comfort half mask PP/TPE
- Elastic straps and harness
- 2 filter cartridges



- Comfort half mask in tri-material
- Elastic straps
- 2 filter cartridges



X2



M6000E PREP2



M6000 P2



M6000E PREP3



M6000 P3



M6000 PREP3



M6000 P2CLIP

M6300 - JUPITER

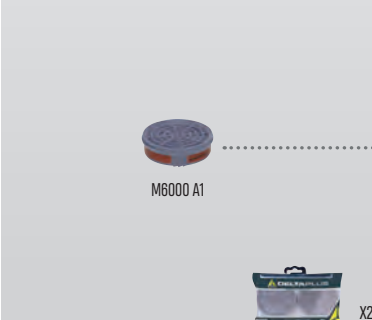
M6100 - JUPITER



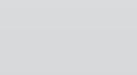
- Comfort half mask PP/TPE
- Elastic straps and harness
- 1 filter cartridge
- Available out of Europe



- Comfort half mask in tri-material
- Elastic straps
- 1 filter cartridge



X2



M6000 P2



M6000 PREP3



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](http://www.deltaplus.eu)

PRODUCTS menu, TECHNICAL SUPPORT section/Respiratory masks



CONTACT

TECHNICAL HELP CHOICE

Respiratory Masks  
Chemicals Gloves  
Fall Arrest



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

## REUSABLE RESPIRATORY



M9000E A2		Black	Box of 4 A2 filtering cartridges for M9200 ROTOR GALAXY and M9300 STRAP GALAXY full face masks. 	CE EN148-1 EN14387 A2	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 EN14387 A2P3R	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 EN14387 A2B2E2K2	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 EN14387 A2B2E2K2P3R	x 10
M9000 P3		Black	Kit of 4 P3R filtering cartridges for M9200 ROTOR GALAXY, M9300 STRAP GALAXY full face masks. 	CE EN148-1 EN143 P3R	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 EN14387 A2B2	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 EN14387 A2B2P3	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 EN14387 A2B2E2P3R	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 EN14387 A2B2E2K2HgP3R	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 EN14387 AX	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 EN14387 AXP3R	x 10
M9000E B2		Black	Box of 4 B2 filtering cartridges for M9200 ROTOR GALAXY and M9300 STRAP GALAXY full face masks. 	CE EN148-1 EN14387 B2	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 EN14387 B2P3	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 EN14387 E2	x 10
M9000E E2P3		Black	Kit of 4 E2P3 filtering cartridges for M9200 ROTOR GALAXY and M9300 STRAP GALAXY full face masks. 	CE EN148-1 EN14387 E2P3	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 EN14387 K2	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 EN14387 K2P3R	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 EN14387 A2B2E2	x 10

On request



# REUSABLE RESPIRATORY

## GALAXY



### M9200 - ROTOR GALAXY



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



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



Adjustable size S/ M/ L  
 ➤ Suitable for most types of faces



Extra large field of vision (210°)  
 ➤ Guaranteed maximum visual comfort

### M9300 - STRAP GALAXY



Tightening with silicone straps  
 ➤ Precise adjustment



Compatible with other PPE  
 ➤ Can be used with a safety helmet

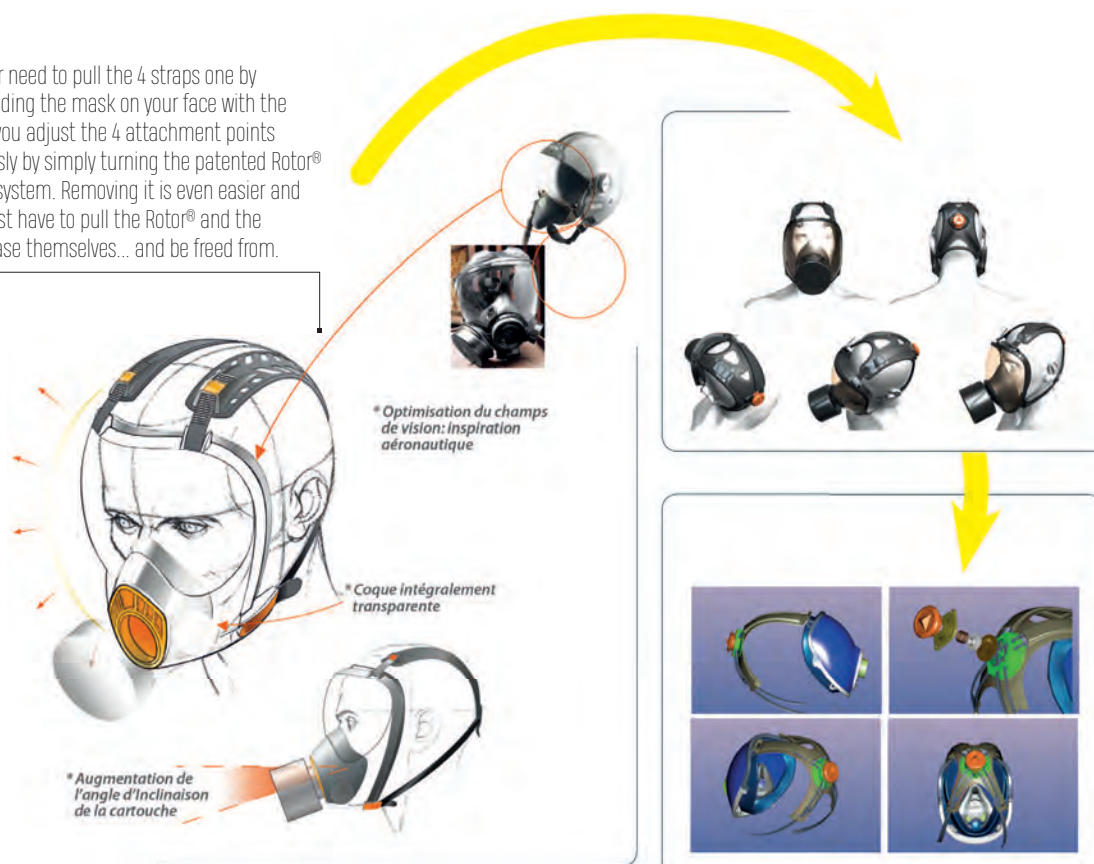




## The first complete mask that can be set and adjusted with one hand!

M9200 - ROTOR GALAXY		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.			682 g	
	Black-Orange		Adjustable	EN136 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.			616 g	








You no longer need to pull the 4 straps one by one while holding the mask on your face with the other hand, you adjust the 4 attachment points simultaneously by simply turning the patented Rotor® adjustment system. Removing it is even easier and faster: you just have to pull the Rotor® and the 4 straps release themselves... and be freed from.



One of the key points to evaluate the performance of a complete respirator, and therefore the protection optimised for the user, is the adjustment. A good mask is in fact useless if the user adjusts it incorrectly on his face. Moreover, in some work situations, you have to work quickly and well. From this observation was born our idea to develop a complete mask that can adjust ultra quickly.

Marie Pourcher, Head Protection Product Expert

# REUSABLE RESPIRATORY

					
M6200 JUPITER		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.			
M6100 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 1 filter cartridges, M6000 P3, M6000 PREP3 or M6000 A1, sold separately. Cardboard packaging.	Adjustable	 EN140	x 15
M6400 JUPITER		Comfort half mask bi-filter: Half mask body in polypropylene (PP) - Thermoplastic (TPE) overmould. Elastic straps. To be used with 2 filter cartridges, M6000 series, sold separately. Shell packaging.	M/L		

## M6200 JUPITER



M6000 Bayonet anchor  
→ Compatible with the M6000 cartridge range (gas and particles)



## M6100 JUPITER



M6000 Bayonet anchor  
→ Compatible with the M6000 cartridge range (gas and particles)



## M6400 JUPITER



Thermoplastic over moulding (TPE) : Secured joints  
→ Low breathing resistance  
→ Enhanced security





<b>M6400 MARS KIT</b>		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	x 10
<b>M6400 SPRAY KIT</b>		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	x 10
<b>M6400 CHEM KIT</b>		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	x 10
<b>M6000 A1</b>		Grey	Pack of 2 A1 filtering cartridges for M6000 JUPITER serie half masks.		x 30
<b>M6000E A2</b>		Grey	Pack of 2 A2 filter cartridges for M6200 JUPITER half-mask and M6400-JUPITER half mask.		x 30
<b>M6000E ABEK1</b>		Grey	Pack of 2 A1B1E1K1 filter cartridges for M6200 JUPITER half-mask and M6400-JUPITER half mask.		x 30
<b>M6000E PREP2</b>		Grey	Set of 6 P2 pre-filters and 2 adapters for M6000 JUPITER half-mask serie. To use with M6000E filters.		x 30
<b>M6000E PREP3</b>		Grey	Set of 2 P3 pre-filters and 2 adapters for M6000 JUPITER half-mask serie. To use with M6000E filters.		x 30
<b>M6000 P2 CLIP</b>		Grey	Set of 2 P2 filter cartridges for M6000 JUPITER serie half masks + 20 spare disposable filters.		x 30
<b>M6000 P2</b>		Grey	Pack of 2 P2 filter cartridges for M6000 JUPITER serie half masks.		x 30
<b>M6000 P3</b>		Grey	Pack of 2 P3 filter cartridges for M6000 JUPITER serie half mask.		x 30





# DESIGNING MANUFACTURING YOUR SAFETY AT WORK





# HAND PROTECTION



## HIGH-TECH GLOVES

- 070 • help with choice
- 072 • Handling of sharp-edged objects
- 084 • Anti static works
- 086 • Precision work
- 088 • General handling
- 090 • Handling in oily environment

## SYNTHETIC GLOVES

- 104 • Help with choice
- 106 • Works in industry
- 108 • Works requiring chemical resistance
- 120 • Disposable

## LEATHER GLOVES

- 124 • Help with choice
- 125 • Handling in cold environment
- 126 • Handling in wet environment
- 128 • General handling
- 132 • Welders works
- 136 • Handling in cold environment

## KNITTED GLOVES

- 135 • Handling requiring cut and heat resistance
- 137 • Small handling

## 393 • TECHNICAL INFORMATION

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HAND PROTECTION

## HIGH-TECH GLOVES

	AGRICULTURE/ GREEN AREAS	CONSTRUCTION/ CIVIL ENGINEERING	SECOND WORK/ CRAFTSMAN	HEAVY INDUSTRY	LIGHT INDUSTRY	SERVICES/ LOGISTICS	HYGIENE ENVIRONMENT	Oil / GAS	MINING	WIND ENERGY	Suitable protection	PAGES
											VENICUT F XTREM CUT TOUCH	72
											APOLLON WINTER CUT VV737	73
											VENICUT5X1	74
											VENICUT59	75
											VENICUT54BL	75
											VENICUT59 LIGHT PLUS	75
											VENICUT53NO	75
											VENICUT47	78
											VENICUT32	80
											VENICUT30	83
											VENICUT20	83
											VENICUT32 ESD	84
											THEMIS VV792 ESD	84
											HESTIA VV702NO	86
											VENICUT10	86
											HESTIA VV702BC	86
											SAFE & STRONG VV811	88
											APOLLONIT VV734	88
											WET & DRY VV636BL	89
											EOS NOCUT VV910	92
											EOS NOCUT WINTER VV913	92
											EOS DBM VV911	94
											EOS VV900JA	95
											NYSOS VV904	96
											BOROK VV903	97
											BOREE VV901	97
											SAFE & TOUCH VV905NO	97
											ATHOS VV902	97
											THRYM VV736	98
											HERCULE VV750	100
											APOLLON WINTER VV735	100
											ATON VV731	100
											DPVV735	100
											APOLLON VV733	101
											DPVV733	101
											DPVV733E	101
											VENICUT F XTREM CUT	73
											VENICUT D HEAT & CUT FOAM	76
											VENICUT52	76
											VENICUT50	76
											VENICUT426N	78
											DPVEUT426N	78
											VENICUT416N	78
											VENICUT55	79
											VENICUT56	79
											VENICUT5M	79
											VENICUT36GR	82
											VE702GR	87
											VE702	87
											VE713	89
											VE728	90
											VE727	90
											VE729	90
											DPVE727	90
											VE726	90
											DPVE716	91
											DPVE715OR	91
											VE733	102
											VE730OR	102
											DPVE730	102
											DPVV831	102

	AGRICULTURE/ GREEN AREAS	CONSTRUCTION/ CIVIL ENGINEERING	SECOND WORK/ CRAFTSMAN	HEAVY INDUSTRY	LIGHT INDUSTRY	SERVICES/ LOGISTICS	HYGIENE ENVIRONMENT	OL / GAS	MINING	WIND ENERGY	Suitable protection	PAGES
											VENICUT58	77
											ECONOCUT5M	77
											VENICUT57G3	77
											VENICUT44	79
											VENICUT43	79
											VENICUT34	83
											DPVEUT34	83
											VENICUT33	83
											VE702P6	87
											VE702PN	87
											DPVE702P6	87
											DPVE702PN	87
											VE702P	87
											DPVE702P	87
											VE715GR	91
											VE712GR	91
											VE722	91
											DPVE712GR	91
											VE631	103
											VE799	103
											VE630	103



## HOW TO IDENTIFY SIZES ?

6	7	8	9	10	11	12
RED	YELLOW	BROWN	BLACK	BLUE	GREY	GREEN

IMPLEMENTATION OF A COLOUR-CODING SYSTEM FOR HIGH-TECHGLOVES AND SOME LEATHER GLOVES:

UNIFORM SIZES FOR EASY IDENTIFICATION.  
REFER TO PAGE 383 TO FIND THE CORRECT SIZE



## SYNTHETIC GLOVES

	AGRICULTURE/ GREEN AREAS	CONSTRUCTION/ CIVIL ENGINEERING	SECOND WORK/ CRAFTSMAN	HEAVY INDUSTRY	LIGHT INDUSTRY	SERVICES/ LOGISTICS	HYGIENE ENVIRONMENT	OIL / GAS	MINING	WIND ENERGY	Suitable protection	PAGES
PREMIUM	●			●	●		●				CHEMSAFE VV835	106
				●	●		●				CHEMSAFE PLUS VV836	107
				●	●		●				CHEMSAFE PLUS WINTER VV837	107
				●			●				PETRO ESD VE781	108
	●			●			●				PETRO VE786	108
				●			●				PETRO VE780	108
		●		●	●						SOFT-NIT VE470	113
	●			●							LA600	116
		●		●		●					VENIPRO VE450	116
	●	●		●		●					DPVE450	116
EVOLUTION				●			●				VENIPLUS V1500	120
				●			●				VENIPLUS V1383	122
	●			●			●				BASF PVCC400	109
	●			●			●				BASF PVCC800	109
		●		●	●		●				TOUTRAVO VE509	110
		●		●	●		●				TOUTRAVO VE510	110
		●		●			●				TOUTRAVO VE511	111
		●		●	●						NEOCOLOR VE530	111
		●		●			●				VENIZETTE VE920	112
		●		●			●				VENIFISH VE990	112
ESSENTIEL	●		●	●							LAT50	112
		●		●							DPLAT50	112
	●			●	●		●				NITREX VE802	114
	●			●	●		●				NITREX VE840	114
		●		●			●				NITREX VE803	114
	●			●	●		●				NITREX VE846	115
	●			●	●		●				NITREX VE830	115
				●		●					ALPHA VE905	116
		●		●		●					VE440	116
				●			●				VENITACTYL V1450B100	121
ESSENTIEL				●			●				VENITACTYL V1400B100	121
				●			●				VENITACTYL V1400PB100	121
	●	●									LA500	103
	●			●							PVC7335	109
	●			●							PVC7327	109
				●	●						DPPVC7327	109
		●		●							PVCGRIP35	109
	●			●	●						NITREX VE801	115
		●		●		●	●				NI170	117
		●		●		●	●				NI150	117
ESSENTIEL		●		●		●	●				NI015	117
		●		●		●	●				NI175	117
		●		●		●	●				NI155	117
	●	●		●		●					DPNI015	117
				●	●		●				DUOCOLOR VE330	118
				●			●				VE200	118
				●	●		●				ZEPHIR VE210	118
				●	●		●				PICAFLORE VE240	118
				●			●				VENITACTYL V1300B100	121
	●			●			●				VENITACTYL V1310	123
ESSENTIEL				●			●				VENICLEAN V1340	123
				●			●				VENITACTYL V1371	123
				●			●				DPV1371	123

## LEATHER GLOVES

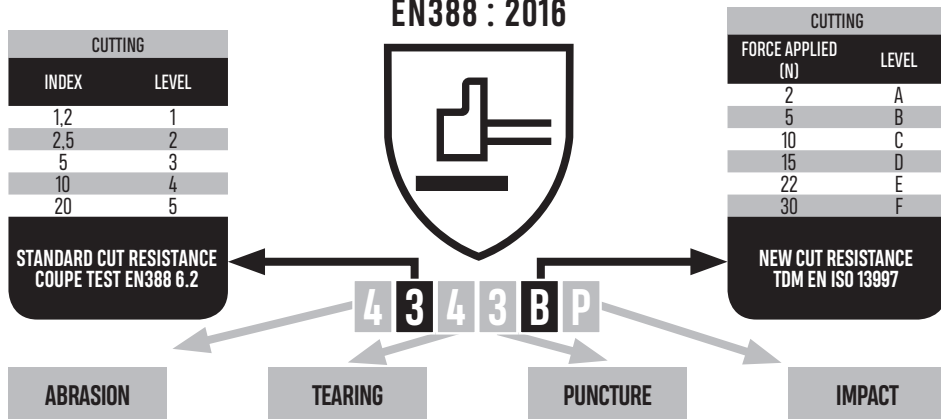
	AGRICULTURE/ GREEN AREAS	CONSTRUCTION/ CIVIL ENGINEERING	SECOND WORK/ CRAFTSMAN	HEAVY INDUSTRY	LIGHT INDUSTRY	SERVICES/ LOGISTICS	HYGIENE ENVIRONMENT	OIL / GAS	MINING	WIND ENERGY	Suitable protection	PAGES
PREMIUM	●	●									FIBKV02	126
	●	●	●								BUCH520V	127
		●	●								FIB49	127
			●								TERK400	132
			●								TER250	133
				●							CRY06	136
		●	●								FBF50	125
		●									DCTH1	125
	●	●									CBHV2	127
	●	●									DPCBHV2	127
EVOLUTION		●	●								FB149	128
		●									51FEDF	128
		●									50MAC	128
		●									6F8LE	128
	●	●	●								DPC7502	129
				●							TC716	133
				●							FC115	133
				●							GFA115K	134
				●							TIG15K	134
		●									FBF15	125
ESSENTIEL		●									DF132	125
	●	●	●								FBN49	129
	●	●	●								CT402	129
	●	●	●								DPFBN49	129
	●	●	●								DPC7402	129
		●	●								FCN29	129
		●									FP159	129
	●	●									DS202RP	130
		●									DC103	130
	●	●									DPDC103	130
ESSENTIEL				●							DPTC715	133
				●							CA615K	134
				●							CA515R	134

## KNITTED GLOVES

	AGRICULTURE/ GREEN AREAS	CONSTRUCTION/ CIVIL ENGINEERING	SECOND WORK/ CRAFTSMAN	HEAVY INDUSTRY	LIGHT INDUSTRY	SERVICES/ LOGISTICS	HYGIENE ENVIRONMENT	OIL / GAS	MINING	WIND ENERGY	Suitable protection	PAGES
PREMIUM			●								XTREM HEAT TERK500	135
				●							KP610	135
				●							KCA15	135
					●						PM159	137
					●						CP149	137
					●						PM160	137
					●						C0131	137
					●						TP169	137
											COB40	137
ESSENTIEL												

## CUT RESISTANT GLOVES

Full range



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.**

RECOMMENDED USES

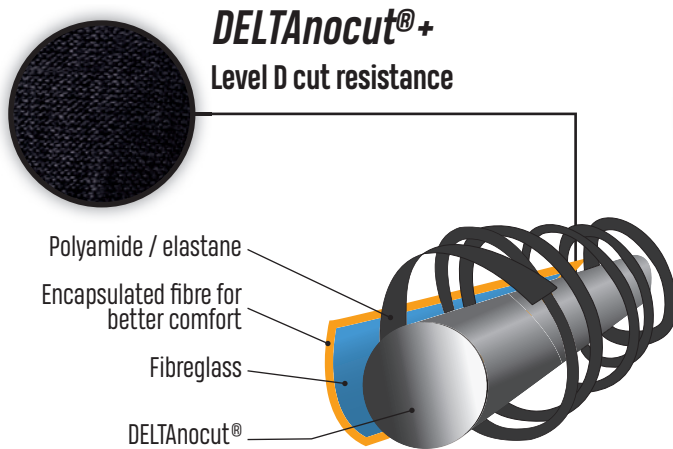
	 <b>&gt; 5 N</b>	 <b>&gt; 10 N</b>	 <b>&gt; 15 N</b>	 <b>&gt; 22 N</b>	 <b>&gt; 30 N</b>			
	 <b>VENICUT30</b>	 <b>VENICUT47 VENICUT32 ESD</b>	 <b>VENICUT5X1 VENICUT5ABL</b>					
	 <b>VENICUT32</b>	 <b>VENICUT42GN VENICUT41GN</b>	 <b>VENICUT59 VENICUT59 LIGHT PLUS VENICUT53</b>	 <b>APOLLON WINTER CUT VV737</b>	 <b>VENICUT F XTREM CUT VENICUT F01</b>			
	 <b>VENICUT36GR ATON VV731</b>	 <b>VENICUT55 VENICUT56 VENICUT5M</b>	 <b>VENICUT58G3 ECONOCUT5M VENICUT57G3</b>	 <b>TERK500</b>	 <b>VENICUT F XTREM CUT TOUCH VECUT F02</b>			
	 <b>VENICUT34G3 VENICUT33G3</b>	 <b>VENICUT44G3 VENICUT43G3</b>	 <b>HEAT AND CUT FOAM VECUT D01 VENICUT52 VENICUT50</b>					
			 <b>EOS NOCUT VV910 KPG10 KCA15</b>					
<ul style="list-style-type: none"> <li>• Packing</li> <li>• Electronics and repair</li> <li>• Coating Finishing Tiling</li> <li>• Assembly</li> </ul>	+	<ul style="list-style-type: none"> <li>• Automotive Assembly</li> <li>• Home appliance assembly</li> <li>• Cutting of metals</li> <li>• Maintenance and service</li> <li>• Handling and installation of glazing</li> <li>• Metal work</li> </ul>	+	<ul style="list-style-type: none"> <li>• Handling of composite materials</li> <li>• Handling of glass plates</li> <li>• Handling and assembly of cladding</li> <li>• Finishing work on sharp pieces</li> </ul>	+	<ul style="list-style-type: none"> <li>• Handling of heavy sharp parts</li> <li>• Handling of sharp metal parts</li> </ul>	+	<ul style="list-style-type: none"> <li>• Intensive works</li> <li>• Final heavy assembly</li> <li>• Metal press forming</li> <li>• Stamping</li> </ul>



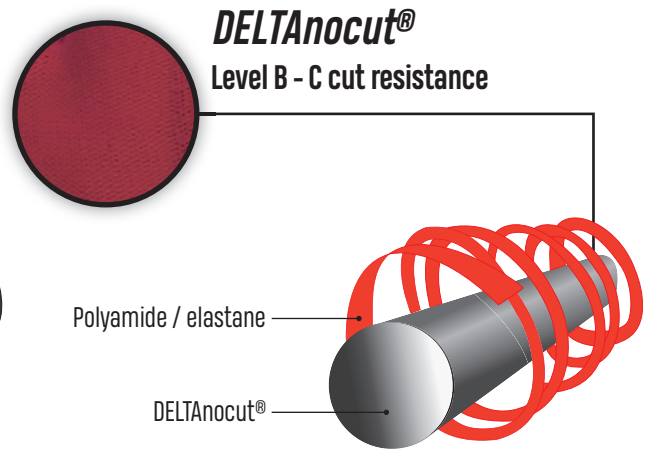


## CUT RESISTANT GLOVES

The fibres



**DELTAnocut®+**  
Level D cut resistance



**DELTAnocut®**  
Level B - C cut resistance



Mono-fibre polymer **high resistance**

**Maximum dexterity**

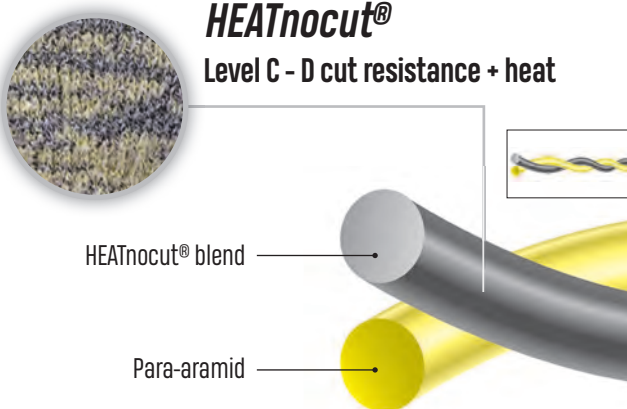
**DMF free:** total material safety, protection of the handled objects.

**Washable:** hygienic, gloves can be re-used.

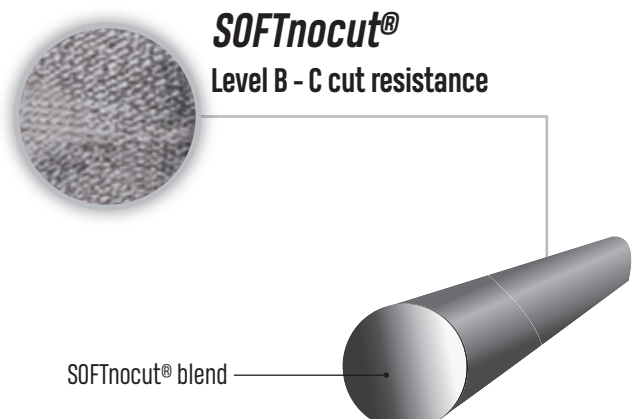
**Reduced thickness:** Fine touch and better breathability.

**Soft touch:** texture provides comfort and feeling of freshness all day.

Available in gauge 15 and 13



**HEATnocut®**  
Level C - D cut resistance + heat



**SOFTnocut®**  
Level B - C cut resistance



**For maximum safety and a good contact-heat protection**

Maximum **cut** resistance.

High level of **abrasion** resistance.

Heat resistance **up to 100°C**

(until 250°C for VENICUT50 and VENICUT52).



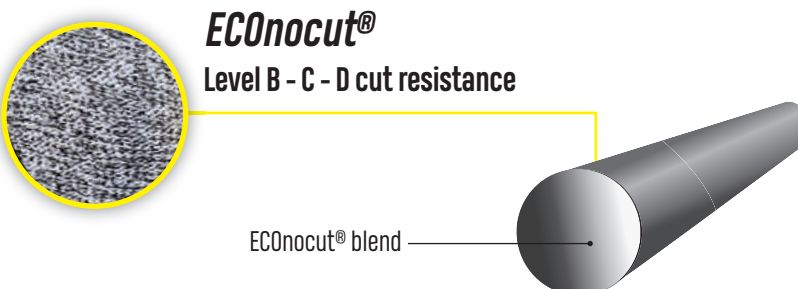
**To combine safety and comfort**

Excellent **cut** resistance

Maximum **abrasion** performance

Soft fibre: High level of **comfort**

Available in gauge 15 and 18



**ECONocut®**  
Level B - C - D cut resistance

**To combine safety and attractive price**

Different levels of cutting resistance

**Good** abrasion performance

**Economical fibre: good price**

Gauge 13: high level of **dexterity**

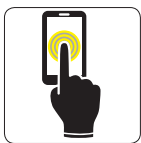


# HANDLING OF SHARP-EDGED OBJECTS

The perfect combination of the thinnest gauge on the market (gauge 18)  
and the highest cut protection level (TDM F).

					
VENICUT F XTREM CUT TOUCH	Navy blue-Black	Xtrem CUT® high performance fibre. Foam nitrile and TPU coating on palm and fingertips. Gauge 18.	06 / 07 / 08 / 09 10 / 11	CE  EN388 4 X 4 3 F 	ANSI-ISEA 105 A6 x 60

## VENICUT F XTREM CUT TOUCH



Fibre Xtrem CUT®

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

Nitrile/TPU foam blend

- ➔ Flexibility and dexterity
- ➔ Reduced transpiration thanks to its very good breathability

8 cm





VENICUT F XTREM CUT	Grey-Black	Xtrem CUT® high performance fibre. Gritty foam nitrile coating on palm and fingertips. Gauge 13.	06 / 07 / 08 09 / 10 / 11	EN388 4 X 4 3 F	
APOLLON WINTER CUT VV737	Fluorescent yellow-Black	Acrylic/high performance polyethylene fibre. Foam latex coating on palm and fingertips. Gauge 10.	08 / 09 / 10 / 11	EN388 3 X 4 3 E EN511 X 3 X ANSI-ISEA 105 A5	x 60



## VENICUT F XTREM CUT

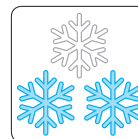


### Fibre Xtrem CUT®

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



## APOLLON WINTER CUT VV737



Protection from the cold  
➔ Ideal in cold environments  
down to -30°C



Cut protection and brushed acrylic support

- ➔ Ideal in extreme environments
- ➔ Maintains heat
- ➔ Very good cut protection (level E)



### Latex foam

- ➔ Increased breathability (feeling of freshness)
- ➔ Dexterity and comfort



# HANDLING OF SHARP-EDGED OBJECTS

Safety assured thanks to the combination of anti-cut and leather reinforcement threads.  
Great resistance for intensive work all day!



VENICUT5X1	Grey	DELTAAnocut®+ high performance fibre. Polyurethane coating and cowhide on palm and fingertips. Gauge 13.	09 / 10 / 11	CE   ANSI-ISEA 105 A5	x 60

## VENICUT5X1



Polyurethane coating  
→ Very soft and breathable  
material bringing comfort  
and dexterity  
→ Good abrasion and tear  
resistance



8 cm



Split leather  
→ Reinforced abrasion  
resistance  
→ Suitable for heavy work

[...]

We started from the need of operators in the automotive industry to combine strength, dexterity and finesse of touch. With a particularly complex technical challenge: to develop the shape of the piece of leather that must both fully respect the anatomy of the hand and the technicality of the fibre of a cut protection glove. Also, we are proud to present one of the most best current technical advances in the field of the protection glove.

Laetitia Guillerm, Hand Protection  
Product Expert





VENICUT59	Black	DELTAAnocut®+ high performance fibre. Polyurethane coating on palm and fingertips. Gauge 13.	07 / 08 / 09 / 10 / 11	EN388 4 X 4 2 D	ANSI-ISEA 105 A4
VENICUT59 LIGHT PLUS		DELTAAnocut®+ high performance fibre. 12 cm cuff. Gauge 13.	06 / 07 / 08 / 09 / 10 / 11	EN388 3 X 4 X D	ANSI-ISEA 105 A3
VENICUT54BL	Royal blue-Black	DELTAAnocut®+ high performance fibre. Double nitrile coating. Gauge 13.	08 / 09 / 10 / 11	EN388 4 X 4 3 D	ANSI-ISEA 105 A4
VENICUT53NO	Black	DELTAAnocut®+ high performance fibre. Nitrile micro-foam coating on palm and fingertips. Gauge 15.	07 / 08 / 09 / 10	EN388 4 X 4 3 D	



## VENICUT59



Washable  
→ Increased lifespan



Polyurethane coating  
→ Very soft and breathable material bringing comfort and dexterity  
→ Good abrasion and tear resistance



8 cm



DELTAAnocut® fibre  
→ Very soft texture for great comfort all day

DELTAAnocut®+  
→ Excellent cut resistance (level D)  
→ Unparalleled finesse of touch

## VENICUT59 LIGHT PLUS



12 cm



## VENICUT54BL



Washable  
→ Increased lifespan



Double nitrile coating for oily work  
→ 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



## VENICUT53NO



Washable  
→ Increased lifespan



Nitrile coating  
→ Very good mechanical performance  
→ Good grip in oily/ greasy environment
















Nitrile foam  
→ Increased breathability (feeling of freshness)  
→ Dexterity and comfort



8 cm



# HANDLING OF SHARP-EDGED OBJECTS

					
VENICUT D HEAT & CUT FOAM	Yellow-Grey-Black	HEATnocut® high performance fibre. Gritty foam nitrile coating on palm and fingertips. Gauge 13.	07 / 08 / 09 / 10 / 11	 EN388 4 X 4 2 D  EN407 X1X XXX	ANSI-ISEA 105 A4
VENICUT52	Yellow-Black	HEATnocut® high performance polyethylene fibre. Latex coating on palm and fingertips. Gauge 10.	07 / 08 / 09 / 10	 EN388 3 X 4 2 D  EN407 X2X XXX 	ANSI-ISEA 105 A3
VENICUT50	Yellow-Grey	HEATnocut® High performance polyethylene fibre. Cowhide on palm and fingertips. Gauge 10.	09 / 10	 EN388 4 X 4 3 D  EN407 X1X XXX	ANSI-ISEA 105 A4

## VENICUT D HEAT & CUT FOAM



Nitrile foam coating  
 ➔ Excellent resistance to abrasion  
 ➔ Rough finish for excellent grip on handled objects



HEATnocut® High Performance Polyethylene  
 ➔ Contact heat and cut resistance

## VENICUT52



Latex coating  
 ➔ Good resistance to abrasion  
 ➔ Rough finish for excellent grip on handled objects



## VENICUT50



Split leather  
 ➔ Reinforced abrasion resistance  
 ➔ Suitable for heavy work





VENICUT58	Grey	ECONOCUT® high performance fibre. Polyurethane coating on palm and fingertips. Gauge 13. Bag of 3 pairs.	07 / 08 / 09 / 10	EN388 4 X 4 2 D	ANSI-ISEA 105 A3 x 40
ECONOCUT5M	White-Black	ECONOCUT® high performance fibre. Knitted sleeve with thumbhole. Length 55 cm. Gauge 13. Bag of 1 pair.	One size	EN388 4 X 4 X D	ANSI-ISEA 105 A2 x 60
VENICUT57G3	Grey-Black	ECONOCUT® high performance fibre. Nitrile coating on palm and fingertips. Gauge 13. Bag of 3 pairs.	07 / 08 / 09 / 10	EN388 4 X 4 3 D	ANSI-ISEA 105 A3 x 40



## VENICUT58



## ECONOCUT5M



## VENICUT57G3



# HANDLING OF SHARP-EDGED OBJECTS

VENICUT47	Red	DELTAAnocut® high performance fibre. Polyurethane coating on palm and fingertips. Gauge 13.	06 / 07 / 08 09 / 10 / 11	EN388 4 X 4 2 C	x 60
VENICUT42GN	Grey	SOFTnocut® high performance fibre. Polyurethane coating on palm and fingertips. Reinforcement between the thumb and index finger. 10 cm cuff. Gauge 15.	07 / 08 / 09 / 10 / 11	EN388 4 X 4 3 C  ANSI-ISEA 105 A3	x 36
DPVEUCUT42GN			09		x 36
VENICUT41GN		SOFTnocut® high performance fibre. Nitrile coating on palm and fingertips. Reinforcement between the thumb and index finger. 10 cm cuff. Gauge 15.	07 / 08 / 09 / 10 / 11	EN388 4 X 4 4 C	x 60

## VENICUT47



Polyurethane coating  
 ➔ Very soft and breathable material bringing comfort and dexterity  
 ➔ Good abrasion and tear resistance



DELTAAnocut®  
 ➔ Good cut resistance (level C)  
 ➔ Unparalleled finesse of touch (13 gauge)

8 cm



Washable  
 ➔ Increased lifespan

## VENICUT42GN



Also available with header card  
 ➔ DPVEUCUT42GN

10 cm



Reinforcement between the thumb and index finger  
 ➔ Increased protection  
 ➔ Increased lifespan

## VENICUT41GN



10 cm



Reinforcement between the thumb and index finger  
 ➔ Increased protection  
 ➔ Increased lifespan





VENICUT55		HEATnocut® High performance polyethylene fibre. Gauge 10.	07 / 09 / 10	EN388 2 X 4 X C	EN407 X1X XXX
VENICUT5M	Yellow-Grey	HEATnocut® High performance polyethylene fibre. Knitted sleeve with thumbhole. Length 45 cm. Gauge 13.	One size		
VENICUT56		HEATnocut® High performance polyethylene fibre. PVC dots on palm. Gauge 10.	07 / 09 / 10	EN388 3 X 4 X C	EN407 X1X XXX
VENICUT44	Grey-Black	ECONOCUT® high performance fibre. Polyurethane coating on palm and fingertips. Gauge 13. Bag of 3 pairs.	07 / 08 / 09 / 10	EN388 4 X 4 2 C	ANSI-ISEA 105 A3
VENICUT43		ECONOCUT® high performance fibre. Nitrile coating on palm and fingertips. Gauge 13. Bag of 3 pairs.		EN388 4 X 4 3 C	

## VENICUT55



HEATnocut® High Performance Polyethylene  
 ➔ Contact heat (100°C for 15 seconds), and cut resistant  
 ➔ Very good level of abrasion resistance



Food compatibility

## VENICUT56



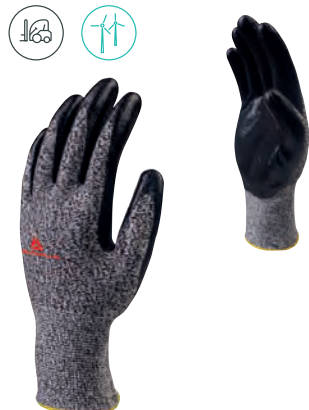
## VENICUT5M



## VENICUT44



## VENICUT43



# HANDLING OF SHARP-EDGED OBJECTS



## VENICUT32



Polyurethane coating  
 ➔ Very soft and breathable material bringing comfort and dexterity  
 ➔ Very good abrasion and tear resistance



Washable  
 ➔ Increased lifespan



DELTAcut® fibre  
 ➔ Very soft texture for great comfort all day



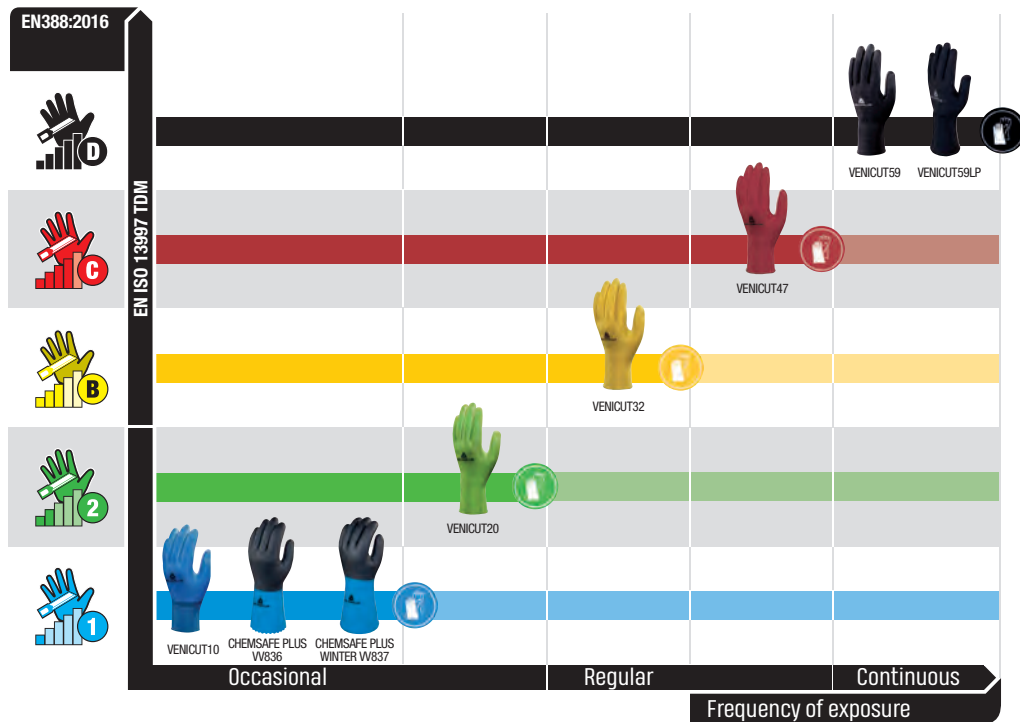


The choice of glove suited to the level of risk, ensured by the visual cue, guarantees work in secure conditions. A whole range dedicated to this approach.

VENICUT32	Yellow Grey White	DELTAcut® high performance fibre. Polyurethane coating on palm and fingertips. Gauge 15.	06 / 07 / 08 09 / 10 / 11	CE   ANSI-ISEA 105 A2	x 60



Risk level



**Blue** : safe work without major risk (<5N)

**Green** : working with low cut risk (micro-cuts) (5N)

**Yellow** : working with moderate cut risks (6,5 N)

**Red** : working with high cut risks, requiring regular wear of the glove (14 N)

**Black** : working with very high cut risks, requiring the daily wear of the glove (16 N)





Initiated by the INRS approach, our concept is available in 5 colours, each associated with a different level of danger. This concept helps safety engineers to verify the proper wearing of the glove corresponding to the identified risk. Coloured tablets are also provided by our teams during the validation of the concept during the study of the position. This allows all stakeholders to see that the glove worn is suitable. This represents a significant gain for a company (optimisation of purchase costs) but also guarantees carriers to always be well protected !

Laetitia Guillerm, Hand Protection Product Expert



# HANDLING OF SHARP-EDGED OBJECTS

Its design with an 18 gauge cut protection thread makes this model one of the thinnest gloves in the field of cut protection.

					
VENICUT36GR	Grey	SOFTnocut® High performance fibre. Nitrile coating on palm and fingertips. Gauge 18.	06 / 07 / 08 / 09 / 10 / 11	CE  EN388 3 X 4 2 B  ANSI-ISEA 105 A2	x 120

## VENICUT36GR



Gauge 18  
→ Very good dexterity and work finesse (Thin gauge of the market)

8 cm



Launched 3 years ago, specifically for engineers in the aviation sector. The challenge was to develop an innovative glove that combines protection, dexterity, sense of touch with a level of adequate cut resistance, the VENICUT36 was created! The choice of its coating and its colour are not by chance either: the nitrile was necessary to guarantee working safely in an oily environment. The transparent colour is a real benefit for users in maintenance operation. Visual control remains crucial with this type of task.

Laetitia Guillerm, Hand Protection Product Expert





VENICUT30	White	DELTAcut® high performance fibre. Gauge 15.	06 / 07 / 08 / 09 / 10	<b>EN388</b> 4 X 4 X B	x 60
VENICUT20	Green	Polyamide/Spandex. Polyurethane coating on palm and fingertips. Gauge 15.	06 / 07 / 08 / 09 / 10 / 11	<b>EN388</b> 4 2 4 2 B	x 40
VENICUT34		ECONOCUT® high performance fibre. Polyurethane coating on palm and fingertips. Gauge 13. Bag of 3 pairs.		<b>ANSI-ISEA 105 A2</b>	x 40
DPVEUCUT34	Grey	ECONOCUT® high performance polyethylene fibre. Polyurethane coating on palm and fingertips. Gauge 13.	07 / 09	<b>EN388</b> 3 X 4 2 B	x 120
VENICUT33		ECONOCUT® high performance fibre. Nitrile coating on palm and fingertips. Gauge 13. Bag of 3 pairs.	06 / 07 / 08 / 09 / 10 / 11	<b>EN388</b> 3 X 4 3 B	x 40



## VENICUT30



8 cm

Food compatibility



## VENICUT20


Gauge 15  
Very good dexterity and work finesse

Polyurethane coating  
Very soft and breathable material bringing comfort and dexterity  
Good abrasion and tear resistance


8 cm

Protection from mechanical risks and the handled object (imprints, sweating)



## VENICUT33



## VENICUT34


Also available with header card  
DPVEUCUT34

# ANTI STATIC WORKS

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

## VENICUT32 ESD



DELTAnocut® fibre  
 ➔ Very soft texture and optimal fit for all-day comfort



Polyurethane coating  
 ➔ Very soft and breathable material bringing comfort and dexterity  
 ➔ Good abrasion and tear resistance

8 cm



Carbon fibre  
 ➔ High electrostatic dissipation to reduce the risk of explosion

## THEMIS VV792 ESD



Copper fibre  
 ➔ More efficient than carbon in electrostatic discharge



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

## PETRO ESD VE781



Textured structure  
 ➔ Good grip of handled objects

30 cm

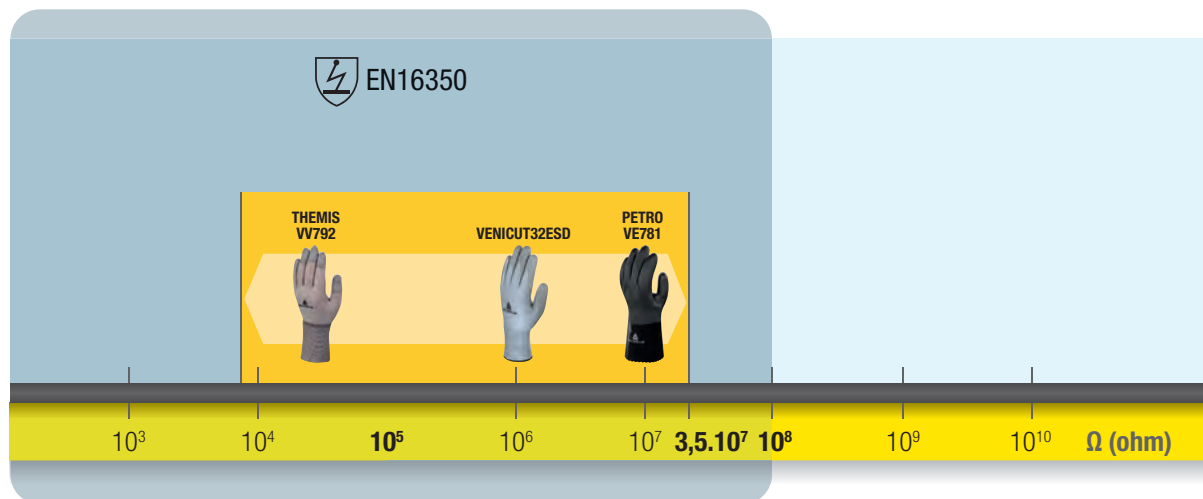


PVC  
 ➔ Good resistance to abrasion  
 ➔ Material very resistant to oils, chemicals and petroleum derivatives

Metallic fibre  
 ➔ High electrostatic dissipation to reduce the risk of explosion



VENICUT32 ESD	Grey	DELTAcut® high performance fibre and carbon fibre. Polyurethane coating on palm and fingertips. Gauge 15.	06 / 07 / 08 09 / 10 / 11	EN388 4 X 4 2 C EN16350 ANSI-ISEA 105 A2	x 60
THEMIS VV792 ESD	Rust-coloured-Grey	Copper polyamide. Polyurethane coating on fingertips. Gauge 15.		EN388 X13 XX EN16350	
PETRO ESD VE781	Black	Chemical PVC. PVC on cotton knitted lining gauge 13 with metal fiber. Rough-textured palm. Length: 30 cm. Thickness: 1.30 mm.	08 / 09 / 10 / 11	EN388 4 1 2 1 X EN374-1 TYPE B J2 > 30 mn KG > 480 mn L4 > 120 mn EN374-5 EN16350	x 120



According to EN16350, electrostatic properties of protective gloves, the electrical resistance through a glove must be less than 10<sup>8</sup> 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.



Car industry stakeholders are always looking for productivity gains. For this, they are aimed at manufacturers who can develop, design and manufacture products that meet their expectations. Their major wish was to have a versatile glove, protecting both the risk of cutting (level B) but also allowing dissipation of the electrostatic charge : we have developed the VENICUT32 ESD for them ! Coming from a best-sellers market (VENICUT32GR), this new model completes a deep range and is suited to all needs !

Laetitia Guillerm, Hand Protection Product Expert

# PRECISION WORK

The quality and fineness of the weave makes this model one of the most comfortable gloves on the market.

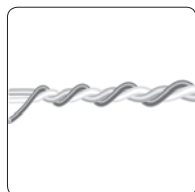
HESTIA VV702NO	Black	100% polyamide. Polyurethane coating on palm and fingertips. Gauge 15.	06 / 07 / 08 09 / 10	EN388 4131X	x 120
HESTIA VV702BC	White				
VENICUT10	Blue		06 / 07 / 08 09 / 10 / 11	EN388 4131X 	

## HESTIA VV702NO

## HESTIA VV702BC



Gauge 15  
→ Very good dexterity and work finesse



Double polyamide weave  
→ Very high density support for very good support and maximum dexterity



The HESTIA model has the distinction of having a double density polyamide knit. Our basic idea was to allow wearers to have a feeling of comfort and support until the end of the working day. Composed of an association between a high quality polyamide and a very flexible polyurethane coating, this glove is an ally of choice ! A winning choice for workers !

Laetitia Guillerm, Hand Protection Product Expert



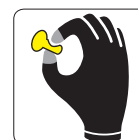
## VENICUT10



Polyurethane coating  
→ Good anti-slip grip



Polyurethane coating  
→ Very soft and breathable material bringing comfort and dexterity  
→ Good abrasion and tear resistance











Gauge 15  
→ Very good dexterity and work finesse



Protection from mechanical risks and the handled object (imprints, sweating)





					
VE702GR	Grey	100% polyamide. Polyurethane coating on palm and fingertips. Gauge 13.	06 / 07 / 08 09 / 10	 	x 240
VE702	White				
VE702PG	Grey				
DPVE702PG		06 / 07 / 09			
VE702P	White	100% polyester. Polyurethane coating on palm and fingertips. Gauge 13.	06 / 07 / 08 09 / 10		x 240
DPVE702P			07 / 09		x 120
VE702PN	Black		06 / 07 / 08 09 / 10 / 11		x 240
DPVE702PN			09 / 10		x 120



## VE702GR



Seamless knit  
➔ More comfort for prolonged glove wear

Grey colour  
➔ Handling of soiled objects

## VE702



## VE702PG



Also available with header card  
➔ DPVE702PG



## VE702P



Also available with header card  
➔ DPVE702P










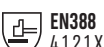
## VE702PN



Also available with header card  
➔ DPVE702PN



# GENERAL HANDLING

					
SAFE & STRONG VV811	Navy blue-Grey	100% Polyamide. Solvent free polyurethane coating on palm and fingertips. Gauge 15.	06 / 07 / 08 / 09 10 / 11		x 120
APOLLONIT VV734	Fluorescent yellow-Black	Polyamide/Spandex. Foam nitrile and TPU coating on palm and fingertips. Gauge 15.	07 / 08 / 09 / 10		

## SAFE & STRONG VV811



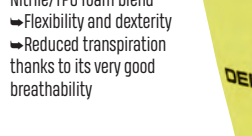
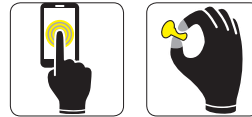
Solvent-free coating  
 ➤ Suitable for sensitive people  
 ➤ Respectful of the environment  
 ➤ Ideal for the automotive industry  
 ➤ No traces on the objects handled

Water-base polyurea : soft, breathable and abrasion resistant  
 ➤ Limit hand fatigue  
 ➤ Reduction of perspiration  
 ➤ Increased lifespan



Washable at 40°C  
 ➤ Reusable  
 Suitable for wet, oily and dry environments  
 ➤ Versatile use

## APOLLONIT VV734











Nitrile/TPU foam quality  
 ➤ Level of abrasion twice as good  
 ➤ Touch function

Fluorescent support  
 ➤ Easy visual identification at the workstation





					
WET & DRY VV636BL	Blue-Black	100% polyamide. Full nitrile coating of the hand. Second foam nitrile coating on palm and fingertips. Gauge 15.	07 / 08 / 09 / 10	 EN388 4131X	x 120
VE713	Black	100% polyamide. Double nitrile coating on palm, fingers and half back. Gauge 13.		 EN388 3121X	x 240

## WET & DRY VV636BL



100% polyamide support  
→ Very good comfort



Nitrile coating  
→ Very good mechanical performance  
→ Good grip in oily/ greasy environment



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



Gauge 15  
→ Lightness and flexibility

## VE713



Nitrile coating  
→ Very good mechanical performance  
→ Good grip in oily/ greasy environment












High coating  
→ Very good protection of the hand

Double coating  
→ Increased lifespan  
→ Very good resistance to abrasion



# HANDLING IN OILY ENVIRONMENT

					
VE728	Grey-Black	Polyester/ acrylic. Foam nitrile coating on palm and fingertips. Nitrile dots on palm. Gauge 13.	07 / 08 / 09 / 10	 EN511 X 1 X	x 120
VE727		Polyamide/Spandex. Nitrile/Polyurethane coating on palm and fingertips. Nitrile dots on palm. Gauge 15.	07 / 09	  EN388 3121X	
DPVE727					
VE729		Polyamide/Spandex. Nitrile/polyurethane coating on palm, fingertips and mid back. Nitrile dots on palm. Gauge 15.	07 / 08 / 09 / 10		
VE726		Polyamide/Spandex. Nitrile/Polyurethane coating on palm and fingertips. Gauge 15.	07 / 08 / 09 / 10 / 11		

## VE728



Non-slip dots  
→ Good grip of handled objects



Brushed acrylic interior  
→ Maintains heat

## VE727



Gauge 15  
→ Very good dexterity and work finesse



Non-slip dots  
→ Good grip of handled objects  
VE727 - VE729



Also available with  
header card  
→ DPVE727



Nitrile/polyurethane coating  
→ Oil resistance  
→ Flexibility of work and increased comfort  
→ Very good mechanical performance  
VE727 - VE729 - VE726

## VE729



3/4 coating  
→ Very good protection of the back of the hand



## VE726







VE715GR	Black-Grey	100% polyester. Nitrile coating on palm, fingertips and half-back. Gauge 13.	07 / 08 / 09 / 10		x 120
VE712GR			07 / 08 / 09 / 10 / 11		x 240
DPVE712GR	Grey-Black	100% polyester. Nitrile coating on palm and fingertips. Gauge 13.	09		x 120
DPVE716	Orange	Foam nitrile on polyamide lining. Fully coated. Gauge 15.	07 / 09 / 10		x 60
DPVE715	White-orange	100% polyester. Nitrile coating on palm, fingertips and half-back. Gauge 13.	07 / 09		x 120
VE722	Grey-Black	100% polyester. Foam nitrile coating on palm and fingertips. Gauge 13.	07 / 08 / 09 / 10		

## VE715GR



## VE712GR



Also available with header card  
→ DPVE712GR

Nitrile coating  
→ Very good mechanical performance  
→ Good grip in oily/greasy environment

## DPVE716



Available only with header card

Flexible Nitrile Foam Coating

## DPVE715



Available only with header card

## VE722



# GENERAL HANDLING



## EOS NOCUT VV910



Washable  
→ Increased lifespan



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



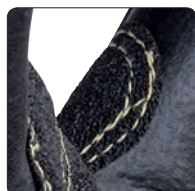
Available only with header card



Flexible reinforcements  
→ Increased protection from impacts and pinches



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.



Reinforcement between the thumb and index finger and on the palm.  
→ Increased protection



## EOS NOCUT WINTER VV913



Acrylic interior support  
→ Excellent comfort all day long  
→ Maintains heat



Very good abrasion and cut resistance  
→ Increased lifespan

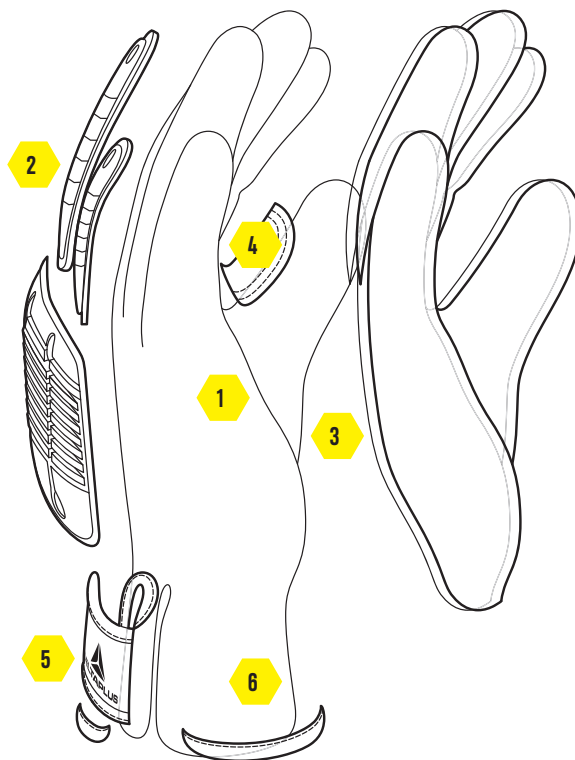
Kevlar® thread stitching  
→ Increased lifespan

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



## Safe, qualitative and very comfortable; the EOS NO CUT is surely one of the gloves with the most interest on the market!

EOS NOCUT VV910		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.		<b>EN388</b> 4 X 4 3 D P	<b>ANSI-ISEA 105</b> A3
	Yellow-Grey-Black		08 / 09 / 10 / 11		x 60
EOS NOCUT WINTER VV913		High performance polyethylene support. TPR reinforcement on back and fingertips. Double smooth nitrile coating/foam nitrile on palm and fingertips. Embossed inside reinforcement on palm. Inside acrylic lining. Kevlar® thread on all the seams.		<b>EN388</b> 4 X 4 4 D P <b>EN511</b> 1 3 X	<b>ANSI-ISEA 105</b>



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



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





EOS OBM VV911	Blue-Yellow	Nitrile on cotton jersey lining. Double coating. Length: 40 cm.	08 / 09 / 10 / 11	  	x 60

## EOS OBM VV911



Protection of the metacarpals 5J  
 ➔ Flexible reinforcements for better protection against impact and pinching.



Available only with header card



Cut cotton interlock stitched  
 ➔ Absorption of perspiration and moisture for improved comfort in everyday life

40 cm



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.

Nitrile  
 ➔ Versatile and powerful material from chemicals, fats and oils

Double coating  
 ➔ Increased lifespan

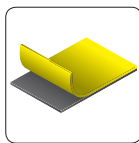
Length : 40 cm  
 ➔ Complete arm protection





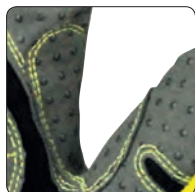
EOS VV900JA	Yellow-Grey-Black	Polyester/polyurethane back. PVC reinforcements. Polyamide/polyurethane palm with PVC dots. Kevlar® seams. 8 cm cuff in neoprene.	08 / 09 / 10 / 11 / 12	CE   ANSI-ISEA 105 A2	x 60

## EOS VV900JA



Double layer of polyamide/polyurethane on palm with non-slip PVC dots  
 ➔ Longer life due to its very good abrasion resistance  
 ➔ Good grip of handled objects

Available only with header card



Reinforcement between the thumb and index finger and on the palm.  
 ➔ Increased lifespan



Flexible reinforcements  
 ➔ Increased protection from impacts and pinches



Identification badge  
 ➔ Belt attachment










Yellow colour  
 ➔ Easy visual identification at the workstation

Velcro closure  
 ➔ Perfect adjustment  
 ➔ Reduced discomfort at the wrist, during prolonged use

8 cm cuff in neoprene  
 ➔ Good glove retention for high security

Protection of the metacarpal area against low energy shocks <2J

# GENERAL HANDLING

					
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 	x 60

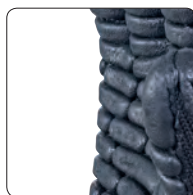
## NYSOS VV904



Available only with header card



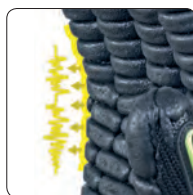
Flexible reinforcements  
→ Increased protection from impacts and pinches



Single coated glove reduces impact, shock and vibration effects



Protection of the metacarpals 5J



Anti-vibration  
→ Reduction of musculoskeletal disorders



Polyester support  
→ Soft weave (seamless) for comfortable long wear  
→ Good dexterity and grip

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.



BOROK VV903	Grey-Black	Polyester back with polyurethane coating. Polyurethane/polyester palm. 3M Thinsulate™ lining. Neoprene wrist.	07 / 09 / 11	EN388 1221X  EN511 110	
SAFE & TOUCH VV905NO	Black-Yellow	Polyester/elasthane back. Artificial leather palm. Cuff in neoprene.	07 / 08 / 09 / 10 / 11	EN388 2121X	x 60
BOREE VV901	Yellow-Grey-Black	Polyester/elasthane back. Polyamide palm. PVC reinforcements on back and palm. Cuff in mesh.	07 / 09	EN388 3131X	
ATHOS VV902	Yellow-Grey-Black	Polyester/elasthane back. Polyamide palm. PVC reinforcements on back and palm. Cuff in mesh.	10 / 11		

## BOROK VV903



3M Thinsulate™ lining  
→ Resistance to humidity and cold



Available only with header card



Water repellent back  
→ Suitable for outdoor work

Velcro closure  
→ Perfect adjustment  
→ Reduced discomfort at the wrist, during prolonged use

## SAFE & TOUCH VV905NO



3 cut-off fingers  
→ Maximum precision for manipulating objects



Available only with header card



Non-slip reinforcements  
→ Very good grip of small items

## BOREE VV901



Aerated back  
→ Very good ventilation of the hand



Available only with header card



## ATHOS VV902



Available only with header card



Flexible reinforcements  
→ Increased impact protection



# GENERAL HANDLING

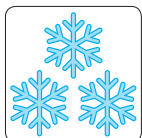
COLD PROTECTION



## THRYM VV736



Double full latex coating  
 ➔ 1st smooth latex coating : waterproof  
 ➔ 2nd foam latex coating : good adhesion



Very good resistance to cold and humidity  
 ➔ Ideal in cold environments down to -30°C



Brushed acrylic support  
 ➔ Maintenance of warmth during outdoor work  
 ➔ Great comfort of use







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

THRYM VV736	Light Blue	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		x 60



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



THRYM VV736

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



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 !



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 !

Lætitia Guillermin, Hand Protection Product Expert

# GENERAL HANDLING

COLD PROTECTION

HERCULE VV750	Black	Inside: 100% acrylic gauge 7. Outside: 100% polyamide gauge 13. 3/4 foam nitrile coating on palm, fingers and half back.	09 / 10		
APOLLON WINTER VV735	Grey-Black	100% acrylic. Foam latex coating on palm and fingertips. Gauge 10.	09		x 60
DPVV735	Fluorescent orange-Black				
ATON VV731	Black	Polycotton/Para-aramide. Latex coating on palm and fingertips. Gauge 10.	08 / 09 / 10 / 11		

## HERCULE VV750



Protection from the cold  
 ➔ Ideal in cold environments down to -15°C

High coating  
 ➔ Very good protection of the hand



Combination of a double support  
 ➔ High comfort  
 ➔ Heat preservation (interior acrylic support)  
 ➔ High dexterity (outer polyamide support)

## ATON VV731



Latex coating  
 ➔ Good resistance to abrasion  
 ➔ Rough finish for excellent grip on handled objects



## APOLLON WINTER VV735



Available only with header card  
 DPVV735OR



Latex foam  
 Increased breathability (feeling of freshness)  
 Dexterity and comfort



Brushed acrylic support  
 Maintenance of warmth during outdoor work  
 Great comfort of use

## DPVV735





APOLLON VV733	Fluorescent yellow-Black Fluorescent orange-Black		07 / 08 / 09 / 10		
DPVV733	White-Purple Fluorescent yellow-Black Fluorescent orange-Black	100% high quality polyester. Latex coating on palm and fingertips. Gauge 13.	07 09 07 / 09 / 10	CE  EN388 2131X	x 120
DPVV733E	White-Purple		04		



## APOLLON VV733



Also available with header card  
DPVV733OR  
DPVV733JA  
DPVV733VL  
DPVV733E



## DPVV733













## DPVV733E



Latex foam  
➤ Increased breathability  
(feeling of freshness)  
➤ Dexterity and comfort

Fluorescent support  
➤ Easy visual  
identification at the  
workstation

# GENERAL HANDLING

					
VE733	Orange-Navy Blue	100% polyester. PURE® latex coating on palm and fingertips. Gauge 13.	07 / 08 / 09 / 10 / 11	 <b>EN388</b> 214 2 A	 <b>EN407</b> X2X XXX
VE7300R	Yellow-orange	Polycotton. Rough latex coating on palm and fingertips. Gauge 10.	08 / 09 / 10 / 11		x 120
DPVE730			08 / 10		
DPVV831	Green	Polycotton. High quality latex coating on palm, fingertips and mid back. Gauge 10.	07 / 08 / 09 / 10	 <b>EN388</b> 214 2 X	

## VE733



Embossing finish  
 ➔ Good grip of handled objects  
 ➔ Very good adhesion in wet or dry environments



PURE® latex coating  
 ➔ Material complies with the REACH regulations and respectful of the environment  
 ➔ Minimises the risk of skin irritation

## VE7300R



Also available with header card  
 ➔ DPVE730



## DPVV831



Available only with header card



Latex coating  
 ➔ Rough finish for excellent grip on handled objects  
 ➔ Flexibility, elasticity and tactility





VE631	Blue-Black	100% polyester. Foam latex coating on palm and fingertips. Gauge 13.	07 / 08 / 09 / 10		x 120
VE630	Grey-Black	100% polyester. Latex coating on palm and fingertips. Gauge 13.			
VE799	White	Polycotton. Transparent full coating in natural latex on full hand and laminated red latex on palm and fingertips. Gauge 10.	10		
LA500	Green	Latex rough-textured on cotton Interlock lining. Knitted wrist. Ventilated back.	07 / 08 / 09 / 10		



## VE631



## VE630



## VE799



## LA500



Cotton interlock support  
with ventilated back  
→ Comfort  
→ Increased breathability

Quality coating  
→ Good grip

## CHOOSE THE RIGHT GLOVE ACCORDING TO THE CHEMICAL ENVIRONMENT

CHEM D-FINDER


<http://respiratory.deltaplus.eu>

**DELTA PLUS**  
YOUR SAFETY AT WORK

Chemical gloves search engine

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 vis-à-vis a chemical product.

CAS Number	Chemical	Letter	BASF PVCC400	Ref	Material	BreakTime	Degradation
1310-73-2	Sodium Hydroxide 40%	K	BASF PVCC400	PVCC400	PVC	6 (>400)	3.7%
7664-93-9	Sulphuric Acid 98%	L	BASF PVCC400	PVCC400	PVC	6 (>400)	12.1%
67-56-1	Methanol	A	BASF PVCC400	PVCC400	PVC	4 (>120)	3.6%

Showing 1 to 3 of 3 entries  
Show 10 entries

Before any searching for any products, ask yourself a few questions. They will guide you through choosing a glove for protection against chemical risks:

- The nature and characteristics of the products handled. For this, help yourself to:
  - The Safety Data Sheet provided by the chemical manufacturer will help you identify the family.
  - The CAS number of the substance used written on the product.
- The type of contact with chemical products (immersion, splashing).
- The length of time you will wear the gloves.
- The skin required.
- Factors that could degrade the gloves (associated mechanical risk: electrical, thermal, ...).
- The surface condition of objects to be manipulated (slippery objects?).
- Individual characteristics of the user (allergies, certain substances?).

Once this analysis is done, you will be guided through your choices and enable you to choose the product best suited to your environment.

Protection against projections

Not recommended use

Medium protection

High protection

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.

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YOUR SAFETY AT WORK

Chemical gloves search engine

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CAS Number	Chemical	Letter	NITREX VE802	Ref	Material	BreakTime	Degradation
71-41-0	Amyl Alcohol 99%		NITREX VE802	VE802	NITRILE	6 (>400)	
101318-46-5	Benzene		NITREX VE802	VE802	NITRILE	6 (>400)	
71-36-3	Butyl Alcohol 99%		NITREX VE802	VE802	NITRILE	6 (>400)	
111-76-2	Butyl Cellulosic 99%		NITREX VE802	VE802	NITRILE	6 (>400)	
7782-50-5	Chlorine gas		NITREX VE802	VE802	NITRILE	6 (>400)	
1333-82-8	Chromic acid 50%		NITREX VE802	VE802	NITRILE	6 (>400)	
110-82-7	Cyclohexane		NITREX VE802	VE802	NITRILE	6 (>400)	
106-93-0	Cyclohexanol 98%		NITREX VE802	VE802	NITRILE	6 (>400)	



## 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): Gives a velvety touch and limits the effects of latex protein allergies.

## SYNTHETIC GLOVES

- : 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

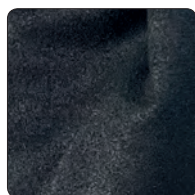
		Latex	Nitrile	Neoprene	PVC
Acetates	Acetate of ethyl (I)	-	**	**	.
Acids	Sulfuric acid (L),	***	**	***	***
Primary alcohol	Methanol (A)	***	***	***	**
Aldehydes (Alcohols & Ketones)	Formaldehyde 37% (R), ...	**	.	.	.
Amine	Diethylamine (G),	-	.	-	-
Bases (Lime, Sodium hydroxide)	Caustic soda (K),	***	**	***	***
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		***	***	***	***





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	 	<b>EN374-1</b> TYPE B AJKL A 2 > 30 mn J 3 > 60 mn K 5 > 240 mn L 2 > 30 mn x 60

## CHEMSAFE VV835



Rough structure palm  
→ Very good grip

35 cm



100% polyamide support  
→ Very good comfort

Triple nitrile coating  
→ Good resistance to abrasion





CHEMSAFE PLUS VV836		Double PVC/nitrile coating on polyamide lining. Gauge 18. Third rough PVC/nitrile coating on hand. Length: 30 cm. Thickness: 1 mm on cuff - 1.10 mm on palm.		EN388 3 1 2 1 X	EN374-1 TYPE B KLMP K 6 > 480 mm L 4 > 120 mm M 2 > 30 mm P 6 > 480 mm x 60
	Blue		09 / 10 / 11	CE	
CHEMSAFE PLUS WINTER VV837		Double PVC/nitrile coating on acrylic lining gauge 10. Third rough PVC/nitrile coating on hand. Length: 30 cm. Thickness: 1.15 mm on cuff - 1.35 mm on palm.		EN388 3 1 2 1 X EN511 1 1 1	EN374-5

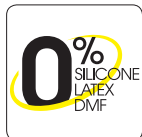


## CHEMSAFE PLUS VV836



Triple PVC/ nitrile coating  
➔ Good resistance to abrasion

100% polyamide support  
➔ Very good comfort



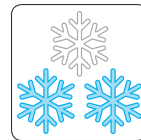
Gauge 18  
➔ Lightness and flexibility



Rough structure hand  
➔ Very good grip



## CHEMSAFE PLUS WINTER VV837



Brushed acrylic support  
➔ Maintaining heat for good thermal protection  
➔ High comfort



# WORKS REQUIRING CHEMICAL RESISTANCE

PETRO ESD VE781	Black	Chemical PVC. PVC on cotton knitted lining gauge 13 with metal fiber. Rough-textured palm. Length: 30 cm. Thickness: 1.30 mm.	08 / 09 / 10 / 11	  	x 120
PETRO VE766	Blue	Chemical PVC. PVC on cotton knitted lining gauge 13. Rough-textured hand. Length: 62 cm. Thickness: 1.30 mm.	08 / 09 / 10	  	x 60
PETRO VE780		Chemical PVC. PVC on cotton knitted lining gauge 13. Rough-textured hand. Length: 30 cm. Thickness: 1.30 mm.			x 120

## PETRO ESD VE781



Textured structure  
→ Good grip of handled objects

30 cm



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

Metallic fibre  
→ High electrostatic dissipation to reduce the risk of explosion

## PETRO VE766



Textured structure  
→ Good grip of handled objects

Length : 62 cm  
→ Complete arm protection

62 cm



## PETRO VE780
















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

30 cm





						
BASF PVCC400	Red	Chemical PVC. PVC on interlock cotton lining. Length: 40 cm. Thickness: 1,20 - 1,40 mm.	10	 <b>EN388</b> 4 1 3 1 X	 <b>EN374-1</b> TYPE B AKL A 4 > 120 mn K 6 > 480 mn L 6 > 480 mn	x 120
BASF PVCC600		Chemical PVC. PVC on interlock cotton lining. Length: 60 cm. Thickness: 1,20 - 1,40 mm.		 <b>EN374-5</b>		x 60
PVC7335		PVC on interlock cotton lining. Length: 35 cm. Thickness 0,90 mm.			 <b>EN374-1</b> TYPE C K K 6 > 480 mn	x 120
PVC7327		PVC on interlock cotton lining. Length: 27 cm. Thickness 0,90 mm.				
DPPVC7327						
PVCGRIP35	Green	PVC on cotton jersey lining, double-dipped. Length: 35 cm. Thickness 0,90 mm.	09 / 10	 <b>EN374-5</b>	 <b>EN374-1</b> TYPE C KN K 6 > 480 mn N 2 > 30 mn	



## BASF PVCC400



- PVC
- Good resistance to abrasion
- Material very resistant to oils, chemicals and petroleum derivatives
- Length : 40 cm
- Forearm protection

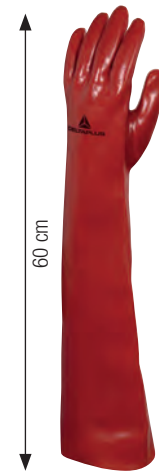


40 cm

- Hexamoll® DINCH® - innovative plasticiser by BASF
- Plasticiser without phthalates guaranteeing the safety of objects handled for sensitive applications
- Material complies with the REACH regulations and is respectful of the environment
- Reliable for all applications in contact with food



## BASF PVCC600



60 cm

- Length : 60 cm
- Complete arm protection



## PVC7335



- Knit cotton jersey 10 gauge
- Absorption of perspiration and moisture for improved comfort in everyday life



35 cm

## PVC7327



27 cm

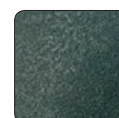


- Also available with header card
- DPPVC7327

## PVCGRIP35












35 cm



- Textured structure
- Good grip of handled objects

# WORKS REQUIRING CHEMICAL RESISTANCE

						
TOUTRAVO VE509	Black	Neoprene with cotton flocklining. Length: 30 cm. Thickness: 0,75 mm.	6/7 - 7/8 - 8/9 9/10 - 10/11	 <b>EN388</b> 3110 X  <b>EN374-5</b>	 <b>EN374-1</b> TYPE A AKLMNOPT A 3 > 60 mn K 6 > 480 mn L 4 > 120 mn M 6 > 480 mn N 5 > 240 mn O 3 > 60 mn P 6 > 480 mn T 6 > 480 mn	x 120
TOUTRAVO VE510		Neoprene with cotton flocklining. Length: 38 cm. Thickness: 0,78 mm.				

## TOUTRAVO VE509



Embossed structure on palm and fingers  
→ Improved object grip



## TOUTRAVO VE510



Embossed structure on palm and fingers  
→ 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





TOUTRAVO VE511		Neoprene on cotton knitted lining gauge 10. Length: 38 cm. Thickness 1,40 mm.	9/10 - 10/11	EN388 2132X EN374-5 EN374-1 TYPE A A 6 > 480 mn J 3 > 60 mn N 6 > 480 mn K 6 > 480 mn O 6 > 480 mn L 5 > 240 mn P 6 > 480 mn M 6 > 480 mn T 6 > 480 mn	x 60
NEOCOLOR VE530	Black	Latex/Neoprene mix with cotton flocklining. Length: 30 cm. Thickness: 0,70 mm.	6/7 - 7/8 - 8/9 9/10 - 10/11	EN388 2121X EN374-5 EN374-1 TYPE A J 2 > 30 mn N 3 > 60 mn K 6 > 480 mn P 6 > 480 mn L 4 > 120 mn T 6 > 480 mn	x 120



## TOUTRAVO VE511



Cotton knit gauge 10  
 ➔ Absorption of perspiration and moisture for improved comfort in everyday life

38 cm



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

## NEOCOLOR VE530

















30 cm



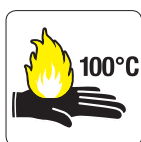
Flocked inside  
 ➔ Absorption of perspiration for comfort

Neoprene/Latex blend  
 ➔ Comfort and flexibility for heavy work

# WORKS REQUIRING CHEMICAL RESISTANCE

						
VENIZETTE VE920	Blue	Latex on interlock cotton lining. Length: 30 cm. Thickness: 1,25 mm.	6/7 - 7/8 - 8/9 9/10 - 10/11	<div><div>EN388 4 1 2 1 X</div><div>EN407 X 1 X X X X</div></div> <div>EN374-5</div>	<div>EN374-1 TYPE A AKLMNPT A 2 &gt; 30 mn K 6 &gt; 480 mn L 4 &gt; 120 mn M 6 &gt; 480 mn</div> <div>N 3 &gt; 60 mn P 6 &gt; 480 mn T 6 &gt; 480 mn</div>	x 120
VENIFISH VE990	Orange	Latex on interlock cotton lining. Rough textured palm and back. Length: 30 cm. Thickness: 1,80 mm.	7/8 - 8/9 - 9/10 10/11	<div>CE</div> <div><div>EN388 3 1 2 1 X</div><div>EN407 X 1 X X X X</div></div> <div>EN374-5</div>	<div>EN374-1 TYPE A AKLMNPT A 6 &gt; 480 mn K 6 &gt; 480 mn L 4 &gt; 120 mn M 5 &gt; 240 mn</div> <div>N 4 &gt; 120 mn P 6 &gt; 480 mn T 6 &gt; 480 mn</div>	x 60
LAT50	Green		7/8 - 9/10			
DPLAT50						

## VENIZETTE VE920



Versatile glove  
 ➤ Resistance to chemicals and contact heat of 100°C for 15 seconds



Maximum abrasion performance  
 ➤ Increased lifespan



Cut cotton interlock stitched  
 ➤ Absorption of perspiration and moisture for improved comfort in everyday life

## VENIFISH VE990



Versatile glove  
 ➤ Resistance to chemicals and contact heat of 100°C for 15 seconds



Cut cotton interlock stitched  
 ➤ Absorption of perspiration and moisture for improved comfort in everyday life



Structure on very rough palm  
 ➤ Excellent grip of very slippery objects

## LAT50



Also available with header card  
 ➤ DPLAT50





SOFT-NIT VE470	Blue	Latex/ Nitrile, smooth chlorinated interior. Length: 30 cm. Thickness: 0.40 mm.	6/7 - 7/8 - 8/9 9/10 - 10/11		x 120
				EN388 2011X EN374-1 TYPE B AKL A 2 > 30 mn K 6 > 480 mn L 2 > 30 mn	



## SOFT-NIT VE470



Chlorinated interior  
 ➔ Easy glove implementation  
 ➔ High comfort  
 ➔ Less risk of allergies



Thickness : 0.40 mm  
 ➔ Fine touch

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

Latex/Nitrile blend  
 ➔ Polyvalent

NITREX VE802		Nitrile with cotton flocklining. Length: 33 cm. Thickness: 0.38 mm.	6/7 - 7/8 - 8/9 9/10 - 10/11		<p>EN374-1 TYPE A AJKLMNOPT A 2 &gt; 30 mn N 3 &gt; 60 mn J 6 &gt; 480 mn O 6 &gt; 480 mn K 6 &gt; 480 mn P 6 &gt; 480 mn L 3 &gt; 60 mn T 6 &gt; 480 mn M 2 &gt; 30 mn</p>
NITREX VE840	Green	Nitrile with cotton flocklining. Length: 40 cm. Thickness: 0.50 mm.	7/8 - 8/9 - 9/10		<p>EN374-1 TYPE A AJLOPT A 3 &gt; 60 mn O 5 &gt; 240 mn J 6 &gt; 480 mn P 6 &gt; 480 mn L 4 &gt; 120 mn T 6 &gt; 480 mn</p>
NITREX VE803		Nitrile on interlock cotton lining. Length: 33 cm. Thickness: 0.85 mm.	9/10 - 10/11		<p>EN374-1 TYPE A AJKLMNOPT A 2 &gt; 30 mn N 3 &gt; 60 mn J 6 &gt; 480 mn O 4 &gt; 120 mn K 6 &gt; 480 mn P 6 &gt; 480 mn L 3 &gt; 60 mn T 6 &gt; 480 mn M 2 &gt; 30 mn</p>

## NITREX VE802

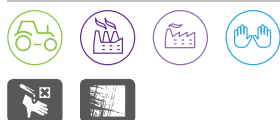


Embossed structure on palm and fingers  
 ➔ Good grip of handled objects  
 NITREX VE802 - NITREX VE840



Flocked inside  
 ➔ Absorption of perspiration  
 for comfort  
 NITREX VE802 - NITREX VE840

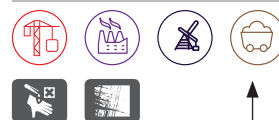
## NITREX VE840



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



## NITREX VE803



Cut cotton interlock  
 stitched  
 ➔ Absorption of perspiration and  
 moisture for improved  
 comfort in everyday  
 life



Maximum abrasion  
 performance  
 ➔ Increased  
 lifespan



Textured structure  
 ➔ Good grip of handled  
 objects

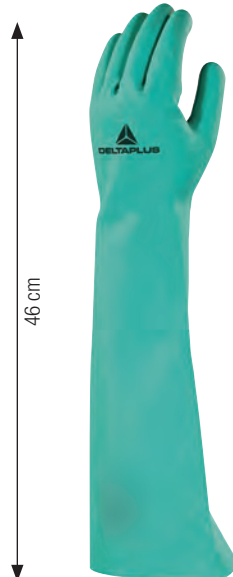
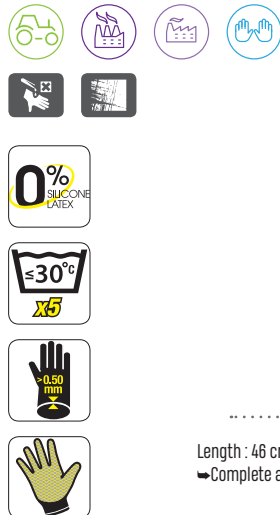




NITREX VE846	Green	Thin nitrile. Chlorinated smooth inside. Length: 46 cm. Thickness: 0,55 mm.	8/9 - 9/10 10/11	  	 <b>EN374-1</b> TYPE A AGJKLMNOPT A 3 > 60 mn N 4 > 120 mn G 2 > 30 mn O 6 > 480 mn J 6 > 480 mn P 6 > 480 mn K 6 > 480 mn T 6 > 480 mn L 5 > 240 mn M 3 > 60 mn x 36
NITREX VE830	Blue	Thin nitrile. Chlorinated smooth inside. Length: 33 cm. Thickness: 0,20 mm.	7/8 - 8/9 9/10 - 10/11	   	 <b>EN374-1</b> TYPE A JKLOPT J 6 > 480 mn O 2 > 30 mn K 6 > 480 mn P 6 > 480 mn L 2 > 30 mn T 6 > 480 mn x 120
NITREX VE801	Green	Nitrile with cotton flocklining. Length: 33 cm. Thickness: 0,40 mm.	07 / 08 / 09 / 10 / 11	 	 <b>EN374-1</b> TYPE B JKL J 6 > 480 mn K 6 > 480 mn L 3 > 60 mn



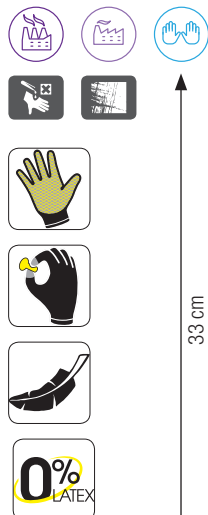
## NITREX VE846



Length : 46 cm  
 ➔ Complete arm protection

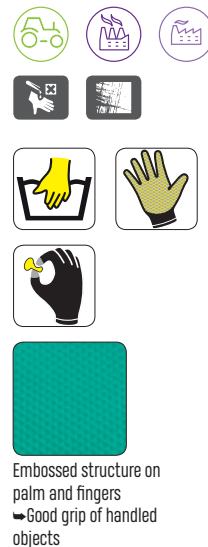
Chlorinated interior  
 ➔ Easy glove implementation  
 ➔ High comfort  
 ➔ Less risk of allergies  
 NITREX VE846 - NITREX 830

## NITREX VE830

























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

## NITREX VE801



Silicone free  
 ➔ Ideal for the  
 automotive industry  
 ➔ No traces on the  
 objects handled  
 Flocked inside  
 ➔ Absorption of  
 perspiration for comfort

# WORKS IN INDUSTRY

						
LA600	Black	Reinforced latex. Chlorinated inside and outside. Length: 60 cm. Thickness: 1.15 mm.	10/11	<div> <b>EN388</b> 4 1 2 1 X</div> <div> <b>EN407</b> X 2 X X X X</div> <div> <b>EN374-5</b></div> <div> <b>EN374-1</b> TYPE A AKLMNOPT A 6 &gt; 480 mn N 5 &gt; 240 mn K 6 &gt; 480 mn O 3 &gt; 60 mn L 4 &gt; 120 mn P 6 &gt; 480 mn M 6 &gt; 480 mn T 6 &gt; 480 mn</div>	x 36	
VENIPRO VE450	Orange	Heavy weight latex with cotton flock lining. Length: 30 cm. Thickness: 1 mm.	8/9 - 9/10 10/11	<div> <b>EN388</b> 3 1 2 1 X</div> <div> <b>EN374-5</b></div> <div></div>	<div> <b>EN374-1</b> TYPE A AKLMNOPT A 6 &gt; 480 mn N 4 &gt; 240 mn K 6 &gt; 480 mn O 3 &gt; 60 mn L 5 &gt; 120 mn P 6 &gt; 480 mn M 6 &gt; 480 mn T 6 &gt; 480 mn</div>	x 120
DPVE450			8/9 - 10/11			
ALPHA VE905	Natural	Latex, chlorinated smooth inside. Length: 30 cm. Thickness: 0,40 mm.	6/7 - 7/8 - 8/9 9/10	<div> <b>EN388</b> 0 0 1 0 X</div> <div><b>EN421</b></div> <div> <b>EN374-5</b></div> <div> <b>EN374-1</b> TYPE C KL K 6 &gt; 480 mn L 3 &gt; 60 mn</div> <div></div>		
VE440	Blue	Latex with cotton flock lining. Length: 32 cm. Thickness: 0,55 mm.		<div> <b>EN388</b> 1 0 1 0 X</div> <div> <b>EN374-5</b></div> <div></div> <div> <b>EN374-1</b> TYPE A AKLMNPT A 2 &gt; 30 mn N 2 &gt; 30 mn K 6 &gt; 480 mn O 3 &gt; 60 mn L 3 &gt; 60 mn P 6 &gt; 480 mn M 5 &gt; 240 mn T 6 &gt; 480 mn</div>	x 144	

## LA600



## VENIPRO VE450



## ALPHA VE905



## VE440





N1170	Blue	Nitrile on cotton jersey lining. 6-cm canvas safety cuff. Ventilated back.	10	CE	x120
N1175		Nitrile on cotton jersey lining. 6-cm canvas safety cuff. Fully coated.	09 / 10 / 11		
N1150		Nitrile on cotton jersey lining. Knitted wrist. Ventilated back.	07 / 08 / 09 / 10		
N1155		Nitrile on cotton jersey lining. Knitted wrist. Fully coated.	10		
N1015	Yellow	Light nitrile on interlock cotton lining. Knitted wrist. Ventilated back.	07 / 08 / 09 / 10 / 11		
DPN1015			10		



## N1170



Safety cuff 6 cm  
 ➤ Good protection of the garment  
 ➤ Easy implementation

Cotton jersey lining with ventilated back  
 ➤ Comfort  
 ➤ Increased breathability



## N1175



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

## N1150



Cotton jersey lining with ventilated back  
 ➤ Comfort  
 ➤ Increased breathability



## N1155



Fully coated hand  
 ➤ Protection of the back of the hand























## N1015



Also available with header card  
 ➤ DPN1015



# WORKS IN INDUSTRY

					
DUOCOLOR VE330	Blue-Yellow	Latex with cotton flock lining, double-dipped. Length: 30 cm. Thickness: 0,60 mm.		<div> <b>EN388</b> 1010 X</div> <div> <b>EN374-5</b></div> <div></div> <div> <b>EN374-1</b> TYPE A AKLMNPT A 2 &gt; 30 mn K 6 &gt; 480 mn L 3 &gt; 60 mn M 5 &gt; 240 mn N 2 &gt; 30 mn P 6 &gt; 480 mn T 6 &gt; 480 mn</div>	
ZEPHIR VE210	Pink	Latex with cotton flock lining. Length: 30 cm. Thickness: 0,38 mm.	6/7 - 7/8 - 8/9 9/10	<div>  <b>EN388</b> XX1XX</div> <div> <b>EN374-5</b></div> <div></div> <div> <b>EN374-1</b> TYPE C KL K 6 &gt; 480 mn L 3 &gt; 60 mn</div> <div>x 144</div>	
PICAFLO VE240	Yellow	Latex with cotton flock lining. Length: 30 cm. Thickness: 0,38 mm.		<div> <b>EN388</b> 1010 X</div> <div> <b>EN374-5</b></div> <div></div> <div> <b>EN374-1</b> TYPE B KLMP K 6 &gt; 480 mn L 2 &gt; 30 mn M 4 &gt; 120 mn P 4 &gt; 120 mn T 6 &gt; 480 mn</div>	
VE200		Latex with cotton flock lining. Length: 30 cm. Thickness: 0,33 mm.			

## DUOCOLOR VE330



## ZEPHIR VE210



## PICAFLO VE240



## VE200







# SYNTHETIC GLOVES DISPOSABLE



VENIPLUS V1500	Orange	Powder-free nitrile. AQL 1,5. Length: 27 cm. Thickness: 0,17 mm. Box of 50 disposable gloves.	7/8 - 8/9 - 9/10 10/11	EN374-5 EN455-1 EN455-2 EN455-3	EN374-1 TYPE B KPT K 6 > 480 mn P 5 > 240 mn T 6 > 480 mn x 10

## VENIPLUS V1500



Nitrile

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

Powder-free gloves

- ➔ Protection from manipulated objects



Thickness : 0.17 mm

- ➔ Resistance to chemicals (> 30 min) compared to a conventional disposable glove

Orange colour

- ➔ Easy visual identification at the workstation

Glove tested in accordance with EN ISO 371-1:2016  
Type B

- ➔ Protection from certain concentrated chemicals



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	EN374-5 <b>EN455-1</b> <b>EN455-2</b> <b>EN455-3</b>	<b>EN374-1</b> <b>TYPE B</b> <b>JKT</b> <b>J 3 &gt; 60 mn</b> <b>K 6 &gt; 480 mn</b> <b>T 6 &gt; 480 mn</b>
VENITACTYL V1400PB100	Blue	Powdered nitrile. Suitable for food industry. AQL 1.5. Box of 100 disposable gloves.	6/7 - 7/8 - 8/9 9/10	EN374-5 <b>EN455-1</b> <b>EN455-2</b> <b>EN455-3</b>	<b>EN374-1</b> <b>TYPE C</b> <b>KT</b> <b>K 6 &gt; 480 mn</b> <b>T 6 &gt; 480 mn</b>
VENITACTYL V1300B100	White	Powder-free nitrile. Suitable for food industry. AQL 1.5. Box of 100 disposable gloves.			<b>EN374-1</b> <b>TYPE C</b> <b>KT</b> <b>K 6 &gt; 480 mn</b> <b>T 6 &gt; 480 mn</b>



## VENITACTYL V1450B100



Powder-free gloves  
 ➤ Ideal for caterers  
 VENITACTYL V1450B100  
 VENITACTYL V1400B100



Nitrile  
 ➤ Airtightness and water proofing  
 ➤ Flexibility, elasticity and tactility  
 ➤ No risk of allergies  
 VENITACTYL V1450B100  
 VENITACTYL V1400B100  
 VENITACTYL V1400PB100  
 VENITACTYL V1300B100

## VENITACTYL V1400B100



Blue colour  
 ➤ Ideal in food environment due to its easy visual identification  
 VENITACTYL V1450B100  
 VENITACTYL V1400B100



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



Powdered glove  
 ➤ Easy glove implementation













## VENITACTYL V1300B100





# DISPOSABLE LATEX



					
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	 EN374-5  EN455-1 EN455-2 EN455-3 	 EN374-1 TYPE B KLMP K 6 > 480 mn L 2 > 30 mn M 4 > 120 mn P 5 > 240 mn T 6 > 480 mn x 10

## 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

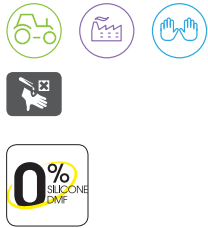




VENITACTYL V1310	Natural	Powdered latex. Suitable for food industry. AQL 1,5. Box of 100 disposable gloves.	6/7 - 7/8 - 8/9	EN374-5 EN455-1 EN455-2 EN455-3	EN374-1 TYPE C KT K 2 > 30 mn T 6 > 480 mn x 10
VENICLEAN V1340		Powder-free chlorinated latex. Suitable for food industry. AQL 1,5. Box of 100 disposable gloves.			
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		Powdered vinyl. Suitable for food industry. AQL 1,5. Box of 10 disposable gloves.	7/8 - 9/10		x 60



## VENITACTYL V1310



## VENICLEAN V1340



Chlorinated interior  
 ➤ Easy glove implementation  
 ➤ Less risk of allergies (latex proteins)



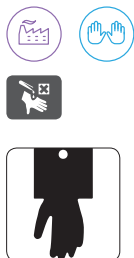
Latex  
 ➤ Airtightness and water proofing  
 ➤ Flexibility, elasticity and tactility



Powder-free gloves  
 ➤ Protection from manipulated objects

VENITACTYL V1310  
 VENICLEAN V1340

## VENITACTYL V1371



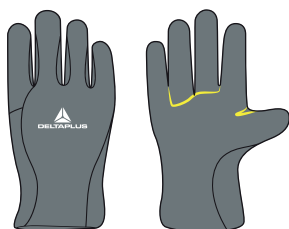
Also available in a box of 10 gloves  
 ➤ DPV1371



## LEATHER GLOVES

## AMERICAN ASSEMBLY

Side palm, middle and ring finger form a single piece that is sewn separately to the rest of the palm



Wing thumb



Docker type



Long wrist or cuff






Latex wrist with vein protection

## FOURCHETTE ASSEMBLY

The thumb is sewn separately (thumb added). A strip of material is sewn between each finger (fourchette). The glove perfectly matches the shape of the hand.

Round thumb  
Gusset on fingers

Choy thumb

	The benefits of Leather	Leather type	Abrasion	Durability	Flexibility	Price
	<ul style="list-style-type: none"> <li>• Light</li> <li>• High breathability due to porous texture</li> <li>• Price</li> <li>• Good abrasion resistance</li> <li>• Tends to become softer and more flexible after use</li> </ul>	Grain	5	3	4	**
	<ul style="list-style-type: none"> <li>• Good durability</li> <li>• Good insulation protection especially against heat</li> <li>• High puncture resistance</li> </ul>	Grain	2	4	3	***
		Split	2	4	2	*
	<ul style="list-style-type: none"> <li>• Good feel touch</li> <li>• Good abrasion and puncture resistance</li> <li>• Good flexibility</li> <li>• Good durability</li> </ul>	Grain	3	4	4	***

## CHOOSE THE BEST GLOVE FOR COLD ENVIRONMENTS



## • Extremely cold conditions

Very light activity levels or special applications requiring extra heat



## • Very cold conditions

Levels of light activity where the wearer generates little body heat by activity



Fresh climate conditions when light heat is needed

## HANDLING IN COLD ENVIRONMENT



FBF50	Beige	Cowhide full grain leather with 3M Thinsulate™ lining. Clip fastener. American assembly.	09 / 10	EN388 2132X            EN511 110	
DCTHI	Brown-Red	Cowhide split leather with 3M Thinsulate™ lining. Canvas back with leather reinforcement. Canvas cuff.	10	EN388 3131X            EN511 12X	x 60
FBF15	Yellow	Cowhide full grain leather with acrylic lining. Elasticated cuff on palm and lining which covers cuff edge. Clip fastener. American assembly.	08 / 10 / 11	EN388 2132X            EN511 240	
DF132	Brown-Yellow	Cowhide split leather with lining. Canvas back with leather reinforcement. Elasticated knitted wrist.	10	EN388 3131X            EN511 12X	x 120



## FBF50



3M Thinsulate™  
➔ Resistance to humidity  
and cold



Superior quality  
➔ Increased lifespan  
➔ Comfortable to wear  
➔ Flexibility



Carabiner attachment



## DCTHI



3M Thinsulate™  
➔ Resistance to humidity  
and cold



## FBF15



## DF132



## HANDLING IN WET ENVIRONMENT



FIBKV02



Beige



Water-repellent cowhide full grain leather. Reverse hide cowhide full grain leather palm. 100% Kevlar® Technology knitted lining. 2 threads. Gauge 10.



08 / 09 / 10



CE

EN388  
3 2 4 3 B  
EN420 4.2  
4/4 ≥ 180 mm



x 60

## FIBKV02



Kevlar® lining

→ Increased resistance to cut, tear, and puncture



Water repellent treatment applied on the reverse hide full grain

→ Ten times more effective than the grain







BUCH520V	Green-Blue	Water-repellent cowhide full grain leather. Palm, thumb and metacarpal in polyester foam. Kevlar® Technology sewn.	08 / 09 / 10 / 11	EN388 3123X	x 36
FIB49	Beige	Water-repellent cowhide full grain leather. Reverse hide cowhide full grain leather palm.	09 / 10	EN388 3122X	EN420 4.2 4/4 ≥ 180 mm x 120
CBHV2	Buff	Water-repellent cowhide full grain leather. American assembly. Knitted wrist and vein protection.	08 / 09 / 10 / 11		
DPCBV2			08 / 10	EN388 2132X	x 60



## BUCH520V



Polyester foam on the palm and back  
 ➔ Increased resistance to tearing and perforation



Special green spaces glove

## FIB49



Water repellent treatment applied on the reverse hide full grain  
 ➔ Ten times more effective than the grain



Reverse hide full grain leather palm  
 ➔ High flexibility  
 ➔ Very good resistance to abrasion

## CBHV2



Water repellent leather  
 ➔ Good splash protection











Also available with header card  
 ➔ DPCBV2



Artery protection  
 ➔ Wrist protection

## GENERAL HANDLING

					
FB149	Beige	Cowhide full grain leather. High quality leather. American assembly.	08 / 09 / 10	 EN388 3122X	
50MAC	White	Lambskin full grain leather. Reinforced palm. Knitted open-work back.	08 / 09 / 10 / 11		
51FEDF	Natural	Goatskin full grain leather. American assembly. Full index. Knitted wrist and vein protection.	08 / 09 / 10	  EN388 2111X	x 120
GFBLE		Cowhide full grain leather. American assembly. Knitted wrist and vein protection.	08 / 09 / 10 / 11		

## FB149



Superior quality  
 ➤ Increased lifespan  
 ➤ Comfortable to wear  
 ➤ Flexibility

## 50MAC



Shock protection for the palm  
 Association of leather and cotton  
 ➤ Comfort, flexibility and dexterity throughout the day

## 51FEDF



Goat leather  
 ➤ Flexibility and dexterity  
 ➤ Good mechanical resistance

Artery protection  
 ➤ Wrist protection

## GFBLE



Artery protection  
 ➤ Wrist protection



DPCT502	Beige-Green	Cowhide split leather. Polyester canvas back. American assembly.	07 / 09	EN388 3121X	x 60
FBN49	Natural	Cowhide full grain leather. American assembly.	07 / 08 / 09 / 10 / 11	EN388 3122X	x 120
DPFBN49			10		x 60
FCN29			08 / 09 / 10 / 11	EN388 2121X	x 120
CT402	Natural-Blue	Goatskin full grain leather palm. Cotton jersey back. American assembly.	07 / 08 / 09 / 10 / 11	EN388 2111X	x 60
DPCT402	Blue-White		10		
FP159	Beige	Pigskin full grain leather. American assembly. Full index.	09 / 10		x 120

## DPCT502



Available only with header card



## FBN49



Also available with header card  
→ DPFBN49



## FCN29



## CT402












Also available with header card  
→ DPCT402



## FP159



## GENERAL HANDLING

						
DS202RP	Grey-Blue	Cowhide split leather with cotton canvas lining. Reinforcement on palm, thumb and index. Canvas back with leather reinforcement. Reinforced canvas cuff.	10	 <b>EN388</b> 4 2 2 3 X	x 120	
DC103	Beige-Navy blue	Cowhide split leather. Canvas back with leather reinforcement. Reinforced canvas cuff.				
DPDC103				 <b>EN388</b> 2 1 1 1 X		

## DS202RP



## DC103



Also available with header card  
→ DPDC103









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

					
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	   	x 36

## 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



[...]

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



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		x 60
TC716		High quality cowhide split leather. American assembly. 15 cm cuff. Length: 35 cm.	09 / 10 / 11		x 120
DPTC715	Grey	Cowhide split leather. 15 cm cuff. American assembly. Length: 35 cm.			
FC115		High quality cowhide full grain leather palm with full index. Cowhide split leather back and cuff. American assembly. 15 cm cuff. Length: 35 cm.	10		x 60



## TER250



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

Kevlar® thread stitching  
 ➔ Self-extinguishing



## TC716



Also available with header card  
 ➔ DPTC715

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

## FC115



Artery protection  
 ➔ Wrist protection

					
GFA115K	Grey	Lambskin full grain leather. Cowhide split leather cuff. Kevlar® Technology seams. Fourchette assembly. 15 cm cuff. Length: 35 cm.	10	 EN388 2111X  EN407 41X X 4 X EN12477 TYPE B	x 120
TIG15K		Goatskin full grain leather. Cowhide split leather cuff. Kevlar® Technology sewn. American assembly. 15 cm cuff. Length: 35 cm.	08 / 09 / 10		x 36
CA615K	Red	High quality heat-resistant split leather (HR). Cuff with canvas lining. Kevlar® Technology sewn. American assembly. Length: 35 cm.	10	CE  EN388 3132X  EN407 413 X 4 X EN12477 TYPE A	x 60
CA515R		Heat-resistant cowhide split leather (HR). Hand with cotton fleece lining. Cuff with canvas lining. American assembly. Length: 35 cm.			

## GFA115K



Lambskin leather  
 ➤ Softer and more dexterity  
 Kevlar® thread stitching  
 ➤ Self-extinguishing

## TIG15K



Welding and heat-resistant gloves  
 ➤ Resistance to flame, heat and splashes of molten metal  
 Goat leather  
 ➤ Flexibility and dexterity  
 ➤ Good mechanical resistance

## CA615K



## CA515R



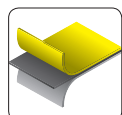


# HANDLING REQUIRING CUT AND HEAT RESISTANCE

XTREM HEAT TERK500		Outside aramid fabric. 100% cotton inside. 16 cm cuff. Length: 36 cm.	One size	EN388 2 5 4 1 E	EN407 4 4 4 2 4 X
KPG10	Yellow	Kevlar® Technology outside. 100% cotton lining. Gauge 7.		CE	EN388 1 X 4 X D
KCA15	Yellow-Rust	Kevlar® Technology outside. 100% cotton inside. 15 cm heat-resistant split leather cuff (THT). Gauge 7.	09		EN407 4 2 X X X X

Your best ally in extreme conditions!

## XTREM HEAT TERK500



Double insulation  
→ Optimum performance for cuts and heat



The construction of the glove in superposition of layers  
→ Protection from the effects of contact heat  
→ Up to 250°C for 1 minute  
→ Up to 500°C for 30 seconds

Aramid fabric cuff 16 cm  
→ Forearm protection



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

## KPG10



100% textile  
→ Ambidextrous  
→ Washable

10 cm ribbed cuff  
→ Better protection of the arteries



Knit Gauge 7  
→ Excellent compromise between thermal resistance and dexterity



Kevlar® / Cotton knit  
→ Optimum performance for cuts and heat thanks to the thickness with the cotton lining

## KCA15








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

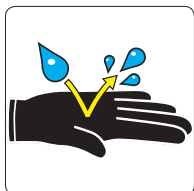
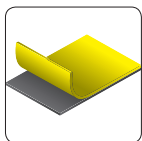


## HANDLING IN COLD ENVIRONMENT

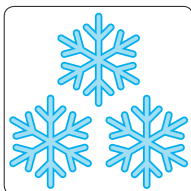


						
CRYOG	Straw-coloured	Water-repellent cowhide full grain leather. Aluminized polyester insert. Cowhide split leather cuff. Hand and cuff in synthetic. American assembly. 20 cm cuff. Length: 40 cm.	10	  <b>EN388</b> 2 2 2 2 X	 <b>EN511</b> 2 3 X <b>EN420 4.2</b> 4/4 ≥ 180 mm	x 36

## CRYOG



Water repellent leather  
→ Good splash protection



Tested with liquid nitrogen  
using method MRO19  
→ Work in all safety up to  
-196°C (a few seconds)



Velcro tape  
→ Adjustable fit



Aluminised polyester  
→ Thermal protection



Superior quality  
→ Increased lifespan  
→ Comfortable to wear  
→ Flexibility



PM159	White	100% foam polyamid. 6-cm long knit wrist. Gauge 13. Ambidextrous.	07 / 09	 	x 300
PM160		100% foam polyamid. 6-cm long knitted wrist. PVC dots on palm. Gauge 13.			
TP169		Polycotton. PVC dots on palm. Gauge 7.			
CP149	Beige	Brushed drill cotton lining 270 g/m <sup>2</sup> . PVC dots on palm and full thumb, index and little finger. French assembly.	08 / 10	 	x 600
C0131	Natural	Interlock cotton 100 g/m <sup>2</sup> . Knitted wrist. Gauge 18. Ambidextrous.	07 / 09		
COB40	White	Bleached cotton 180 g/m <sup>2</sup> . Fourchette assembly.	06 / 07 / 08 / 09		



## PM159



## PM160



## TP169



## CP149



## C0131



## COB40





# THE ESSENTIAL GLOVES SELECTION FOR YOUR POINT OF SALES

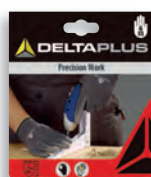
## BUILDING AND CONSTRUCTION



CUT RESISTANCE  
DPVECUT42GN  
9  
☐ 78



CUTTING WORKS  
DPVECUT34  
7 - 9  
☐ 83



AGILITY  
DPVE702PG  
6 - 7 - 9  
☐ 87



CONSTRUCTION  
DPVE730  
8 - 10  
☐ 102



WINTER MASONRY  
DPW735  
9  
☐ 100



TOOL HANDLING  
DPFBN49  
10  
☐ 129



WELDING  
DPTC715  
10  
☐ 133

## MULTI PURPOSE



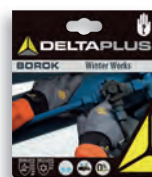
MULTI PURPOSE  
VV900  
8 - 9 - 10 - 11 - 12  
☐ 95



LIGHT WORKS  
VV901  
7 - 9  
☐ 97



HEAVY WORKS  
VV902  
10 - 11  
☐ 97



WINTER WORKS  
VV903  
7 - 9 - 11  
☐ 97



ANTI VIBRATIONS  
VV904  
10 - 11  
☐ 96



HIGH PRECISION WORKS  
VV905  
7 - 8 - 9 - 10 - 11  
☐ 97



INTENSIVE WORKS  
VV910  
8 - 9 - 10 - 11  
☐ 92

## OUTSIDE WORKS



LITTLE GARDENER  
DPW733EVL  
4  
☐ 102



BALCONY AND TERRACE  
DPW733VL  
7  
☐ 102



SPECIAL HARVEST  
DPVE715  
7 - 9  
☐ 91



MULTI PURPOSE  
DPVE716  
7 - 9 - 10  
☐ 91



PLANTING  
DPVE450  
8 - 10  
☐ 116



ROSEBUSH  
DPW831  
7 - 8 - 9 - 10  
☐ 102

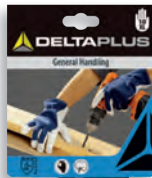


THORN BUSH  
DPLAT50  
7 - 9  
☐ 112



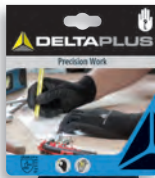


## SECOND WORK



POWER TOOL

DPCT402  
10  
☐ 129



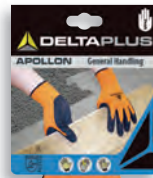
PRECISION WORKS

DPVE702PN  
9 - 10  
☐ 87



GENERAL HANDLING

DPVV733JA  
9  
☐ 101



EXTRA COMFORT

DPW7330R  
7 - 9 - 10  
☐ 101



EXTRA GRIP

DPVE727  
7 - 9  
☐ 90



WET ENVIRONMENT

DPVE712GR  
9  
☐ 91



GREASE AND FUEL

DPPVC7327  
10  
☐ 109

## PAINTING AND DECORATING



INTENSIVE WINTER  
WORKS  
VV913  
8 - 9 - 10 - 11  
☐ 92



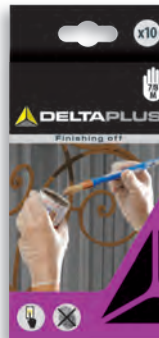
OIL & GAS

VV911  
8 - 11  
☐ 94



PAINTING

DPVE702P  
7 - 9  
☐ 87



FINISHING OFF

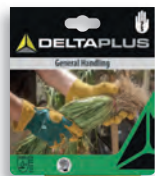
DPV1371  
7 - 9  
☐ 123

## STANDARD



FORESTER

DPCBH2  
8 - 10  
☐ 127



GARDEN MAINTENANCE

DPCT502  
7 - 9  
☐ 129



LIGHT HANDLING

DPDC103  
10  
☐ 130



OUTSIDE WORKS

DPNI015  
10  
☐ 117







# DESIGNING MANUFACTURING YOUR SAFETY AT WORK



# DISPOSABLE WEAR

142 • HELP WITH CHOICE

---

146 • Chemical protection overalls

156 • Overalls - Coats - Aprons - Headwear

158 • Masks - Sleeves - Overshoes

399 • TECHNICAL INFORMATION

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DISPOSABLE WEAR

## TO FIND THE SUITABLE PRODUCT FOR YOUR JOB

	AGRICULTURE/ GREEN AREAS	CONSTRUCTION/ CIVIL ENGINEERING	SECOND WORK/ CRAFTSMAN	HEAVY INDUSTRY	LIGHT INDUSTRY	SERVICES/ LOGISTICS	HYGIENE ENVIRONMENT	OIL / GAS	MINING	WIND ENERGY		
											Suitable protection	PAGES
PREMIUM	●			●	●		●				DT300 DELTACHEM	146
	●			●	●						DT250	148
	●			●	●		●				DT119	149
EVOLUTION				●	●		●				DT117	150
			●	●	●						DT125	151
	●	●	●	●	●						DT221	152
	●	●	●	●	●						DT223	153
ESSENTIEL				●	●						DT115	154
	●			●	●						DT115CV	154
		●		●	●						DT215	154
				●	●						DT215CV	154
	●	●		●	●						DT216	154
			●	●	●	●	●				P0106	156
		●	●	●	●	●	●				P0109	156

## MATERIALS

## POLYETHYLENE (PE)

Is a flexible plastic fibre which provides good chemical resistances.

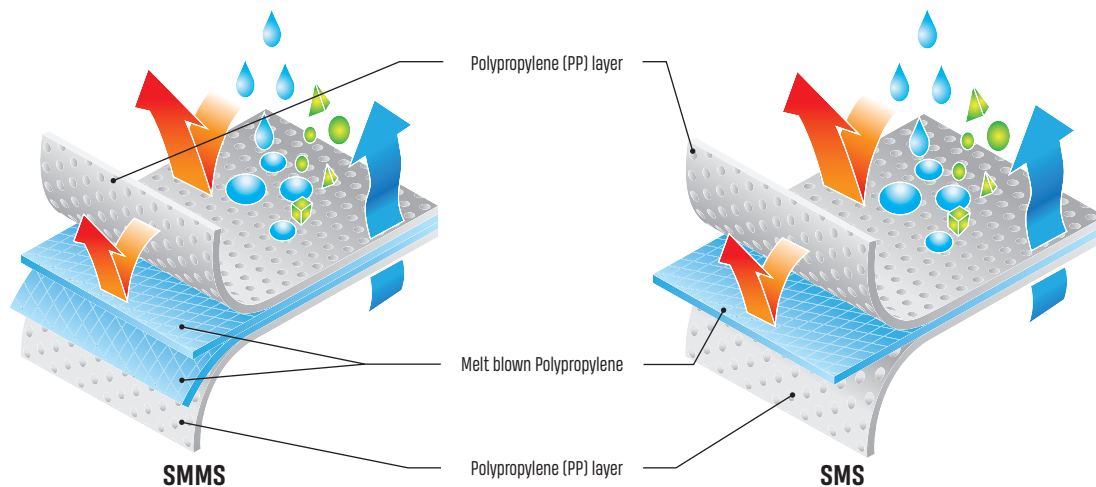
## POLYPROPYLENE (PP)

Is a nonwoven breathable fibre which provides excellent comfort.

## SMS/SMMS

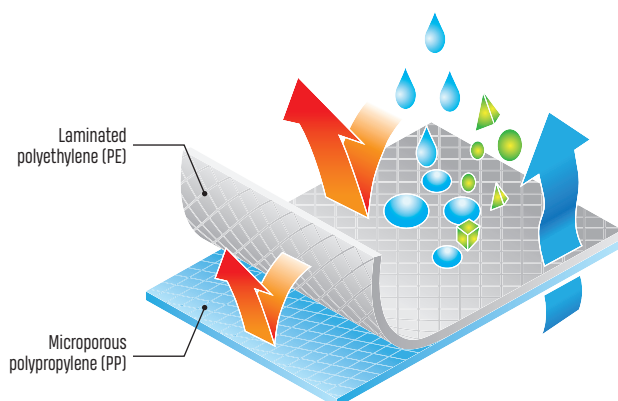
## POLYPROPYLENE - MELT BLOWN POLYPROPYLENE - POLYPROPYLENE - DT2XX

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



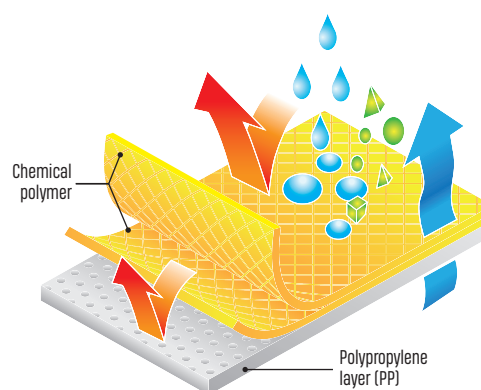
## LAMINATED MICROPOROUS MATERIAL - DT1XX

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 fabric is very resistant and lint free.



## DELTACHEM POLYPROPYLENE + CHEMICAL BARRIER - DT3XX

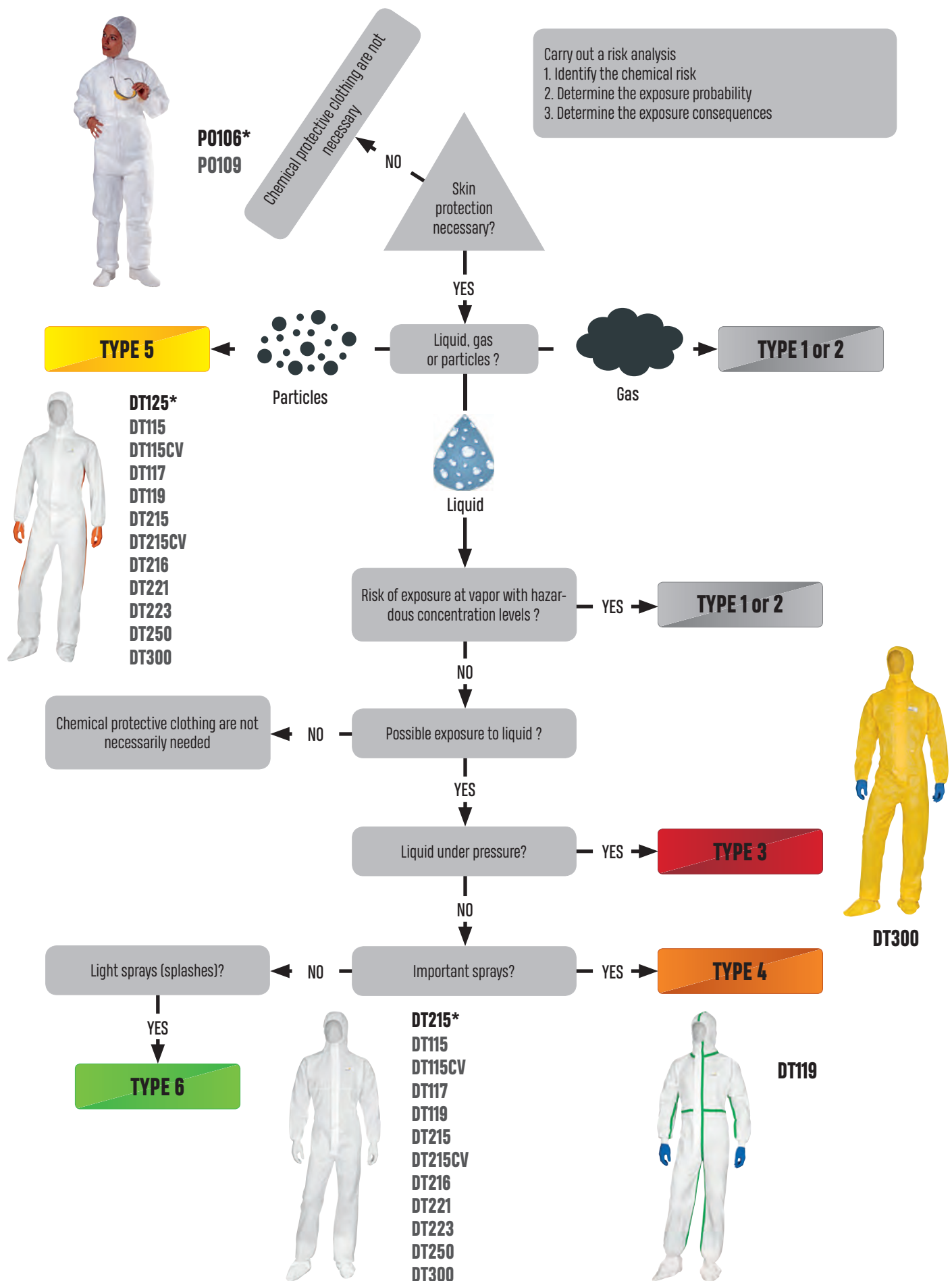
The combination of several high performance polymer layers (chemical barrier) combines with several polypropylene (PP) layers, provides exceptional protection and ensures a non-woven breathable fabric. The polypropylene (PP) with the chemical barrier ensure flexible and comfort in extreme conditions.





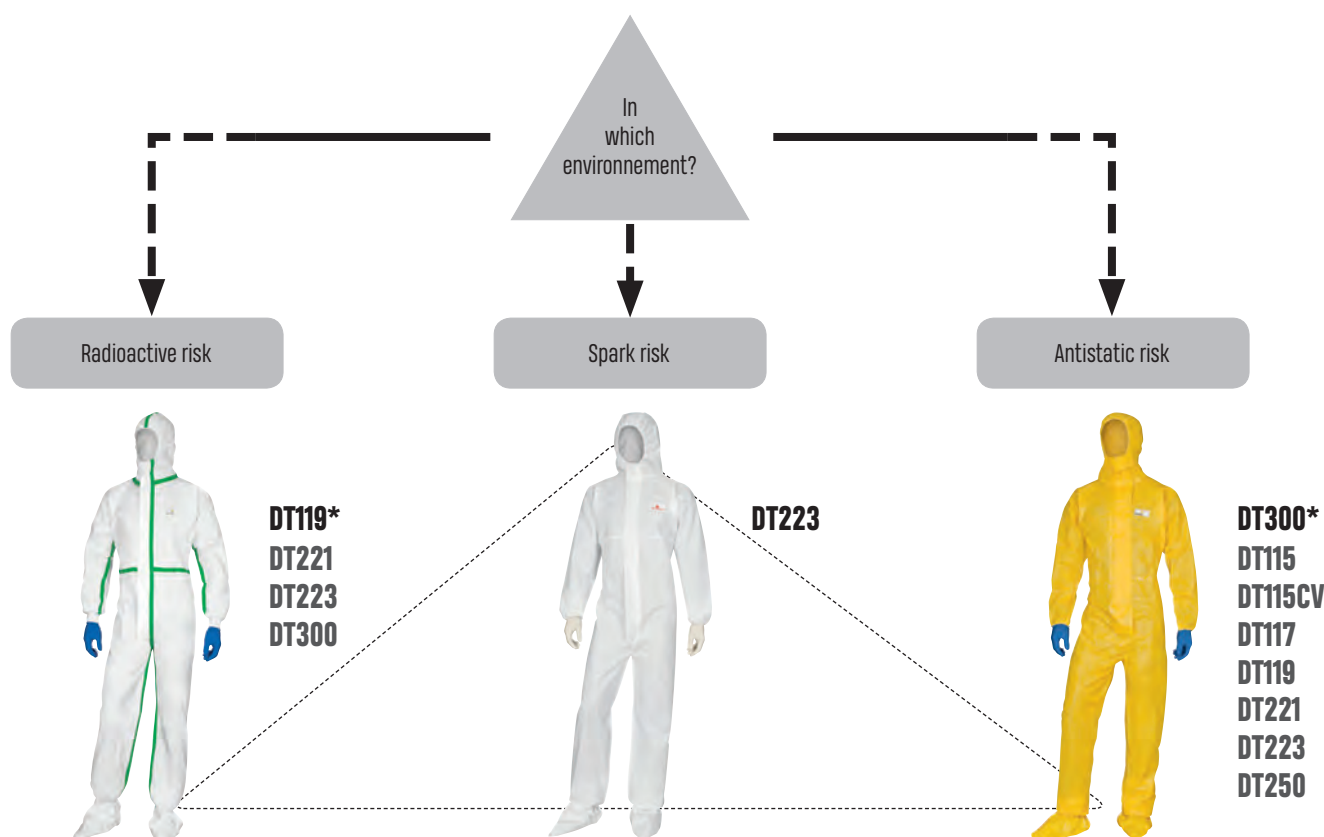


## HELP WITH CHOICE














## SELECT YOUR DISPOSABLE CHEMICAL OVERALL






















## STANDARDS

	 <b>EN14605 TYPE 3(B)</b>	Protective clothing against liquid chemicals (sprays).	 <b>EN14126</b>	Protective clothing against infective agents.
	 <b>EN14605 TYPE 4(B)</b>	Protective clothing against liquid chemicals (mists).	 <b>EN1073-2</b>	Protective clothing against radioactive contamination.
	 <b>EN13982-1 TYPE 5(B)</b>	Protective clothing for use against solid particles (dust - asbestos).	 <b>EN1149-5</b>	Protective clothing to dissipate static electricity.
	 <b>EN13034 TYPE 6(B)</b>	Protective clothing against liquid chemicals (splashes).	 <b>EN ISO 14116</b>	Protective clothing against heat and flame.

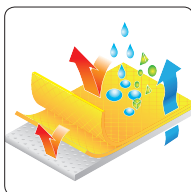
EXAMPLES OF APPLICATIONS		
Applications	Risks	Level of protection
Work Maintenance	Fouling	Category I/Non PPE
Industrial cleaning	Exposure to hazardous chemical substances and particles	<b>TYPE 6</b>
Asbestos abatement / removal (dust > 1 micron)	Contact with particles or fibres	<b>TYPE 5</b>
Agriculture and horticulture (Handling of herbicides / pesticides / fungicides / fertilizers ...)	Contact with harmful elements	<b>TYPE 4</b>
Paint spraying (Solvents)	Contact with low-concentrate aerosols	<b>TYPE 4</b>
Paint spraying (Preparation / Mixing)	Contact with high concentrate aerosols	<b>TYPE 3</b>
Laboratories / Chemical Industries	Projection of chemical products	<b>TYPE 3</b>
Emergency / Rescue Personnel	Bacteriological contamination	<b>TYPE 4-B</b> <b>TYPE 3-B</b>

## CHEMICAL PROTECTION OVERALLS

DELTACHEM®

					
DT300 DELTACHEM		Overall with three-sided elasticated hood. Non woven Deltachem®. Zip Fastening under double flap. Double elastic for thumb. Elasticated around the head, waist, cuffs and ankles. Individual airtight pack.	M/L/XL/XXL	<div> <b>EN14605</b> TYPE 3B TYPE 4B</div> <div> <b>EN ISO 13982-1</b> TYPE 5B</div> <div> <b>EN13034</b> TYPE 6B</div> <div> <b>EN14126</b></div> <div> <b>EN1073-2</b> CLASS 1</div> <div> <b>EN1149-5</b></div>	x 20
DT301 DELTACHEM	Yellow	Overboots. Non-woven DELTACHEM®. Non-slip sole. Elastic on top and tightening link. Sealed seams. Bag of 1 pair.	One size	<div></div> <div> <b>EN14605</b> TYPE PB3-B TYPE PB4-B</div> <div> <b>EN14126</b></div> <div> <b>EN1149-5</b></div>	x 50
DT302 DELTACHEM		Sleeve. Non-woven DELTACHEM®. Elasticated on both ends. Sealed seams. Bag of 1 pair.		<div> <b>EN14605</b> TYPE PB3B</div> <div> <b>EN14126</b></div> <div> <b>EN1149-5</b></div>	

## DT300 DELTACHEM



DELTACHEM®  
 ➔ Enhanced protection against chemicals



DELTACHEM®  
 ➔ No risk of lint

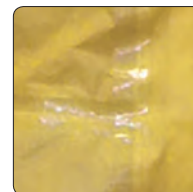
## DT301 DELTACHEM



## DT302 DELTACHEM



3-part hood  
 ➔ Supports head movement for increased comfort



Waterproof seams  
 ➔ Decontamination work



Closure with double flap  
 ➔ Total water-proofing



Double thumb loops  
 ➔ Good hold of the glove on the hand















Elasticated ankles  
 ➔ More comfort







## CHEMICAL PROTECTION OVERALLS

					
DT250	White	Overall with integrated feet with non-slip soles and elasticated hood. PE/PP non woven. Fastening with zip under flap. Elasticated around the head, waist, cuffs and ankles. Individual airtight pack.	M/L/XL/XXL/3XL	CE <div>  EN14605 TYPE 4B            EN ISO 13982-1 TYPE 5B            EN13034 TYPE 6B         </div> <div>  EN14126            EN1073-2 CLASS 1            EN1149-5         </div>	x 20

## DT250



Waterproof seams  
 ➤ Decontamination work

PE/PP material  
 ➤ No risk of lint



Closure with chin strap  
 ➤ Very good support and reinforced protection



Double thumb loops  
 ➤ Very good support



Adhesive tape to connect a glove  
 ➤ Total water-proofing

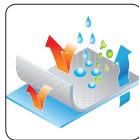


DT119	White	Overall with elasticated hood. Non-woven microporous laminate Deltatek® 5000. Fastening with zip under adhesive flap (top and bottom opening). Elasticated waist and ankles. Knitted wrist. Antistatic. Individual airtight pack.	M/L/XL/XXL	EN14605 TYPE 4B EN ISO 13982-1 TYPE 5B EN13034 TYPE 6B	EN14126 EN1073-2 CLASS 1 EN1149-5 x 20

## DT119



**DELTATek<sup>5000</sup>**



DELTATEK® 5000

→ Polyethylene film ensures better a resistance to chemical attack and better mechanical resistance (abrasion - tearing)



Microporous laminate  
→ No risk of lint  
→ Very soft



Waterproof seams  
→ Decontamination work



3-part hood  
→ Supports head movement for increased comfort



Closure with self-adhesive flap  
→ Very good seal



Ribbed cuffs  
→ Good hold of the glove on the hand



Elasticated ankles



## CHEMICAL PROTECTION OVERALLS

DELTATEK® 5000



DT117

White

Overall with elasticated hood. Non-woven microporous laminate Deltatek® 5000. Fastening with zip under adhesive flap (top and bottom opening). Elasticated waist and ankles. Knitted wrist. Antistatic. Individual airtight pack.

M/L/XL/XXL


 EN13034  
TYPE 6-B

 EN ISO 13982-1  
TYPE 5-B

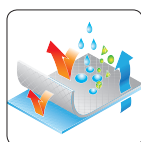
 EN14126

 EN1073-2  
CLASS 1

 EN1149-5

x 20

## DT117

DELTATEK<sup>5000</sup>

DELTATEK® 5000

➔ Polyethylene film ensures better resistance to chemical attack and better mechanical resistance (abrasion - tearing)



Microporous laminate

➔ No risk of lint

➔ Very soft



3-part hood

➔ Supports head movement for increased comfort



Closure with self-adhesive flap

➔ Very good seal



Ribbed cuffs

➔ Good hold of the glove on the hand



Elasticated ankles



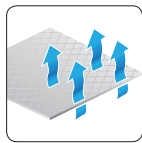


DT125	White-orange	Non-woven overall with three-sided elasticated hood. Made in 2 materials: laminated microporous and SMS. Fastening with zip under flap. Elasticated round head, waist, cuffs and ankles. Individual pack.	M/L/XL/ XXL/3XL	  EN ISO 13982-1 TYPE 5  EN13034 TYPE 6	 EN1073-2 CLASS 1  EN149-5 x 50

## DT125



DELTATek<sup>5000</sup>



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



SMS and Microporous Laminates Association  
 ➔ Optimum comfort  
 ➔ Cooler due to the ventilated back



Antistatic

Microporous laminate  
 ➔ Less risk of lint



3-part hood  
 ➔ Supports head movement for increased comfort



Crotch reinforcement  
 ➔ Increased resistance to tearing



Thumb loop  
 ➔ Good support



## CHEMICAL PROTECTION OVERALLS

DELTATEK® 6000



DT221

White

Overall with elasticated hood. SMMS non-woven Deltatek® 6000. Fastening with zip under adhesive flap (top and bottom opening). Elasticated round head, waist and ankles. Knitted wrist. Antistatic. Individual airtight pack.

M/L/XL/XXL



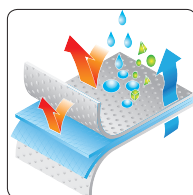
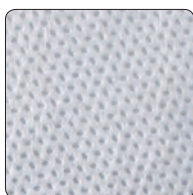
EN ISO 13982-1  
TYPE 5

EN13034  
TYPE 6

EN1073-2  
CLASS 1

EN1149-5 x 20

## DT221

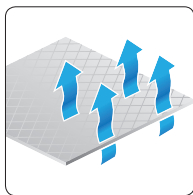
DELTATEK<sup>6000</sup>

DELTATEK® 6000

➔ 100% polypropylene SMMS\*

\*Spunbound Nonwoven (x1), Melt Blown (x2), Spunbound (x1)

The SMMS\* process provides better product breathability



SMMS

➔ Breathable



3-part hood

➔ Supports head movement for increased comfort



Closure with self-adhesive flap

➔ Very good seal



Ribbed cuffs

➔ Good hold of the glove on the hand



Elasticated ankles

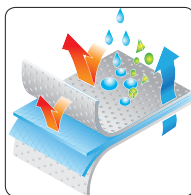


DT223	White	Overall with three-sided elasticated hood. Non-woven SMMS Deltatek® 6000. Flame retardant material. Fastening with zip under flap. Elasticated around the head, waist, cuffs and ankles. Individual airtight pack.	M/L/XL/XXL/3XL	  	 x 20

## DT223



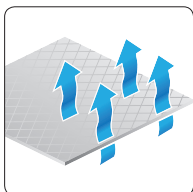
DELTATek<sup>6000</sup>



DELTATEK® 6000

➔ 100% polypropylene SMMS\*

\*Spunbound Nonwoven (x1), Melt Blown (x2), Spunbound (x1)  
The SMMS\* process provides better product breathability



SMMS

➔ Breathable



3-part hood  
➔ Supports head movement for increased comfort



Tested according to standard EN ISO14116  
➔ Protection against flames



## CHEMICAL PROTECTION OVERALLS

TYPE 5 - TYPE 6

DT115		Microporous laminated non-woven overall with elasticated hood. Fastening with zip under flap. Elasticated round head, waist, cuffs and ankles. Individual pack.	M/L/XL/XXL	EN ISO 13982-1 TYPE 5 EN13034 TYPE 6	EN1149-5
DT115CV		Microporous laminated non-woven overall with collar. Fastening with zip under flap. Elasticated round waist, cuffs and ankles. Individual pack.	M/L/XL/XXL/3XL	EN13034 TYPE 6	
DT215	White	Non-woven overall with elasticated hood. 100% SMS. Fastening with zip under flap. Elasticated round head, waist, cuffs and ankles. Individual pack.	M/L/XL/XXL	EN ISO 13982-1 TYPE 5 EN13034 TYPE 6	x 50
DT215CV		100% SMS non-woven overall with collar. Fastening with zip under flap. Elasticated round waist, cuffs and ankles. Individual pack.	M/L/XL/XXL/3XL	EN13034 TYPE 6	
DT216		Non-woven overall with elasticated hood. 100% SMS. Sealed seams. Fastening with zip under flap. Elasticated round head, waist, cuffs and ankles. Individual pack.	M/L/XL/XXL/3XL	EN ISO 13982-1 TYPE 5 EN13034 TYPE 6	

## DT115



## DT115CV



## DT215



## DT215CV



## DT216







## OVERALLS - COATS - APRONS - HEADWEAR

					
P0106		Overall with elasticated hood. Non-woven polypropylene 35 g/m <sup>2</sup> . Zip fastening. Elasticated waist, ankles and cuffs. Suitable for food industry. Individual pack.	M/L/XL/XXL	CE 	x 50
BLOUSPE	White	Coat for visitors. Polyethylene 18 µm. Fastening with 3 press studs. Shirt collar. Raglan sleeves. Dispenser box of 100 pieces.	One size		x 5
TABP002		Apron. Polyethylene 20 µ. Dimensions: 120 x 70 cm. Bag of 100 pieces.			x 10
TABP004		Apron. Polyethylene 40 µ. Dimensions: 120 x 70 cm. Bag of 50 pieces.			
P0109	Blue	Overall with elasticated hood. Non-woven polypropylene 35 g/m <sup>2</sup> . Zip fastening. Elasticated cuffs. Individual pack.	L/XL/XXL	CE	x 50
BLOUSPO	White	Coat. Non-woven polypropylene 35 g/m <sup>2</sup> . Fastening with 4 press studs. Shirt collar. Made-up sleeves. 2 patched low pockets. Suitable for food industry. Individual pack.	M/L/XL/XXL		

P0106



BLOUSPE



TABP002



P0109








BLOUSPO



TABP004





				
P0111	White	Accordion pleating mobcap. Non-woven polypropylene 10 g/m <sup>2</sup> . Elasticated border. Dispenser box of 100 pieces.	One size	x 10
P0110	White	Round mobcap. Non-woven polypropylene 10 g/m <sup>2</sup> . Elasticated border. 53 cm in diameter. Dispenser box of 100 pieces.		
	Blue			
P0112		Mobcap with peak. Non-woven polypropylene 10 g/m <sup>2</sup> . Box of 100 pieces.		
P0115	White	Chin/beard protector. Non-woven polypropylene 10 g/m <sup>2</sup> . Elasticated for a good fit. Dispenser box of 100 pieces.		
TOQUE		Adjustable pleated hat. Extra-white crepe paper, 80 g/m <sup>2</sup> . Height: 25 cm. Bag of 10 pieces.		x 25



### P0111



### P0110



### P0112



### P0115














### TOQUE





# MASKS - SLEEVES - OVERSHOES

					
MASQU	White	Hygiene masks. Non-woven polypropylene 160 g/m <sup>2</sup> . Elasticated straps and nose clip. Box of 50 masks.			
MASQUV		Hygiene mask, medical type, 3 pleats. Non-woven polypropylene 58 g/m <sup>2</sup> . Tie and nose clip. Box of 50 masks.			x 20
MASQUG	Green	Hygiene mask, medical type, 3 pleats. Non-woven polypropylene 62 g/m <sup>2</sup> . Elastic tie and nose clip. Box of 50 masks.			x 40
MANCHBL	White	Sleeve. Polyethylene 21 µm. Suitable for food industry. Elasticated on both ends. Dimensions: 40 x 20 cm. Bag of 100 pieces.	One size		x 20
MANCHBE	Blue			   	x 50
DT302 DELTACHEM	Yellow	Sleeve. Non-woven DELTACHEM®. Elasticated on both ends. Sealed seams. Bag of 1 pair.			

## MASQU



## MASQUV



## MASQUG



## DT302 DELTACHEM



## MANCHBL



## MANCHBE







DT111	White	Overboots. Non-woven microporous laminate Deltatek® 5000. Elastic and tie on top. Bag of 10 pairs.	One size		x 5
SURCHPLUS	Blue-White	Overshoes. Non-woven polypropylene, 8,8 g/m <sup>2</sup> . Polyethylene 120 µ. Waterproof plasticized sole. Elasticated ankle. Bag of 50 pairs.			
SURCHPE	Blue	Visitor overshoes. Polyethylene 25 µm. Elasticated ankle. Bag of 50 pairs.			
SURCHPO	White	Overshoes. Non-woven polypropylene 40 g/m <sup>2</sup> . Elasticated ankle. Dimensions: 35 x 17 cm. Bag of 50 pairs.			
KITVI		Kit for visitor: 1 polyethylene overall Ref. BLOUSPE). 1 accordion pleating mobcap (Ref. PD111). 1 two-pleats paper mask (Ref. MASQU2). 1 polyethylene pair of overshoes (Ref. SURCHPE). Box of 100 kits.			x 4
DT301 DELTACHEM	Yellow	Overboots. Non-woven DELTACHEM®. Non-slip sole. Elastic on top and tightening link. Sealed seams. Bag of 1 pair.		   	x 50



### DT301 DELTACHEM



### DT111



### SURCHPLUS



### SURCHPE



### SURCHPO



### KITVI









# WORK WEAR

## 163 • HELP WITH CHOICE

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164 • Mach Originals

166 • Mach 5

172 • Mach 2 Corporate

178 • D-Mach

182 • Mach 2

186 • Panostyle

192 • Mach Spring - Palaos

194 • Polos - Tshirts - Underwear

196 • High Visibility Workwear

202 • Caps - Belts - Kneepads

## 402 • TECHNICAL INFORMATION











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WORK WEAR



## TO FIND THE SUITABLE PRODUCT FOR YOUR JOB

	AGRICULTURE/ GREEN AREAS	CONSTRUCTION/ CIVIL ENGINEERING	SECOND WORK/ CRAFTSMAN	HEAVY INDUSTRY	LIGHT INDUSTRY	SERVICES/ LOGISTICS	HYGIENE ENVIRONMENT	OIL / GAS	MINING	WIND ENERGY	Suitable protection	PAGES
												
PREMIUM		●	●			●					M0G12	164
		●	●			●					M0PA2	164
					●						M5PA2	168
		●	●		●	●					M5C02	170
		●	●		●	●					M5SA2	170
		●	●		●	●					M5VE2	171
		●	●		●	●					M5BE2	171
		●	●		●	●					M5G12	171
											MAPOC	203
					●	●					MCPA2	174
EVOLUTION		●	●		●	●					MCVE2	176
		●	●		●	●					MCC02	176
		●	●		●	●					MCSA2	176
		●	●		●	●					MCCDZ	177
		●	●		●	●					MCCOM	177
		●	●		●	●					DMACHCOM	180
		●	●		●	●					DMACHSAL	180
		●	●		●	●					DMACHVES	181
		●	●		●	●					DMACHPAN	181
		●	●		●	●					DMACHGIL	181
		●	●		●	●					DMACHBER	181
	●	●	●		●	●			●	●	M2SA2	184
	●	●	●		●	●			●	●	M2C02	184
	●	●	●		●	●			●	●	M2CZ2	184
	●	●	●		●	●			●	●	M2VE2	185
	●	●	●		●	●			●	●	M2PA2	185
		●	●		●	●			●	●	M2G12	185
	●	●	●		●	●			●	●	M2BE2	185
	●	●	●		●	●					LULEA2	191
	●	●	●		●	●					M5SG1	192
	●	●	●		●	●					M5SPA	192
	●	●	●		●	●					MSLPA	193
	●	●	●		●	●					BALI	194
		●	●		●	●					GENOA	194
	●	●	●		●	●					AGRA	195
		●	●		●	●					TURINO	195
	●	●	●		●	●				●	LAZIO	195
	●	●	●		●	●				●	ROMA	195
		●	●		●	●				●	M2VHV	197
		●	●		●	●				●	M2PHV	197
	●	●		●	●					METEOR	201	
	●	●		●	●					OFFSHORE	201	
●	●	●	●	●	●					VERONA	202	
	●	●		●	●					ATOLL	202	
	●	●		●	●					CEINT04	202	
	●	●		●	●					ZIMA	203	
	●	●		●	●					M2GEN	203	

ESSENTIEL	AGRICULTURE/ GREEN AREAS	CONSTRUCTION/ CIVIL ENGINEERING	SECOND WORK/ CRAFTSMAN	HEAVY INDUSTRY	LIGHT INDUSTRY	SERVICES/ LOGISTICS	HYGIENE ENVIRONMENT	OIL / GAS	MINING	WIND ENERGY	Suitable protection	PAGES
												
	●	●	●	●							M6COM	188
	●	●	●	●							M6VES	189
	●	●	●	●							M6GIL	189
	●	●	●	●		●					M6BER	189
	●	●	●	●		●					PANOSTRPA	190
	●		●								NAPOLI	191
	●	●	●		●						M6PAN	191
	●	●	●		●						M6SAL	191
	●	●	●		●	●					PALIGVE	193
	●	●	●		●	●					PALIGPA	193
		●	●		●					●	PHVE2	200
		●	●		●					●	PHPA2	200
		●	●								PHBE2	200
	●	●			●					STAR	201	
	●	●			●					COMET	201	
				●						BADGE	202	

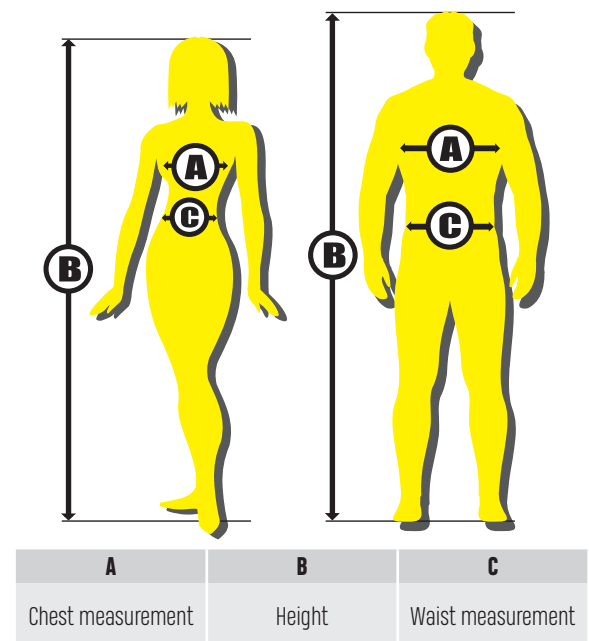
## SIZES

Order the right size by taking the correct measurements

To take the correct measurements, take the measurements directly on the body, without tightening.

### ► I.E. :

- The measurements outlined in the tables are for the **body**, not the garment.
- For wearing a garment over another, **the width required is provided**.















## SIZE EQUIVALENCE TABLE

MALE	XS	S	M	L	XL	XXL	3XL
FEMALE	S	M	L	XL	XXL	-	-

MALE	B	XS 156/164	S 156/164	M 164/172	L 172/180	XL 180/188	XXL 188/196	3XL 196/204
JACKET / BOMBER / BODYWARMER / OVERALL  Chest measurement (A)	EU	42/44	44/46	48/50	52/54	56/58	60/62	64/66
	IT	36/38	38/40	42/44	46/48	50/52	54/56	58/60
	DE	46/48	48/50	52/54	56/58	60/62	64/66	68/70
	cm	78/86	86/94	94/102	102/110	110/118	118/129	129/141
	inch	32 <sup>1/2</sup> /34	34/37	37/40	40/43	43/46 <sup>1/2</sup>	46 <sup>1/2</sup> /50 <sup>1/2</sup>	50 <sup>1/2</sup> /55 <sup>1/2</sup>
TROUSERS / DUNGAREES  Waist measurement (C)	EU	32/34	34/36	38/40	42/44	46/48	50/52	54/56
	IT/DE	36/38	38/40	42/44	46/48	50/52	54/56	58/60
	cm	58/66	66/74	74/82	82/90	90/98	98/106	106/117
	inch	23/26	26/29	29/32	32/35 <sup>1/2</sup>	35 <sup>1/2</sup> /38 <sup>1/2</sup>	38 <sup>1/2</sup> /41 <sup>1/2</sup>	41 <sup>1/2</sup> /46
TEE-SHIRT (A)	cm	76/79	80/88	89/97	98/106	107/115	116/124	125/133



						
MOG12	Grey Navy blue	Vest. Bias finishing. 10 pockets including 2 inner.	Canvas 97% cotton 3% elastane 290 g/m <sup>2</sup> . Yokes : Cordura®.	S/M/L/XL/XXL/3XL		x 10
MOPA2		Trousers. Inside adjustable waist with elastic and buttons. 12 pockets.				

## MOG12



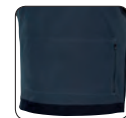
Fixed badge holder included  
MOG12 - MOPA2



Covered zips



Mesh insert on the back for ventilation  
→ Increased breathability for better evacuation of perspiration

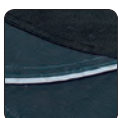


Large pocket on the back  
→ The necessary tools always at hand

## MOPA2



Crotch reinforcement  
→ Increased lifespan



Decorative retro-reflective piping on the front and back  
MOG12 - MOPA2



Kneepad pockets  
→ Allows you to insert M2GEN kneepads to work more comfortably on your knees



Triple seams  
→ Increased lifespan



Fleece lined kidney protector  
→ Perfect protection of the lower back against the cold  
→ Increased comfort



Easy adjustment of leg length by pressure (3 lengths possible)



**MOG12**

CE  
S->3XL



**MILTON2**

CE  
S->3XL



**TURINO**

S->3XL



**MOPA2**

CE  
S->3XL



**OTAKE**

CE  
EN343  
3  
3  
S->3XL



**GENOA**

S->3XL



**NATORI**

S->3XL



**NAGOYA**

CE  
S->3XL



**MAPOC**





WORK WEAR

MACH 5







**MACH/5**  
by DELTAPLUS  
**CORDURA**  
FABRIC

**M5SA2**

CE  
S->3XL



**M5C02**

CE  
S->3XL



**MILTON2**

CE  
S->3XL



**M5VE2**

CE  
S->3XL



**M5G12**

CE  
S->3XL



**M5PA2**

CE  
S->3XL



**OTAKE**

CE  
EN343  
3  
3  
S->3XL



**TURINO**

S->3XL



**KOPER**

CE  
S->3XL



**GENOA**

S->3XL



**M5BE2**

CE  
S->3XL



**NAGOYA**

CE  
S->3XL



**NATORI**

S->3XL



**MAPOC**





M5PA2	Beige-Black Grey-Black	Trousers. Elasticated waist on both sides. Preformed knees. 8 pockets including 1 ruler.	Canvas 60% cotton 40% polyester 270 g/m <sup>2</sup> . Yokes: Cordura® and Oxford polyester.	S/M/L/XL/XXL/3XL	CE	x 10

## M5PA2



MAPOC removable pockets sold separately  
→ The necessary tools always at hand





## The M5V2 range is highly resistant thanks to its triple seams and Cordura® reinforcements.



Triple seams  
➔ Increased lifespan



Covered zips



Tool holder pocket  
➔ The necessary tools always at hand



Retro-reflective piping  
(front and back)



Fixed badge holder included



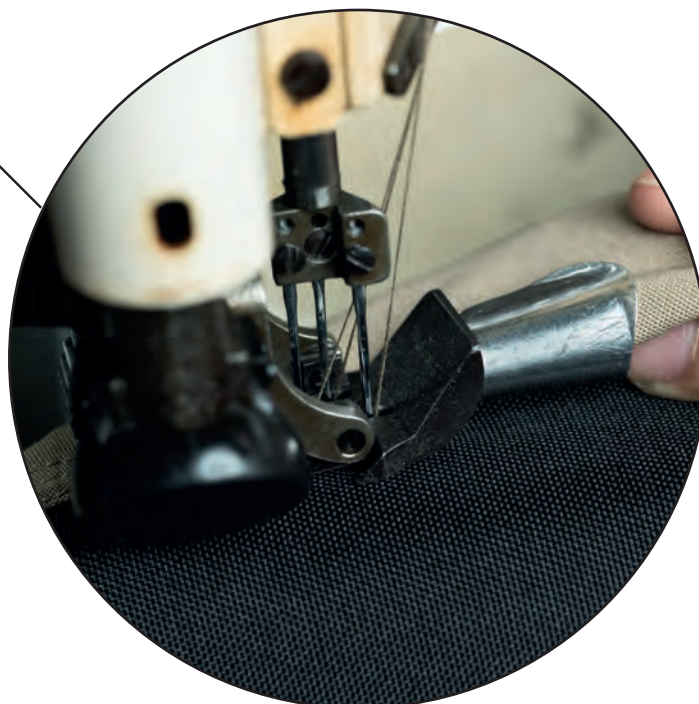
Reinforcement  
➔ Increased lifespan



Cordura® kneepad pockets  
➔ Allows you to insert M2GEN kneepads to work more comfortably on your knees










Using Cordura® and triple seams to improve product life.



We have developed the M5 range to meet the needs of demanding customers and to enable intensive use of the product. That's why we chose a heavy cotton majority fabric to lend comfort and durability. The Cordura®, highly resistant to abrasion, is positioned on areas of high wear such as knees and forearms for maximum durability.

Laurent Kostrzewa, Body Protection Product Expert



						
M5C02	Beige-Black Grey-Black	Overalls. Fastening zip under storm flap with Velcro strap (top and bottom opening). Elasticated waist. Underarm ventilation eyelets. Preformed elbows. 11 pockets including 1 ruler.	Canvas 60% cotton 40% polyester 270 g/m <sup>2</sup> . Yokes: Cordura® and Oxford polyester.	S/M/L/XL/ XXL/3XL	CE	x 10
M5SA2		Dungarees. Fastening zip under flap (top and bottom opening). Elasticated waist on both sides. Adjustable elasticated braces. Preformed knees. 10 pockets including 1 ruler.				

## M5C02



Triple seams  
→ Increased lifespan  
M5C02 - M5PA2 - M5BE2



Retro-reflective piping  
(front and back)  
M5VE2 - M5PA2 - M5C02 -  
M5SA2 - M5G12



Fixed badge holder  
included  
M5VE2 - M5PA2 - M5C02 -  
M5SA2 - M5G12 - M5BE2



Covered zips  
M5VE2 - M5PA2 - M5C02 -  
M5SA2 - M5G12 - M5BE2



Tool holder pocket  
→ The necessary tools always  
at hand  
M5PA2 - M5C02 - M5SA2 -  
M5BE2



Cordura® kneepad pockets  
→ Allows you to insert M2GEN  
kneepads to work more  
comfortably on your knees  
M5PA2 - M5C02 - M5SA2



Reinforcement  
→ Increased lifespan  
M5PA2 - M5C02 - M5SA2



## M5SA2







M5VE2	Beige-Black Grey-Black	Jacket. Fastening with zip under velcro storm flap. Elasticated waist on both sides. Underarm ventilation eyelets. 9 pockets including 2 inner.	Canvas 60% cotton 40% polyester 270 g/m <sup>2</sup> . Yokes: Cordura® and Oxford polyester.			
M5BE2	Beige Black	Bermuda. Elasticated waist on both sides. 8 pockets including 1 ruler.	Canvas 60% cotton 40% polyester 270 g/m <sup>2</sup> .	S/M/L/XL/XXL/3XL	CE x 10	
M5G12	Beige-Black Grey-Black	Vest. Zip fastening under bias. Elasticated waist on both sides. 9 pockets including 2 inner.	Canvas 60% cotton 40% polyester 270 g/m <sup>2</sup> . Yokes: Oxford polyester			

## M5VE2



Cordura® reinforcement  
 ➔ Increased lifespan  
 ➔ Very good resistance to abrasion



## M5BE2



## M5G12



WORK WEAR

# MACH 2 CORPORATE







**MACH/2C**  
by DELTAPLUS

**MCSA2**

CE  
S->3XL



**MCC02**

CE  
S->3XL



**MCCDZ**

CE  
S->3XL



**MCVE2**

CE  
S->3XL



**MCPA2**

CE  
S->3XL



**MOOVE**

S->3XL



**TURINO**

S->3XL



**HORTEN2**

CE  
S->3XL



**MAPOC**



**MARMOT**

S->3XL



**GDOON**

S->3XL





MCPA2



Grey-Black  
Navy blue-Black  
Light grey-Dark grey



Trousers. Elasticated waist on both sides. Preformed knees. Reinforced crotch. 13 pockets including 1 ruler.



Canvas 65% polyester  
35% cotton Ripstop  
260 g/m<sup>2</sup>.



S/M/L/XXL/3XL



CE x 10



## MCPA2



RIPSTOP



MAPDC removable pockets sold separately







## The new Mach Corporate range meets the expectations of today's demanding professionals thanks to its many pockets and the Ripstop fabric used.



Triple seams  
➔ Increased lifespan



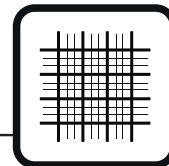
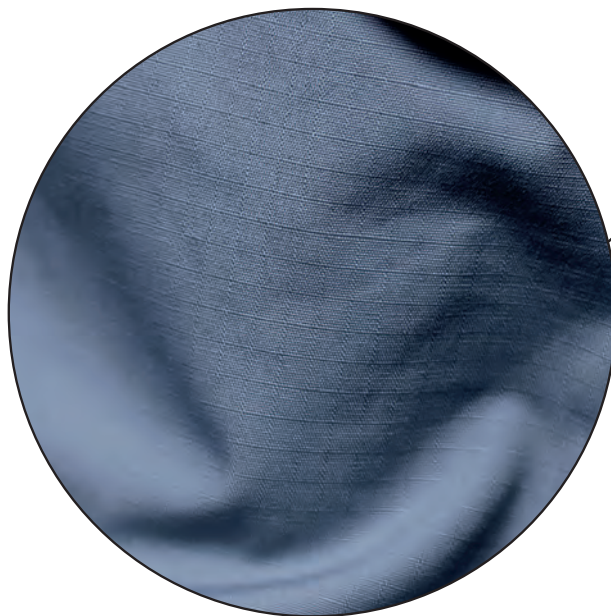
Kneepad pockets  
➔ Allows you to insert M2GEN kneepads to work more comfortably on your knees



Retro-reflective piping (front and back)



Fixed badge holder included



### RIPSTOP








The use of the 260g/m<sup>2</sup> Ripstop polyester/ cotton fabric guarantees the user a very high level of tear resistance while remaining comfortable and relatively light.

A modern cut  
A current design



We took inspiration from current trends to develop the new Mach Corporate range. Ripstop fabric improves tear strength. Heavier, it significantly increases the life of the product. The many functional pockets are a real advantage to always have the necessary tools at hand. The 3 colours available and the decline of design on winter products make the Mach Corporate a usable range throughout the year.

Laurent Kostrzewa, Body Protection Product Expert

						
MCVE2	Grey-Black Navy blue-Black Light grey-Dark grey	Jacket. Fastening with zip under velcro storm flap. Elasticated cuffs adjustable with Velcro. 9 pockets including 1 zipped.	Canvas 65% polyester 35% cotton Ripstop 260 g/m².			
MCC02	Grey-Black	Overalls. Elasticated waist at the back. 11 pockets including 1 ruler.		S/M/L/XL/XXL/3XL	CE x10	
MCSA2	Grey-Black Navy blue-Black Light grey-Dark grey	Dungarees. Adjustable elasticated braces. 9 pockets including 1 ruler.	Canvas 65% polyester 35% cotton Ripstop 260 g/m².			

## MCVE2



Triple seams  
→ Increased lifespan



Fixed badge holder included



## MCC02



Retro-reflective piping  
(front and back)



Kneepad pockets  
→ Allows you to insert M2GEN kneepads to work more comfortably on your knees



## MCSA2





MCCDZ	Navy blue-Black Light grey-Dark grey Beige-Grey	Overalls with 2 zips. Adjustable elasticated waist at the back, through velcro band at the front Adjustable bottom of legs with velcro band. 7 pockets. 2 Hand slits.	Twill 65% polyester 35% cotton 245 g/m².	S/M/L/XL/XXL/3XL	CE	x 10
MCCOM	Beige-Grey	Overalls. Elasticated waist at the back. 8 pockets including 1 ruler. 2 Hand slits.				

## MCCDZ



## MCCOM



Hand pocket  
MCCOM



Buttock reinforcement  
Increased lifespan  
MCCOM



Zip on the bias for ergonomics



Eyelets under arms  
Gusset at the back  
Increased breathability for better evacuation of perspiration

Kneepad pockets  
Allows you to insert M2GEN kneepads to work more comfortably on your knees  
MCCDZ - MCCOM









**D-MACH**  
by DELTAPLUS

**DMACHVES**

CE  
S->3XL



**DMACHSAL**

CE  
S->3XL



**DMACHCOM**

CE  
S->3XL



**VIGO**

CE  
S->3XL



**DMACHGIL**

CE  
S->3XL



**SLIGO**

CE  
EN343  
3  
1  
S->3XL



**DMACHGIW**

CE  
S->3XL



**DMACHPAN**

CE  
S->3XL



**RANDERS**

CE  
S->3XL



**TURINO**

S->3XL



**BALI**

M->3XL



**DMACHBER**

CE  
S->3XL



**DMACHPAW**

CE  
S->3XL



**LECCO**

S->3XL



**MYSEN2**

S->3XL











**MAPOC**



**DOON**

S->3XL



						
DMACHCOM	Black-Red Grey-Yellow Grey-Orange	Overalls. Elasticated waist. Fastening with zip under bias (top and bottom opening). 9 pockets including 1 ruler.	Twill 65% polyester 35% cotton 245 g/m <sup>2</sup> .	S/M/L/XL/XXL/3XL	 x10	
DMACHSAL		Dungarees. Adjustable elasticated braces. 8 pockets including 1 ruler.				

## DMACHCOM



Smocked back  
→ Easy to put on  
→ Freedom of movement



Tool holder pocket  
→ The necessary tools always at hand  
DMACHCOM - DMACHPAN - DMACHSAL



Lower trousers reinforced with anti-dirt coating  
DMACHCOM - DMACHPAN - DMACHSAL



## DMACHSAL



Button closure on the waist



Jean style pockets  
DMPAN - DMSAL - DMCOM



Buttock reinforcement  
→ Increased lifespan



Kneepad pockets  
→ Allows you to insert M2GEN kneepads to work more comfortably on your knees  
DMCOM - DMPAN - DMSAL





DMACHVES	Black-Red Grey-Yellow Grey-Orange	Jacket. Cuffs with press studs fastening. 4 pockets.				
DMACHGIL	Grey-Yellow	Vest. Zip fastening under bias. 5 pockets.	Twill 65% polyester 35% cotton 245 g/m <sup>2</sup> .	S/M/L/XL/XXL/3XL		x 10
DMACHPAN	Black-Red Grey-Yellow Grey-Orange	Trousers. Elasticated waist on both sides. 6 pockets including 1 ruler.				
DMACHBER	Black-Red Grey-Yellow	Bermuda. Elasticated waist on both sides. 6 pockets.				

## DMACHVES



Badge holder  
location



Inner pocket  
→ The necessary tools  
always at hand



Hand pockets



Reinforced anti-soil cuffs



## DMACHGIL



Hand pockets



## DMACHPAN



## DMACHBER











**MACH/2**  
by DELTAPLUS

**M2SA2**

CE  
S->3XL



**M2C02**

CE  
S->3XL



**M2CZ2**

CE  
S->3XL



**CARSON**

CE  
EN343  
3  
1  
S->3XL



**SLIGO**

CE  
EN343  
3  
1  
S->3XL



**M2VE2**

CE  
S->3XL



**M2PA2**

CE  
S->3XL



**NORTHWOOD2**

CE  
EN343  
3  
1  
S->3XL



**M2GI2**

CE  
S->3XL



**GENOA**

S->3XL



**DOON**

S->3XL



**M2BE2**

CE  
S->3XL



**STOCKTON2**

CE  
S->3XL



**BEAVER**

S->3XL



**M2PW2**

CE  
S->3XL













**LULEA2**

S->3XL



**MAPOC**



						
M2SA2	Grey-Orange Navy blue-Royal blue Black-Grey	Dungarees. Adjustable elasticated braces. 8 pockets including 1 ruler.	#			
M2C02		Overalls. Zip fastening under bias. Elasticated waist. Elasticated cuffs. 10 pockets including 1 on the sleeve and 1 ruler.				
M2CZ2		Overalls with 2 zips. Elasticated waist. 10 pockets including 1 ruler.				
			Twill 65% polyester 35% cotton 245 g/m².	S/M/L/XL/XXL/3XL	CE	x 10

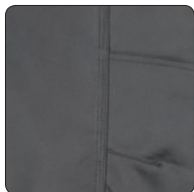
## M2SA2



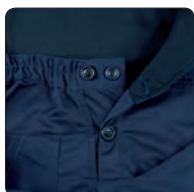
Decorative retro-reflective piping on the back  
M2C02 - M2CZ2 - M2VE2 - M2PA2



Fixed badge holder included  
M2C02 - M2CZ2 - M2VE2 - M2PA2 - M2SA2 - M2G12 - M2BE2



Triple seams  
→ Increased lifespan  
M2C02 - M2CZ2 - M2PA2 - M2SA2 - M2BE2



Waist adjustable with buttons  
→ Elasticated back waist  
→ Freedom of movement and optimised comfort



Kneepad pockets  
→ Allows you to insert M2GEN kneepads to work more comfortably on your knees  
M2C02 - M2PA2 - M2SA2



## M2C02



Covered zips  
M2C02 - M2VE2



## M2CZ2



Hand pocket



Adjustable bottom by Velcro strap





M2VE2	Grey-Orange Navy blue-Royal blue Black-Grey	Jacket. Elasticated cuffs adjustable with Velcro. 5 pockets including 1 zipped and 1 inside.	Twill 65% polyester 35% cotton 245 g/m <sup>2</sup> .	S/M/L/XL/XXL/3XL	CE x 10	
M2G12	Grey-Orange Navy blue-Royal blue Green-Black	Multipocket vest. Bias finishing. 10 pockets.				
M2PA2	Grey-Orange Navy blue-Royal blue Black-Grey Green-Black	Trousers. Elasticated waist on both sides. 7 pockets including 1 ruler.		XS/S/M/L/XL/ XXL/3XL		
M2BE2	Grey-Orange Navy blue-Royal blue Green-Black	Bermuda. Elasticated waist on both sides. 7 pockets including 1 ruler.		S/M/L/XL/XXL/3XL		

## M2VE2



## M2G12



Large pocket on the back  
→ The necessary tools  
always at hand



## M2PA2



MAPOC removable  
pockets sold separately  
→ The necessary tools  
always at hand

## M2BE2











# PANOSTYLE

M6SAL

CE  
XS->3XL



M6COM

CE  
XS->3XL



DARWIN3

CE  
EN343  
3  
1  
XS->3XL



M6VES

CE  
XS->3XL



M6GIL

CE  
XS->3XL



M6PAN

CE  
XS->3XL



PANOSTRPA

CE  
XS->3XL



RENO

CE  
S->3XL



BALI

M->3XL



LITE

S->3XL



M6BER

CE  
S->3XL



MAPOC



BEAVER








S->3XL



SIERRA2

CE  
S->3XL



						
M6COM	Grey-Green Navy blue-Orange Grey-Orange Brown-Green	Overalls. Front zip fastening with bias finishing. Elasticated waist. Elasticated cuffs. 7 pockets.				
M6SAL	Grey-Orange Navy blue-Orange Grey-Green Brown-Green White-Grey	Dungarees. Elasticated waist on both sides. Adjustable elasticated braces. 6 pockets.	Twill 65% polyester 35% cotton 235 g/m².	XS/S/M/L/XL/XXL/3XL	CE x 10	

## M6COM



Badge holder location sold separately



Contrasting colours



Internal kneepad pockets  
➡ Allows you to insert M2GEN kneepads to work more comfortably on your knees



## M6SAL



Button closure on the waist





M6VES	Grey-Green Navy blue-Orange	Jacket. Front zip fastening with bias finishing. Elasticated cuffs. 4 pockets.	Twill 65% polyester 35% cotton 235 g/m <sup>2</sup> .	XS/S/M/L/XL/ XXL/3XL		x 10
M6GIL	Grey-Orange Brown-Green	Multipocket vest. Front zip fastening with bias finishing. Bias finishing. 6 pockets.				
M6PAN	Grey-Orange Navy blue-Orange Grey-Green Brown-Green White-Grey	Trousers. Elasticated waist on both sides. 5 pockets including 1 ruler.				
M6BER	Grey-Green Navy blue-Orange	Bermuda. Elasticated waist on both sides. 5 pockets.				

## M6VES



## M6GIL



## M6PAN



## M6BER



The new PanostrPa trousers completes the PANOSTYLE offer by providing a more modern fit and incomparable comfort thanks to the cleverly positioned stretch fabric.

PANOSTRPA	Navy blue-Orange Grey-Black	Trousers. Elasticated waist at the back. 5 pockets including 1 ruler.	Twill 63% polyester 34% cotton 3% elastane 240 g/m <sup>2</sup> .	XS/S/M/L/XL/ XXL/3XL	CE x 10	

## PANOSTRPA



The use of 240 g/m<sup>2</sup> polyester/cotton/elastane stretch fabric guarantees the best price/value ratio for this range without compromising the quality and durability of the product.



We have integrated a stretch line in the Panostyle range to meet the expectations of our customer users. They can continue to dress in Panostyle, or rediscover this range while having pants with a current cut that offers greater freedom of movement whatever the job they do.  
Laurent Kostrzewa, Body Protection Product Expert







LULEA2	White-Grey	Jacket. Fastening with zip under storm flap. Bottom of sleeves with bias finishing. Adjustable bottom of garment with elastic drawstring. 5 pockets.	Softshell 96% polyester 4% elastane fabric.	S/M/L/XL/XXL/3XL		
NAPOLI	White	Tee-shirt with short sleeves. Round collar.	Jersey stitch 100% cotton 140 g/m².			x 10
M6PAN	White-Grey	Trousers. Elasticated waist on both sides. 5 pockets including 1 ruler.	Twill 65% polyester 35% cotton 235 g/m².	XS/S/M/L/XL/XXL/3XL		
M6SAL		Dungarees. Elasticated waist on both sides. Adjustable elasticated braces. 6 pockets.				

## LULEA2



Softshell  
→ Lightness and protection from cold, wind and fine rain



## NAPOLI











## M6PAN



## M6SAL



# MACH SPRING - PALAOS

						
M5SGI	Beige	Stonewashed multipocket vest. Zip fastening under bias. 12 pockets.	Twill 65% polyester 35% cotton 245 g/m <sup>2</sup>	S/M/L/XL/XXL/3XL		x 10
M5SPA		3 in 1 stonewashed trousers. Elasticated waist on both sides. Preformed knees. 8 pockets including 1 ruler.				

## M5SGI



Dorsal ventilation flap



Fixed badge holder included



## M5SPA



Triple seams  
➔ Increased lifespan  
Crotch reinforcement  
➔ Increased lifespan



Kneepad pockets  
➔ Allows you to insert M2GEN kneepads to work more comfortably on your knees



Pants convertible via zip



Tool holder pocket  
➔ The necessary tools always at hand



MAPOC removable pockets sold separately  
➔ The necessary tools always at hand

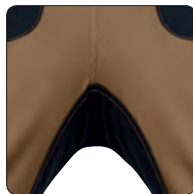


MSLPA	Beige	Trousers. Elasticated waist on both sides. Preformed knees. 6 pockets including 1 ruler.	Canvas 100% cotton 195 g/m <sup>2</sup> . Cordura® reinforcement 100% polyamide.			
PALIGVE	Grey	Jacket. Zip fastening under bias. Elasticated cuffs. 3 pockets including 1 inner.	Twill 100% cotton 200 g/m <sup>2</sup> .	S/M/L/XL/XXL/3XL	CE	x 10
PALIGPA	Navy blue	Trousers. Elasticated waist on both sides. 5 pockets including 1 ruler.	Twill 100% cotton 200 g/m <sup>2</sup> .			

## MSLPA



Kneepad pockets  
 ➔ Allows you to insert M2GEN kneepads to work more comfortably on your knees



Crotch reinforcement  
 ➔ Increased lifespan



## PALIGVE










Covered zips



## PALIGPA



# POLOS - TSHIRTS - UNDERWEAR

					 
BALI	Grey-Navy blue Black-Yellow Orange-Navy Blue Red-Grey Green-Grey	Two-coloured tee-shirt with short sleeves. Round collar.	100% polyester 160 g/m <sup>2</sup> . Dry fit treatment.	M/L/XL/XXL/3XL	x 10
GENOA	Grey-Orange Royal blue-Navy blue Black-Grey Green-Black	Two-coloured tee-shirt with short sleeves (To match the MACH range). Round collar.	Jersey stitch 100% cotton 180 g/m <sup>2</sup> .	S/M/L/XL/XXL/3XL	
NAPOLI	Blue Grey White	Tee-shirt with short sleeves. Round collar.	Jersey stitch 100% cotton 140 g/m <sup>2</sup> .		

## BALI



Synthetic fabric  
 ↳ Quick drying to keep the skin dry  
 ↳ Lightweight



## GENOA



## NAPOLI







AGRA	Blue Black Red	Polo with short sleeves. Collar with button fastening.	Piqué stitch 100% cotton 200 g/m <sup>2</sup> .			
TURINO	Black Grey-Black	Polo with long sleeves (To match MACH range). Knitted cuffs.	Piqué stitch 100% cotton 210 g/m <sup>2</sup> .	S/M/L/XL/XXL/3XL		x 10
LAZIO	Black	Tee-shirt with short sleeves. Round collar.	Jersey stitch 100% cotton 180 g/m <sup>2</sup> .			
ROMA	Grey					

## AGRA



## TURINO



## LAZIO



## ROMA



WORK WEAR

# HIGH VISIBILITY WORKWEAR







### METEOR

CE

EN ISO 20471

3  
x50

S->3XL



### M2VHV

CE

EN ISO 20471  
JACKET/JACKET+TROUSERS  
2/3

S->3XL



### PHVE2

CE

EN ISO 20471

2

S->3XL



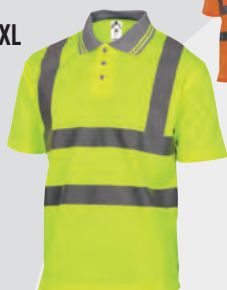
### OFFSHORE

CE

EN ISO 20471

2

M->XXL



### M2PHV

CE

EN ISO 20471  
TROUSERS/TROUSERS+JACKET  
2/3

S->3XL



### PHPA2

CE

EN ISO 20471

2

S->3XL



### STAR

CE

EN ISO 20471

3  
x50

S->3XL



### GILP2/GILP4

CE

EN ISO 20471

2

x25

L->XL



### COMET

CE

EN ISO 20471

2

S->3XL



### PHBE2

CE

EN ISO 20471

1

S->3XL



### BRASSJA

CE

EN 13356

TYPE 2

3M Scotchlite™  
Reflective Material



### BAUCE2

CE

EN 13356










TYPE 2

M



# HIGH VISIBILITY WORKWEAR



						
M2VHV	Fluorescent yellow-Grey	Jacket. Elasticated cuffs adjustable with Velcro. 4 pockets including 1 zipped and 1 inside. High visibility. Class 2 - Silver colour - Parallel assembly.	Twill 54% cotton 46% polyester 260 g/m <sup>2</sup> Retro-reflective sewn bands.	S/M/L/XL/XXL/3XL	 <b>EN ISO 20471</b> JACKET/ JACKET+TROUSERS 2/3	x 10
M2PHV	Fluorescent orange-Grey	Trousers. Elasticated waist on both sides. High visibility. Class 2 - Silver colour. 7 pockets including 1 ruler pocket.			 <b>EN ISO 20471</b> TROUSERS/ JACKET+TROUSERS 2/3	

## M2VHV



## M2PHV







## From T-shirts to the parka to pants and work jackets, our high-visibility clothing line lets you be seen for your safety in any season wherever you work.



Fixed badge holder included



Covered zips



Triple seams  
→ Increased lifespan



MAPOC removable pockets  
sold separately  
→ The necessary tools  
always at hand



Kneepad pockets  
→ Allows you to insert M2GEN kneepads  
to work more comfortably on your knees

Class		
1	> 0,14 m <sup>2</sup>	> 0,10 m <sup>2</sup>
2	> 0,50 m <sup>2</sup>	> 0,13 m <sup>2</sup>
3	> 0,80 m <sup>2</sup>	> 0,20m <sup>2</sup>

A high visibility garment that will allow you to be visible to other road users and machine operators day and night.

To be visible by day, they must use yellow, orange or red fabrics that meet the EN ISO 20471 standard.

To be visible at night, they must use retro-reflective tapes that also meet the EN ISO 20471 standard.

The surface and positioning of the retro-reflective fabrics and bands will certify the garment in class 1, 2 or 3.

These classes guarantee a visibility to a greater or lesser distance that you define according to your place of work : construction site, road, highway...

We mainly use retro-reflective tapes sewn to guarantee the best value for money.













Our entire range meets the requirements of standard EN ISO 20471 A1 2016.

Most models are available in orange and yellow, we developed them with the constant concern of the best value for money without compromising on the quality of the materials used.

Laurent Kostrzewa, Body Protection Product Expert

# HIGH VISIBILITY WORKWEAR

						
PHVE2		Jacket. Elasticated cuffs. High visibility: Class 2 - Silver colour - Shoulder-belt and parallel assembly. 2 pockets.				
PHPA2	Fluorescent yellow-Navy blue Fluorescent orange-Navy blue	Trousers. Elasticated waist on both sides. High visibility: Class 2 - Silver colour. 5 pockets including 1 ruler pocket.	Twill 80% polyester 20% cotton 230 g/m <sup>2</sup> . Retro-reflective sewn bands.	S/M/L/XL/XXL/3XL	 	x 10
PHBE2		Bermuda. Elasticated waist on both sides. High visibility: Class 1 - Silver colour. 5 pockets.				

## PHVE2



## PHPA2













Internal kneepad pockets  
→ Allows you to insert  
M2GEN kneepads to work  
more comfortably on your  
knees



## PHBE2





						
METEOR	Fluorescent yellow Fluorescent orange	Polo with long sleeves. Contrast collar with button placket. High visibility: Class 3 - Silver colour - Shoulder-belt and parallel assembly.	Piqué stitch 100% polyester 235 g/m². Retro-reflective sewn bands.	S/M/L/XL/XXL/3XL	 <b>EN ISO 20471</b> CLASS 3	x 10
STAR		Long Sleeve T-Shirt. Round collar. High visibility: Class 3 - Silver colour - Shoulder-belt assembly.			 <b>EN ISO 20471</b> CLASS 3 x 50	
OFFSHORE		Polo with short sleeves. Contrast collar with button placket. High visibility: Class 2 - Silver colour - Shoulder-belt and parallel assembly.	100% polyester stich 160 g/m². Retro-reflective sewn bands.	M/L/XL/XXL		
COMET		Short sleeve tee-shirt. Round collar. High visibility: Class 2 - Silver colour - Shoulder-belt assembly.				

## METEOR



## STAR










## OFFSHORE



## COMET



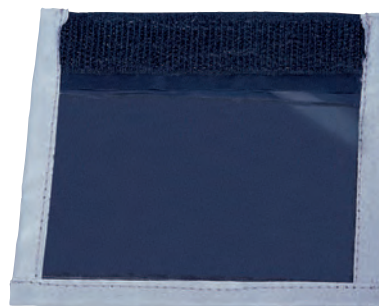
# CAPS - BELTS - KNEEPADS

					 
VERONA	Navy blue-Royal blue Grey-Orange Black-Grey Red-Grey	Cap (To match the MACH range).	Twill 65% polyester 35% cotton 245 g/m <sup>2</sup> .	One size	x 100
BADGE	Black	Removable badge holder suitable for all products with badge holder text. Outside dimensions: width 10,5 cm x height 9,5 cm.	Fabric. Plastic.		x 750
ATOLL	Grey	Belt. Length: 120 cm.	100% polyester.	One size	x 100
CEINT04	Black	Adjustable lumbar belt with velcro band. Double elasticated band for adjustment. Adjustable tightening shoulder-straps. Reinforced at the back with a system of «4 stiffeners».	Canvas polyester elastane. Stiffeners in polypropylene.	M/L/XL	x 48

## VERONA



## BADGE



## ATOLL



## CEINT04







MAPOC		Set of 2 removable pockets. 6 pockets and 1 hammer holder.	100% Oxford polyester canvas.			x 40
ZIMA	Black	Pair of gel kneepad with outside anti slip shell. Elastic velcro band to maintain the knee. Adjustable strips in elastic velcro.	PVC-coated 100% polyester. 100% polyester lining. PVC shelve.	One size	EN14404 TYPE 1 LEVEL 1	x 10
M2GEN		Pair of kneepads 20 x 15 cm for trousers, dungarees and overalls of the MACH and PANOSTYLE ranges (not M2CZ2).	Polyethylene foam.		EN14404 TYPE 2 LEVEL 1	

## MAPOC



## ZIMA



## M2GEN



**DESIGNING  
MANUFACTURING  
YOUR SAFETY AT WORK**



# OUTDOOR WEAR

## 207 • HELP WITH CHOICE

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208 • Parkas and bombers jackets

224 • Bodywarmers

228 • Trousers

230 • Polars - Softshell - Sweats - Pull-over

237 • Caps - Hoods - Gloves

238 • Rain

## 402 • TECHNICAL INFORMATION

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OUTDOOR WEAR



## TO FIND THE SUITABLE PRODUCT FOR YOUR JOB

	AGRICULTURE/ GREEN AREAS	CONSTRUCTION/ CIVIL ENGINEERING	SECOND WORK/ CRAFTSMAN	HEAVY INDUSTRY	LIGHT INDUSTRY	SERVICES/ LOGISTICS	HYGIENE ENVIRONMENT	ONLY GAS	MINING	WIND ENERGY	Suitable protection	PAGES
PREMIUM		●	●	●	●	●					KOLDYTOP	208
		●	●	●	●	●					KOLDYPANTS	208
			●		●	●					MILTON2	210
			●		●	●					EOLÉ	212
			●		●	●					TATRY	212
											MOOVE	220
			●		●	●					MOTION	221
		●	●		●	●				●	FIDJI2	224
		●	●		●	●					NATORI	225
			●		●						HORTEN2	230
		●	●		●	●					BRIGHTON	233
	●	●	●		●	●					NAGOYA	234
		●	●		●	●					OTAKE	239
			●		●	●					850	242
	●	●	●		●	●				●	YEMAN	241
			●		●	●					VIGO	243
		●	●		●	●					KOPER	243
		●	●		●	●			●	●	CARSON	244
		●	●		●	●					FINNMARK	245
		●	●		●	●					GÖTEBORG	245
EVOLUTION					●						DOON	221
	●	●	●		●	●			●	●	NORTHWOOD2	222
			●		●	●					RANDERS	223
			●			●			●		G-DOON	226
			●		●	●					GRANDERS	226
	●	●	●		●	●					DMACHIW	228
		●	●		●	●					DMACHPAW	228
		●	●		●	●			●	●	STOCKTON2	229
	●	●	●		●				●	●	M2PW2	229
			●		●	●					MYSEN2	232
	●	●	●		●	●					LULEA2	232
		●	●		●	●					SHERMAN	233
	●	●	●		●	●				●	MARMOT	234
	●	●	●		●	●					ANZIO	235
	●	●	●		●	●					LECCO	235
		●									KARA	237
			●								JURA	237
		●									CHAMONIX	237
		●									NORDIC	237
		●									NEVE	237
	●	●		●	●					SLIGO	240	
	●	●		●	●					GALWAY	240	
	●	●		●	●					LIDINGO	241	
	●	●		●	●					TYPHOON	241	
	●	●		●	●					TOFINO	241	

ESSENTIEL	AGRICULTURE/ GREEN AREAS	CONSTRUCTION/ CIVIL ENGINEERING	SECOND WORK/ CRAFTSMAN	HEAVY INDUSTRY	LIGHT INDUSTRY	SERVICES/ LOGISTICS	HYGIENE ENVIRONMENT	ONLY GAS	MINING	WIND ENERGY	Suitable protection	PAGES
												
											BADGE	202
											ALASKA2	216
											HELSINKI2	217
											DARWIN3	218
											ISOLA	218
											NEW DELTA	222
											RENO	223
											HALDEN	225
											SIERRA2	227
											CLUSES2	227
											BEAVER	234
											VERNON	236
											LITE	239
										400	243	
										304	243	
										MA400	243	
										305	243	







## SIZES

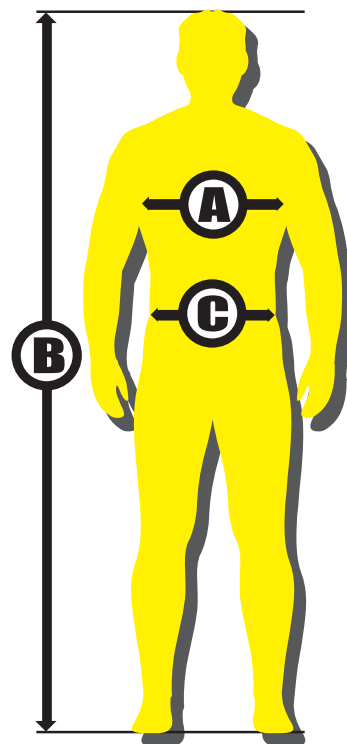
Order the right size by taking the correct measurements

To take the correct measurements, take the measurements directly on the body, without tightening.

I.E. :

- the measurements outlined in the tables are for the **body**, not the garment.
- for wearing a garment over another, **the width required is provided**.

A	B	C
Chest measurement	Height	Waist measurement



## SIZE EQUIVALENCE TABLE



MALE		B	XS 156/164	S 156/164	M 164/172	L 172/180	XL 180/188	XXL 188/196	3XL 196/204
JACKET / BOMBER PARKA / VEST	Chest measurement (A)	EU	44/46	46/48	48/50	50/52	52/54	54/56	56/58
		IT	36/38	38/40	42/44	46/48	50/52	54/56	58/60
		DE	48/50	50/52	52/54	54/56	56/58	58/60	60/62
		cm	90/94	94/98	98/102	102/106	106/110	110/114	114/118
		inch	35 <sup>1/2</sup> /37	37/38 <sup>1/2</sup>	38 <sup>1/2</sup> /40	40/41 <sup>1/2</sup>	41 <sup>1/2</sup> /43 <sup>1/2</sup>	43 <sup>1/2</sup> /45	45/46 <sup>1/2</sup>
TROUSERS	Waist measurement (C)	EU	/	34/36	38/40	42/44	46/48	50/52	54/56
		IT/DE	/	38/40	42/44	46/48	50/52	54/56	58/60
		cm	/	66/74	74/82	82/90	90/98	98/106	106/117
		inch	/	26/29	29/32	32/35 <sup>1/2</sup>	35 <sup>1/2</sup> /38 <sup>1/2</sup>	38 <sup>1/2</sup> /41 <sup>1/2</sup>	41 <sup>1/2</sup> /46
UNDERWEAR	Chest measurement (A)	EU	/	34/36	38/40	42/44	46/48	50/52	54/56
		IT/DE	/	38/40	42/44	46/48	50/52	54/56	58/60
		cm	/	78/86	86/94	94/102	102/110	110/118	118/123
		inch	/	30 <sup>1/2</sup> /34	34/37	37/40	40/43 <sup>1/2</sup>	43 <sup>1/2</sup> /46 <sup>1/2</sup>	46 <sup>1/2</sup> /48 <sup>1/2</sup>
	Waist measurement (C)	cm	/	66/74	74/82	82/90	90/98	98/106	106/117
		inch	/	26/29	29/32	32/35 <sup>1/2</sup>	35 <sup>1/2</sup> /38 <sup>1/2</sup>	38 <sup>1/2</sup> /41 <sup>1/2</sup>	41 <sup>1/2</sup> /46

## PARKAS AND BOMBERS JACKETS

					
KOLDYTOP	Black	Long sleeve raglan t-shirt.	60% polyamide 35% Coolmax® 5% elastane.	S/M/L/ XL/XXL	x 10
KOLDYPANTS		Long Johns.			

## KOLDYTOP



Thermoregulator  
Lightweight  
Ergonomic cut

➔ Very comfortable to wear, the Coolmax® technology allows faster evacuation of perspiration. Quick drying to give the user maximum comfort



## KOLDYPANTS





## The 3-layers system allows you to always be well protected whatever the weather conditions.



The 3-layers concept guides you in the choice of clothes to use in order to not suffer from the weather conditions.

1

The first layer in contact with the skin should be comfortable and facilitate the evacuation of sweat to stay dry.



2

The second layer must protect you from the cold. This is the layer that can be doubled or tripled if the cold is really intense. We must favour textiles that trap the air as it is an excellent insulation : fleece, wadding...



3








The third and last layer must primarily protect you from external aggressions, particularly rain and wind, but also allow the evacuation of moisture. Remember that the best way to get rid of moisture is to open the zip and limit perspiration by adapting the intermediate layers to the outside temperature and the intensity of the planned work.



Evacuate, isolate and protect are reminiscent of first aid terms (Protect - Alert - Rescue) but if we stay within the protection, it's a concept that allows you to choose your clothes to protect you in any weather.

Laurent Kostrzewa, Body Protection Product Expert

# PARKAS AND BOMBERS JACKETS

						
MILTON2	Black Red Navy blue	Parka. Waterproof seams. Fastening with zip storm flap. Adjustable bottom of garment with elastic drawstring. 6 pockets.	94% polyester 6% elasthane fabric, 2 laminated layers. Yokes: Polyurethane-coated Oxford polyester fabric. Quilted Taffeta polyester lining.	S/M/L/XL/ XXL/3XL	CE x 10	

## MILTON2



**tech2**



**BREATHABLE WATERPROOF**  
→ Evaporative resistance  
Class 2



**Fleece lined collar**  
→ Comfort wear for  
optimised cold protection



**Internal audio guide**



**Document storage pocket**  
→ The necessary tools  
always at hand



**Wind-proof mitten**  
→ Maintains heat  
→ Wind-breaker



**Padded removable hood**  
→ Increased protection  
from the cold



**Fixed badge holder  
included**



**Inner opening**  
→ Easy and qualitative  
marking







YEMAN	Black	Bomber jacket. Fastened with a zip under storm flap. Knitted cuffs and bottom of garment. 6 pockets.	65% polyester 35% cotton Ripstop fabric. Top lining: polyester polar fleece - Bottom lining: polyester Taffeta.	S/M/L/XL/XXL/3XL	CE	x 10

## YEMAN



Padded removable hood  
→ Increased protection from the cold



Fleece lined collar  
→ Comfort wear for optimised cold protection



Decorative retro-reflective piping on the front and back



Fixed badge holder included



Inner opening  
→ Easy and qualitative marking



# PARKAS AND BOMBERS JACKETS

EOLE	Grey	Parka 3 in 1, removable jacket. Rain parka: Waterproof seams. Fastening with zip under storm flap. 6 pockets. Removable Jacket: Fastening with zip under storm flap. Bottom of sleeves with bias finishing. 2 pockets.	Fabric 74% polyamide 26% polyester with polyurethane coating. Fixed polyester mesh lining. Removal "Softshell" fabric vest 96% polyester 4% elastane.	S/M/L/XL/XXL/3XL	<b>EN343</b> 3 1*	x 5
TATRY		Parka. Waterproof seams. Fastening with zip under storm flap. Wadded removable hood. Adjustable bottom of garment with elastic drawstring. 8 pockets.	Fabric 94% polyester 6% elastane 2 laminated layers. Padded polyester taffeta lining.			x 10

## EOLE



Waterproof zips



Decorative retro-reflective serigraph



Fixed hood



Detachable jacket "Softshell" fabric - 3 in 1

- ➔ Lightness and protection against cold and fine rain
- ➔ Use all year round

## TATRY



BREATHABLE WATERPROOF  
➔ Evaporative resistance Class 2



Inner cuffs  
➔ Maintains heat  
➔ Wind-breaker



Padded removable hood  
➔ Increased protection from the cold



Fleece lined collar  
➔ Comfort wear for optimised cold protection



Inner opening  
➔ Easy and qualitative marking



VIGO	Grey Red-Black	Parka. Fastening zip under storm flap. Fixed hood. 4 pockets.	Fabric 96% polyester 4% elastane 2 laminated layers. Padded polyester taffeta lining.	S/M/L/XL/ XXL/3XL	CE	x10
KOPER	Black	Stonewashed jacket. Fastening with zip under press studs storm flap. 6 pockets including 2 inner.	Cloth 100% cotton 270 g/m <sup>2</sup> . Polyester polar fleece lining.			

## VIGO



**tech2**



Removable badge holder included



Fleece lined collar  
→ Comfort wear for optimised cold protection



Inner opening  
→ Easy and qualitative marking



Inner cuffs  
→ Maintains heat  
→ Wind-breaker











## KOPER



Sherpa lining on the back  
→ Comfort wear for optimised cold protection



# PARKAS AND BOMBERS JACKETS

						
CARSON	Grey-Orange Black-Grey Navy blue-Royal blue	Parka (To match the MACH range). Waterproof seams. Fastening with zip under velcro storm flap. Adjustable waist with elastic drawstring. Removable hood. 5 pockets.	Polyurethane-coated Oxford polyester fabric. Quilted polyester Taffeta lining.	S/M/L/XL/ XXL/3XL	CE  EN343 3 1*	x 10

## CARSON



Fleece lined collar  
→ Comfortable to wear and  
protects against the cold



Decorative reflective  
piping on sleeves



Fixed badge holder included



Inner cuffs  
→ Maintains heat  
→ Wind-breaker



Inner opening  
→ Easy and qualitative marking



To match the STOCKTON2 vest and NORTHWOOD2 bomber jacket





FINNMARK	Navy blue-Black	Parka. Waterproof seams. Collar with polar lining for optimal comfort. Fastening with zip under velcro storm flap. Adjustable bottom of garment with elastic drawstring. 5 pockets.	PVC-coated Ripstop polyester fabric. Quilted polyester Taffeta lining.		<b>EN343</b> 3 1*	
GOTEBORG	Navy blue	Parka. Waterproof seams. Collar with polar lining for optimal comfort. Fastening with zip under velcro storm flap. Removable hood. Adjustable bottom of garment with elastic drawstring. 5 pockets.	PVC-coated Twill polyester fabric. Top lining: Wadded polyester polar fleece. Bottom lining: Wadded polyester Taffeta.	S/M/L/XL/ XXL/3XL	<b>EN14058</b> 3 3 0,199 m <sup>2</sup> . K/W WP <b>EN343</b> 3 1*	x 10

## FINNMARK



Decorative Retro-reflective tapes (front)



Removable hood



Inner opening  
→ Easy and qualitative marking



## GOTEBORG



Fixed badge holder included












Inner opening  
→ Easy and qualitative marking

Parka with no metallic part



# PARKAS AND BOMBERS JACKETS

						
ALASKA2	Black-Red Navy blue-Royal blue Black-Grey	Parka 2 in 1, removable lining. Parka: Waterproof seams. Fastening with zip under storm flap with Velcro strap. Adjustable bottom of garment with elastic drawstring. 5 pockets. Removable lining: 1 pocket.	Polyester pongee fabric with PVC coating Fixed polyester taffeta lining. Padded polyester taffeta removable lining 3M Thinsulate™.	S/M/L/XL/ XXL/3XL	  <b>EN14058</b> 4 3 0.215m <sup>2</sup> .K/W X	x 10

## ALASKA2



Removable hood



Decorative reflective strips  
(front and back)



Fixed badge holder included



Ribbed inner cuffs  
→ Maintains heat  
→ Wind-breaker



3M Thinsulate™ padded thermal  
removable lining  
→ Very high heat retention  
→ Modifiable according to the activity



HELSINKI2	Navy blue Navy blue-Royal blue	Parka. Waterproof seams. Fastening zip under velcro and press studs storm flap. Adjustable waist with elastic drawstring. 4 pockets.	PVC-coated polyester fabric. Wadded polyester Taffeta lining.	S/M/L/XL/ XXL/3XL	CE  EN342 0,273m <sup>2</sup> K/W (B) 2 X	x 10

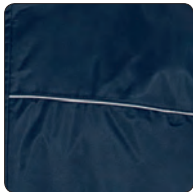
## HELSINKI2



Insulating textile complex  
→ Protection from extreme cold



Wadded removable hood  
→ Increased protection from the cold



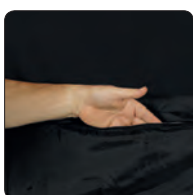
Decorative retro-reflective piping on the front and back



Removable badge holder included











Ribbed inner cuffs  
→ Maintains heat and wind-proof



Inner opening  
→ Easy and qualitative marking



# PARKAS AND BOMBERS JACKETS

						
DARWIN3		Parka. Waterproof seams. Fixed hood. Adjustable waist with drawstring. 5 pockets.	PVC-coated Pongee polyester fabric. Quilted polyester Taffeta lining.	XS/S/M/L/ XL/XL/3XL		
ISOLA	Navy blue	3 in 1 parka: Removable lining. Parka :Waterproof seams. Fixed hood. Adjustable waist and bottom of garment with elastic drawstring. 6 pockets. Removable lining :Collar with corduroy lining. Removable sleeves. Fastening with press studs. Gusset opening on sides with press-studs. 2 pockets.	PVC-coated polyester fabric. Fixed polyester Taffeta lining. Removable quilted polyamide Taffeta lining.	S/M/L/ XL/XXL	CE  EN343 3 1*	x 10

## DARWIN3



Removable badge holder included



Inner opening  
→ Easy and qualitative marking



Ribbed inner cuffs  
→ Maintains heat  
→ Wind-breaker



## ISOLA



Removable lining  
→ Increased protection from the cold  
→ Use all year round







# PARKAS AND BOMBERS JACKETS



MOOVE

Black-Red  
Navy blue-Orange  
Black-Camouflage

Bi-material jacket. Fastening zip under storm flap.  
Fixed hood. Knitted cuffs. 5 pockets.

Quilted polyurethane-coated Ripstop polyamide fabric. Yokes: Polyester fabric. 2 laminated layers. Polyester taffeta lining.

S/M/L/XL/  
XXL/3XL x 10

## MOOVE



Removable badge holder included



Decorative retro-reflective piping on the front and back



Polyamide ripstop  
➔ Increased resistance to tearing

Polyester wadding  
➔ Light and warm





MOTION	Grey	Bi-material jacket. Fastening with zip under storm flap. Bottom of sleeves with bias finishing. 5 pockets.	"Softshell" fabric 96% polyester 4% elastane. Yokes: Polyester fabric coated with acrylic padded. Polyester taffeta lining.		CE	
DOON	Black-Red Grey-Orange Navy blue-Royal blue	Down jacket (to match MACH range). Fastening with zip under storm flap. Cuffs and bottom of garment with bias finishing. Fixed hood. 2 pockets.	Quilted polyamide fabric. Polyester taffeta lining.	S/M/L/XL/ XXL/3XL		x 10

## MOTION



Fixed hood



Decorative retro-reflective serigraph



Softshell  
→ Lightness and protection from cold, wind and fine rain

## DOON












Polyester wadding  
→ Light and warm



SLIGO matching rain parka  
→ To add rain protection



# PARKAS AND BOMBERS JACKETS

						
NORTHWOOD2	Grey-Orange Navy blue-Royal blue Black-Grey Green-Black	Warm padded jacket (to match the MACH range). Waterproof seams. Fastening with zip under storm flap with Velcro strap. Fixed hood. 9 pockets.	Polyurethane-coated Oxford polyester fabric. Quilted polyester Taffeta lining.	S/M/L/XL/ XXL/3XL	 <b>EN343</b> 3 1*	x 10
NEW DELTA	Navy blue	Bomber jacket with removable sleeves. Elasticated cuffs and bottom of garment. 4 pockets.	65% polyester 35% quilted cotton fabric. Quilted polyester Taffeta lining.	M/L/XL/XXL		

## NORTHWOOD2



Fixed badge holder included



Fixed hood



Inner opening  
→ Easy and qualitative marking



Decorative retro-reflective piping on the front and sleeves



Hand pockets



## NEW DELTA



Removable sleeves  
→ Use all year round



STOCKTON2 jacket and matching CARSON parka





RANDERS	Grey Navy blue Black	Quilted bomber jacket with removable sleeves (To match the MACH range). Fastened with a zip under the storm flap with press studs. Knitted cuffs and bottom of garment. 5 pockets.	Quilted polyurethane-coated polyamide fabric. Lining: Quilted in polyester Taffeta.	S/M/L/XL/XXL/3XL	CE	x 10
RENO	Black Navy blue Green	Bomber jacket with removable sleeves. Collar with polar lining for optimal comfort. Knitted cuffs and bottom of garment. 5 pockets.	Polyurethane-coated Oxford polyester fabric. Polyester polar fleece lining.			

## RANDERS



Padded removable hood  
→ Increased protection from the cold



Fixed badge holder included



Eyelets under arms



Removable sleeves  
→ Use all year round



## RENO



Fleece lining  
→ Comfort wear for optimised cold protection










Fixed badge holder included



# OUTDOOR WEAR

## BODYWARMERS

						
FIDJ12	Navy blue-Royal blue Grey-Black Black Black-Red	Bodywarmer. Collar with polar lining for optimal comfort. 4 pockets.	PVC-coated Pongee polyester fabric. Yokes: PVC-coated Oxford polyester. Wadded polyester polar fleece lining.	S/M/L/XL/XXL/3XL	CE x 10	

### FIDJ12



Lateral zips  
→ Freedom of movement



Kidney protector  
→ Perfect protection of the lower back against the cold





NATORI	Grey-Black	Bodywarmer (To match MACH 5 range). Fastened with a zip under storm flap. Bias finishing. 6 pockets.	Softshell fabric polyamide/polyester polar.	S/M/L/XL/XXL/3XL		x 10
HALDEN	Navy blue Grey	Vest. Fastening with zip under storm flap. Armholes with bias finishing. 4 pockets.	Softshell 100% polyester fabric, 3 laminated layers.			

## NATORI



Decorative retro-reflective piping on the front and back



## HALDEN



3 layers softshell  
→ Lightness and protection from cold, wind and fine rain



## BODYWARMERS



G-DOON	Black-Red Black-Camouflage Navy blue-Royal blue	Bodywarmer. Fastening zip under storm flap. Armholes with bias finishing. Low back protection. 3 pockets.	Polyurethane-coated Ripstop polyamider fabric. Polyester Taffeta lining.	S/M/L/XL/ XXL/3XL		x 10
GRANDERS	Black	Padded vest. Zip fastening. Armholes with bias finish. Adjustable bottom of garment with elastic drawstring. 3 pockets.	Polyester fabric coated with polyurethane. Polyester taffeta lining.		CE	

## G-DOON



Polyamide ripstop  
→ Increased resistance to tearing

Polyester wadding  
→ Light and warm



SLIGO matching rain parka  
→ Offers protection against the rain

## GRANDERS







SIERRA2	Navy blue-Orange Grey-Green Navy blue-Red Navy blue	Multipocket bodywarmer (to match the PANOSTYLE range). Fastening with zip under storm flap. Elasticated on both sides and back. 9 pockets.	65% polyester 35% quilted cotton canvas. Wadded polyester Taffeta lining.	S/M/L/XL/ XXL/3XL	CE	x 20
CLUSES2	Navy blue	Bodywarmer. Fastening with zip under storm flap. Elasticated bottom of garment. 6 pockets.	65% polyester 35% quilted cotton canvas. Polyester Taffeta lining.			

## SIERRA2



Wind-proof armholes



Fixed badge holder included



Kidney protector  
➔ Perfect protection of the lower back against the cold










Hand pockets



## CLUSES2



# BODYWARMERS - TROUSERS

						
DMACHGIW	Black-Red Grey-Yellow	Multipocket bodywarmer (To match the D-MACH range). Fastened with a zip under the storm flap with press studs. Elasticated on both sides and back. 8 pockets.	Twill 65% polyester 35% cotton 245g/m². Padded polyester taffeta lining.	S/M/L/XL/ XXL/3XL	CE	x 10
DMACHPAW		Trousers. Elasticated waist on both sides. 6 pockets including 1 ruler.				

## DMACHGIW



Decorative retro-reflective piping on the back



Fixed badge holder included



Kidney protector  
→ Perfect protection of the lower back against the cold



Fleece lined collar  
→ Comfort wear for optimised cold protection



Inner opening  
→ Easy and qualitative marking



## DMACHPAW



Lower trousers reinforced with anti-dirt coating



Quilted lined pants  
→ Comfort wear for optimised cold protection



Jean style pockets



Kneepad pockets  
→ Allows you to insert M2GEN kneepads to work more comfortably on your knees





STOCKTON2	Grey-Orange Navy blue-Royal blue Black-Grey Green-Black	Multipocket bodywarmer (to match the MACH range). Fastening with zip under storm flap. Adjustable bottom with elastic drawstring. 9 pockets.	Quilted twill 65% polyester 35% cotton 235 g/m <sup>2</sup> . Wadded polyester Taffeta lining.	S/M/L/XL/ XXL/3XL	CE	x10
M2PW2	Grey-Orange Navy blue-Royal blue Black-Grey	Warm trousers. Elasticated waist on both sides. 7 pockets including 1 ruler.	Twill 65% polyester 35% cotton 245 g/m <sup>2</sup> . 100% flannelette lining.			

## STOCKTON2



Wind-proof armholes



To match the NORTHWOOD2 jacket and CARSON parka



Multi-pocket

Decorative retro-reflective piping on the front and back

Hand pockets



## M2PW2



Decorative retro-reflective piping on the back



Flannel lined trousers  
→ Comfort wear for optimised cold protection



Fixed badge holder included



Triple seams  
→ Increased lifespan



Kneepad pockets  
→ Allows you to insert M2GEN kneepads to work more comfortably on your knees



MAPOC removable pockets sold separately  
→ The necessary tools always at hand



# POLARS - SOFTSHELL - SWEATS - PULL-OVER



HORTEN2

Black-Orange  
Black-Camouflage  
Black-Yellow



Jacket. Fastening zip under storm flap. Fixed hood. 4 pockets.



Softshell 96% polyester 4% elastane fabric.  
3 laminated layers.



S/M/L/XL/  
XXL/3XL



x 10



## HORTEN2



Removable badge holder included



Decorative retro-reflective piping on the front and back



3 layers softshell  
→ Lightness and protection from cold, wind and fine rain







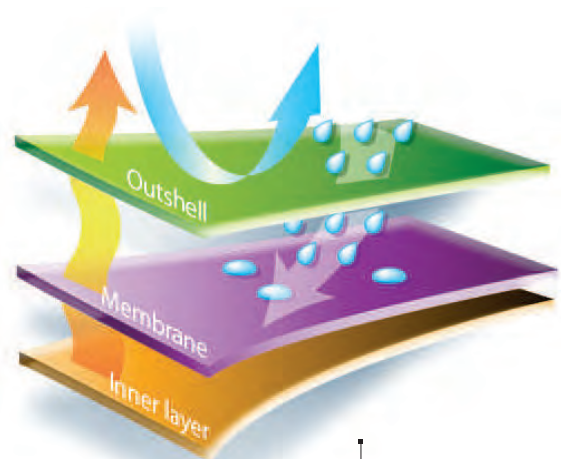
**Softshells are developed to meet everyday use throughout the year whether worn in the first or second layer.**



**Softshells are jackets that derive their name from the textile that make them up and whose performance differs according to the textiles used.**

The presence of a membrane makes the textile a wind-breaker, it is then composed of 3 textile layers :

- external very often stretch
- the membrane
- the inner side very often polar for the comfort and the contribution of heat.



Composed of 2 textile layers with no membrane, it is a real technical alternative to the polar with its appearance and its Water repellent properties.







**The Softshell jacket can be used as a 2nd or 3rd layer. Wind-proof, Water repellent, insulating with or without a hood, with or without sleeves, this is real everyday clothing.**



Today it is unavoidable, the softshell is THE technical clothing that can be used all year round. Light, flexible, wind-proof it is a true ally for everyday life. When temperatures are mild it is an excellent garment to protect from the wind, cold and light rain. And when it's colder, we recommend using the softshell as a 2nd layer under a parka.

Laurent Kostrzewa, Body Protection Product Expert

# POLARS - SOFTSHELL - SWEATS - PULL-OVER

					
MYSEN2	Blue-Black Grey-Fushia Black-Red Grey-Yellow	Jacket (to match the D-MACH range). Fastening with zip under storm flap. Bottom of sleeves with bias finishing. 5 pockets.	#	XS/S/M/ L/XL/XXL/ 3XL	x 10
LULEA2	Grey-Orange Navy blue-Black Grey-Black	Jacket. Fastening with zip under storm flap. Bottom of sleeves with bias finishing. Adjustable bottom of garment with elastic drawstring. 5 pockets.		S/M/L/XL/ XXL/3XL	

## MYSEN2



Softshell  
→ Lightness and protection from cold, wind and fine rain



Removable sleeves  
→ Use all year round



Grey-Fushia colour  
→ Woman's cut









## LULEA2



Softshell  
→ Lightness and protection from cold, wind and fine rain





					
BRIGHTON	Grey-Black	Polar fleece jacket. Zip fastening. 3 pockets.	Polyester polar fleece 350 g/m <sup>2</sup> . Inserts: Polyester Taslon fabric.	S/M/L/XL/ XXL/3XL	x 10
SHERMAN	Grey	Polar fleece jacket. Fastened with a zip under storm flap. Knitted cuffs and bottom of garment. 5 pockets.	Polyester polar fleece 540 g/m <sup>2</sup> .		x 5








## BRIGHTON



## SHERMAN



# POLARS - SOFTSHELL - SWEATS - PULL-OVER

						
NAGOYA	Navy blue Grey	Cardigan jacket (To match the MACH ORIGINALS range). Fastened with a zip under storm flap. Cuffs and bottom of garment with bias finishing. 6 pockets.	Polyester stitch. Yokes: Cordura® and "Softshell" 96% polyester 4% elastane fabric.	S/M/L/XL/ XXL/3XL	CE	x 10
MARMOT		Truck driver polar fleece, pullover appearance. Zip closure. Cuffs and bottom of fleece with bias finish.	Polyester knit 285 g/m². Yokes: 100% polyester material, 2 laminated layers.			
BEAVER	Navy blue- Orange Grey-Orange Grey-Green Black	Cardigan jacket (To match the MACH and PANOSTYLE ranges). Fastened with zip under storm flap. Cuffs and bottom of garment with bias finishing. 4 pockets.	Polyester stitch 380 g/m². Yokes: "Softshell" 96% polyester 4% elastane fabric.			

## NAGOYA



Fleece lined collar  
→ Comfort wear for optimised cold protection



Decorative retro-reflective piping on the front and sleeves



## MARMOT



Shoulder and elbow reinforcements  
→ Increased resistance to abrasion

Pullover style



## BEAVER



Fleece and softshell  
→ Very good protection against the cold  
→ Optimised comfort thanks to the use of Softshell







ANZIO	Grey Navy blue	Sweat jacket. Front fastening with zip. Knitted cuffs and bottom of garment. 4 pockets. Adjustable hood with drawstring.	65% polyester fleece 35% cotton.	S/M/L/XL/ XXL/3XL		x 10
LECCO	Wine-coloured-Black Grey-Yellow Black-Red	Sweat jacket. Knitted cuffs and bottom of garment. 2 lower pockets. Adjustable hood with drawstring.				



## ANZIO









Attached hood



## LECCO



# POLARS - SOFTSHELL - SWEATS - PULL-OVER

					
VERNON	Black Royal blue Red	Polar fleece jacket. Elasticated cuffs. 2 pockets.	Polyester polar fleece 280 g/m <sup>2</sup> .	S/M/L/XL/ XXL/3XL	x 10
ALMA	Navy blue Black Orange	Under Shirt. Raglan sleeve with zip Mandarin collar. Designed for next to skin use.	Polyester polar fleece 200 g/m <sup>2</sup> .		

## VERNON



## ALMA





KARA	Red Black Orange Grey Navy blue	Cap in wadded 3M Thinsulate™ polyester polar fleece.	One size	x 120
CHAMONIX	Red Navy blue	Neck scarf in polyester polar fleece. Tightening with elastic drawstring.		
JURA	Grey Black Navy blue	Double thickness cap in acrylic knit.		x 240
NORDIC	Navy blue	Warm cap in polyamide canvas with synthetic lining. Wadded polyester Taffeta lining. Protective ear flaps		
NEVE	Navy blue Black	Gloves in polyester polar fleece.		x 120

## KARA



## CHAMONIX



## JURA



## NORDIC



## NEVE



**850**

CE  
EN343  
3  
1  
S->3XL



**OTAKE**

CE  
EN343  
3  
3  
S->3XL



**SLIGO**

CE  
EN343  
3  
1  
S->3XL



**400**

CE  
EN343  
3  
1  
M->XXL



**TYPHOON**

CE  
EN343  
3  
1  
S->3XL



**GALWAY**

CE  
EN343  
3  
1  
S->3XL



**LITE**

S->3XL



**LIDINGO**

CE  
EN343  
3  
1  
S->3XL



**304**

CE  
EN343  
3  
1  
M->XXL



**MA400**

CE  
EN343  
3  
1  
M->XXL



**305**

CE  
EN343  
3  
1  
M->3XL



**TOFINO**

CE  
EN343  
3  
1  
S->3XL







OTAKE	Grey-Black	Light bomber jacket (To match the MACH 5 range). Waterproof seams. Fixed hood with mesh lining. Fastening with zip under storm flap. Elasticated waist and bottom of garment. 6 pockets.	Polyurethane-coated polyamide fabric. Polyester mesh lining.		CE  EN343 3 3	x 5
LITE	Grey-Orange Grey-Green Navy blue-Orange Black	Light bomber jacket (To match the MACH and PANOSTYLE ranges). Waterproof seams. Fixed hood. Fastening with zip under storm flap. Elasticated waist and bottom of garment. 5 pockets.	PVC-coated polyester fabric. Polyester mesh lining.	S/M/L/XL/ XXL/3XL		x 10

## OTAKE



Fixed badge holder included



Waterproof zips



Decorative retro-reflective piping on the front and back



Fleece lined collar  
→ Comfort wear for optimised cold protection



Inner opening  
→ Easy and qualitative marking



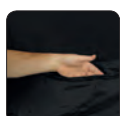
Breathable waterproof membrane  
→ Increased breathability for better evacuation of perspiration



## LITE











Decorative retro-reflective piping on the front and back



Inner opening  
→ Easy and qualitative marking



# OUTDOOR WEAR RAIN

						
SLIGO	Black-Red Navy blue-Royal blue Grey-Orange	Light parka (To match the MACH and PANOSTYLE ranges). Waterproof seams. Fastening with zip under storm flap with Velcro strap. Fixed hood. 7 pockets.	Polyurethane-coated Oxford polyester fabric. Polyester mesh lining.	S/M/L/XL/ XXL/3XL	CE  EN343 3 1*	x 10
GALWAY	Black	Rain trousers. Waterproof seams. Elasticated waist. Bottom legs with press-stud opening. 2 pockets and 2 hand slits.	Polyurethane-coated Oxford polyester fabric.			

## SLIGO



Decorative retro-reflective piping on the back



Inner opening  
→ Easy and qualitative marking



Fixed badge holder included



Matching DOON puffer jacket



## GALWAY



Adjustable leg bottoms with gussets  
→ Easy dressing





LIDINGO	Navy blue	Rain jacket and trousers. Waterproof seams. JACKET: Fixed hood. Adjustable bottom with elastic drawstring. 5 pockets. TROUSERS: Elasticated waist. Adjustable bottom of legs with press-studs. 2 pockets.	PVC-coated polyester fabric. Jacket lining: Polyester mesh. Trousers lining: Polyester Taffeta.	S/M/L/XL/XXL/3XL		x 10
TYPHOON		Rain trousers. Waterproof seams. Elasticated waist. Bottom legs with press-stud opening. 5 pockets.	PVC-coated polyester fabric. Polyester Taffeta lining.	M/L/XL/XXL		
TOFINO	Black	Rain coat. Waterproof seams. Fastening with zip under velcro and press studs storm flap. Fixed hood. 2 pockets. Flap ventilation.	PVC-coated polyester fabric. Polyester mesh lining.	S/M/L/XL/XXL/3XL		

## LIDINGO



Fixed hood



Decorative Retro-reflective tapes



Eyelets under arms  
 ➔ Increased breathability for better evacuation of perspiration



## TYPHOON



Adjustable leg bottoms



## TOFINO



Ventilation flap with pressures to facilitate marking  
 ➔ Increased breathability for better evacuation of perspiration











Decorative reflective bands (front and back)



# OUTDOOR WEAR

## RAIN

						
850	Navy blue Yellow Green	Rain jacket and trousers. Sealed seams. JACKET: Fastening with zip under storm flap. Fixed hood. Underarm ventilation with eyelets. Elasticated inside cuffs. Adjustable bottom of garment with elastic drawstring. 2 pockets. Ventilation back flap. TROUSERS: Elasticated waist. Fly closed with press-studs. Adjustable bottom of legs with press-studs. 2 hand slits.	Mixed polyurethane-coated polyester support.	S/M/L/XL/ XXL/3XL	CE 	x 10

850



Dorsal ventilation flap  
→ Increased breathability  
for better evacuation of  
perspiration





400	Royal blue Navy blue Yellow 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.			x 20
MA400		Rain coat. Waterproof seams. Fixed hood. Fastening with zip under storm flap. Elasticated inside cuffs. 2 pockets.		M/L/XL/XXL		
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.		CE  EN343 3 1*	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		

## 400



## MA400



Decorative retro-reflective bands (front and back)



Dorsal ventilation flap and underarm eyelets  
→ Increased breathability for better evacuation of perspiration  
400 - MA400 - 304 - 305

## 304



## 305



Length 1.20 m



# DESIGNING MANUFACTURING YOUR SAFETY AT WORK





# TECHNICAL WEAR

247 • HELP WITH CHOICE

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248 • Outdoor high visibility

258 • High Visibility Workwear

260 • Forestry

262 • Chill Room and Cold Store

265 • Chemical resistant - Flame retardant - Antistatic

266 • Chemical protection overalls

267 • Protective aprons - Welders

399 • TECHNICAL INFORMATION

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TECHNICAL WEAR



## TO FIND THE SUITABLE PRODUCT FOR YOUR JOB

	AGRICULTURE/ GREEN AREAS	CONSTRUCTION/ CIVIL ENGINEERING	SECOND WORK/ CRAFTSMAN	HEAVY INDUSTRY	LIGHT INDUSTRY	SERVICES/ LOGISTICS	HYGIENE ENVIRONMENT	OIL / GAS	MINING	WIND ENERGY	Suitable protection	PAGES
PREMIUM	●	●			●						TARMAC	248
		●		●	●						MOONLIGHT2	252
	●		●	●	●						KOLDYTOP	264
	●		●	●	●						KOLDYPANTS	264
	●		●				●				KOMODO2	265
	●		●				●				KOMODO2HV	265
	●	●		●	●						OPTIMUM2	249
	●	●		●	●						STRADA 2	250
	●	●		●	●						FARGO HV	251
		●		●	●						LEGA	252
	●	●		●	●						DOONHV	253
	●	●		●	●						MARMOTHV	253
	●	●		●	●						RENO HV	254
	●	●			●						FIDJI HV	254
	●	●			●						METEOR	255
	●	●			●						OFFSHORE	255
	●	●		●	●						604V2	256
	●	●		●	●						605V2	256
	●	●		●				●			M2VHV	258
	●	●		●				●			M2PHV	258
EVOLUTION	●										EPICEA 3	261
	●										MELEZE 3	261
	●										DOUGLAS 3	261
	●										ERABLE 3	261
	●	●		●	●						NORDLAND	262
	●	●		●	●						ICEBERG	262
	●	●			●						BALTIC	264
		●	●								SSVFR	265
		●	●								CAFR1	265
			●				●				C0600	266
				●		●					TABNIT	267
				●							TASOUB	267
				●		●					TABPU	267
				●							MANCHB	267

	AGRICULTURE/ GREEN AREAS	CONSTRUCTION/ CIVIL ENGINEERING	SECOND WORK/ CRAFTSMAN	HEAVY INDUSTRY	LIGHT INDUSTRY	SERVICES/ LOGISTICS	HYGIENE ENVIRONMENT	OIL / GAS	MINING	WIND ENERGY	Suitable protection	PAGES
ESSENTIEL	●	●			●						RUNWAY	250
	●	●			●						EASYVIEW	251
	●	●			●						FREEWAY HV	254
	●	●			●						STAR	255
	●	●			●						COMET	255
	●	●			●						208V2	256
	●										GILP2	257
	●										BAUCE2	257
	●										GILP4	257
	●				●						BRASSJA	257
	●	●		●				●			PHVE2	259
	●	●		●				●			PHPA2	259
	●	●									PHBE2	259
				●	●						LAPONIE II	263
				●	●						AUSTRAL II	263
				●	●						IGLOO II	263
	●	●	●								ALMA	264
				●		●					TABLIVE	267
				●		●					TABALPV	267

### ► SEE OUR SIZE CHARTS FOR:

WORK WEAR : PAGE 163

OUTDOOR WEAR : PAGE 207







### RUNWAY

CE S->3XL

EN ISO 20471  
3

EN343  
3  
1



### OPTIMUM2

CE S->3XL

EN ISO 20471  
PARKA/BODYWARMER  
3/2

EN343  
3  
1



### TARMAC

CE S->3XL

EN ISO 20471  
PARKA/JACKET/BODYWARMER  
3/2/1

EN14058  
PARKA

1  
3  
0,184m².K/W  
WP

EN343  
3  
2



### STRADA2

CE S->3XL

EN ISO 20471

EN14058

4  
3  
0,206m².K/W  
WP

EN343  
3  
1



3M Scotchlite™  
Reflective Material



### EASYVIEW

CE S->3XL

EN ISO 20471

EN343  
3  
1



### FARGO HV

CE S->3XL

EN ISO 20471

EN14058  
3  
3  
0,213m².K/W  
WP

EN343  
3  
1



### RENO HV

CE S->3XL

EN ISO 20471  
BOMBER/BODYWARMER  
3/2

EN343  
BOMBER  
3  
1



### 605V2

CE M->XL

EN ISO 20471

EN343  
3  
1

3M Scotchlite™  
Reflective Material



### 604V2

CE S->XXL

EN ISO 20471

EN343  
3  
1

3M Scotchlite™  
Reflective Material



### 208V2

CE S->3XL

EN ISO 20471  
JACKET/TROUSERS  
3/1

EN343  
3  
1



### DOON HV

CE S->3XL

EN ISO 20471  
3  
x 25



### MARMOT HV

CE S->3XL

EN ISO 20471  
2  
x 25



### FREEWAY HV

CE M->XXL

EN ISO 20471

2



### FIDJI HV

CE S->XXL

EN ISO 20471  
2  
x 25



### MOONLIGHT2

CE S->3XL

EN ISO 20471  
BOMBER/BODYWARMER  
3/2  
x 25

EN343  
3  
1



# OUTDOOR HIGH VISIBILITY

TARMAC	Fluorescent orange-Grey Fluorescent yellow-Grey	4 in 1 parka with removable jacket. Rain parka: waterproof seams. Fastening with zip under press stud storm flap. 6 pockets. high visibility: Class 3 - silver colour - Shoulder-belt and parallel assembly. Removable jacket: zip fastening. Bottom of sleeves with biais finishing. 2 pockets. high visibility: Class 2 - silver colour - Shoulder-belt assembly.	Polyurethan-coated Oxford polyester fabric. Fixed polyester Taffeta lining. Softshell removable jacket 96% polyester 4% elastane. Retro-reflective sewn bands.	S/M/L/XL/XXL/3XL	  <b>EN ISO 20471</b> PARKA/JACKET/ BODYWARMER 3 / 2 / 1  <b>EN 343</b> PARKA 3 2	x 5

## TARMAC



Fixed hood



Fixed badge holder included



Inner opening

→ Easy and qualitative marking



3 layers softshell  
→ Lightness and protection from cold, wind and fine rain

4 in 1  
→ Use all year round





OPTIMUM2	Fluorescent yellow- Navy blue Fluorescent orange- Navy blue	Parka 4 in 1, removable bodywarmer. Parka: Waterproof seams. Fastening with zip under velcro storm flap. Fixed hood. Polar fleece collar. High visibility: Class 3 - Silver colour - Shoulder-belt and parallel assembly. 4 pockets. Removable jacket: Waterproof seams. Removable sleeves. High visibility: Class 2 - Silver colour - Shoulder-belt assembly. 4 pockets.	Polyurethane-coated Oxford polyester fabric. Fixed polyester Taffeta lining. Removable bodywarmer: Polyurethane-coated Oxford polyester with removable sleeves in polyester polar fleece. Quilted polyester Taffeta lining. Retro-reflective sewn bands.	S/M/L/XL/ XXL/3XL	  <b>EN ISO 20471</b> <b>PARKA/JACKET/</b> <b>BODYWARMER</b> <b>3 / 2 / 2</b>  <b>EN343</b> <b>3</b> <b>1*</b>	x 10











## OPTIMUM2



Inner opening  
→ Easy and qualitative marking



# OUTDOOR HIGH VISIBILITY

						
STRADA 2	Fluorescent yellow-Navy blue Fluorescent orange-Navy blue	Warm parka. Waterproof seams. Fixed hood. Underarm ventilation eyelets. Fastening with zip under press stud flap. Adjustable waist with elastic drawstring. High visibility: Class 3 - Silver colour - Shoulder-belt and parallel assembly. 3 pockets.	Polyurethane-coated Oxford polyester fabric. Quilted polyester Taffeta lining. 3M Scotchlite™ retro-reflective sewn bands.	S/M/L/XL/ XXL/3XL	  	x 5
RUNWAY	Fluorescent yellow-Navy blue	Parka 3 in 1, removable lining. Rain parka: Waterproof seams. Fastening with zip under press studs storm flap. 3 pockets. High visibility: Class 3 - Silver colour - Shoulder belt and parallel assembly. Removable lining: Zip fastening.	Polyurethan-coated Oxford polyester fabric. Fixed polyester taffeta lining. Removable padded polyester taffeta fabric lining. Retro-reflective sewn bands.			x 10

## STRADA 2



**3M Scotchlite™**  
Reflective Material



Ribbed inner cuffs  
→ Maintains heat  
→ Wind-breaker



## RUNWAY



Fixed hood







EASYVIEW	Fluorescent yellow-Navy blue Fluorescent orange-Navy blue	Warm parka Waterproof seams. Fixed hood. Fastening with zip under velcro storm flap. High visibility: Class 3 - Silver colour - Shoulder-belt and parallel assembly. 4 pockets.	Polyurethane-coated Oxford polyester fabric. Quilted polyester Taffeta lining. Retro-reflective sewn bands.	S/M/L/XL/ XXL/3XL	  EN ISO 20471 CLASS 3 Max. 25 x EN343 3 1*	x 10
FARGO HV		Warm salopettes. Waterproof seams. Elasticated waist on both sides. Adjustable elasticated braces. Preformed knees. High visibility: Class 1 - Silver colour. 4 pockets.	Polyurethane-coated Oxford polyester fabric. Wadded polyester Taffeta lining. Retro-reflective sewn bands.			

## EASYVIEW



## FARGO HV











Kidney protector  
➔ Perfect protection of the lower back against the cold



Bottom with gusset  
➔ Easy dressing



# OUTDOOR HIGH VISIBILITY

						
MOONLIGHT2	Fluorescent orange-Grey Fluorescent yellow-Grey	Jacket. Fastening with zip under storm flap. Bottom of sleeves with bias finishing. Adjustable bottom of garment with elastic drawstring. High visibility. Class 3 - Silver colour - Shoulder-belt assembly. 5 pockets.	Softshell 100% polyester fabric, 3 laminated layers. Retro-reflective sewn bands.	S/M/L/XL/ XXL/3XL		x 10
LEGA	Fluorescent yellow Fluorescent orange	Jacket. Fastening with zip under storm flap. Bottom of sleeves with bias finishing. High visibility. Class 3 - Silver colour - Shoulder-belt assembly. 4 pockets.				

## MOONLIGHT2



3 layers softshell  
→ Lightness and protection from cold, wind and fine rain



Removable sleeves  
→ Use all year round

## LEGA



3 layers softshell  
→ Lightness and protection from cold, wind and fine rain



BREATHABLE WATERPROOF  
→ Evaporative resistance  
Class 3 high visibility



DOONHV	Fluorescent yellow Fluorescent orange	Down jacket. Fastening with zip under storm flap. Cuffs and bottom of garment with bias finishing. Fixed hood. 2 pockets.	Quilted Ripstop polyester fabric. 2 laminated layers. Polyester taffeta lining. Retro-reflective sewn bands.	S/M/L/XL/ XXL/3XL	 EN ISO 20471 CLASS 3 Max. 25 x	x 10
MARMOTHV	Fluorescent yellow- Navy blue Fluorescent orange- Navy blue	Truck driver polar fleece, pullover appearance. Zip closure. Cuffs and bottom of fleece with bias finish. High visibility: Class 2 - Silver colour - Shoulder-belt and parallel assembly.	Polyester knit 380 g/m². Yokes: Polyester knit 285 g/m².		 EN ISO 20471 CLASS 2 Max. 25 x	

DOONHV



Polyester wadding  
→ Light and warm



MARMOTHV



Pullover style



# OUTDOOR HIGH VISIBILITY

RENO HV	Fluorescent yellow Fluorescent orange	Bomber jacket with removable sleeves. Collar with polar lining for optimal comfort. Knitted cuffs and bottom of garment. Bomber jacket: High visibility Class 3 - Silver colour - Shoulder-belt and parallel assembly. Bodywarmer: High visibility Class 2 - Silver colour - Shoulder-belt and parallel assembly. 4 pockets.	Polyurethane-coated Oxford polyester fabric. Polyester polar fleece lining. Retro-reflective sewn bands.	S/M/L/XL/ XXL/3XL	 <b>EN ISO 20471</b> <b>BOMBER/</b> <b>BODYWARMER</b> <b>3 / 2</b> Max. 25 x  <b>EN343</b> <b>PARKA</b> <b>3</b> <b>1*</b>	
FIDJI HV	Fluorescent yellow- Navy blue	Reversible body warmer. Zip fastening. 4 pockets. High visibility: Class 2 - Silver colour - Shoulder-belt assembly.	Polyurethan-coated Oxford polyester fabric on 1 side. Quilted polyester taffeta fabric on 1 side. Retro-reflective sewn bands.	S/M/L/ XL/XXL	  <b>EN ISO 20471</b> <b>CLASS 2</b> Max. 25 x	x 10
FREEWAY HV	Fluorescent yellow Fluorescent orange	Jacket with removable sleeves. Collar with polar fleece lining. Knitted cuffs. High visibility: Class 2 - Silver colour - Shoulder-belt assembly. 4 pockets.	Polyester fabric. Quilted polyester Taffeta lining. Sleeves 65% polyester 35% quilted cotton fabric. Retro-reflective sewn bands.	M/L/ XL/XXL	 <b>EN ISO 20471</b> <b>CLASS 2</b> Max. 25 x	

## RENO HV



Fleece lining  
→ Comfort wear for optimised cold protection



Removable sleeves  
→ Use all year round



## FIDJI HV



Kidney protector  
→ Perfect protection of the lower back against the cold



Zip gussets on the sides



## FREEWAY HV







METEOR	Fluorescent yellow Fluorescent orange	Polo with long sleeves. Contrast collar with button placket. High visibility: Class 3 - Silver colour - Shoulder-belt and parallel assembly.	Piqué stitch 100% polyester 235 g/m <sup>2</sup> . Retro-reflective sewn bands.	S/M/L/XL/ XXL/3XL	EN ISO 20471 CLASS 3	x10
STAR		Long Sleeve T-Shirt. Round collar. High visibility: Class 3 - Silver colour - Shoulder-belt assembly.			EN ISO 20471 CLASS 3 Max. 50 x	
OFFSHORE		Polo with short sleeves. Contrast collar with button placket. High visibility: Class 2 - Silver colour - Shoulder-belt and parallel assembly.	100% polyester stich 160 g/m <sup>2</sup> . Retro-reflective sewn bands.	M/L/ XL/XXL	EN ISO 20471 CLASS 2	
COMET		Short sleeve tee-shirt. Round collar. High visibility: Class 2 - Silver colour - Shoulder-belt assembly.		S/M/L/XL/ XXL/3XL		

## METEOR



## STAR



## OFFSHORE



## COMET



# OUTDOOR HIGH VISIBILITY

604V2		Rain suit. JACKET: Sealed seams. Fixed hood. Zip fastening with studded storm flap over. Raglan sleeves. High visibility: Class 3 - Silver colour - Parallel assembly. 1 pocket. TROUSERS: Elasticated waist. Fly closed with press studs. Adjustable bottom of legs with press studs. High visibility: Class 1 - Silver colour - Parallel assembly. 1 hand slit.	PU/PVC-coated polyester support - Outside coating. 3M Scotchlite™ retro-reflective transferred bands.	S/M/L/ XL/XXL	 <b>EN ISO 20471</b> <b>JACKET/</b> <b>TROUSERS</b> <b>3</b>  <b>EN343</b> <b>3</b> <b>1*</b>	
605V2	Fluorescent yellow	Raincoat. Sealed seams. Fixed hood. Raglan sleeves. Fastening with zip under press stud flap. High visibility: Class 3 - Silver colour - Parallel assembly. 1 pocket under flap.		M/L/XL	  <b>EN ISO 20471</b> <b>CLASS 3</b>  <b>EN343</b> <b>3</b> <b>1*</b>	x 10
208V2		Rain suit. High visibility: Class 3. JACKET: Waterproof seams. Fixed hood. Fastening with zip under press stud flap. Raglan sleeves. 2 pockets. TROUSERS: Elasticated waist. Fly closed with press studs. Adjustable bottom of legs with press studs. 1 side access pockets. Retro-reflective sewn bands: Silver colour - Parallel assembly.	PU-coated Oxford polyester fabric. Retro-reflective sewn bands.	M/L/ XL/XXL	 <b>EN ISO 20471</b> <b>JACKET/</b> <b>TROUSERS</b> <b>3 / 1</b>  <b>EN343</b> <b>3</b> <b>1*</b>	

## 604V2



**3M Scotchlite™**  
Reflective Material



## 605V2



**3M Scotchlite™**  
Reflective Material



## 208V2



Elasticated inner cuffs  
Wind-breaker





GILP2	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	 <b>EN ISO 20471</b> CLASS 2 Max. 25 x	x 100
GILP4		Vest. Fastening with velcro band. High visibility: Class 2 - Silver colour - Shoulder-belt assembly.				
BAUCE2	Fluorescent yellow	Shoulder-belt. Fastening with velcro band. Belt and shoulder bands width: 7.5 cm. High visibility: Silver colour - Shoulder-belt assembly.	PU-coated Oxford polyester fabric. Retro-reflective sewn bands.	M	<b>CE</b>  <b>EN13356</b> 2	x 10
BRASSJA		Armband. Fastening with velcro band. Dimensions: 9 cm x 50 cm. High visibility - Silver colour.	PVC-coated Oxford polyester fabric. 3M Scotchlite™ retro-reflective sewn bands.	Adjustable		x 50

## GILP2



## GILP4



## BAUCE2



## BRASSJA










**3M Scotchlite™**  
Reflective Material



Fixed badge holder included



# HIGH VISIBILITY WORKWEAR

						
M2VHV	Fluorescent yellow-Grey	Jacket. Elasticated cuffs adjustable with Velcro. 4 pockets including 1 zipped and 1 inside. High visibility: Class 2 - Silver colour - Parallel assembly.	Twill 54% cotton 46% polyester 260 g/m². Retro-reflective sewn bands.	S/M/L/XL/XXL/3XL	EN ISO 20471 JACKET/ JACKET+TROUSERS 2/3	x 10
M2PHV	Fluorescent orange-Grey	Trousers. Elasticated waist on both sides. High visibility: Class 2 - Silver colour. 7 pockets including 1 ruler pocket.			EN ISO 20471 TROUSERS/ JACKET+TROUSERS 2/3	

## M2VHV



Fixed badge holder included



Covered zips



## M2PHV



Fixed badge holder included



Triple seams  
→ Increased lifespan



Kneepad pockets  
→ Allows you to insert M2GEN kneepads to work more comfortably on your knees



MAPOC removable pockets sold separately  
→ The necessary tools always at hand



Our entire range meets the requirements of standard EN ISO 20471 A1 2016. Most models are available in orange and yellow, we developed them with the constant concern of the best value for money without compromising on the quality of the materials used.

Laurent Kostrzewa, Body Protection Product Expert





PHVE2		Jacket. Elasticated cuffs. High visibility: Class 2 - Silver colour - Shoulder-belt and parallel assembly. 2 pockets.				
PHPA2	Fluorescent yellow-Navy blue Fluorescent orange-Navy blue	Trousers. Elasticated waist on both sides. High visibility: Class 2 - Silver colour. 5 pockets including 1 ruler pocket.	Twill 80% polyester 20% cotton 230 g/m². Retro-reflective sewn bands.	S/M/L/XL/XXL/3XL	EN ISO 20471 CLASS 2	x 10
PHBE2		Bermuda. Elasticated waist on both sides. High visibility: Class 1 - Silver colour. 5 pockets.			EN ISO 20471 CLASS 1	

## PHVE2



## PHPA2



Internal kneepad pockets  
 ➔ Allows you to insert M2GEN kneepads to work more comfortably on your knees



## PHBE2











EPICEA 3		Cut resistant jacket. Zip fastening. Adjustable cuffs with press studs. 2 pockets.		M/L/ XL/XXL	EN381-11 CLASS 0	
DOUGLAS 3		Cut resistant gaiters. Internal zip opening. Tightening strap with press studs. 1 pocket.		One size		
MELEZE 3	Green-Orange	Cut resistant trousers. Adjustable elasticated waist with internal buttons on both sides. Bottom of legs with zip opening. Preformed knees. 6 pockets including 1 ruler.	Twill 60% cotton 40% polyester 290 g/m². Polyester mesh lining with a cut resistant compound.		CE	x 5
ERABLE 3		Cut resistant dungarees. Zip opening leg hem with preformed knees. Adjustable elasticated waist with internal buttons to both sides. Adjustable elasticated braces. 5 pockets including 1 ruler.		M/L/ XL/XXL	EN381-5 TYPE A CLASS 1	

## EPICEA 3



Ventilated back closed with Velcro  
➔ Increased breathability for better evacuation of perspiration



## DOUGLAS 3



Zip opening



Decorative Retro-reflective tapes  
DOUGLAS 3 - EPICEA 3 -  
MELEZE 3 - ERABLE 3



## MELEZE 3



Pocket for ruler  
➔ The necessary tools  
always at hand  
ERABLE 3 - MELEZE 3



Ventilation via a zip on  
the back  
➔ Increased breathability  
for better evacuation of  
perspiration  
ERABLE 3 - MELEZE 3











## ERABLE 3



Buttock reinforcement  
➔ Waist reinforcement  
➔ Increased lifespan  
ERABLE 3 - MELEZE 3



# CHILL ROOM AND COLD STORE

						
NORDLAND	Navy blue Grey	Parka. Waterproof seams. Removable hood. Collar with polar lining for optimal comfort. Fastening with double zip under press stud storm flap. Adjustable waist and bottom with elastic drawstring. 7 pockets.	Polyurethane-coated Oxford polyester fabric. Quilted polyester Taffeta lining.	S/M/L/XL/ XXL/3XL	CE 	EN342 0.358 m².K/W (B) 3 X x 5
ICEBERG		Warm Salopette. Waterproof seams. Adjustable waist with elastic drawstring. Adjustable braces. Preformed and reinforced knees. 5 pockets.				

## NORDLAND



Insulating textile complex  
→ A true bulwark from extreme cold



Decorative retro-reflective tapes  
NORDLAND - ICEBERG



Fixed badge holder included



Wind-proof mitten  
→ Maintains heat  
→ Wind-breaker



## ICEBERG



Kidney protector  
→ Perfect protection of the lower back against the cold



Pockets with waterproof zip



Storm flaps to bottom of legs for extra protection against the cold







LAPONIE II		Parka. Removable hood with padded 3M Thinsulate™ polar fleece lining. Collar with polar lining for optimal comfort. Zip fastening with Velcro closing storm flap. Elasticated waist at the back. 6 pockets.			<b>EN342</b> 0.408 m².K/W (B) 2 X	
AUSTRAL II	Navy blue	Warm salopette. Adjustable elasticated braces. Bottoms of legs closed with zip under velcro flap. 4 pockets.	85% polyester 15% cotton cloth. Quilted polyester Taffeta lining with 3M Thinsulate™ padded.	M/L/ XL/XXL		x 5
IGLOO II		Overall. Removable hood with padded 3M Thinsulate™ polar fleece lining. Collar with polar fleece lining. Zip fastening with Velcro storm flap over. Elasticated waist at the back. Bottoms of legs closed with zip under Velcro flap. 5 pockets.			<b>EN342</b> 0.373 m².K/W (B) 2 X	

## LAPONIE II



Insulating textile complex  
→ A true bulwark from extreme cold



Ribbed cuffs  
→ Maintains heat  
→ Wind-breaker



3M Thinsulate™ wadding  
→ Light and very warm  
LAPONIE II - AUSTRAL II - IGL00 II

## AUSTRAL II



Kidney protector  
→ Perfect protection of the lower back against the cold









## IGLOO II



Bottom with gusset  
→ Easy dressing



# CHILL ROOM AND COLD STORE

					
KOLDYTOP	Black	Long sleeve raglan t-shirt.	60% polyamide 35% Coolmax® 5% elastane.	S/M/L/ XL/XXL	
KOLDYPANTS		Long Johns.			
ALMA	Navy blue Black Orange	Under Shirt. Raglan sleeve with zip Mandarin collar. Designed for next to skin use.	Polyester polar fleece 200 g/m².	S/M/L/XL/ XXL/3XL	x 10
BALTIC	Navy blue	Lightweight Polar fleece Balaclava.	Polyester polar fleece 100 g/m².	One size	

## KOLDYTOP



COOLMAX®



Thermoregulator  
Lightweight  
Ergonomic cut

Very comfortable to wear, the Coolmax® technology allows faster evacuation of perspiration. Quick drying to give the user maximum comfort

## KOLDYPANTS



COOLMAX®



## ALMA



## BALTIC





KOMODO2	Navy blue	2 in 1 parka: Removable jacket. Parka: Waterproof seams. Fastening with zip under velcro flap. Removable jacket: Zip fastening. Knitted cuffs. 3 pockets.	Polyurethane-coated 98% polyester 2% antistatic fibre fabric. 100% flame retardant cotton fixe lining. 100% polyester polar fleece removable lining.		EN13034 TYPE PB (6) EN ISO14116	
KOMODO2HV	Fluorescent yellow-Navy blue	2 in 1 parka: Removable jacket. Parka: Waterproof seams. Fastening with zip under velcro flap. High visibility: Class 2 - Silver colour - Parallel assembly. Removable jacket: Zip fastening. Knitted cuffs. 3 pockets.	Polyurethane-coated 98% polyester 2% antistatic fibre fabric. 100% flame retardant cotton fixe lining. 100% polyester polar fleece removable lining. Loxy® retro-reflective sewn bands.	S/M/L/XL/XXL/3XL/4XL	EN343 3 EN1149-5 EN ISO 20471 CLASS 2 EN13034 TYPE PB (6) EN ISO14116	x 5
SSVFR	Navy blue	Underwear set. Long sleeve tee-Shirt and Long Johns.	50% Aramid knitwear 48% Viscose 2% Antistatic fibre 200 g/m².	S/M/L/XL/XXL/3XL/4XL	EN ISO14116 3/12H/60 EN1149-5	x 10
CAFR1		Hood with flap covering shoulders.	50% Aramid knitwear 48% Viscose 2% Antistatic fibre 200 g/m².	One size		x 50

## KOMODO2



## KOMODO2HV



Removable fleece lining  
 ➔ Increased protection from the cold  
 ➔ Use all year round



## SSVFR











Extended cuff with mitten



## CAFR1



# CHEMICAL PROTECTION OVERALLS

						
C0600	Green	Chemical protective overall type 3, liquid-tight. Raglan sleeves. Sealed seams. Zip fastening with studded cover flap and Velcro straps. Fixed elasticated hood, elasticated at wrist and ankles.	Polyester support with double sided PVC 380 g/m <sup>2</sup> coating.	S/M/L/XL/XXL/3XL	CE  EN14605 TYPE 3	x10

## C0600



M9200 - ROTOR GALAXY



M9000E A2B2E2K2P3



RUIZI ACETATE














PETRO VE766





# PROTECTIVE APRONS - WELDERS



						
TABNIT	White	Apron. Adjustment buckle on the neck. Dimensions: 115 cm x 90 cm. Thickness: 0,35 mm.	Nitrile/Vinyl.	One size	 	x 50
TABPU		Apron. Elasticated strap with hook. Adjustment buckle on the waist. Dimensions: 115 cm x 90 cm. Thickness: 0,30 mm.	100% polyurethane 355 g/m².			x 25
TABLIVE	Green	Waterproof all-purpose apron. Drawstring straps. Dimensions: 110 cm x 75 cm. Thickness: 0,35 mm.	PVC-coated polyester support. Double sided coating.		  <b>EN11611</b> TYPE A1 CLASS 2	x 50
TABALPV	White	Apron. Adjustment buckle on the neck. Dimensions: 120 cm x 90 cm. Thickness: 0,30 mm.	100% PVC.			
TASOUB	Grey	Welder apron with bib. Adjustment buckle on the neck. Sewn split leather strap with plastic bucklet. Dimensions: 90 cm x 60 cm. Thickness: 1,40 mm to 1,60 mm.	Cowhide split leather.			
MANCHB		Welders over sleeve. with elasticated hems. 40cm length. Sold in Pairs.				

## TABNIT



## TABPU



## TABLIVE



## TABALPV



## TASOUB



## MANCHB





# DESIGNING MANUFACTURING YOUR SAFETY AT WORK



# FOOT PROTECTION



## SHOES

- 270 • Help with choice
- 272 • Trek Work
- 274 • Comfort Tech
- 276 • Waterproof
- 278 • Outdoor
- 279 • Pro Tech
- 280 • X-Large Composite
- 281 • Classic Industry
- 284 • ESD
- 286 • Classic Industry - Classic +
- 290 • Sportswear
- 296 • Light Walkers
- 301 • Agro - Executive

## BOOTS

- 302 • Winter Boot
- 306 • Rain Boot

## ACCESSORIES

- 307 • Soles - Laces - Socks

## 404 • TECHNICAL INFORMATION

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FOOT PROTECTION



## TO FIND THE SUITABLE PRODUCT FOR YOUR JOB

	AGRICULTURE / GREEN AREAS	CONSTRUCTION / CIVIL ENGINEERING	SECOND WORK / CARPENTRY	HEAVY INDUSTRY	LIGHT INDUSTRY	SERVICES / LOGISTICS	HYGIENE ENVIRONMENT	OIL / GAS	MINING	WIND ENERGY	Suitable protection	PAGES
PREMIUM											TREK WORK	272
											COMFORT TECH	274
											WATERPROOF - NOMAD S3 SRC	276
											SPORTSWEAR - DELTAFLY S1P SRC	290
											ESKIMO SBHP SRC	302
											COMFORT TECH - SAGA S3 SRC	274
											WATERPROOF - SAMY S3 SRC	276
											OUTDOOR	278
											PRO TECH	279
											X LARGE COMPOSITE	280
											X LARGE INDUSTRY	281
											ESD	284
											SPORTSWEAR	292
											LIGHT WALKERS	296
											EXECUTIVE	301
											WINTER BOOT	304
											PRO TECH	279
											CLASSIC INDUSTRY	286
											CLASSIC +	286
											LIGHT WALKERS	297
											AGRO	301
											WINTER BOOT	305
											RAIN BOOT	306

## RANGES



	HEAVYWORKS									
	TREK WORK	COMFORT TECH		WATERPROOF	OUTDOOR	PROTECH	X LARGE INDUSTRY		CLASSIC +	CLASSIC INDUSTRY
	COMPOSITE	COMPOSITE		COMPOSITE	COMPOSITE		COMPOSITE	NO COMPOSITE		
Material	PU / NITRILE RUBBER	PU / TPU	PU / RUBBER	PU / PU	PU / PU		PU / PU		PU / PU	PU / PU
Advantages	<ul style="list-style-type: none"><li>• Ladder grips</li><li>• Flex-Zone for increased flexibility</li><li>• Slip-resistant cleated outsole</li></ul>	<ul style="list-style-type: none"><li>• Lightness</li><li>• Comfort</li><li>• TPU outsole for a good resistance to abrasion, hydrocarbons and cold &lt;0°C (CONCORDE S3 - CARAVELLE S3)</li></ul>		<ul style="list-style-type: none"><li>• 100% waterproof Deltatex membrane</li><li>• TPU Back reinforcement for a high wear protection and lifespan (NOMAD S3 SRC)</li><li>• PU bumper protection</li><li>• Staples specially designed for an optimal traction and a best slip-resistance on all slippery surfaces</li></ul>	<ul style="list-style-type: none"><li>• Ladder grips</li><li>• V STAB SYSTEM</li><li>• Flex-Zone</li></ul>		<ul style="list-style-type: none"><li>• Areas of integrated bending (PANOFLEX® system)</li><li>• Shock absorber Available in ESD (SAULT2 S3 ESD)</li></ul>		<ul style="list-style-type: none"><li>• Lifespan and comfort</li></ul>	<ul style="list-style-type: none"><li>• Lifespan and comfort</li><li>• JUMPER2 S3 FUR / JUMPER2 S3 FUR HC PU properties resistant to -30°C</li></ul>
Performances	SRC HRO HI CI	SRC	SRC HRO	SRC WR HI CI	SRC		SRC		SRC	SRC





LIGHTWORKS					BOOTS		
SPORTSWEAR		LIGHT WALKERS			EXECUTIVE	AGRO	ESKIMO SBHP SRC
COMPOSITE		COMPOSITE	COMPOSITE	NO COMPOSITE			
PU / RUBBER	PHYLON / RUBBER	PU / PU	PU MONO DENSITY		PU MONO DENSITY	PU / PU	COMPOSITE
<ul style="list-style-type: none"><li>• Midsole for effective cushioning : PU (D-SPIRIT / D-STAR) Phylon (DELTAFLY/DELTASPORT/BROOKLYN/MANHATTAN)</li><li>• Rubber outsole for improved abrasion resistance</li><li>• Crampon design specially designed for optimum grip</li><li>• Upper with MATRYX® technology (DELTAFLY)</li></ul>		<ul style="list-style-type: none"><li>• Step rolling (VIAGI SIP ESD - VIRAGE SIP - ASTI SIP)</li><li>• Upper Mesh (ASTI SIP/VIAGI SIP ESD/VIRAGE SIP) or knitted (SUMMER SIP) for better ventilation of foot</li><li>• Available in ESD version (VIAGI SIP ESD)</li><li>• Upper in canvas for more lightness (ARONA S1)</li><li>• XL large sole for optimal comfort</li><li>• Ventilated upper mesh (MIAMI XLARGE COMPOSITE)</li></ul>			<ul style="list-style-type: none"><li>• Non-metallic</li><li>• Lightness and flexibility</li></ul>	<ul style="list-style-type: none"><li>• Microfibre upper</li></ul>	<ul style="list-style-type: none"><li>• Overshoes and soles PU properties resistant to -30°C</li></ul>
SRC HRO		SRC			SRC	SRC	SRC





## TW402 S3 SRC



COMPOSITE



NON METALLIC

↳ Compatible with security checks  
(metal detectors)



Composite toe cap 200j

↳ Lightweight and less fatigue  
↳ Non conductive hot and cold



Anti-perforation composite protective midsole

↳ Increased flexibility at the  
metatarsal level



## TW302 S3 SRC



COMPOSITE



Fast lacing

↳ Time saving



## The design and comfort of a trekking shoe with high tech performance of a safety shoe.

TW402 S3 SRC	Black	Upper: Full grain leather, S3 water resistant treatment, with premolded front and back reinforcements. Lining: Polyamide absorbing. Insole: Removable preformed - Polyester on PU. Midsole: Cemented - PU with Panoshock® shock absorber. Outsole: Rubber Nitrile. Non metallic footwear.	39 → 48	CE	EN ISO 20345 S3 HRO HI CI SRC	770 g
TW302 S3 SRC						x 5 740 g

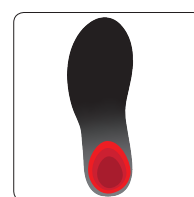


This PU/ RUBBER NITRILE SOLE has been developed with :

- 1- Areas of attachment, allowing secure stabilisation on the ladder rungs.
- 2- Large cleats for soft flooring, meeting SRC standards, for reinforced grip on all types of indoor and outdoor surfaces.
- 3- A rubber nitrile outsole that guarantees good resistance to abrasion and contact heat (HRO = 300°C for 1 minute).



Rear reinforcement  
 ➔ Stabilisation of the foot when walking  
 ➔ Reinforced protection on the rear of the shoe



PANOSHOCK® system  
 ➔ Decreased propagation of shock waves



Preformed and removable insole  
 ➔ Comfort and easy drying



Pre-moulded bumpers provide extra protection from the front and the back of the foot.



Our goal is to meet the most extreme working conditions. These highly technical and functional shoes allow you to reach unequalled levels of performance.

Michel Munier, Foot Protection Product Expert





## CONCORDE S3 SRC



COMPOSITE



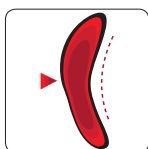
NON METALLIC

Compatible with security checks  
(metal detectors)



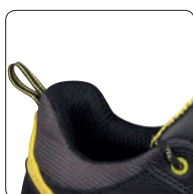
Composite toe cap 200j

Lightweight and less fatigue  
Non conductive hot and cold



Anti-perforation composite protective midsole

Increased flexibility at the  
metatarsal level



Air Mesh 3D polyester lining  
Increased breathability and optimal  
comfort



## CARAVELLE S3 SRC



COMPOSITE



## SAGA S3 SRC



COMPOSITE







## Designed for the most demanding workers in terms of comfort.

CONCORDE S3 SRC	Brown Black	Upper: Calfskin full grain leather, S3 water resistant treatment. Lining: Air Mesh 3D polyester. Insole: "Deltaplus Air Flow System" - Removable premolded - Polyester on PU. Outsole: Injected - PU. Outsole: TPU. Non-metallic footwear.	36 → 48	EN ISO 20345 S3 SRC	762 g	x 5
CARAVELLE S3 SRC					744 g	
SAGA S3 SRC	Beige Black	Upper: Nubuck leather, S3 water resistant treatment. Lining: Polyester. Insole: 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	842 g	



TPU OUTSOLE  
➔ Increased resistance to abrasion and cold



RUBBER SOLE  
➔ Increased durability



### COMFORT TECH :

A full-grain leather upper and a specially designed performance oriented sole :

- 1- The Wide Fitting is suitable for all types of feet and provides a better fit.
- 2- Full grain cowhide leather offers great flexibility in movement as does the TPU outsole.
- 3- "Delta Plus Air Flow System" is a new technology, integrated into our sockliner, allowing for excellent ventilation of the foot and great comfort all day long.



At the heart of this premium collection, our team has developed a major concept "The Comfort" which translates into 4 axes (the shape, the leather, the flex, the insole). Trying it is adopting it!

Michel Munier, Foot Protection Product Expert

# WATERPROOF

COMPOSITE - 100% DELTA-TEX WATERPROOF MEMBRANE



## NOMAD S3 SRC



**DELTA-TEX**  
**WATER PROOF**  
by DELTAPLUS

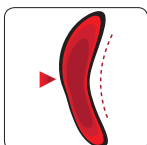
**COMPOSITE**



Composite toe cap 200j  
➔ Lightweight and less fatigue  
➔ Non conductive hot and cold



NON METALLIC  
➔ Compatible with security checks  
(metal detectors)



Anti-perforation composite protective  
midsole  
➔ Increased flexibility at the metatarsal level



Cleats, SRC standards  
➔ Good grip on all types of indoor and outdoor  
surfaces

## SAMY S3 SRC



**DELTA-TEX**  
**WATER PROOF**  
by DELTAPLUS

**METAL**



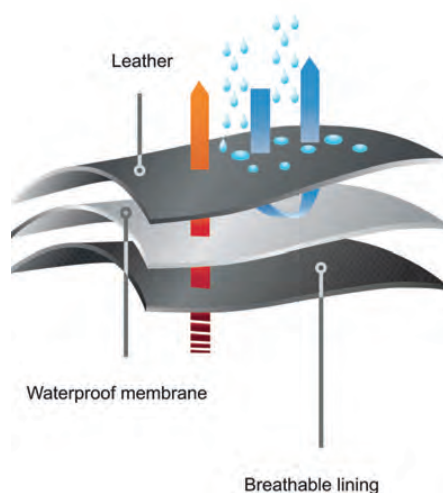


The protection also goes through an innovative concept of impermeability and water resistance. The DELTA-TEX™ membrane protects you from the weather while wicking away moisture.

NOMAD S3 SRC	Brown Black	Upper: Full grain leather, S3 water resistant treatment. Lining: DELTA-TEX™ waterproof polyester membrane. Insole: Removable - polyester on EVA. Midsole: Injected - Dual density PU. PU bumper protection. Non metallic footwear.	39 → 48	EN ISO 20345 S3 WR HI CI SRC	812 g	x 5
SAMY S3 SRC	Black	Upper: Full grain leather, S3 water resistant treatment. Lining: DELTA-TEX™ waterproof polyester membrane. Insole: Removable preformed - Polyester on EVA. Outsole: Injected - Dual-density PU. PU bumper protection.			844 g	

## DELTA-TEX WATER PROOF

by DELTAPLUS



DELTA-Tex polyester membrane WATERPROOF: waterproof and breathable.

It offers a water-proofing greater than 10,000 mm/cm<sup>2</sup> (ISO811). Impermeability is measured by placing this membrane under a tube of water (water column). The minimum water height at which the first drops of water pass through this membrane represents its impermeability.



Rear reinforcement  
➤ Stabilisation of the foot when walking  
➤ Reinforced protection on the rear of the shoe



Outsole with PU protection bumper  
➤ Reinforced protection of the forefoot



Polyester lining  
➤ Softer and more comfort



Fast lacing  
➤ Time saving



The 4 nylon bands at the instep have two main functions:

- 1- They offer a reinforced support of the foot
- 2- Due to the retro-reflective strips, they increase the visibility for even more security.



The weather, work and the outdoor business sector leads you to face harsh conditions. That is why we have developed this range whose "waterproof" membrane protect you perfectly from bad weather.

Michel Munier, Foot Protection Product Expert



The nature sports and walking shoe dedicated to safety. Comfortable, technical and performance, the shoes of OUTDOOR range will take you far !

OHIO3 S3 SRC	Black	Upper: Full grain leather, S3 water resistant treated. Lining: Polyester. Insole: Removable preformed - Polyamide on EVA. Outsole: Injected - Dual density PU. Non metallic footwear.		EN ISO 20345 S3 SRC	684 g	
AURIBEAU3 S1P SRC	Green-Black	Upper: Split suede leather and mesh. Lining: Polyester. Insole: Removable preformed - Polyamide on EVA. Outsole: Injected - Dual density PU. Non metallic footwear.	36 → 47	CE	640 g	x 5
PERTUIS3 S1P SRC					622 g	

### OHIO3 S3 SRC



COMPOSITE



DUAL DENSITY PU OUTSOLE

- 1- Flex zone
- 2- V STAB SYSTEM
- 3- Lateral ladder grips
- 4- Cleats 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



NON METALLIC

- Compatible with security checks (metal detectors)



Composite toe cap 200j

- Lightweight and less fatigue
- Non conductive hot and cold



Anti-perforation composite protective midsole

- Increased flexibility at the metatarsal level

### AURIBEAU3 S1P SRC



COMPOSITE



### PERTUIS3 S1P SRC







A professional range combines resistance, comfort and lightness.

PHOENIX S3 SRC	Black	Upper: Pigmented split leather, S3 water resistant treatment. Lining: Polyamide mesh. Insole: Removable preformed - Polyamide on EVA. Outsole: Injected - PU bi-density. Non metallic footwear.	36 → 47	CE	EN ISO 20345 S3 SRC	590 g
PHOCEA S3 SRC						570 g
PROTON S1P SRC					EN ISO 20345 S1P SRC	594 g x 5
PRISM S1P SRC						590 g

## PHOENIX S3 SRC



COMPOSITE



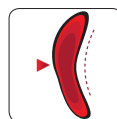
Fast lacing  
→ Time saving



NON METALLIC  
→ Compatible with security checks (metal detectors)



Composite toe cap 200j  
→ Lightweight and less fatigue  
→ Non conductive hot and cold



Anti-perforation composite protective midsole  
→ Increased flexibility at the metatarsal level

## PHOCEA S3 SRC



DUAL DENSITY PU OUTSOLE  
1- Flex zone  
2- V STAB SYSTEM  
3- Lateral ladder grips  
4- Cleats, 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

## PROTON S1P SRC



COMPOSITE



## PRISM S1P SRC



# X-LARGE COMPOSITE

**X-LARGE COMPOSITE** is the perfect answer for trades where **RESISTANCE** and **PROTECTION** are essential and the concept of **COMFORT** a must.

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

## SANTANA S3 SRC



**COMPOSITE**



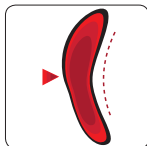
**NON METALLIC**

➔ Compatible with security checks (metal detectors)



Composite toe cap 200j

➔ Lightweight and less fatigue  
➔ Non conductive hot and cold



Anti-perforation composite protective midsole  
➔ Increased flexibility at the metatarsal level



Wide fitting (mondo 11)  
➔ Hard wearing



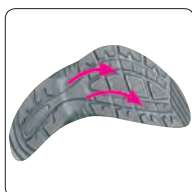
**SHOCK ABSORBER**

➔ Dual density PU outsole  
➔ Decreased propagation of shock waves



Outsole with PU protection bumper

➔ Reinforced protection of the forefoot



Areas of integrated bending (PANOFLEX® system)

➔ Less fatigue at the end of the day  
➔ More comfortable walking



## MAESTRO S3 SRC



## CALYPSO S3 SRC










**DUAL DENSITY PU OUTSOLE**

1- Hard wearing outsole with toe and heel grip  
2- Lateral ladder grips

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



Symbol of comfort, protection and durability, the X-LARGE INDUSTRY range meets the toughest working environments.

						
CADEROUSSE S3 SRC	Black	Upper: Full grain leather, S3 water resistant treatment. Lining: Acrylic furlined. Insole: Preformed removable - Felt. Outsole: Injected - Dual-density PU with bump cap.	39 → 48	EN ISO 20345 S3 CI SRC	852 g	x 5
MONTBRUN S3 SRC		Upper: Pigmented split leather, S3 water resistant treatment. Lining: Polyamide. Insole: Removable preformed - Polyamide on EVA. Outsole: Injected - Dual-density PU with bump cap.		EN ISO 20345 S3 SRC	702 g	
CAROMB S1P SRC	Grey-Blue	Upper: Suede split leather and polyamide nylon. Lining: Polyamide. Insole: Preformed removable - Polyamide on EVA. Outsole: Injected - Dual-density PU with bump cap.		EN ISO 20345 S1P SRC	772 g	
MAZAN S1P SRC					682 g	

## CADEROUSSE S3 SRC



METAL



Wide fitting (mondo 11)  
➔ Hard wearing



Retro-reflective tapes  
➔ Increased visibility for better safety



METAL



Outsole with PU protection bumper  
➔ Reinforced protection of the forefoot



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



SHOCK ABSORBER  
➔ Dual density PU outsole  
➔ Decreased propagation of shock waves



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

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



## CAROMB S1P SRC



METAL



## MAZAN S1P SRC







## SAULT2 S3 SRC



METAL



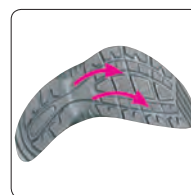
Retro-reflective tapes  
 ➔ Increased visibility for better safety



Outsole with PU protection bumper  
 ➔ Reinforced protection of the forefoot



SHOCK ABSORBER  
 ➔ Dual density PU outsole  
 ➔ Decreased propagation of shock waves



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







## Symbol of comfort, protection and durability, the X-LARGE INDUSTRY range meets the toughest working environments.

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



### 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



### Wide fitting (mondo 11):

The footwear is suitable for wide and strong feet.

Padded collar and tongue with a reinforced leather tongue provide better protection from rubble and improved comfort.








This form has been designed to meet all the needs of the construction and heavy industry sectors. Indeed, the design of the sole protects the user from shocks, either at the front of the foot (bumper) or on the sides (side bumper).

The recognised success of the SAULT2 model is linked to the durability that is widely appreciated by all users in the construction and industry sectors.



It is the study of the needs of the Civil engineering/Construction sector which led us to develop this iconic DELTA PLUS product whose strengths are extra large footwear (XL) and a maximum durability. Often copied, never equalled!

Michel Munier, Foot Protection Product Expert

						
SAULT2 S3 SRC ESD	Black	Upper: Pigmented split leather, S3 water resistant treatment. Lining: Polyamide. Insole: Removable preformed - Polyamide on EVA. Outsole: Injected - Dual-density PU with bump cap.	39 → 48	EN ISO 20345 S3 SRC EN61340 CLASSE 1	734 g	x 5
VIAGI S1P SRC ESD	Black-Red	Upper: Suede split leather and polyester mesh. Lining: Polyester. Insole: Removable preformed - Polyester on EVA. Outsole: Injected - Dual-density PU. Non metallic footwear.	36 → 48	CE EN ISO 20345 S1P SRC EN61340 CLASSE 1	610 g	x 10

## SAULT2 S3 SRC ESD




## VIAGI S1P SRC ESD





## What does the regulation say?

Areas with potentially explosive atmospheres called ATEX and the protection of workers against the risks of explosion are regulated by 1999/92/EC Directive.

The use of  qualified footwear dissipating electrostatic charges, is recommended in these areas as part of a comprehensive system of prevention of explosion risk.

Requirements for the design, implementation of systems controlling electrostatic discharge (ESD) that can damage electronic components are defined by the EN61340-5-1 standard.

**The device said ESD must offer resistance between  $10^5 \Omega$  and  $3.5 \cdot 10^7 \Omega$ .**

To be used in an ESD system, a shoe must at least be qualified according to EN61340-4-3 standard and offer resistance less than  $10^8 \Omega$  (and greater than  $10^5 \Omega$ ), it is then dissipative.

**SAULT ESD and VIAGI ESD** perform particularly well because they have not only reached a maximum resistance between  $10^5$  and  $3.5 \cdot 10^7$  (single ohm), but **these tests were conducted under severe restraints: the climatic environment class number 1 (high drought: 15% humidity rate).**

Due to their low resistance level, **SAULT ESD** and **VIAGI ESD** are a particularly efficient part of global grounding system (gloves, clothing, carpet, seat, etc ...).

Thus, their performances help this system to achieve the level of resistance required for  compliance.



## RISK OF ELECTROSTATIC DISCHARGE (ESD\*)

The static electricity on the operators must be controlled in the following application areas, because it can:












- > Generate electrostatic sparks that can ignite explosive atmospheres: plastic industry, mining, oil and gas industry, chemical industry ...
- > Damage sensitive equipment against electric shock: various electronic industries ...
- > Generate particles that may be deposited on the painting: car industry, house appliances ...

\* Electrostatic Discharge



## CLASSIC INDUSTRY - CLASSIC +

						
COBRA4 S3 SRC		Upper: Pigmented split leather, S3 water resistant treatment. Lining: Polyester. Insole: Removable premolded - Polyamide on EVA. Outsole: Injected - PU/Rubber nitrile. • Para aramid seams. • Flap. Fastening with velcro band.	36 → 48	 EN ISO 20345 S3 HRO HI SRC EN ISO 20349-2 WG	628 g	
MIWA S3 M SRC	Black	Upper: Pigmented Buffalo leather 1.8-2 mm, S3 water resistant treatment. Lining: Polyamide mesh. Insole: Removable - Polyamide on EVA. Outsole: Injected - Dual-density PU. • Integrating a protection flap with a pre-molded part to the metatarsals.	36 → 47	 EN ISO 20345 S3 M SRC	650 g	x 10
GARGAS II S1P SRC		Upper: Pigmented split leather. Lining: Polyamide absorbing. Insole: Removable premolded - Polyester on EVA. Outsole: Injected - Dual-density PU.	35 → 48	EN ISO 20345 S1P SRC	644 g	
GOULT II S1P SRC					636 g	

## COBRA4 S3 SRC



## METAL



## RUBBER NITRILE OUTSOLE

- Good resistance to abrasion and contact heat (standard HRO = 300°C for 1 minute)
- Guaranteed insulation of the foot in the shoe against heat (HI: the temperature inside must not exceed 22°C after 30 minutes in a sand bath at +150°C)
- Optimum adhesion on all types of surfaces

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



## METAL



## GARGAS II S1P SRC



## METAL



## GOULT II S1P SRC







TANGARA S1P SRC	Grey-Yellow	Upper: Ventilated suede split leather. Lining: Polyamide absorbing. Insole: Removable - Polyamide on EVA. Outsole: Injected - Dual-density PU.	36 → 47	EN ISO 20345 S1P SRC	630 g	x 10
RIMINI III S1P SRC	Beige-Yellow Navy blue-Orange				610 g	
FENNEC3 S1P SRC	Grey	Upper: Suede split leather. Lining: Polyamide absorbing. Insole: Fixed - Polyamide on EVA. Outsole: Injected - Dual-density PU.	36 → 45 46 → 47	EN ISO 20345 S1 SRC	564 g	x 10 x 5
FENNEC3 S1 SRC					474 g	

## TANGARA S1P SRC



METAL



## RIMINI III S1P SRC



METAL



## FENNEC3 S1P SRC



METAL










## FENNEC3 S1 SRC



METAL



## CLASSIC INDUSTRY

						
JUMPER2 S3 FUR HC SRC	Black	Upper: Pigmented leather croupon, S3 water resistant treatment. Lining: Polyester fur. Insole: Removable preformed - Felt. Outsole: Sole: Injected - Dual density PU. • PU formula sole keeping its properties until -30°C	36 → 48	EN ISO 20345 S3 CI SRC	690 g	x 5
JUMPER2 S3 FUR SRC					658 g	
JUMPER2 S3 BUMPER SRC		Upper: Pigmented split leather, S3 water resistant treatment, with TPU toe cap. Lining: Polyamide mesh. Insole: Fixed - Polyamide on EVA. Outsole: Injected - Dual-density PU.	36 → 45 46 → 48	CE  EN ISO 20345 S3 SRC	660 g	x 10 x 5
JUMPER2 S3 SRC		Upper: Pigmented split leather, S3 water resistant treatment. Lining: Polyamide mesh. Insole: Fixed - Polyamide on antibacterial latex. Outsole: Injected - Dual-density PU.			664 g	
JET2 S3 SRC			36 → 45 46 → 47		644 g	x 10 x 5

## JUMPER2 S3 FUR HC SRC



METAL



## JUMPER2 S3 FUR SRC



METAL



## JUMPER2 S3 BUMPER SRC



METAL



## JUMPER2 S3 SRC



METAL



## JET2 S3 SRC





JUMPER2 S1P SRC	Black	Upper: Pigmented split leather. Lining: Polyamide mesh. Insole: Fixed - Polyamide on EVA. Outsole: Injected - Dual-density PU.	36 → 45 46 → 47	CE	EN ISO 20345 S1P SRC	664 g
JET2 S1P SRC						638 g
JUMPER2 S1 SRC					EN ISO 20345 S1 SRC	596 g
JET2 S1 SRC						564 g
						x 10 x 5

## JUMPER2 S1P SRC



METAL



## JET2 S1P SRC



## JUMPER2 S1 SRC



METAL



## JET2 S1 SRC







DELTA FLY S1P SRC	Grey-Green	Upper: Matryx® technology consisting of PU-coated polyamide yarns, polyester monofilament yarns, reflective yarns and Kevlar® areas. Lining: Polyester. Insole: Removable preformed - Polyester on EVA. Outsole: Cemented - EVA/Rubber Nitrile. Non metallic footwear.	39 → 47	CE EN ISO 20345 S1P HRO SRC	520 g	x 5

## DELTA FLY S1P SRC



### COMPOSITE



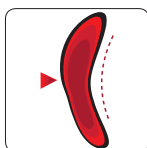
#### NON METALLIC

➔ Compatible with security checks (metal detectors)



Composite toe cap 200j

➔ Lightweight and less fatigue



Anti-perforation composite protective midsole  
➔ Increased flexibility at the metatarsal level



Outsole with TPU protection bumper  
➔ Reinforced protection of the forefoot







**MATRYX® is a high performance technical complex made from high tenacity polyamide and KEVLAR® thread. This unique and patented French technology enables specific areas to provide efficient solutions in terms of ergonomics and lightness.**



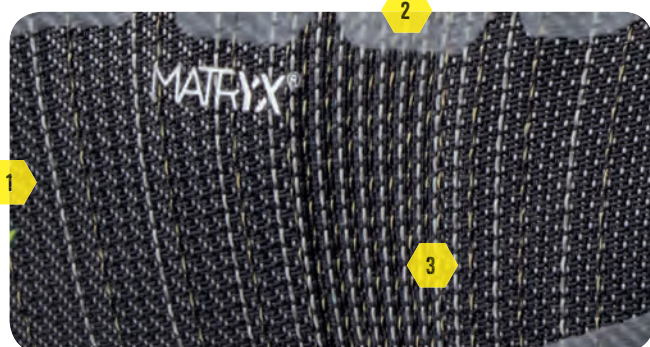
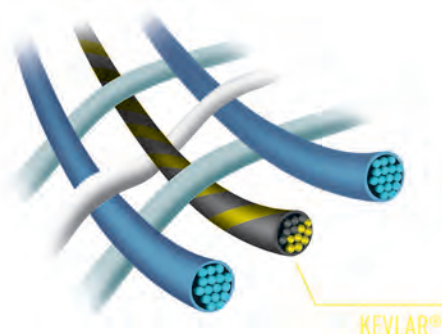
#### **RUBBER NITRILE OUTSOLE**

Good resistance to abrasion and contact heat (HRO = 300°C for 1 minute)  
Optimum adhesion

#### **WELDED SOLE WITH PHYLON MIDSOLE (EVA)**

Incomparable comfort and lightness

**MATRYX®**



#### **Unique MATRYX® Technology:**

- 1- Multizone woven upper : brings extreme lightness and flexibility to the upper material as well as very good ventilation. This complex fabric does not deform.
- 2- Reflective threads : allow increased visibility.
- 3- Kevlar® thread : provide excellent support around the instep in any position and increased resistance to abrasion.
- 4- Seamless upper for optimal comfort.



Our goal is to combine the best of sport and safety in order to push performance limits. It is due to our partnership with the French company Chamatex, which patented the MATRYX® Technology, that we have developed this innovative premium product. The most of MATRYX®: the option of choosing, according to our needs, predefined strategic function zones during weaving. This construction of the upper material reduces by approximately 50% the weight of our upper material. MATRYX® is a unique technology and DELTA FLY is unique in the world of PPE.

Michel Munier, Foot Protection Product Expert

## A Sport attitude for many professional activities.

MANHATTAN S3 SRC	Black-Yellow	Upper: Suede split leather (cowhide), S3 water resistant treatment with front rubber reinforcement. Lining: Polyester non-woven and knitted mesh. Insole: Removable preformed - Polyamide on EVA. Outsole: Cemented - Phylon. Outsole: Rubber. Non metallic shoe.	39 → 47	CE	565 g	x 10
BROOKLYN S3 SRC	Black-Orange				535 g	
DELTA SPORT S1P SRC	Blue-Yellow Black-Red				482 g	
		Upper: Injected PU on mesh. Lining: Polyester. Insole: Removable preformed - Polyester on EVA. Outsole: Cemented - Phylon. Outsole: Rubber Nitrile. Non metallic footwear.				
				EN ISO 20345 S3 HRO SRC		
				EN ISO 20345 S1P HRO SRC		

## MANHATTAN S3 SRC

## BROOKLYN S3 SRC



## COMPOSITE



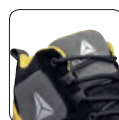
NON METALLIC  
➔ Compatible with security checks (metal detectors)



Composite toe cap 200j  
➔ Lightweight and less fatigue



Anti-perforation composite protective midsole  
➔ Increased flexibility at the metatarsal level



Quilted collar and tongue  
➔ Reduction of pressure points at the lacing



Rear support of the reflective upper  
➔ Optimal stabilisation of the foot when walking  
➔ Increased visibility



Outsole with protection rubber toe bumper  
➔ Reinforced protection of the forefoot



RUBBER NITRILE OUTSOLE  
➔ Good resistance to abrasion and contact heat (HRO = 300°C for 1 minute)  
➔ Optimum adhesion

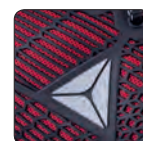
WELDED SOLE WITH PHYLON MIDSOLE (EVA)  
➔ Incomparable comfort and lightness

Preformed and removable EVA insole  
➔ Reinforced ergonomics and comfort during movement  
➔ Confort et légèreté incomparables  
Anti-slide on the inside of the shoe  
➔ Improved heel hold  
➔ Reinforced rear section

## DELTA SPORT S1P SRC



## COMPOSITE



PU upper injected on Mesh  
➔ Increased resistance of the upper material to abrasion  
➔ Improved foot support thanks to the "Cage" concept  
➔ Excellent ventilation with Mesh





## A Sport attitude for many professional activities.

SMASH S1P SRC	Black	Upper: Leather. Lining: Polyester. Insole: Removable preformed EVA. Outsole: Cemented - Rubber nitrile.	36 → 47	CE	EN ISO 20345 S1P HRO SRC	588 g
	White					604 g
	Blue Brown	Upper: Suede split leather. Lining: Polyester. Insole: Removable preformed EVA. Outsole: Cemented - Rubber nitrile.				572 g
						x 10

## SMASH S1P SRC



## COMPOSITE



Composite toe cap 200j

- ↳ Lightweight and less fatigue
- ↳ Non conductive hot and cold



Anti-perforation composite protective midsole

- ↳ Increased flexibility at the metatarsal level



Quilted collar and tongue

- ↳ Reduction of pressure points at the lacing



Preformed and removable EVA insole

- ↳ Reinforced ergonomics and comfort in foot movements



## RUBBER NITRILE OUTSOLE

- ↳ Good resistance to abrasion and contact heat (HRO = 300°C for 1 minute)
- ↳ Optimum adhesion





D-SPIRIT S3 SRC	Black	Upper: Leather, S3 water resistant treatment. Lining: Polyester. Insole: Removable - Polyester on EVA. Outsole: Cemented - PU/Rubber. Non metallic footwear.	36 → 47	EN ISO 20345 S3 HRO SRC	540 g	x 5
D-SPIRIT S1P SRC		Upper: Leather/mesh. Lining: Polyester. Insole: Removable - Polyester on EVA. Outsole: Cemented - PU/Rubber. Non metallic footwear.	38 → 47	CE EN ISO 20345 S1P HRO SRC	498 g	
	Blue-Grey	Upper: Suede split leather. Lining: Polyester. Insole: Removable - Polyester on EVA. Outsole: Cemented - PU/Rubber. Non metallic footwear.	36 → 47		514 g	
D-STAR S1P SRC	Beige		38 → 47		534 g	

## D-SPIRIT S3 SRC



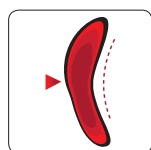
### COMPOSITE



**NON METALLIC**  
 ➤ Compatible with security checks (metal detectors)



Composite toe cap 200j  
 ➤ Lightweight and less fatigue  
 ➤ Non conductive hot and cold



Anti-perforation composite protective midsole  
 ➤ Increased flexibility at the metatarsal level



Quilted collar and tongue  
 ➤ Reduction of pressure points at the lacing



EVA insole  
 ➤ Reinforced plantar comfort throughout the day

SOLE WITH PU MIDSOLE  
 ➤ Reinforced plantar cushioning



**RUBBER OUTSOLE**  
 ➤ Good resistance to abrasion and contact heat (HRO = 300°C for 1 minute)  
 ➤ Optimum adhesion

## D-SPIRIT S1P SRC



### COMPOSITE



## D-STAR S1P SRC



### COMPOSITE



# LIGHT WALKERS



A lightweight and ventilated system make these shoes particularly suitable for professional activities requiring comfort.

## ASTI S1P SRC



### COMPOSITE



Composite toe cap 200g  
 ➔ Lightweight and less fatigue  
 ➔ Non conductive hot and cold



NON METALLIC  
 ➔ Compatible with security checks (metal detectors)



Anti-perforation composite mid sole  
 ➔ Increased flexibility at the metatarsal level



Polyester mesh upper  
 ➔ Limitation of abrasion  
 ➔ Good ventilation of the foot



DUAL DENSITY PU OUTSOLE  
 ➔ Reinforced SHOCK ABSORBER  
 ➔ High abrasion resistance

1- Flex zone  
 PANOFLEX® system  
 2- Step rolling anti fatigue sole  
 ➔ 1- Foot motion improved  
 ➔ 2- Less fatigue at the end of the day and a more comfortable walk







ASTI S1P SRC	Beige Grey-Blue Black	Upper: Suede split leather and polyester mesh. Lining: Polyester. Insole: Removable premolded - Polyester on EVA. Outsole: Injected - Dual-density PU. Non metallic footwear.	36 → 48	 <b>EN ISO 20345</b> <b>S1P SRC</b>	544 g	x 10
VIRAGE S1P SRC	Grey-Green Black-Red	Upper: Suede split leather and polyester mesh. Lining: Polyester. Insole: Removable preformed - Polyester on EVA. Outsole: Injected - Dual-density PU. Non metallic footwear.			612 g	
COMO S1P SRC	Navy blue Brown-Beige Black-Fushia	Upper: Suede split leather and polyester mesh. Lining: Polyester. Insole: Removable premolded - Polyester on EVA. Outsole: Injected - Single density PU.	39 → 48 39 → 48 35 → 43		508 g	
SUMMER S1P SRC	Blue-Yellow Grey-Orange	Upper: Polyester and cotton. Insole: Removable preformed - polyester on EVA. Midsole: injected - Single density PU.	35 → 48		440 g	

## VIRAGE S1P SRC



### COMPOSITE



**DUAL DENSITY PU OUTSOLE**  
 ➔ Reinforced shock absorption  
 ➔ Good resistance to abrasion

1- Flex zone  
**PANOFLEX®** system  
 2- Step rolling for  
 optimal comfort during  
 movement

➔ 1- Foot motion improved  
 ➔ 2- Less fatigue at the end of  
 the day and a more comfortable  
 walk



**ARCH SUPPORT SYSTEM**  
 ➔ Reinforced stability in the  
 supports  
 ➔ Good twist control

## COMO S1P SRC



### METAL



**PU MONO-DENSITY  
 SOLE**  
 ➔ High flexibility



## SUMMER S1P SRC










### METAL



## LIGHT WALKERS



						
MIAMIXL S1P SRC	Black	Upper: Suede split leather combined with polyester and cotton. Lining: Polyester. Insole: "Deltaplus Air Flow System" - Removable premolded - Polyester on PU. Midsole: injected - Single density PU. Non metallic footwear.	36 → 48	CE EN ISO 20345 S1P SRC	540 g	x 10

## MIAMIXL S1P SRC



## COMPOSITE



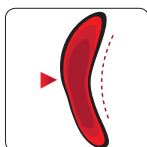
## NON-METALLIC

➔ Compatible with security checks (metal detectors)



## Composite toe cap 200j

➔ Lightweight and less fatigue  
➔ Non conductive hot and cold



## Anti-perforation composite protective midsole

➔ Increased flexibility at the metatarsal level



PU MONO-DENSITY SOLE  
➔ High flexibility







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



The concept of the MIAMI is a simple, innovative idea, with a very good price-comfort ratio for a unique safety shoe : 400g of barefoot sensation!

This concept now has a family to meet different user needs : MIAMI, SUMMER, COMO, ARONA and MIAMI X-LARGE.



#### **Wide Fitting (mondo 10) :**

The footwear is suitable for all foot shapes. The shape has been specially designed to meet the sizes and measurements of the average European foot.



"Delta Plus Air Flow system" insole technology  
Increased breathability and optimal comfort



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.

Michel Munier, Foot Protection Product Expert

# LIGHT WALKERS

A lightweight and ventilated system make these shoes particularly suitable for professional activities requiring comfort.

MIAMI S1P SRC	Grey-Navy blue Black	Upper: Polyester and cotton. Insole: Removable preformed - polyester on EVA. Midsole: injected - Single density PU.			442 g
MIAMI S1P CAMO SRC	Khaki		35 → 48	CE EN ISO 20345 S1P SRC	460 g x 10
ARONA S1P SRC	Beige Black	Upper: Canvas. Insole: Removable preformed - polyester on EVA. Midsole: injected - Single density PU.			440 g

## MIAMI S1P SRC



METAL



## MIAMI S1P CAMO SRC



## ARONA S1P SRC



METAL



SINGLE DENSITY PU OUTSOLE  
→ High flexibility





MIAMI S2 SRC	White	Upper: Microfibre/PU. Insole: Removable preformed - polyester on EVA. Midsole: Injected - Single density PU. • Water resistant upper in microfibre • Machine wash up to 30° C, easy to maintain	35 → 48	EN ISO 20345 S2 SRC	402 g	x 10
ROBION3 S2 SRC		Upper: Microfiber Lining: Polyamide. Insole: Preformed removable - Polyester on EVA. Outsole: Injected - PU bi-density. • Water resistant upper in microfibre • Machine wash up to 30° C, easy to maintain • Absorbent non woven lining for quick dry	35 → 47	EN ISO 20345 SB A E SRC	468 g	x 5
MAUBEC 3 SBEA SRC					524 g	
BRISTOL S3 SRC	Black	Upper: Derby light pigmented grain leather. Lining: Polyamide. Insole: Removable - EVA foam. Outsole: Mono density PU. Non metallic shoe.	39 → 48	EN ISO 20345 S3 SRC	494 g	x 10
RICHMOND S1 SRC		Upper: Oxford light pigmented grain leather. Brogue shoe. Lining: Polyamide. Insole: Removable - EVA foam. Outsole: Mono density PU. Non metallic shoe.		EN ISO 20345 S1 SRC	486 g	

## MIAMI S2 SRC



METAL



## ROBION3 S2 SRC



METAL



## MAUBEC 3 SBEA SRC



METAL



## BRISTOL S3 SRC



COMPOSITE



## RICHMOND S1 SRC



COMPOSITE



NON METALLIC

Compatible with security checks (metal detectors)



Composite toe cap 200j

Lightweight and less fatigue  
Non conductive hot and cold



Anti-perforation composite protective midsole

Increased flexibility at the metatarsal level  
Except RICHMOND S1



Quilted collar

Great freedom of movement

Polyamide lining and foam

Softer and more comfort

EVA insole

Reinforced plantar comfort throughout the day

Leather upper, S3 treated

Water repellent upper (Bristol S3 only)



PU MONO-DENSITY SOLE

Good cushioning  
Abrasion resistance  
Certified SRC anti-slip resistant



# WINTER BOOT

COMPOSITE - 100% DELTA-TEX WATERPROOF MEMBRANE



## ESKIMO SBHP SRC



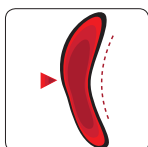
**COMPOSITE**



**NON METALLIC**  
 ➔ Compatible with security checks  
 (metal detectors)



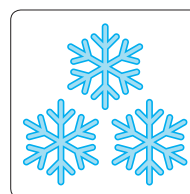
Composite toe cap 200j  
 ➔ Lightweight and less fatigue  
 ➔ Non conductive hot and cold



Anti-perforation composite  
 protective midsole  
 ➔ Increased flexibility at the  
 metatarsal level



**EASY-EXIT**  
 ➔ Easy removal



Safety boot specially designed for the cold  
 ➔ Suitable for use in outdoor cold  
 environments but also in cold rooms



Canadian **WATERPROOF** boot combining a  
 pre-moulded PU pad and an impermeable  
 membrane  
 ➔ Resistance to extreme cold and snow  
 ➔ Moisture protection



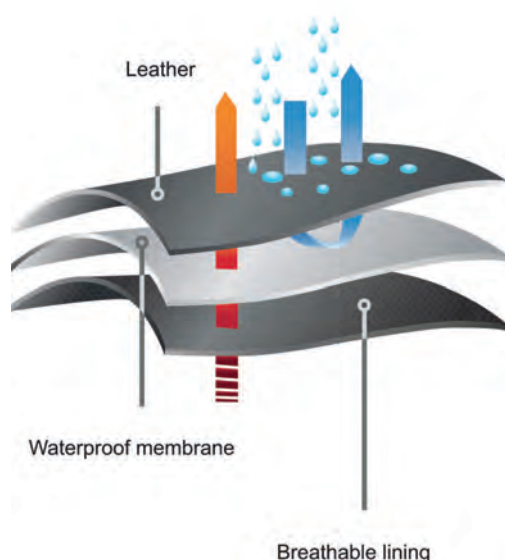
Felt insole  
 ➔ Better insulation against the  
 cold





ESKIMO will be able to protect you safely in all weather conditions.

ESKIMO SBHP SRC	Black	Canadian safety boot. Upper: PU and Polyester. Lining: SNOWTEX™ fur-lined and DELTA-TEX™ waterproof polyester membrane + fur-lined polyester collar. Insole: Removable preformed - Felt. Outsole: Injected - Dual density PU resistant to -30°C. Amagnetic boot.	38 → 48	CE EN ISO 20345 SBH P A E FO CI WR SRC	865 g	x 5



## DELTA-TEX WATER PROOF by DELTAPLUS

The DELTA-Tex WATERPROOF membrane, with SNOWTEX polyester lining offers optimal protection against harsh weather and harsh environments. The DELTA-Tex polyester membrane is waterproof and breathable. It offers waterproofing higher than 10,000 mm/ cm<sup>2</sup> (ISO 811). Impermeability is measured by placing this membrane under a tube of water (water column). The minimum water height at which the first drops of water pass through this membrane represents its impermeability.

### PU DOUBLE DENSITY SOLE :









- The PU sole and padding made with specific composition guarantee the PU properties down to -30°C.
- The crampons as well as the SRC sliding resistance provide secure stabilisation on the ladder rungs. They lend a good grip on all types of indoor surfaces (cold rooms) and outdoors.



Following the Nordic markets' demand for boots suited to extreme cold, rain and wind conditions, we designed ESKIMO in order to protect your feet against these elements. The Canadian boot design, the DELTA-TEX™ membrane combined with SNOWTEX™ lining are durably waterproof and insulating.

Michel Munier, Foot Protection Product Expert

# WINTER BOOT

						
SAKHA S3 SRC	Beige	Upper: Cowhide leather, water resistant treatment S3 with TPR heel protection. Lining: Acrylic fur. Insole: Removable preformed - Polyester on EVA. Outsole: Injected - Dual density PU with front PU reinforcement.	39 → 48	 <b>EN ISO 20345</b> S3 CI SRC	870 g	x 5
SAMARA S3 SRC					882 g	
CADEROUSSE S3 SRC	Black				852 g	
		Upper: Full grain leather, S3 water resistant treatment. Lining: Acrylic furlined. Insole: Preformed removable - Felt. Outsole: Injected - Dual-density PU with bump cap.				

## SAKHA S3 SRC



METAL



## SAMARA S3 SRC



METAL



## CADEROUSSE S3 SRC



METAL



DUAL DENSITY PU OUTSOLE

1- Rear wearing outsole with toe and heel grip  
2- Lateral ladder grips

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



LAUTARET 3	Black	Canadian fur-lined winter working boots. Lining: 100% polyester. Upper: PVC-coated fabric and polyamide Water-repellent treatment. Outsole: Thermoplastic (keeps it's property until -30°C).	38 → 47	EN ISO 20347 SRC OB E CI	626 g	x 6
ECRINS S5 SRC		Safety boots. Upper: Bi-injection PVC. Lining: Polyester furlined. Insole: Fixe with aluminium protection. Sole: PVC - Nitrile with cleats - Steel S5 sole. Easy put on with band.	39 → 47	CE EN ISO 20345 S5 CI SRC	1.1 kg	x 5
MORNAS SRC	Green	Bi-injection PVC boot. Collar: PU. Lining: Polyester furlined. Outsole: PVC with cleats.		EN ISO 20347 SRC OB E CI	884 g	x 6

## LAUTARET 3



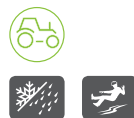
## ECRINS S5 SRC










METAL



## MORNAS SRC



# RAIN BOOT

						
GIGNAC2 S5 SRC	Green	Safety boots. Upper: Bi-injection PVC. Lining: Jersey polyester. Puncture-resistant stainless steel plate. Sole: PVC - Nitrile with cleats - Steel S5.	39 → 47	EN ISO 20345 S5 SRC	1.20 kg	x 5
JOUCAS2 SRC	Black	Working boots. Upper: Bi-injection PVC. Lining: Jersey polyester. Sole: PVC with cleats.	36 → 47	CE EN ISO 20347 SRC OB E	1.0 kg	x 6
JOUCAS2 NO SRC						
VIENS2 S4 SRC	White	Safety boots. Upper: Bi-injection PVC. Lining: Jersey polyester. Outsole: PVC - Nitrile with staples.	36 → 47	EN ISO 20345 S4 SRC	1.0 kg	x 5
JAVON 2 E	Green	Garden half-boots. Upper: Bi-injection PVC. Lining: Jersey polyester. Sole: PVC with cleats.	39 → 47		788 g	x 6

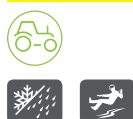
## GIGNAC2 S5 SRC



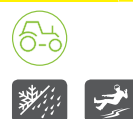
METAL



## JOUCAS2 SRC



## JOUCAS2 NO SRC



## VIENS2 S4 SRC



METAL









## JAVON 2 E







					
46500	Black-Grey	Spare soles. Polyester on PU.	36 → 48	60 g	x 100
45400	Black	Spare soles. Polyamide.	35/36 → 47/48		x 350
22180		Round polyamide laces. Length: 100 cm.	One size	10 g	x 500
LACET XL		Round polyamide laces. Length: 120 cm.			
PRATO	Khaki-Green Black-Grey	Antistatic and antibacterial socks. 64% cotton / 17% polyamide / 16% Nostatex® / 3% Lycra®. Anti-stress soft edge. Lycra® stretch. Antishrinking treatment (Prewashed).	39/42 → 43-46	82 g	x 100
CHAUSSETT	Champagne	Acrylic fleeced socks for boots.	One size	120 g	x 50
CHAUSSON	Grey	100% polyester Isothermic slipper. Rubber band ankle support - width 22 mm.	38/39 → 46/47	46 g	

## 46500



## 45400



## 22180



## LACET XL



## PRATO



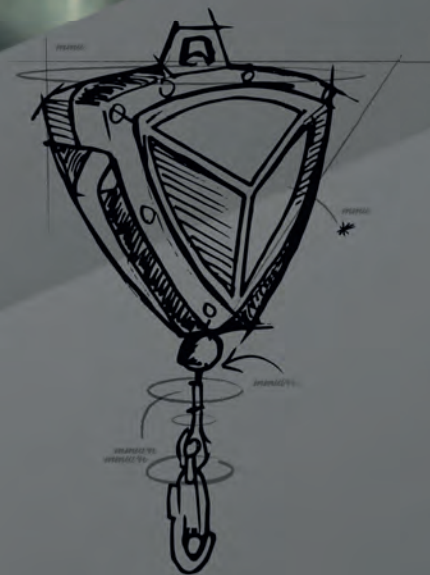
## CHAUSSETT



## CHAUSSON



# DESIGNING MANUFACTURING YOUR SAFETY AT WORK





# FALL PROTECTION

## 308 • HELP WITH CHOICE

---

### BODY SUPPORT

320 • Fall arrester and suspension harnesses

324 • Fall arrester harnesses

### ANCHORAGE - WORK POSITIONING

330 • Work positioning systems

355 • Anchorage devices

360 • Lanyards

### FALL ARRESTER SYSTEMS

332 • Kits

338 • Energy absorbing lanyards

344 • Retractable fall arresters

352 • Fall arresters on rope

354 • Fall arresters on cable

371 • Accessories and storage bags

### CONNECTING SYSTEMS

361 • Connectors

### SUSPENSION

362 • Rope access work

### RESCUE

364 • Fall arrest and rescue, confined space

367 • Rescue & evacuation

## 406 • TECHNICAL INFORMATION

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FALL PROTECTION





## BODY SUPPORT

	AGRICULTURE/ GREEN AREAS	CONSTRUCTION/ CIVIL ENGINEERING	SECOND WORK/ CRAFTSMAN	HEAVY INDUSTRY	LIGHT INDUSTRY	SERVICES/ LOGISTICS	HYGIENE ENVIRONMENT	OIL / GAS	MINING	WIND ENERGY	Suitable protection	PAGES
PREMIUM											JAGUAR HAR36TCP	320
											GALAGO HAR35TC	322
											GALAGO HAR35TCA	322
											EOLIE HAR35	324
											EOLIE HAR35A	324
											ANATOM HAR32	324
											HAR44EL	325
											HAR42EL	325
											TC105	367
											RAH33	367
EVOLUTION											HAR25HA	326
											HAR24H	326
											HAR23H	327
											EX220	327
											HAR22H	327
											HAR14	328
ESSENTIEL											HAR12	328
											HAR11	328
											HAR12GILNO	328
											EX120	328
											HARVESGI	331



## ANCHORAGE - WORK POSITIONING - CONNECTING SYSTEMS

	AGRICULTURE/ GREEN AREAS	CONSTRUCTION/ CIVIL ENGINEERING	SECOND WORK/ CRAFTSMAN	HEAVY INDUSTRY	LIGHT INDUSTRY	SERVICES/ LOGISTICS	HYGIENE ENVIRONMENT	OIL / GAS	MINING	WIND ENERGY	Suitable protection	PAGES
PREMIUM											EX030200	330
											EX030400	330
											IPN LV130	356
											LV400	357
											LV401	357
											LV403	357
											LV402	357
											SPEEDLINE LV201	358
											LV301	359
											LO147150CDD	360
EVOLUTION											LO147150	360
											LO047150AD	360
											LO047100	360
											LO047150	360
											LO045200	360
											AM027	361
											AM030	361
											EX118	330
											HAPAD	331
											HA203	331
ESSENTIEL											HA200	331
											LV106	355
											LV105	355
											LV100	355
											CAIMAN LV135	355
											DAYAK LV120G	355
											AM007	356
											LV102100	356
											LV102150	356
											LV102050	356





## FALL ARRESTER SYSTEMS - RESCUE - SUSPENSION

	AGRICULTURE/ GREEN AREAS	CONSTRUCTION/ ENGINEERING	SECOND WORK/ CRAFTSMAN	HEAVY INDUSTRY	LIGHT INDUSTRY	SERVICES/ LOGISTICS	HYDRO-ENVIRONMENT	OIL / GAS	MINING	WIND ENERGY	Suitable protection	PAGES
											ELARA340H	332
											ELARA350H	332
											ELARA390H	333
											AN245200PRR	338
											AN245200CDD	338
											AN240CDD	338
											AN235200PR	338
											AN235200CD	338
											AN230CD	338
											PROTECTOR EXTRA LARGE AN18040T	347
											PROTECTOR EXTRA LARGE AN18060T	347
											PROTECTOR LOAD AN517	351
											PROTECTOR LOAD AN518	351
											PROTECTOR LOAD AN530	351
											CAMELEON AN066A	352
											AN410	352
											CAMELEON AN066	352
											AN420	352
											AN430	352
											AN401	352
											AN701	354
											ASCAB AN071	354
											AN801	354
											ASCAB AN024	354
											AN802	354
											ASCAB AN025	354
											TC009	363
											PROTECTOR ELEVATOR TR01720F	348
											PROTECTOR ELEVATOR TR01720T	348
											PROTECTOR ELEVATOR TR01730F	348
											PROTECTOR ELEVATOR TR01730T	348
											TRBAG3	371
											TRBAG	371
											TRA20	364
											TRA22_	364
											TRA30	364
											TRA32_	364
											TRA101	364
											TRA102	364
											TRA103	364
											TR003C	364
											TR003K	364
											GIRAFE TR620	366
											TR601	366
											TR602	366
											TR603	366
											TC022	367
											TC102C	367
											RESCUEHUB TC063	368
											DESCENDER TC062	370
											ROPE ACCESS KIT TC039	370
											TC064	370
											TC001	362
											TC002	362
											TC003	362
											TC012	362
											SAFECORD TC007	362
											DESCORD TC006	362
											TC004	362
											TC044	362
											TC005	363
											TC015	363
											TC016	363
											TC025	363
											TC040	363
											TC029	363

	AGRICULTURE/ GREEN AREAS	CONSTRUCTION/ ENGINEERING	SECOND WORK/ CRAFTSMAN	HEAVY INDUSTRY	LIGHT INDUSTRY	SERVICES/ LOGISTICS	HYDRO-ENVIRONMENT	OIL / GAS	MINING	WIND ENERGY	Suitable protection	PAGES
											ELARA320	333
											ELARA280	334
											ELARA270	334
											ELARA170	335
											ELARA150	335
											ELARA140	336
											AN218S200CDD	339
											AN218R2CDD	339
											AN208S200CD	339
											AN208R2CD	339
											PROTECTOR TETRA AN15006F	344
											PROTECTOR TETRA AN15006T	344
											PROTECTOR TETRA AN15010F	344
											PROTECTOR TETRA AN15010T	344
											PROTECTOR TETRA AN15015F	344
											PROTECTOR TETRA AN15015T	344
											PROTECTOR TETRA AN14006F	346
											PROTECTOR TETRA AN14006T	346
											PROTECTOR TETRA AN14008F	346
											PROTECTOR TETRA AN14008T	346
											PROTECTOR TETRA AN14008T	346
											PROTECTOR LARGE AN18020T	347
											PROTECTOR LARGE AN18030T	347
											PROTECTOR METAL AN115F	348
											PROTECTOR METAL AN115T	348
											PROTECTOR METAL AN116F	348
											PROTECTOR METAL AN116T	348
											PROTECTOR METAL AN11730F	348
											PROTECTOR METAL AN11730T	348
											MAXIBLOC AN10006T	349
											MAXIBLOC AN10010T	349
											MEBLOC AN13006C	349
											MINIBLOC AN102	350
											FIXBLOC AN105	350
											ASDRIS2 AN068	352
											ASCORD AN065	353
											AN30010	353
											AN30020	353
											AN30030	353
											ELARA190	336
											ELARA130	337
											ELARA160	337
											AN201200CC	340
											AN211200CCC	340
											AN201200CD	340
											AN211200CDD	340
											AN203200CC	341
											AN213200CCC	341
											AN203200CD	341
											AN213200CDD	341
											AN213100CDD	342
											AN203100CC	342
											FENNEC AN06310	353
											FENNEC AN06320	353
											FENNEC AN06330	353
											RA038_	371
											TC008	371



## FALL ARREST

5

4

3

2

1

4

3

2

1

HARNESSES

EN 361  
HARNESSES  
EN 358  
RESTRAINT



ABSORBERS



EN 355

RETRACTABLES



EN 360

SLIDINGS



EN 353-1  
CABLE

EN 353-2  
ROPES

ANCHORAGES



EN 795

A=FIX

B=MOBILE

CONFINED



EN 795

B=MOBILE

LIFE LINE

**SPEEDline** **CABLEline**

CONNECTORS



EN 362

LANYARDS



EN 354



POSITIONING

2



EN 358  
RESTRAINT

ROPE ACCESS WORK

6

5



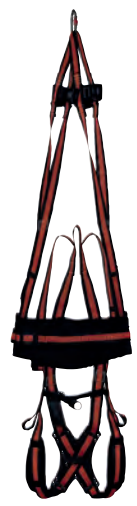
EN 361  
HARNESSES  
EN 567  
BLOCKERS



EN 358  
RESTRAINT  
EN 12841  
ROPE ACCESS WORK

RESCUE

3



EN 361  
HARNESSES



EN 1498-C  
RESCUE



EN 567  
BLOCKERS



EN 341-2-A  
DESCENDERS



EN 12841-C  
ROPE ACCESS WORK



EN 341-1-B  
DESCENDERS



EN 341-1-A  
DESCENDERS



EN 341-2-A  
DESCENDERS



EN 1496-B  
RESCUE



EN 358  
RESTRAINT



EN 1891  
ROPES

EN 12278  
PULLEYS



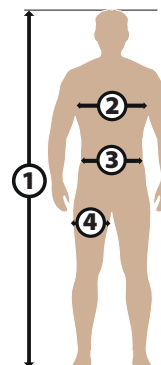
EN 1498-B  
RESCUE WEBBINGS

## 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

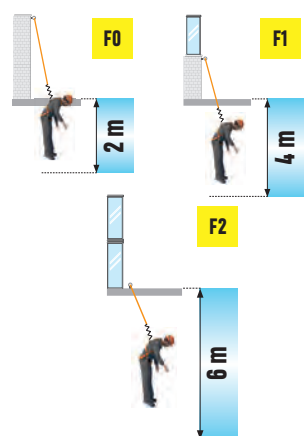


= 2

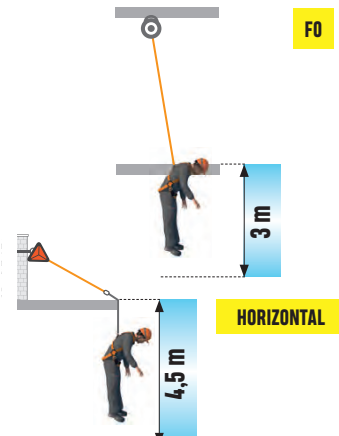


= 1

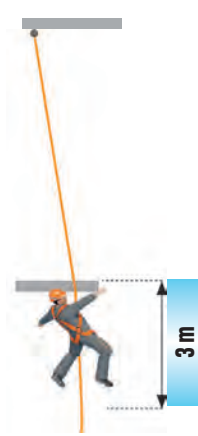
### ABSORBERS



### RETRACTABLES



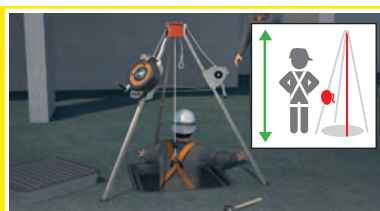
### SLIDINGS



### ANCHORAGES



### CONFINED



### LIFE LINE



### CONNECTORS



### LANYARDS







POSITIONING



● ● = 2

ROPE ACCESS WORK

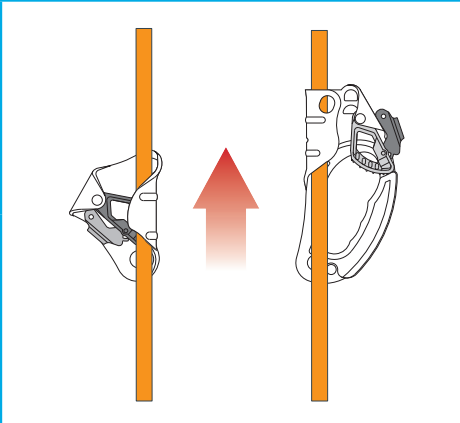
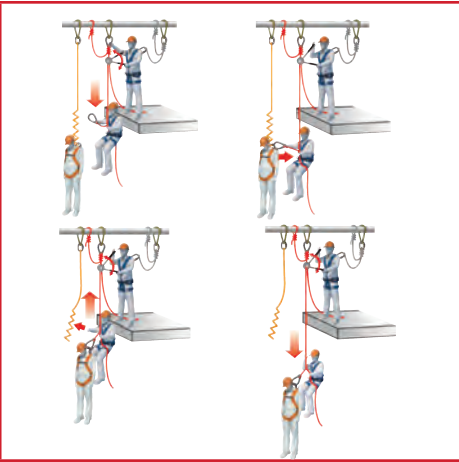
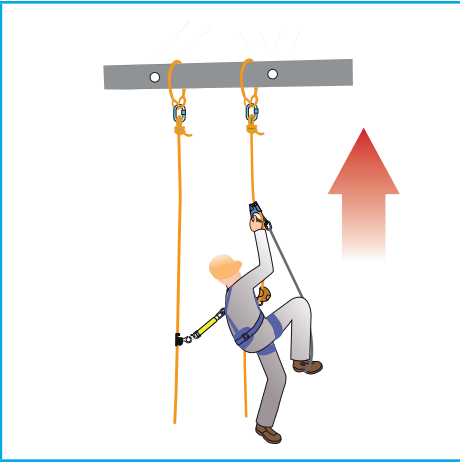


● ● ● ● = 6 +

RESCUE



● ● ● = 3






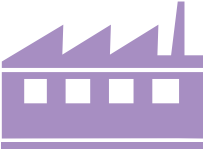











# SAFETY INFORMATION - READY TO USE PROTECTION

FALL ARREST		POSITIONING	ROPE ACCESS WORK	RESCUE
HARNESSES				
ABSORBERS				
				
ANCHORAGES				



ELARA KIT			
ESSENTIAL	EVOLUTION		PREMIUM

	 <div>L - XXL190</div>	 <div>L280</div>	 <div>L320</div>	 <div>L - XXL390</div>
	 <div>L - XXL160</div>	 <div>L - XXL140</div>	 <div>L270</div>	 <div>L - XXL340</div>
	 <div>L - XXL130</div>	 <div>L150</div>	 <div>L - XXL170</div>	 <div>L - XXL350</div>





# HELP WITH CHOICE LIFETIME

**Textile products**

**Y YEARS**  
**10**

**LIFE TIME**

Duration of use: 0 to 10 years. STOP at 10 years.

**FALL ARREST**

	5	4	3	2	1
<b>HARNESSES</b>	4				
3					
2					
1					

**POSITIONING**  
**2**

**ROPE ACCESS WORK**  
**6** **5**

**RESCUE**  
**3**

**ABSORBERS**

**RETRACTABLES**

**SLIDINGS**

**ANCHORAGES**

**CONNECTORS**

**LIFELINE**

**LANYARDS**

**CONTAINED**

**SPEEDline**

**Metallic PPE**

**Y YEARS**  
**20**

**LIFE TIME**

Duration of use: 0 to 20 years. STOP at 20 years.

**ABSORBERS**

**RETRACTABLES**

**SLIDINGS**

**ANCHORAGES**

**CONNECTORS**

**LIFELINE**

**CABLEline**





- ★ 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**
- ▶ **MANUFACTURING DATE**

PRODUCT : AN13006C  
SERIAL : D12.352.0028  
DATES : PROD. : 01/2012

Using an Android or Windows mobile phone having technology,



**NFC**  
(Near Field Communication)

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.**

USER : BARAK USA  
START : 06/2017

2. The Official Service Center (SAV) will write:

- ▶ **THE DATE OF EACH ANNUAL CONTROL.**

SAV 1 : 06/2017  
SAV 2 :  
SAV 3 : DATA

3. Both user and controller can check anytime:

- ▶ **THE STATUS OF PRODUCT CONTROLS.**

PRODUCT SERIAL  
1. AN13006C D12.352.0028



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.



# FALL ARRESTER AND SUSPENSION HARNESSSES



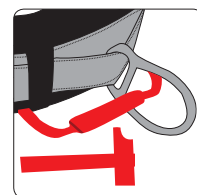
JAGUAR HAR36TCP	Two colour harness with positioning belt for rope access work. 2 fall arrest anchorage points (dorsal-sternal). Positioning and seat belt with thermoformed large back and shorts. 3 work positioning attachment points (2 lateral and 1 on back). 1 suspension point (ventral). 1 ventral blocker for rope access. 6 adjustable buckles, of which 2 are automatic. 1 carabiner.	S/M/L XL/XXL	CE	EN361 150 kg EN358 150 kg EN813 150 kg EN12841 TYPE B EN362	2.4 kg x 5

## JAGUAR HAR36TCP

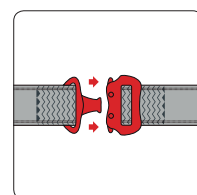


Comfortable with the thermoformed backrest and thigh with sponge lining and comfort pad  
 ➔ Increased comfort

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



2 accessory attachment holders incorporated into the belt  
 ➔ Anchorage carabiners, lanyards and tools



Automatic buckles  
 ➔ Quick and easy set-up and adjustment



## Comfort and multiple functionality for rope work.



### 1- Comfort and speed of implementation.

6 adjustment buckles

180° belt rotation

### 2- Dedicated to rope access

Ventral point of suspension

Integrated ventral stopper

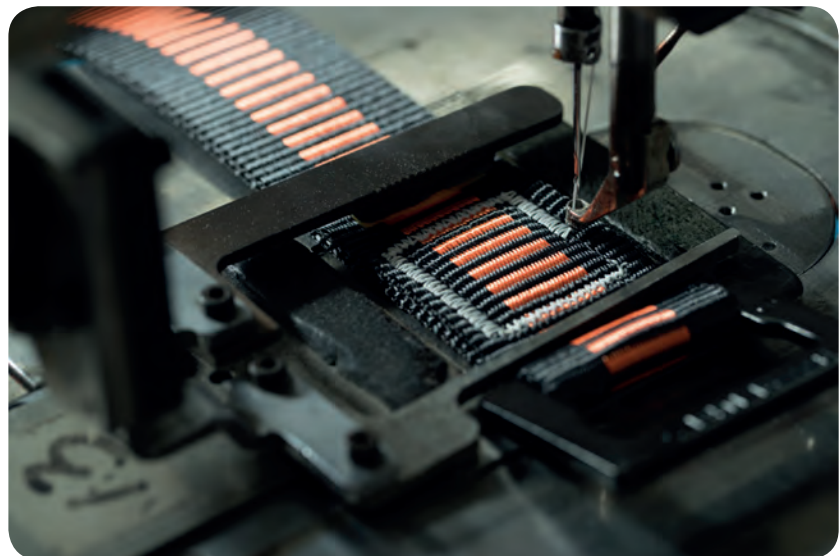
### 3- Functional and safe

Certified 150 kg

3 work positioning points

Fall indicator

The strap, developed by our R&D department and woven in our factories, allows to have a real flexibility and thus to accentuate the notion of comfort for the user.










To optimise the progression of the user on his rope, we integrated a stopper on the harness, because it gives him a better stability.

David Naulin, Fall Protection Product Expert





# FALL ARRESTER AND SUSPENSION HARNESSSES

					
GALAGO HAR35TC	Two colour harness with belt: 2 fall arrester anchorage points (back - front). Positioning belt with thermoformed back and shorts. 2 work positioning attachment points (lateral). 1 suspension point. 8 adjustable buckles. 1 carabiner.	S/M/L XL/XXL		EN361 150kg	2.2 kg
GALAGO HAR35TCA	Two colour harness with belt: 2 fall arrest anchorage points (dorsal-sternal). Positioning belt with thermoformed back and shorts. 2 work positioning attachment points (lateral). 1 suspension point. 8 adjustable buckles, of which 4 are automatic. 1 carabiner.			EN358 150kg EN813 150 kg	x 5 2.6 kg

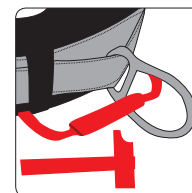
## GALAGO HAR35TC



Comfortable with the thermoformed backrest and thigh with sponge lining and comfort pad  
 ➔ Increased comfort



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

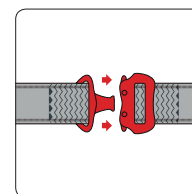


2 accessory attachment holders incorporated into the belt  
 ➔ Anchorage carabiners, lanyards and tools



2 quick release buckles to adjust or remove the shoulder straps to get a shorts belt EX320TC  
 ➔ Can only be used as a harness for positioning work

## GALAGO HAR35TCA



Automatic buckles  
 ➔ Quick and easy set-up and adjustment

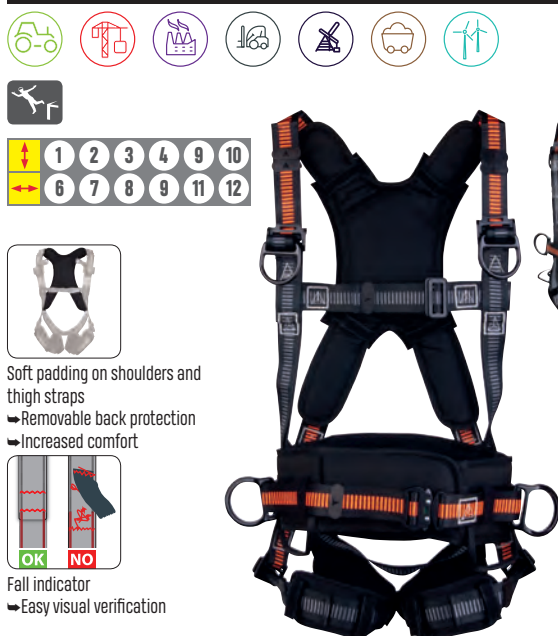




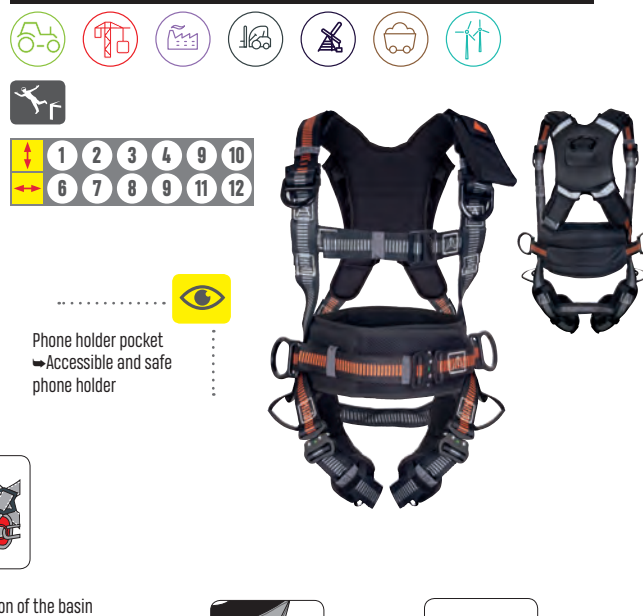
# FALL ARRESTER HARNESSSES

EOLIEN HAR35	Two colour harness with positioning belt. 3 fall arrester attachment points (back- front right side - front left side). 4 adjustable buckles in light alloy. 2 automatic buckles. Positioning belt with thermoformed back closed with wide Velcro for more comfort. 180° rotation. 2 lateral anchorage points. 1 adjustment loop. Sponge back lining.				
EOLIEN HAR35A	Two colour harness with positioning belt. 3 fall arrester attachment points (back- front right side - front left side). 4 adjustable buckles. Positioning belt with thermoformed back closed with wide Velcro for more comfort. 180° rotation. 2 lateral anchorage points. 3 adjustable automatic buckle. Sponge back lining.	S/M/L/ XL/XXL	CE	EN361 150 kg EN358 150 kg	2 kg x 5
ANATOM HAR32	Two colour harness. 2 fall arrester anchorage points (back - front). 4 adjustable buckles.			EN361 150 kg	1.3 kg

## EOLIEN HAR35



## EOLIEN HAR35A



## ANATOM HAR32



Phone holder pocket  
 ➔ Accessible and safe phone holder

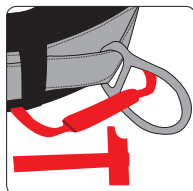
Tested at 150 kg  
 ➔ No problem related to the weight of the tools transported or other



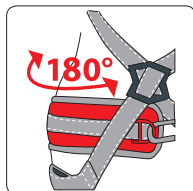


HAR44EL	Dielectric harness with positioning belt. 2 fall arrester anchorage points (back - front). 4 adjustable buckles. Positioning belt with thermoformed back closed with wide Velcro for more comfort. 180° rotation. 2 lateral anchorage points for work positioning. Sponge back lining. Buckles with plastic coating. Material insulates to 20kV.	S/M/L/ XL/XXL	EN361 EN358  CE	2 kg   x 5	
HAR42EL	Dielectric harness. 2 fall arrester anchorage points (back - front). 4 adjustable buckles. Buckles with plastic coating. Material insulates to 20kV.		EN361	922 g	

## HAR44EL



2 accessory attachment holders incorporated into the belt  
➔ Anchorage carabiners, lanyards and tools



180° rotation  
➔ Easy rotation of the basin



DIELECTRIC  
➔ Insulator up to 30kV

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

## HAR42EL



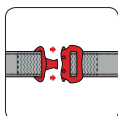
# FALL ARRESTER HARNESSSES

HAR25HA	Harness with positioning belt. 2 fall arrest anchorage points (dorsal - sternal). 6 automatic adjustable buckles. Positioning belt with thermoformed back closed by large velcro. 2 lateral work positioning anchorage points. 1 extension lanyard.	S/M/L/ XL/XXL		EN358 150 kg	1.8 kg
HAR24H	Harness with positioning belt. 2 fall arrest anchorage points (back - front). 6 adjustable buckles. Positioning belt with thermoformed back closed with wide Velcro. 180° rotation. 2 lateral anchorage points for work positioning.			EN361 150 kg EN813 150 kg	x 5 1.7 kg

## HAR25HA



180° rotation  
→ Easy rotation of the basin



Automatic buckles  
→ Quick and easy set-up and adjustment



2 accessory attachment holders incorporated into the belt  
→ Anchorage carabiners, lanyards and tools



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

## HAR24H



Fall indicator  
→ Easy visual verification



2 accessory attachment holders incorporated into the belt  
→ Anchorage carabiners, lanyards and tools



180° rotation  
→ Easy rotation of the basin



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





HAR23H	Harness with 3 fall arrest anchorage points (back - right front side - left front side). 5 adjustable buckles.			1.3 Kg	
HAR22H	Harness with 2 fall arrester anchorage points (back - front). 5 adjustable buckles.	S/M/L/ XL/XXL	EN361 150 kg CE	1 Kg	x 5
EX220	Positioning belt with thermoformed back closed with wide Velcro for more comfort. 180° rotation. 2 lateral anchorage points. 1 adjustment loop. Sponge back lining.		EN358 150 kg	712 g	

## HAR23H

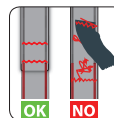


Fall indicator  
→ Easy visual verification

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



## HAR22H



Fall indicator  
→ Easy visual verification

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



## EX220



180° rotation  
→ Easy rotation of the basin



# FALL ARRESTER HARNESSSES

HAR14	2 fall arrester anchorage point harness (back - front). 2 adjustment loops. 2 adjustable lateral plates. Positioning belt with broad thermoformed back. Sponge lining. 2 anchorage points for work positioning.		EN358 140 kg EN361 140 kg	1.1 kg	
HAR11	1 fall arrester anchorage point harness (back). 2 adjustment loops. 2 adjustable lateral plates.	S/M/L/ XL/XXL		624 g	
HAR12	2 fall arrester anchorage point harness (back - front). 2 adjustment loops. 2 adjustable lateral plates.		CE EN361 140 kg	730 g	x 10
HAR12GILNO	Harness with work vest not removable: Harness (Ref. HAR12). Vest: 100% polyester. Polyester Mesh lining. Zip closure. 4 pockets including 1 phone pocket. Adjustable size by zip.			1.1 kg	
EX120	Positioning belt with thermoformed back. 2 lateral anchorage points for work positioning. 1 adjustment loop. Sponge back lining.	One size	EN358 140 kg	400 g	

## HAR11



## HAR12



## EX120



## HAR12GILNO





## Intuitive and fast set-up

### HAR14



#### 1- Intuitive

Bi-colour strap ensuring correct positioning of the harness  
Only 2 adjustment loops.  
Adjustable side plates for better adjustment of the harness

#### 2- Ergonomics

Ultra light thanks to a thin but ultra compact strap  
Certified 140kg

The 100% integrated construction allows the flexibility to create different typologies of straps, whether in the weaving technique, or, as in the case of the harnesses in the Essential range, to have a colour on each side.



The two-tone strap creates the difference. It allows novice users or users who use the fall arrest harnesses on an ad hoc basis, to ensure a correct and rapid installation of the latter, and therefore to work safely.

David Naulin, Fall Protection Product Expert



# WORK POSITIONING SYSTEMS

EX030200	Lanyard tensioner equipped with a rope and 1 AM010 carabiner. The positioning device allows adjustment of the distance between the operator (with work positioning belt) and the structure. Lanyard: Braided rope Ø 11mm with manufactured ends. (See AN066 description too)	0,20 → 2 m	EN358	998 g	x 5
EX030400		0,20 → 4 m		1.2 kg	
EX118200A EX118400A	Adjustable work positioning lanyard via stainless steel tensioner. Adjustable length. Stranded rope Ø 14 mm equipped with a wear indicator. Thimble loop. Splice protection. Protective sheath. 1 hook.	0,20 → 2 m 0,20 → 4 m	EN358	872 g 1.1 kg	x 15
EX021	Adjustable work positioning lanyard via reducer. Adjustable length. Stranded rope Ø 12 mm. Protective sheath on the splices.	1,10 → 2 m		306 g	

## EX030200



Fall indicator  
→ Easy visual verification



## EX030400



Non-inverting device  
→ Easy installation of the slider in the right direction

Opening with one hand  
→ Ergonomics and intuitiveness for opening the product

## EX118



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



## EX021





# FALL ARRESTER HARNESSSES



HARVESGI	Vest. Zip fastening. 4 pockets including 1 phone pocket. Adjustable size by zip. High visibility: Class 1 - Silver colour - Shoulder-belt assembly.	One size			x 10
LV102050	Extension strap in high tenacity polyester with D-ring. Width 45 mm. End loop with shrinkage and steel anchor D.	0,50 m			300 g x 15
HAPAD	Comfort pad for back.				170 g x 10
HA203	Pair of straps enabling blood circulation in the legs after a fall while waiting for help. Adjustable for any type of harness by positioning on the side straps. Ease and speed of implementation. Carrying case.	One size			80 g x 25
HA200	Tool holder. Extended length: 1 m. Maximum working load: 4 kg.				60 g x 20

## HARVESGI



## LV102050



## HAPAD



## HA203



## HA200



ELARA340H	INDUSTRY 6 M - ready for use fall arrest kit: Harness with 3 fall arrester anchorage points (back-right front side - left front side). 5 adjustable buckles (Ref. HAR23H). Self retractable fall arrester with polyester webbing 25 mm. ABS protection. Swivel with fall indicator. 1 carabiner AM002 (Ref. AN13006C). Anchorage ring with high tenacity polyester strap. Width 45 mm. End loop with shrinkage and steel anchor D (ref. LV102100). Comfort pad for back (Ref. HAPAD). 1 tool holder (Ref. HA200). 1 carabiner AM002.		EN360 EN361 EN362 EN795 TYPE B	4.1 kg	x 5
ELARA350H	SERVICES - ready for use fall arrest kit: Harness with positioning belt. 2 fall arrest anchorage points (back - front). 6 adjustable buckles. Positioning belt with thermoformed back closed with wide Velcro. 180° rotation. 2 lateral anchorage points for work positioning (ref. HAR24H). Fall arrest sliding on anchorage line stranded rope Ø 14 mm, opening type, equipped with automatic locking, non-inverting device, energy absorber with fall indicator (ref. AN065). Anchorage line stranded rope Ø 14 mm (ref. AN30010). Adjustable work positioning lanyard via reducer. Adjustable length. Stranded rope Ø 12 mm. Protective sheath on the splices (ref. EX021). Anchorage ring with high tenacity polyester strap. Width 45 mm. End loop with shrinkage and steel anchor D (ref. LV102100). 1 tool holder (ref. HA200). 2 carabiners AM002.	S/M/L/ XL/XXL	CE EN353-2 EN358 EN361 EN362 EN795 TYPE B	5.2 kg	x 3

## ELARA340H



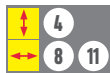
## ELARA350H





ELARA390H	CONSTRUCTION - ready for use fall arrest kit: Harness with 2 fall arrest anchorage points (back - front). 5 adjustable buckles (Ref. HAR22H). Fall arrest with energy absorber elastic strap. Thimble loops. Equipped with 1 AM002 carabiner + 1 AM022 hook (Ref. AN235200CD). 1 tool holder (Ref. HA200). 1 carabiner AM002.	S/M/L/ XL/XXL	EN355 EN361 EN362	2.8 kg	
ELARA320	POSITIONNING & SCAFFOLDING - ready for use fall arrest kit: 2 fall arrester anchorage point harness (back - front). 2 adjustment loops. 2 adjustable side plates. Positioning belt (Ref. HAR14). Adjustable work positioning 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 connectors AM002.	S/M/L	CE EN355 EN358 EN361 EN362	3.5 kg	x 5

## ELARA390H









## ELARA320



Storage bag



# FALL ARRESTER SYSTEMS KITS

					
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)		EN355 EN361 EN362	2.5 kg	x 5
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. L0030200). 2 connectors AM002.	S/M/L	CE EN354 EN360 EN361 EN362 EN795 TYPE B	9.1 kg	x 1

## ELARA280



Storage bag

## ELARA270

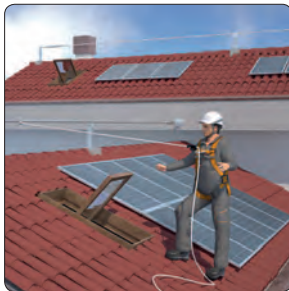
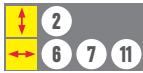






ELARA170	ROOF - ready for use fall arrester kit: 2 fall arrester anchorage point harness (back - front). 2 adjustment loops. 2 adjustable side plates. (Ref. HAR12). Sliding non opening fall arrester set with fall indicator on stranded rope anchorage line Ø 12 mm, length 20 m. (Ref. AN063/20). 2 connectors AM002.	S/M/L/ XL/XXL	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	

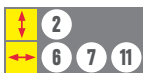
## ELARA170



Storage bag









## ELARA150



Storage bag



# FALL ARRESTER SYSTEMS KITS

					
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 EN361 EN362	1.9 kg	x 5
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 EN361 140 Kg EN362	1.8 kg	

## ELARA140



Storage bag

## ELARA190



Storage bag



ELARA130	RESTRAINT - ready for use kit: 1 fall arrester anchorage point harness (back). 2 adjustment loops, 2 adjustable side plates with lanyard in irremovable stranded rope Ø 12 mm. Length 1.50 m. 1 connector AM002.	S/M/L/ XL/XXL	EN358 140 kg	900 g	
ELARA160	CLASSIC - ready for use fall arrester kit: 1 fall arrester anchorage point harness (back). Two adjustment loops, 2 adjustable side plates with fall arrester with not removable energy absorber in stranded rope Ø 12mm, length 2 m. 1 carabiner AM002.	S/M/L/ XL/XXL	CE EN361 EN355	946 g	x 5

## ELARA130



MAINTENANCE KIT

Storage bag

## ELARA160



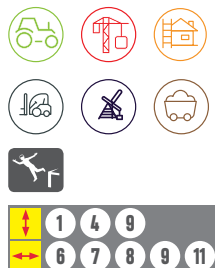
Storage bag



# ENERGY ABSORBING LANYARDS

AN245200PRR	Dielectric fall arrest with energy dissipater in double elastic strap (Y). Thimble loops. Equipped with 1 carabiner AM010D + 2 hooks AM022D. Material insulates to 30kV.		x1  x2		1.9 kg	
AN235200PR	Dielectric fall arrest with energy dissipater in elastic strap. Thimble loops. Equipped with 1 carabiner AM010D + 1 hook AM022D. Material insulates to 30kV.		x1  x1		1.2 kg	
AN245200CDD	Fall arrest with energy dissipater in double elastic strap (Y). Thimble loops. Equipped with 1 carabiner AM002 + 2 hooks AM022.		x1  x2		1.6 kg	
AN235200CD	Fall arrest with energy absorber elastic strap. Thimble loops. Equipped with 1 carabiner AM002 + 1 hook AM022.	1.40 → 2 m	x1  x1	CE EN355	994 g	x 5
AN240CDD	Fall arrester with extensible energy absorber in double woven webbing (Y) with integrated crumple on the lanyard. Retracted length: 1.40 m. Stretched length: 2 m. 1 carabiner AM002. 2 hooks AM022.		x1  x2		1.8 kg	
AN230CD	Fall arrester with energy absorber in woven webbing with integrated crumple on the lanyard. Retracted length: 1.40 m. Stretched length: 2 m. 1 Screw lock carabiner in galvanized steel, opening 17 mm (AM002). 1 Automatic hook lock in galvanized steel, large opening 55 mm (AM022).		x1  x1		1 kg	

## AN245200PRR

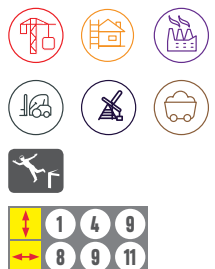


DIELECTRIC  
↳ Insulator up to 30kV

## AN235200PR



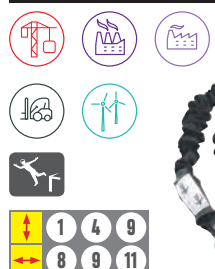
## AN245200CDD



## AN235200CD



## AN240CDD



Energy dissipater in woven strap with integrated crumple on the lanyard

Reduced resting length limits discomfort to the operator and the risk of stumbling

Protective sheath on loops to reduce wear caused by the friction of connectors

## AN230CD







AN218S200CDD	Fall arrester with energy absorber in double braided rope (Y) Ø 10.5 mm with shrink tubing to compress the lanyard. Thimble loops.	2 m	AM002 x1 AM022 x2	EN355	1.9 kg	x 5
AN208S200CD	Fall arrester with energy absorber in braided rope Ø 10.5 mm with shrink tubing to compress the lanyard. Thimble loops.		AM002 x1 AM022 x1		1.2 kg	
AN218R2CDD	Fall arrester with energy absorber in double braided rope Ø 12 mm (Y), adjustable by means of two gear rings on the rope.	1.50 → 2 m	AM002 x1 AM022 x2		1.9 kg	
AN208R2CD	Fall arrester with energy absorber in braided rope Ø12 mm, simple and adjustable by means of a gear ring on the rope.		AM022 x1 AM022 x1		1.2 kg	

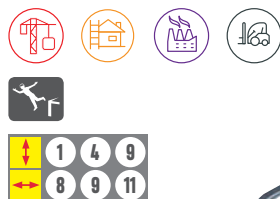
## AN218S200CDD



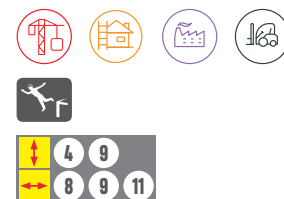
## AN208S200CD










## AN218R2CDD



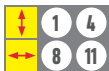
## AN208R2CD



## ENERGY ABSORBING LANYARDS

						
AN201200CC	Fall arrester with energy absorber in stranded rope Ø 12 mm. Thimble loops.	2 m	AM002 x1	AM002 x1	800 g	
AN201200CD			AM002 x1	AM022 x1		
AN211200CCC			AM002 x1	AM002 x2	CE EN355	1.1 kg x 5
AN211200CDD			AM002 x1	AM022 x2		2 kg

## AN201200CC



## AN201200CD



## AN211200CCC



## AN211200CDD





AN203200CC	Fall arrester with energy absorber in lanyard webbing. Thimble loops.	2 m	x1	<b>EN355</b>	668 g	x 5
AN203200CD			x1			
AN213200CCC			x1			
AN213200CDD			x1			
			x1		1 kg	
			x2		1.3 kg	
			x2		1.6 kg	

## AN203200CC



## AN203200CD













## AN213200CCC



## AN213200CDD



## ENERGY ABSORBING LANYARDS

						
AN213100CDD	Fall arrester with energy absorber in double lanyard webbing (Y). Thimble loops.	1 m	 x1	 <b>EN355</b>	1.3 kg	x 5
AN203100CC	Fall arrester with energy absorber in lanyard webbing. Thimble loops.		 x1		600 g	

## AN213100CDD



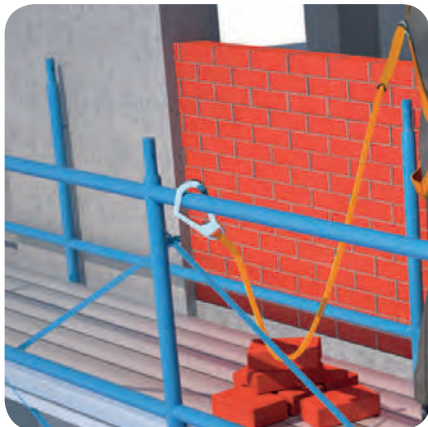
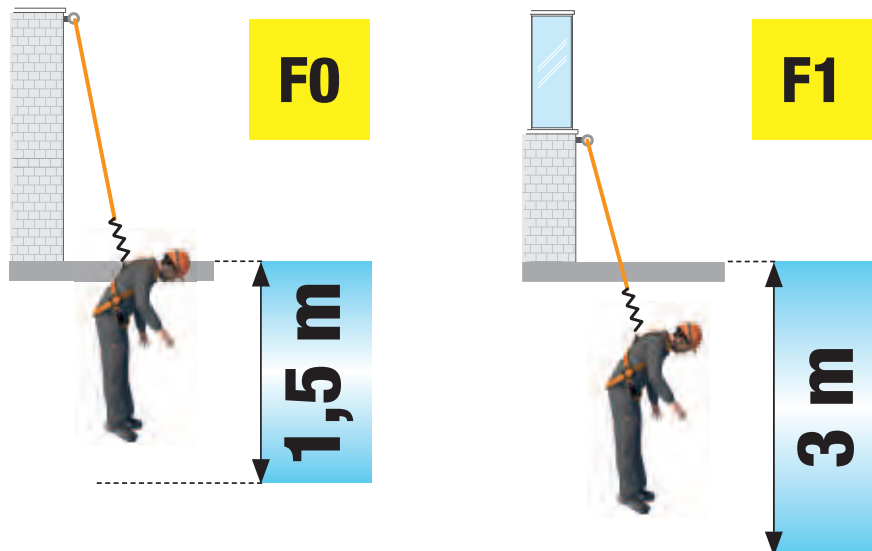
## AN203100CC







Identifying a usage factor is complex. With this device no more hesitation possible: it is the safest factor.



### 1-Ergonomics

Easy anchoring thanks to its large connectors

### 2- Secure

The length of 1m reduces the air draft in factor 1  
Impossible to position in factor 2

The No Shock absorber system developed by Delta Plus makes it possible to find the right compromise between braking force and stopping distance for a better safety of the operator.















[...]

The failure to recognise or to take into account the air draft as a fall factor is a problem for some companies who want to ensure that their employees are always in a secure position. That's why we created these 1m long absorbers: the employer ensures the safety of the user with a reduced air draft and the impossibility of anchoring in factor 2.

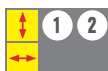
David Naulin, Fall Protection Product Expert



## RETRACTABLE FALL ARRESTERS

						
PROTECTOR TETRA AN15006F	Self retractable fall arrester with galvanised steel cable with integrated energy absorber. ABS case. Fall indicator. Inertia locking system.	6 m	 x 1 AM020	 <b>EN360</b> 150 kg	5.6 kg	x 1
PROTECTOR TETRA AN15015F		15 m	 x 1 AM020		6.5 kg	
PROTECTOR TETRA AN15006T		6 m	 x 1 AM016		5.6 kg	
PROTECTOR TETRA AN15015T		15 m	 x 1 AM016		6.5 kg	
PROTECTOR TETRA AN15010F		10 m	 x 1 AM020		5.8 kg	
PROTECTOR TETRA AN15010T			 x 1 AM016		5.3 kg	

## PROTECTOR TETRA



Fall indicator  
→ Easy visual verification



2 integrated carrying handles  
→ Easy to transport and set-up



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

High strength ABS casing  
→ High impact resistance



## Link performance with ergonomics



ABS shock casing for a very high resistance  
 Certified 150 kg  
 Excellent reactivity and very low braking force thanks to a mechanical system specifically developed for these type of results



Brake discs prepared during manufacture by running them in order to be 100% efficient from the first use. This preparation, which consists of carrying out a calibration of the whole brake system, makes it possible to have the best possible compromise between braking force and fall stopping distance.















Innovation developed thanks to the know-how of FROMENT, our historical subsidiary expert in mechanical systems, this TETRA range is acclaimed by professionals who work at height.

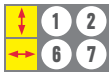
David Naulin, Fall Protection Product Expert



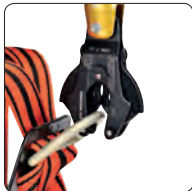
## RETRACTABLE FALL ARRESTERS

						
PROTECTOR TETRA AN14006F	Self retractable fall arrester with webbing with energy absorber. ABS case. Fall indicator. Inertia locking system.	6 m	 x 1 AM021	 <b>EN360</b> HORIZONTAL CERTIFICATION 100 kg	5.4 kg	x1
PROTECTOR TETRA AN14006T			 x 1 AM016		5.4 kg	
PROTECTOR TETRA AN14008F		8 m	 x 1 AM021			
PROTECTOR TETRA AN14008T			 x 1 AM016			

## PROTECTOR TETRA



Fall indicator  
→ Easy visual verification



2 integrated carrying handles  
→ Easy to transport and set-up

High strength ABS casing  
→ High impact resistance

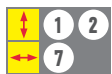
Tested at 150 kg  
→ No problem related to the weight  
of the tools transported or other





PROTECTOR EXTRA LARGE AN19040T	Self retractable fall arrester with Ø 4,8 mm steel cable with integrated energy absorber. ABS case. Fall indicator. Inertia locking system.	40 m	x 1 AM016	EN360	21.1 kg	x 1
PROTECTOR EXTRA LARGE AN19060T		60 m	x 1 AM016		30.5 kg	
PROTECTOR LARGE AN18020T	Self retractable fall arrester with galvanised steel cable with integrated energy absorber. ABS case. Fall indicator. Inertia locking system.	20 m	x 1 AM016		11.5 kg	
PROTECTOR LARGE AN18030T		30 m	x 1 AM016		12.35 kg	

## PROTECTOR EXTRA LARGE

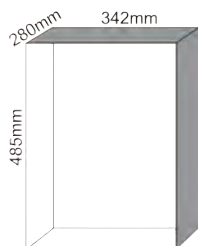


2 integrated carrying handles  
→ Easy to transport and set-up

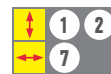
IP66 waterproof stainless steel cable  
→ Resistance in aggressive environments



Fall indicator  
→ Easy visual verification










## PROTECTOR LARGE



Fall indicator  
→ Easy visual verification



# RETRACTABLE FALL ARRESTERS

						
PROTECTOR METAL AN115F	Self retractable fall arrester with galvanised steel cable with integrated energy absorber. Steel case. Fall indicator. Inertia locking system.	20 m	x 1 AM020	CE EN360 150 kg	9.5 kg	x 1
PROTECTOR METAL AN115T			x 1 AM016		9.5 kg	
PROTECTOR METAL AN116F		25 m	x 1 AM020		10 kg	
PROTECTOR METAL AN116T			x 1 AM016		10 kg	
PROTECTOR METAL AN11730F		30 m	x 1 AM020		11 kg	
PROTECTOR METAL AN11730T		30 m	x 1 AM016			
PROTECTOR ELEVATOR TR01720F	Self retractable fall arrester in steel cable with removable rescue winch. Steel case. Inertia locking system. Energy absorber	20 m	x 1 AM020	EN1496 CLASS A	14.6 kg	
PROTECTOR ELEVATOR TR01720T			x 1 AM016		14.6 kg	
PROTECTOR ELEVATOR TR01730F		30 m	x 1 AM020		18.9 kg	
PROTECTOR ELEVATOR TR01730T			x 1 AM016		18.9 kg	

## PROTECTOR METAL



Fall indicator  
→ Easy visual verification



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



## PROTECTOR ELEVATOR



Equipped with a rescue winch  
→ Rescue a person without sending a rescuer



Fall indicator  
→ Easy visual verification



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



MAXIBLOC AN10006T	Self retractable fall arrester with Ø 4 mm galvanised steel cable with integrated energy absorber. PP case. Fall indicator.	6 m	x 1 AM016	EN360 150 kg	2.80 kg	x 1
MAXIBLOC AN10010T		10 m	x 1 AM016		3.75 kg	
MEDBLOC AN13006C	Self retractable fall arrester with polyester webbing 25 mm. ABS protection. Swivel with fall indicator. 1 carabiner AM002.	6 m	x 1 AM002		1.60 kg	x 5

## MAXIBLOC



Lightweight  
➔ Easy to transport and set-up



Fall indicator  
➔ Easy visual verification



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

## MEDBLOC AN13006C



Light and compact: 1.8 kg  
➔ Easy to transport and set-up













Fall indicator  
➔ Easy visual verification



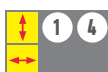
Tested at 150 kg  
➔ No problem related to the weight of the tools transported or other



## RETRACTABLE FALL ARRESTERS

						
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	
FIXBLOC AN105	Self retractable fall arrester with 17 mm polyester/Aramid Kevlar® strap. Plastic case. Inertia locking system. 1 automatic swivel connector with fall indicator. 1 carabiner AM002.	1,90 m	 x 1 AM002	 <b>EN360</b> 150 kg	834 g	x 5

## MINIBLOC AN102



## FIXBLOC AN105



Fall indicator  
→ Easy visual verification







PROTECTOR LOAD AN517	Load fall arrester in galvanized cable Ø 4 mm to secure all moving loads under 250 kg. High resistance ABS case.	10 m	2006/42/EEC	5.1 kg	x1
PROTECTOR LOAD AN518		15 m		5.9 kg	
PROTECTOR LOAD AN530		12 m		11.6 kg	
	Load fall arrester in galvanized cable Ø 6 mm to secure all moving loads under 500 kg. Steel case.				

## LOAD SELF RETRACTING FALL ARREST

### PROTECTOR LOAD AN517 - AN518



2 integrated carrying handles  
➔ Easy to transport and set-up

High strength ABS casing  
➔ High impact resistance

Integrated energy dissipater  
➔ Structure protected from the forces generated by the fall

## LOAD SELF RETRACTING FALL ARREST















### PROTECTOR LOAD AN530



Integrated energy dissipater  
➔ Structure protected from the forces generated by the fall



# FALL ARRESTERS ON ROPE

						
ASDRISS2 AN068	Fall arrester sliding on anchorage line stranded rope Ø 10.5 mm (rope sold separately). Opening type fall arrester equipped with automatic locking and energy absorber. 1 carabiner.		 x1 AM002	EN353-2 EN362	549 g	
CAMELEON AN066A	3 multi function products in 1: 1- Sliding fall arrester on braided rope anchorage line Ø 10.5 - 11mm equipped with an extension tab with energy absorber and an AM002 carabiner. 2- Stopper on rope: The rope's adjusting device used in the safety bracket (type A) accompanies the user during his changes of position and locks under the action of a static or dynamic load. 3- Stopper on rope: The ascension device on its work support, locks under the action of a load in one direction and slides freely in the opposite direction (type B) (see EX030 description too).		 x1 AM002		706 g	
CAMELEON AN066	3 multi function products in 1: 1- Sliding fall arrester on braided rope anchorage line Ø 10.5 - 11mm + 1 AM002. 2- Stopper on rope: The rope's adjusting device used in the safety bracket (type A) accompanies the user during his changes of position and locks under the action of a static or dynamic load. 3- Stopper on rope: The ascension device on its work support, locks under the action of a load in one direction and slides freely in the opposite direction (type B) (see EX030 description too).		 x1 AM002	CE EN353-2 EN12841 TYPE A TYPE B	300 g	x 5
AN410		10 m	 x1 AM002		1.4 kg	
AN420	Anchorage line in braided rope Ø 11mm for CAMELEON® and ASDRISS2. 1 loop sewn thimble. Equipped with an AN006 counterweight and an AM002 connector.	20 m	 x1 AM002		2.1 kg	
AN430		30 m	 x1 AM002		2.9 kg	
AN401		per meter	 x1 AM002			

## ASDRISS2 AN068



## CAMELEON AN066A



Opening with one hand  
→ Ergonomic and simple to use

## CAMELEON AN066



Fall indicator and non-inverting device  
→ Easy visual verification

Extension carabiner  
→ Better user mobility



## AN410



## AN420

## AN430

## AN401





ASCORD AN065	Fall arrester sliding on anchorage line stranded rope Ø 14 mm (rope sold separately). Opening type fall arrester equipped with automatic locking, non-inverting device, energy absorber with fall indicator. 1 carabiner AM002.		x1 AM002		736 g	x 5
FENNEC AN06310	Sliding non opening fall arrester set with fall indicator on stranded rope anchorage line Ø 12 mm. Wear indicator. 1 loop spliced on high end.	10 m	EN353-2		1.3 kg	x 10
FENNEC AN06320		20 m			2.2 kg	x 5
FENNEC AN06330		30 m			3 kg	x 5
AN30010	Anchorage line stranded rope Ø 14 mm for ASCORD®. End spliced with thimble loop. 1 carabiner AM002.	10 m	x1 AM002		1.6 kg	x 10
AN30020		20 m			3 kg	x 5
AN30030		30 m			4.1 kg	x 5

## ASCORD AN065

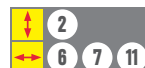


Non-inverting device  
→ Easy installation of the slider in the right direction

Energy dissipater with fall indicator



## FENNEC



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



## AN30010







## AN30020

## AN30030





## FALL ARRESTERS ON CABLE

					
AN701	Vertical central attachment composed of 2 stainless steel plates with Ø 12 mm anchor screws and tensioner system. AN024/AN025 cable sold separately by meter.		EN795 TYPE A	4 kg	x 1
AN801	Top attachment (EN795-A), lower attachment and tensioner system in stainless steel with universal anchorage.		EN795 TYPE A (AN801UNI)	4.2 kg	x 6
AN802	Intermediary attachment in stainless steel with universal anchorage. Recommended at least every 8 m.			1.3 kg	x 12
ASCAB AN071	Sliding opening fall arrester on anchorage line in cable Ø 8 mm with self-locking, non-inverter device, extension tab with energy absorber. 1 carabiner AM002.			1 kg	x 5
ASCAB AN024	1 meter anchorage line cable for ASCAB in stainless steel. 1 thimble sleeve loop. 1 carabiner AM002.	1 m	CE EN353-1		x 1
ASCAB AN025	Additional meter of anchorage line cable for ASCAB.	per meter			

## AN701

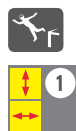


Stainless steel  
→ Suitable for any type of environment

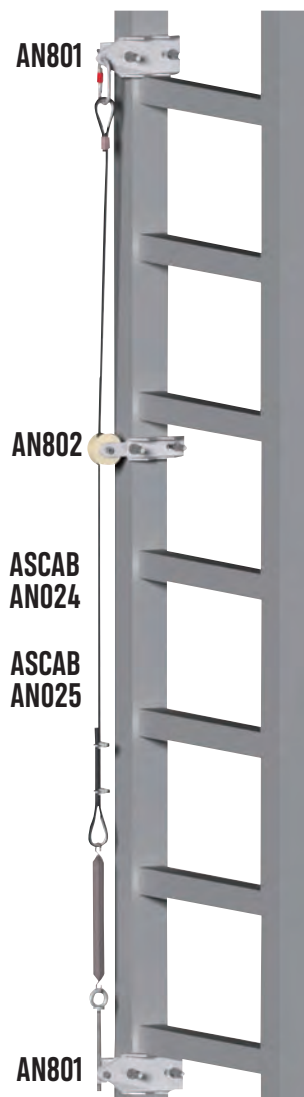
Non-inverting device  
→ Easy installation of the slider in the right direction



## AN801



## AN802



## ASCAB AN071





# ANCHORAGE DEVICES



LV106	Swivel anchorage point in stainless steel, for vertical or horizontal installation (ceiling).			100 g	
LV105	Anchorage with stainless steel eye Ø 12 mm. Overall length 140 mm. Rod length (under flange) 100 mm. Thread length 80 mm.		EN795 TYPE A	174 g	x 10
LV100	Stainless steel anchorage mounting plate with screws Ø 12 mm.			46 g	
CAIMAN LV135	Anchorage for concrete block. Adjustable length from 80 cm to 120 cm.			12.9 kg	x 1
DAYAK LV120G	Transportable anchorage point, galvanized steel, for door frame or window of 63 to 123 cm. Adjustable with clamping screw.	Adjustable	CE EN795 TYPE B TS16415 2	7 kg	x 1

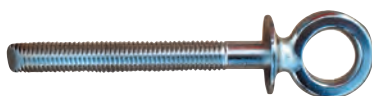
## LV106



## CAIMAN LV135



## LV105



To seal or to screw

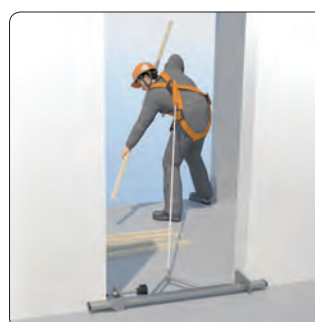
## DAYAK LV120G









## LV100



Quick installation  
→ Easy installation of the anchor point



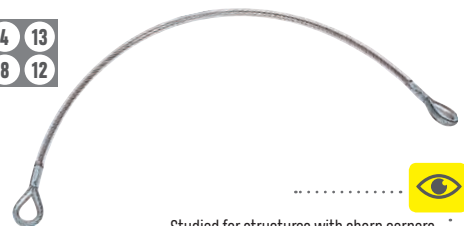
# ANCHORAGE DEVICES

					
IPN LV130	A transportable interim anchorage device with aluminium alloy wheels. It can be attached to beams of width 76 to 255 mm.	Adjustable	EN795 TYPE B	4 kg	x 4
AM007	Sling anchor in galvanized steel cable Ø 8 mm. Protective sheath. 2 thimble ferrule loops.	1 m		600 g	x 5
LV102100	Anchorage ring with high tenacity polyester strap. Width 45 mm. End loop with shrinkage and steel anchor D.	1 m		222 g	
LV102150	Anchorage ring with high tenacity polyester strap. Width 45 mm. End loop with shrinkage and steel anchor D.	1,50 m	CE EN795 TYPE B EN354	258 g	
LV102050	Extension strap in high tenacity polyester with D-ring. Width 45 mm. End loop with shrinkage and steel anchor D.	0,50 m		300 g	x 15
L0030100		1 m		70 g	
L0030150	Lanyard and anchorage point in tubular strap. 2 sewn loops. Width 25 mm.	1,50 m		187 g	
L0030200		2 m		218 g	

## IPN LV130



## AM007



Studied for structures with sharp corners

## LV102100



## LV102150

## LV102050



## L0030100

## L0030150

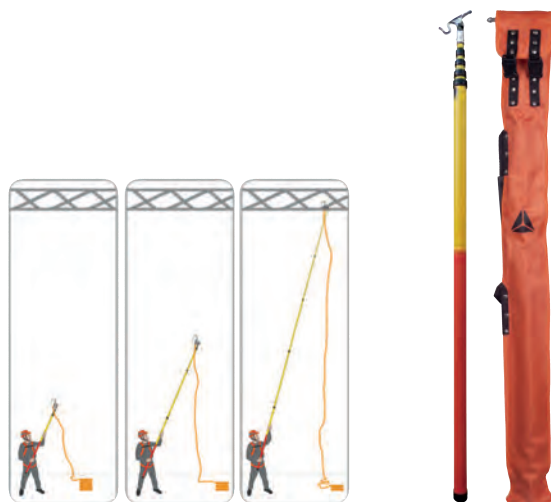
## L0030200





LV400	Telescopic rod with 5 sections. Closed length 2 m. Open Length 8 m. Material insulates to 30kV.	Adjustable		5 kg	x 1
LV403	Telescopic rod with 3 sections. Closed length 1,2 m. Open Length 3 m. Material insulates to 30kV.			4 kg	
LV401	Automatic lock hook in aluminium with double opening action. Opening 90 mm R> 23kN.		CE EN795 TYPE B EN362 CLASS A	1.1 kg	x 10
LV402	Adapter for connector, for use with AM022 or AM030 (sold separately). Usable on LV400 and LV403 rods. Particularly suitable for rescuing upwards or downwards.			362 g	

## LV400



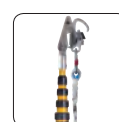
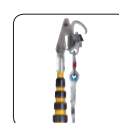
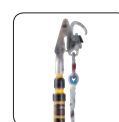
## LV403



## LV401



## LV402





# ANCHORAGE DEVICES

★ Safe  
★ Clear



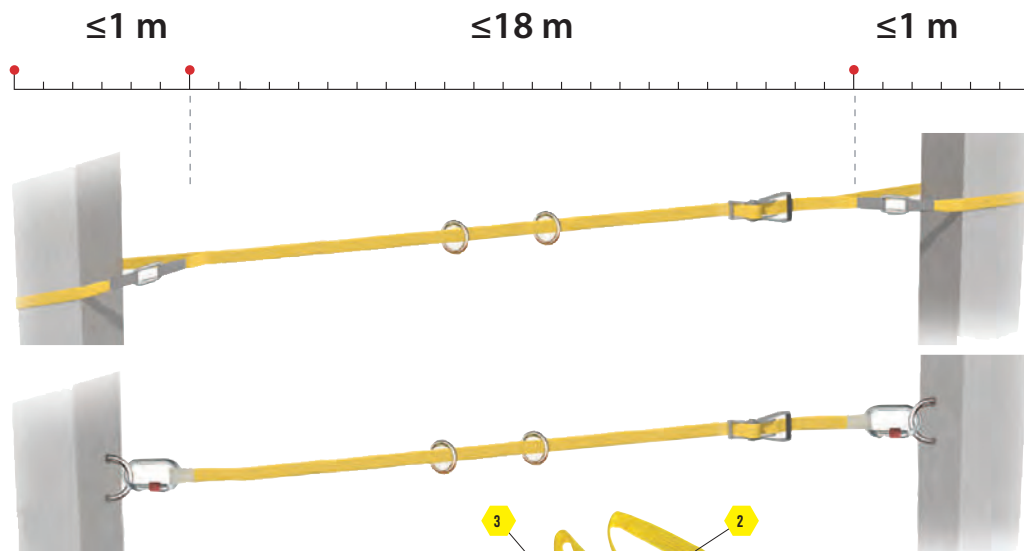
**SPEEDline**



Description	<b>LV201</b> Single span cable lifeline
Certification	EN795:2012 Type B + C (Hybrid)
Maximum users	 CEN/TS 16415:2013
Weight	3,8 kg
Material	Sangle
Length	20 m in total, 18 m usable
Anchorage	On starting and ending points
Slider	

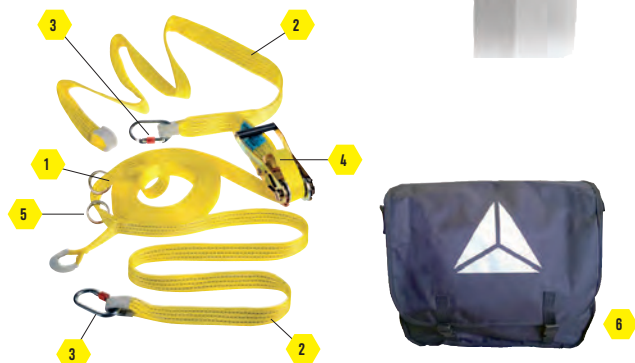
**Removable**

## Components / Installation



### Kit consisting of:

- 1 18 m strap
- 2 2 x Anchorage strap (2 m)
- 3 2 x AM002
- 4 Tensioner
- 5 2 x Anchorage O-rings
- 6 Bag for storage







★ Safe  
★ Clear



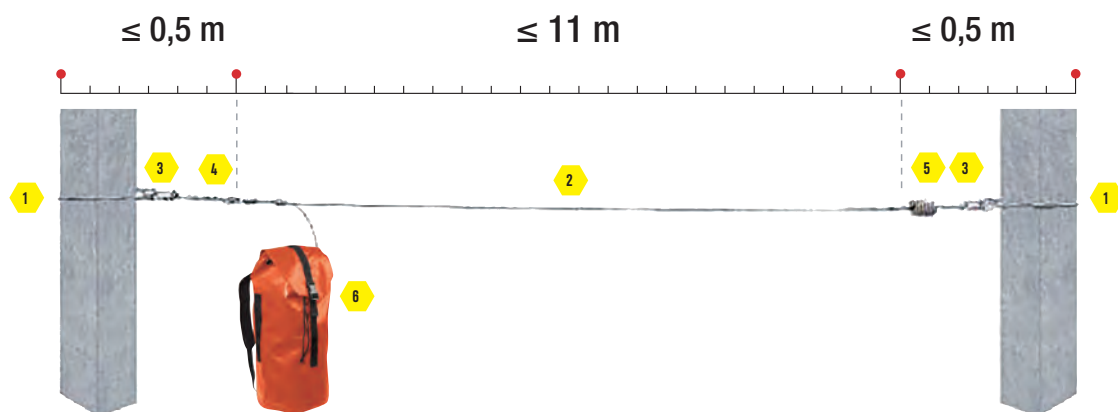
## CABLE line



Description	LV301 Single span cable lifeline
Certification	EN795:2012 Type B + C (Hybrid)
Maximum users	CEN/TS 16415:2013
Weight	6,4 kg
Material	Inox
Length	12 m in total, 11 m usable
Anchorage	On starting and ending points
Slider	

**Removable**

### Components / Installation



2 x AM007  
(1m)

1



Sling anchor in galvanized steel cable Ø 8 mm.

Tensioner

4



Tensioner

11m LV040  
Ø 8mm

2



Cable

Absorber

5



Energy absorber

2 x AM002

3



Screw lock carabiners in galvanized steel. Opening 17 mm. R > 23 kN.

TC008


























6




























Bag for storage



# LANYARDS




























						
<b>L0147150CDD</b> 	Double lanyard in braided rope Ø 10.5 mm. 3 thimble loops ends.	1,50 m	 x1  x2	 <b>EN354</b>	1,4 kg	x 5
<b>L0147150</b> 	Double lanyard in braided rope Ø 10.5 mm. 3 thimble loops ends.	1,50 m		 <b>EN354</b>	264 g	x 15
<b>L0047150AD</b> 	Lanyard in braided rope Ø 10.5 mm. 2 thimble loops ends.	1,50 m	 x1  x1	 <b>EN354</b>	802 g	x 5
<b>L0047100</b> <b>L0047150</b> <b>L0045200</b>	Lanyard in braided rope Ø 10.5 mm. 2 thimble loops ends.	1 m 1,50 m 2 m		 <b>EN354</b>	116 g 150 g 188 g	x 15 x 15 x 15
	Lanyard in stranded rope Ø 12 mm. 2 thimble loops.	1,50 m	 x1  x1	 <b>EN354</b>	850 g	x 15
<b>L0007100</b> <b>L0007150</b> <b>L0005200</b>	Lanyard in stranded rope Ø 12 mm. 2 thimble loops.	1 m 1,50 m 2 m		 <b>EN354</b>	154 g 198 g 260 g	x 15 x 15 x 15
	Lanyard and anchorage point in tubular webbing. 2 sewn loops. Width 25 mm.	1 m 1,50 m 2 m		 <b>EN795 TYPE B EN354</b>	70 g 187 g 218 g	x 15 x 15 x 15
						



 <b>AM027</b> 	 Automatic lock carabiner in light alloy. Large opening 58 mm. Sliding ring. Eye hook opening with latch. 	 <b>EN362</b> CLASS A / T	 240 g	 x 20
<b>AM030</b> 	Automatic lock hook in aluminium alloy. Opening 25 mm. 	 <b>EN362</b> CLASS A / T <b>EN12275</b> TYPE D TYPE K	130 g	x 20
<b>AM009</b> 	Quick docking in stainless steel. Large aperture 150 mm. Eye hook. R > 23 kN. 	 <b>EN362</b> CLASS A / T	380 g	x 20
<b>AM022X2</b> 	Set of 2 automatic hooks lock in galvanized steel. Large opening 55 mm. Eye hook. R > 20 kN. 	 <b>EN362</b> CLASS A	1.0 kg	x 10
<b>AM025X2</b> 	Set of 2 automatic lock carabiners in light alloy. Opening 22 mm. Ring 1/4 turn. R > 25 kN. 	 <b>EN362</b> CLASS B	180 g	x 10
<b>AM002X5</b> 	Set of 5 screw lock carabiners in galvanized steel. Opening 17 mm. R > 23 kN. 	 <b>EN362</b> CLASS B	802 g	x 4
<b>AM018</b> 	Karabiner with 1/4 turn automatic lock in steel. Opening 17 mm. R > 25 kN. 	 <b>EN362</b> CLASS B	200 g	x 20




























# ROPE ACCESS WORK

				
<b>TC001</b> 	<p>Ventral opening blocker type in aluminium alloy. Works on braided rope Ø 8 to 13 mm.</p>  	<p>CE EN567</p>	<p>160 g</p>	<p>x 10</p>
<b>TC002</b> 	<p>Right hand ascension handle in aluminium alloy. Works on braided rope Ø 8 to 13 mm.</p>  	<p>CE EN567</p>	<p>240 g</p>	<p>x 10</p>
<b>TC003</b> 	<p>Left hand ascension handle in aluminium alloy. Works on braided rope Ø 8 to 13 mm.</p>  	<p>CE EN567</p>	<p>240 g</p>	<p>x 10</p>
<b>TC012</b> 	<p>Mono stirrup adjustable strap 25 mm from 90 to 120 cm. Pedal ascent. To pair with TC002 or TC003.</p>  		<p>200 g</p>	<p>x 10</p>
<b>SAFECORD TC007</b> 	<p>Locking device suitable for descent and ascent, with mechanical traction systems.</p>  	<p>CE EN12841 TYPE C EN341 TYPE 2 CLASS A EN358</p>	<p>360 g</p>	<p>x 50</p>
<b>DESCORD TC006</b> 	<p>Self locking descender with double security (anti-panic system) in aluminium. Intended for works on braided rope Ø 9 à 12 mm.</p>  	<p>CE EN341 CLASS 2A EN12841 TYPE C</p>	<p>360 g</p>	<p>x 50</p>
<b>TC004</b> 	<p>Figure of eight in aluminium alloy. Works on braided rope Ø 9 to 12 mm.</p>  		<p>130 g</p>	<p>x 20</p>
<b>TC044</b> 	<p>Safety figure of eight in aluminium alloy. Works on braided rope Ø 9 to 16 mm.</p>  		<p>260 g</p>	<p>x 20</p>

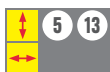




 <b>TC005</b> 	 Oscillating pulley flanges in aluminium alloy. Intended for works on braided rope less than Ø 16 mm.  	 	 CE EN12278	 250 g	 x 10
<b>TC015</b> 	Double pulley with oscillating flanges in aluminium alloy for braided rope less than Ø 16 mm.  		CE EN12278	430 g	x 10
<b>TC016</b> 	Mini pulley in aluminium alloy for braided rope less than Ø 13 mm and cable less than Ø 12 mm.  		CE EN12278	140 g	x 10
<b>TC025</b> 	Double aluminium alloy pulley on ball bearings, designed for zip lines (less than Ø 13 mm) and cables (less than Ø 12 mm).  		CE EN12278	280 g	x 10
<b>TC040</b> 	Double swivel on ball bearing.  		CE EN362 EN354	160 g	x 20
<b>TC009</b> 	Semi-static braided rope Ø 10,5mm - Length on request. 	per meter	CE EN1891 TYPE A	200 g	x 1
<b>TC029</b> 	Opening rope protection 35 cm. Velcro tape closure. Scalable length by adding elements. 			200 g	x 100



# FALL ARREST AND RESCUE, CONFINED SPACE



**TRA20**

**TRA22**

**TRA30**

**TRA32**

**TR01720F**

**TR01720T**

**TR01730F**

**TR01730T**

**TRA101**

**TRA102**

**TR003C**

**TR003K**

**TRA103**



Steel swivel  
→ Adaptable to any type of surface

3 anchorage points  
→ Possibility of descending by rope

Certified for 3 people  
→ Usable by 3 people

**TRBAG3**

**TRBAG**





## Easy to install, it is lightweight and adapts to all types of floors

TRA20	Telescopic aluminium tripod. Height adjustable from 1.20 m to 1.97 m. Maximum wheelbase on ground 1.89 m. 3 central anchor points, 2 anchor points on the legs. Ability to set the TRA101 or TRA102 adjuster plate or the TRA103 steps.	Adjustable		<b>EN795 TYPE B TS16415 3</b>	15.3 kg	
TRA22	Telescopic aluminium tripod. Height adjustable from 1.20 m to 1.97 m. Maximum wheelbase on ground 1.89 m. 3 central anchor points, 2 anchor points on the legs. Equipped with TRA101 and TRA102 adjuster plates. TRA103 steps not included.				17.4 kg	
TRA30	Telescopic aluminium tripod. Height adjustable from 1.74 m to 3.02 m. Maximum wheelbase on ground 2.62 m. 3 central anchor points, 2 anchor points on the legs. Ability to set the TRA101 or TRA102 adjuster plate or the TRA103 steps.				20.1 kg	
TRA32	Telescopic aluminium tripod. Height adjustable from 1.74 m to 3.02 m. Maximum wheelbase on ground 2.62 m. 3 central anchor points, 2 anchor points on the legs. Equipped with TRA101 and TRA102 adjuster plates and the TRA103 steps.				22.2 kg	
TRA101	Aluminium mounting plate for a self retracting fall arrest. To set on tripod TRA20 and TRA30.				1.3 kg	x1
TRA102	Aluminium mounting plate for hoist. To set on tripod TRA20 and TRA30.				860 g	
TRA103	Step to access the tripod head and the pulley. Sold individually.				500 g	
PROTECTOR ELEVATOR TR01720F	Self retractable fall arrester in steel cable with removable rescue winch. Steel case. Inertia locking system. Energy absorber	20 m	x1 AM020	<b>EN360 150 kg EN1496 CLASS A</b>	14.6 kg	
PROTECTOR ELEVATOR TR01720T			x1 AM016		14.6 kg	
PROTECTOR ELEVATOR TR01730F		30 m	x1 AM020		18.9 kg	
PROTECTOR ELEVATOR TR01730T			x1 AM016			
TR003C	Manual winch in galvanized cable. Length 20 m. Non-return system. Folding handle.	20 m		<b>2006/42/EEC</b>	7.8 kg	
TR003K	Manual winch in galvanized cable. Length 30 m. Non-return system. Folding handle.	30 m			8.1 kg	
TRBAG3	Storage bag with wheels for TRA30 and TRA32 3m tripod. 260 x 260 x 2100 mm.	One size			1.8 kg	x10
TRBAG	Storage bag with wheels for tripod. 250 x 250 x 1640 mm.				1.5 kg	







[...]

There are as many types of flooring as types of applications, our tripods had to be able to adapt: here is the challenge that we had to meet during the creation of this device: complex but exciting ! Today the user's testimony proves that we have developed the expected solution.

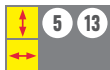
David Naulin, Fall Protection Product Expert



# FALL ARREST AND RESCUE, CONFINED SPACE

					
GIRAFE TRG20	Mobile anchor for confined space. 360° rotation. Height adjustable from 1.90 m to 2.50 m. Base sold separately. Option to attach the adapter board TRA101 or TRA102.	Adjustable	CE EN795 TYPE B	25 kg	
TRG01	Rotating base on floor for TRG20 anchorage.			16 kg	x 1
TRG02	Rotation base for wall for TRG20 anchorage.			19 kg	
TRG03	Mobile base for confined space for TRG20 anchorage.			36 kg	

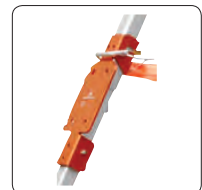
## GIRAFE TRG20



TRA101



TR01720  
TR01730



TRA102



TR003C  
TR003K



TRBAG3

## TRG01



## TRG02



## TRG03





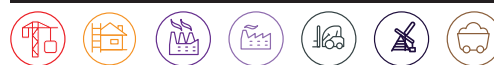


TC022	Rapid evacuation triangle. Fits all body types with its 12 adjustment points.	Adjustable	EN1498 CLASS B	1.1 kg	
RAH33	Head down harness with rescue sling. 3 attachment points (sternal, dorsal and for rescue). 7 adjustment buckles.	S/M/L	CE EN1498 CLASS C EN361	2 kg	x 5
TC105	A seat for a vertical movement. Adjustable footrest length for better stability. Ring D tool holder on both sides.	One size		2.2 kg	x 2
TC102C	Universal rescue stretcher sold with safety belts, mattress and foot rest. Flame retardant.		CE 93/42/EEC	23 kg	x 1

## TC022



## RAH33



Allows a person to descend head down into a confined space (piping, sewer, tank)



## TC105



## TC102C



## RESCUEHUB TC063



2 magnetic brakes  
→ Preservation of brake pads



Length 300 m max.

2 people, ≤ 225 kg  
Speed - 0.8m/ sec  
(no matter the weight)

→ Precise control of the speed  
of descent for better safety

→ Improved rescue speed via  
use with a screwdriver





## Designed specifically to facilitate and execute rescue operations

RESCUEHUB TC063	Descender, rescue and lifting equipment with hand wheel able to lift up to 225 kg. Approved for 2 people. Automatic brake system. 2 centrifugal brake systems. 3 connectors AM030. TC064 rope sold separately by the meter (max length 300 m), sewn thimble loops.	One size	EN341 TYPE 1 CLASS A EN1496 CLASS B CE	3.40 kg	x1
TC064	Static polyamide rope, Ø 9.6 mm for TC062 and TC063. Sold by meter, max length 300 m. Loops sewn thimble.	per meter < 160 m	EN1891 TYPE A		

- 1- Full steering wheel with counterweight to ensure a better stability during the operation.
- 2- 3 separate rooms to ensure non-pollution of the mechanical system.
- 3- Quick connectors.
- 4- Can be mounted with an electric screwdriver.



TC064

Our sewing system for the end of the rope ensures a non-variation of its resistance over time.



[...]

Rescue operations are often burdensome and must be carried out as quickly as possible to provide assistance to the victim. Lending intuitiveness to a tricky application : that's why we designed the TC063.

David Naulin, Fall Protection Product Expert



DESCENDER TC062	Descender and rescue equipment for self-rescue. Automatic brake system. 2 centrifugal brake systems. 3 connectors AM030. TC064 rope sold separately by the meter (max length 300 m), sewn thimble loops.	One size	EN341 TYPE 1 CLASS B	1.8 kg	
TC064	Static polyamide rope, Ø 9.6 mm for TC062 and TC063. Sold by meter, max length 300 m. Loops sewn thimble.	per meter < 160 m	EN1891 TYPE A		
ROPE ACCESS KIT TC039	Rope access set comprised of: 1 double safety auto locking descender device TC006, 1 anchor ring LV102150, 2 connectors AM025, 1 carrier bag TC008. Rope TC009 sold separately per meter.	One size	CE EN12841 TYPE C EN341 CLASS A EN362 CLASS B EN795 TYPE B	1 kg	x1

## DESCENDER TC062



2 magnetic brakes  
→ Preservation of brake pads



1.8 kg  
→ Lightweight and easy to set up



Length 300 m max.  
1 person, ≤ 150 kg  
Speed ~ 0.8m/ sec  
(no matter the weight)  
→ Precise control of the speed  
of descent for better safety

## ROPE ACCESS KIT TC039



For use with TC009



For use with HAR36TCP



For use with TC105



For use with TC002,  
TC003 and TC012



For use with CAMELEON  
AN066



## ACCESSORIES AND STORAGE BAGS



TRBAG3	Storage bag with wheels for TRA30 and TRA32 3m tripod. 260 x 260 x 2100 mm.	One size	1.8 kg	x 10
TRBAG	Storage bag with wheels for tripod. 250 x 250 x 1640 mm.		1.5 kg	
RA038_	PVC fabric bag for storage and protection of equipments during transport. Dimensions: 60 x 37 x 17 cm.		512 g	x 20
TC008	PVC fabric bag for storage and protection of equipments during transport. Dimensions: 30 x 65 cm.		1 kg	x 5

## TRBAG3



## TRBAG



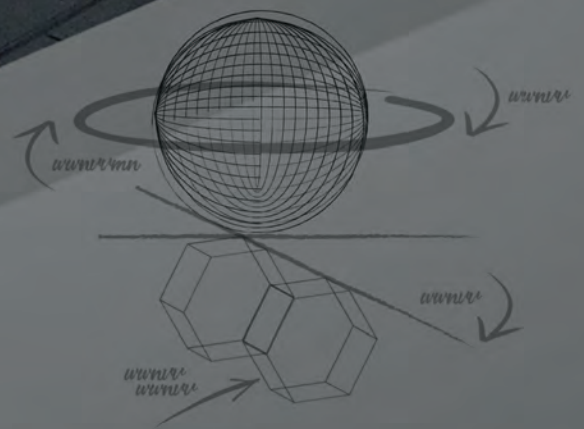
## RA038\_



## TC008



# DESIGNING MANUFACTURING YOUR SAFETY AT WORK





# TECHNICAL INFORMATION

374 • PACKAGING

376 • MERCHANDISING

380 • ALPIC - DPG TRAINING

382 • HEAD PROTECTION

394 • HAND PROTECTION

398 • BODY PROTECTION

404 • FOOT PROTECTION

406 • FALL PROTECTION

409 • GLOSSARY

423 • INDEX

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TECHNICAL INFORMATION



# TECHNICAL INFORMATION







# TECHNICAL INFORMATION



**CORNERDP**  
H 200 x W 100 x D 60 cm  
High module



**CHESTDUMMYGR**  
H 79 x W 40 x D 40 cm  
PVC chest dummy



**MANNEQUIN**  
H 172 x W 60 x D 60 cm  
Dummy

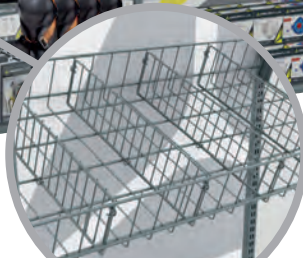


**CORNERLOWPART3 - 4**  
H 120 x W 150 x D 120 cm  
Low module

**CORNERDRESSING2**  
H 200 x W 85 x D 60 cm  
Fitting room



Point of sales  
space

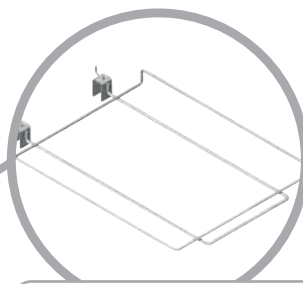


**CORNERBASKET**  
H 12 x W 102 x D 50 cm  
Inclined basket with dividers



Subject to conditions, contact us





#### CORNERSHOES10

H 5,5 x W 32 x D 48 cm  
1 support of 2 pairs of shoe without box.  
Suitable for perforated back panel



#### CORNERFRAMESHOES

H 10 x W 20 x D 50 cm  
Set of 4 magnetic shoe supports



#### CORNERSTOOL

H 40 x W 40 x D 40 cm  
Seat



#### PLV028NO

H 36 x W 100 x D 2 cm  
2 Topsigns



# TECHNICAL INFORMATION



## CORNERFRAME

H 220 x H 200 → 300 x D 30 → 60 cm  
Decoration for sales shelves (adjustable)



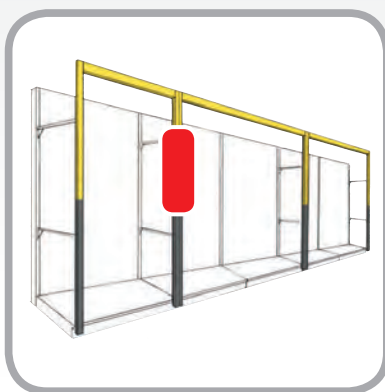
## CORNERTOPSIGN

H 33 x W 60 x D 1 cm  
Topsign with Delta Plus logo



## PLV019NO

H 90 x W 11,5 x D 1 cm  
Support 5 product cards



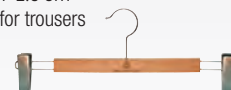
## CORNERSEASON

H 120 x L 120 x P 60 cm  
Low display for seasonal clothing on hanger



## CLIPHANGERNA

H 13.5 x L 36.5 x P 2.5 cm  
Wooden hanger for trousers



## HANGERNA

H 22 x W 44 x D 1 cm  
Wooden hanger for jackets







**PLV010**

H 166 x W 60 x D 60 cm  
Footwear display



**PLV030**

H 190 x L 58 x P 36 cm  
Mini metal display + 12 hooks



**PR004**

H 210 x W 80 x D 80 cm  
Fall arrest display



**PLV022BC**

H 33 x W 23 x D 7 cm  
3D molded hand with magnetic base



**PLV023BC**

H 4 x W 60 x D 20 cm  
Metal base for 3D molded hand



**PLV017JA**

H 120 x W 35 x D 55 cm  
Cardboard display with 3 shelves



**PLV012GR**

H 79 x W 44 x D 8 cm  
PVC chest dummy with hanger



**HEADDUMMY001**

H 40 x W 25 x D 25 cm  
Head dummy



**PLV002**

H 25,5 x W 33 x D 36 cm  
Cardboard box



**PLV004**

H 32 x W 20 x D 29.5 cm  
Counter display for spectacles



# OUR ALPIC AND DPG TRAINING UNITS ARE AVAILABLE TO MONITOR YOU DURING YOUR TRAINING COURSE TO MATCH YOUR NEEDS AS CLOSE AS POSSIBLE. A TRAINING CENTRE DEDICATED MAINLY TO HEALTH AND SAFETY.



## ► OUR IN PERSON AND E-LEARNING TRAINING OFFERS PPE DESIGNED FOR BOTH DISTRIBUTORS AND USERS.

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.



## ► KEY OBJECTIVES TO BETTER UNDERSTAND THE ISSUES OF PERSONAL PROTECTION

- Act within the framework of health and safety at work.
- Argue a range of personal protection.
- Understand the technical features of personal protection.
- Follow a study of work position and recommend a solution for personal protection.
- Identify and assess risks, adjust the performance of protection.
- Comply with requirements for recording, storage, maintenance, product control.
- Read and understand the product certification.
- Know the legal, regulatory and normative environment.

## ► THEREFORE 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



EN365

**USERS** : "It is essential that staff are trained, that their competence is controlled and they have written instructions enabling them to choose, use, maintain and periodically revise the PPE or other equipment."

**AUDITOR** : "It is possible that a competent person has to be trained by the manufacturer (i.e.) significant security related knowledge necessary for the disassembly, reassembly, or evaluation of PPE or other equipment."



## REGULATORY FRAMEWORK

### THE REGULATION (EUROPEAN UNION)

Regulation EU 2016/425 is intended for Personal Protective Equipment (PPE) manufacturers and determines conditions for market trade. It defines the essential requirements in terms of design, manufacture and test methods for PPE, which must comply in order to ensure the safety of the users. The EU Regulation 2016/425 has replaced the EEC Directive 89/686 since 21/4/2018.

### STANDARDIZATION

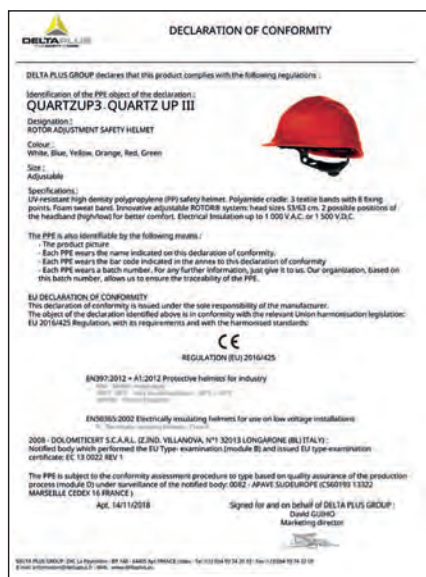
Its aim is to draw up test methods and in the form of standards defining the technical specifications for products. The respect of these standards is evidence of conformity to Regulation EU 2016/425 and allows CE marking.

### CATEGORIZATION

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.

### 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 the user.

The product sheet, the user instructions and the Declaration of Conformity are available online on our website: [www.deltaplus.eu](http://www.deltaplus.eu)

### OTHER ACCREDITATIONS (EXCEPT EUROPEAN UNION)

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

USA	ANSI, ASTM, NIOSH
Argentina	   
Brazil	CA
Ukraine	
Common Economic Space (Russia, Belarus, Kazakhstan)	



## SAFETY EYEWEAR

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

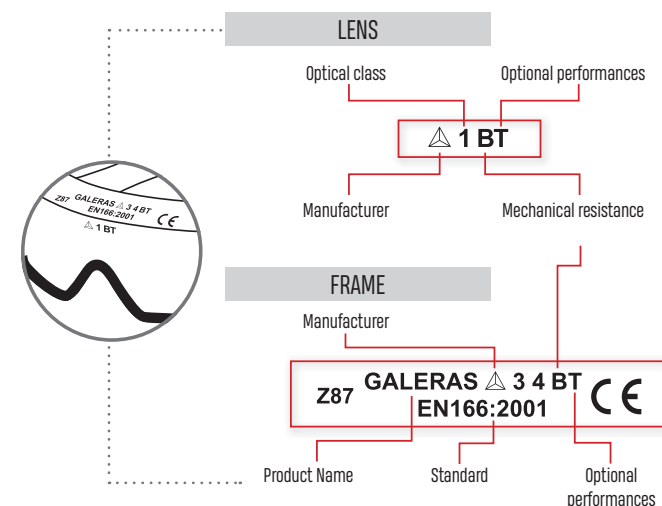
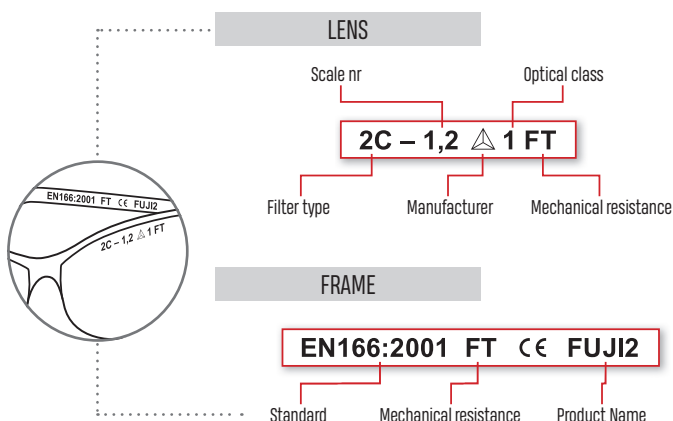
**EN172:** Specification of level numbers and requirements relating to the transmittance of filters for protection against solar radiation, industrial use.

**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) Z87.1-2003 :** Specifications and minimum general requirements, test methods, selection, use and maintenance of eye and face protection.

## ► 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:** Large dust particles resistance (size of > 5 µm).

**5:** Gas and fine dust particles resistance (size < 5 µm).

**8:** Short circuit electric arc resistance.

**9:** Resistance 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...).

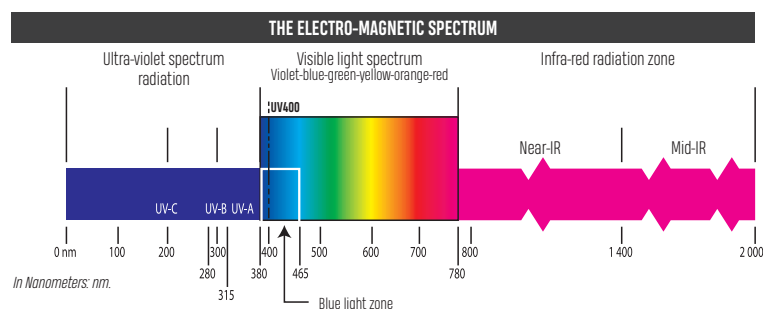
SPECTACLES LENS MARKING								
Lens colour	Minimal transmission factor of visible light	SCALE Nr	EN166					
			UV FILTERS (EN170)		IR FILTERS (EN171)	SUN FILTERS (EN172)		WELDING (EN169)
			2	2C	4	5	6	no code nr
CLEAR 	80,0%	1,1				5-1,1	6-1,1	
	74,4%	1,2	2-1,2	2C-1,2	4-1,2			
LIGHT SMOKE 	58,1%	1,4	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 	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) 	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.

**SCALE 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.



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).

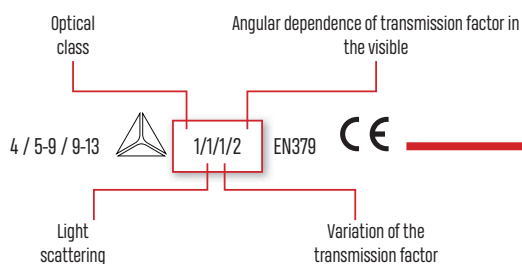


# TECHNICAL INFORMATION

## ► WELDING

**1** The highest quality

**3** The lowest quality



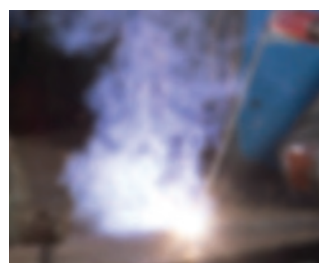
**1 Optical class:**

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?



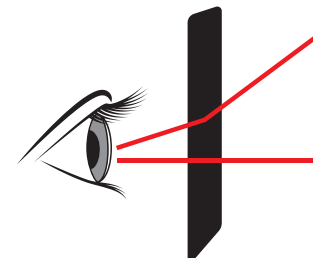
**3 Variation of the transmission factor:**

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 a face and hearing protection.

### ► STANDARDS

EN397	Protective helmets for industry	MANDATORY	<b>Impact*</b> : 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. <b>Penetration*</b> : the tip of the mass used in the test (3 kg over 1 m) must not come into contact with the skull <b>Flammability</b> : the helmet should not burn with flame emission more than 5 seconds after removal of the flame <i>* The impact and penetration tests are performed at room temperature, at 50°C and at -10°C</i>
		OPTIONAL	<b>In extreme temperatures</b> : 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 <b>electrical conductor up to 440 VAC</b> . Protects against <b>lateral compression</b> . The maximum deformation of the helmet should be ≤ 40 mm. Resistance to <b>molten metal splashes</b> .
EN50365	Electrical insulation helmets for use in low voltage environment	MANDATORY	<b>Electrically insulating helmets</b> for use near energized equipment not exceeding <b>1000 VAC</b> or <b>1500 VDC</b> (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	Depending on the type and class of the helmet: Protection against mechanical risk (impact, penetration, crushing), flammability, electrical insulation.
		OPTIONAL	
EN812	Bump caps for industry	MANDATORY	<b>Impact*</b> : 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. <b>Penetration*</b> : the tip of the mass used in the test (0.5 kg over 0.5 m) must not come into contact with the skull <i>* The impact and penetration tests are performed at room temperature, at 50°C and at -10°C</i> Should in no way be a substitute for an industry type helmet (EN397).
		OPTIONAL	<b>In extreme temperatures</b> : impact and penetration tests are conducted at room temperature at -20°C or -30°C Protects against accidental short-term contact with a <b>live electrical conductor up to 440 VAC</b> <b>Flammability</b> : the helmet must not burn with flame emission more than 5 seconds after removal of the flame (F marking)

### ► HELMET MARKING ILLUSTRATION

Helmet material



Year and month of manufacture:  
**Helmets lifespan:**  
**ZIRCON, QUARTZ UP:**  
5 years from date of manufacture,  
3 years in use.  
**SUPER QUARTZ, DIAMOND, GRANITE:**  
7 years from the date of manufacture,  
4 years use



CE 0082  
EN397:2012 + A1:2012  
DIAMOND V  
LD MM 440 VAC  
-30°C  
△  
Classe 0  
Batch NR :  
production date

- > CE Marking
- > Standard number
- > Name of the helmet model
- > Optional requirements
- > EN50365 standard
- > Batch number

DELTA PLUS  
53 - 63 cm

- > Manufacturer identification
- > Size Range



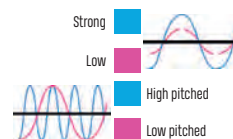
## HEARING PROTECTION

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

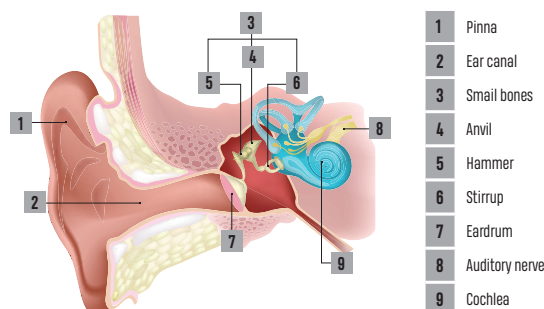
Noise, as a vibratory phenomenon is characterized by:

- **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.



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 $\geq 85$ dB(A)	8 hours exposure time at $\geq 80$ 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 AUTHORIZED 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%

## 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.

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

## WEARING METHOD

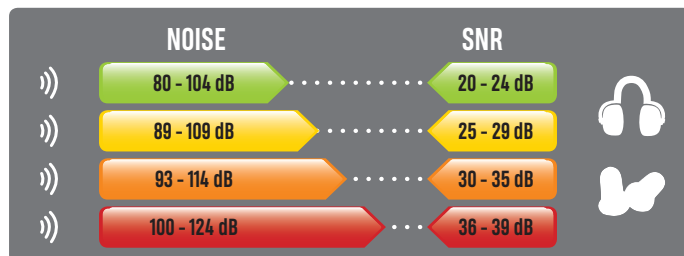
When hearing protection equipment can be worn in several ways (on the head and under the chin for example), it must be tested for each method of wearing.

- **OTH:** Over the head
- **UTC:** Under the chin
- **BTH:** Behind the head

- **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.

### 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 cleansers 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
1/2 mask P1 1/2 mask gas XP1	EN140 EN14387 EN143 + A1	22	4
1/2 mask P2 1/2 mask gas XP2	EN140 EN14387 EN143 + A1	8	12
1/2 mask P3 1/2 mask gas XP3	EN140 EN14387 EN143 + A1	2	48
1/2 mask gas X	EN140 EN14387	2	50
Full Face Mask P3	EN136 EN143 + A1	0,1	1000
Full Face Mask gaz XP3	EN136 EN14387 EN143 + A1	0,1	1000
Full Face Mask gaz 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 CO<sub>2</sub> content, and reduces heat and humidity inside the mask.



**P** Horizontal folding.  
**B** Vertical folding.



**FFP1**  
Protection level of the mask according to the filtration ability of the filter medium.  
**Filtering Facepiece Particles = Filtering Face Piece from Particles.**

**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.



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

No. of the quality control laboratory.

Instructions inside the packaging.

Colour code filter

Standard

**W** Protection against unpleasant odours.



Storage conditions

Date of expiration (AAAA/MM)

### GAS AND VAPOUR FILTER

Each filter or cartridge is identified with a colour code.

TYPE	TYPE OF PROTECTION	GAS AND VAPOUR
<b>A</b>	Protects from organic gases and vapours whose boiling point is > 65°C	Alcohol, acetic acid, ether, hexane, toluene, xylene, white spirits, thiophenol...*
<b>AX</b>	Protects from organic gases and vapours whose boiling point is ≤ 65°C	Acetone, acetaldehyde, ethyl ether, butane, methanol, trichloromethane...*
<b>B</b>	Protects from inorganic gases and vapours	Chlorine, chlorine dioxide, fluorine, formaldehyde, phosphine...*
<b>E</b>	Protects from sulphur dioxide and some acid vapours and gases	Sulphur dioxide...*
<b>K</b>	Protects from ammoniac and some amine derivatives	Ammonia, ethylamine, methylamine...*
<b>Hg</b>	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	PARTICLES
<b>P1</b>	Protects from non-toxic dust and / or water-based aerosols.	Cement dust, flour, calcium carbonate (chalk), graphite, cotton, concrete...*
<b>P2</b>	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...*
<b>P3</b>	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.





## USER GUIDE FOR BREATHING APPARATUS FILTER FOR POLLUTING SUBSTANCES

Substances	Chemical formula	N° CAS	Gas filter	Particulates filter	MC/DM*	OEL	Unit of measure - limit
1-chloro-2,3-epoxy-propane	C3H5OCl	106-89-8	A	P3	MC	VLE-2	ppm
1,1,1-Trifluoro-2-bromo-2-chloroethane	CF3CBrCl	161-67-7			ARI or A AIR	2,000	ppm
1,1,2,2-tetrabromoethane	CHBr2CBr2	79-27-6	A	P3	MC	1	ppm
1,1-Ethylene-2,2-bipyridylium 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	C8H4O5	552-30-7	A	P3	MC	0.04	mg/m3
1,2-Benzenedicarboxylic anhydride	C8H4O2O	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-dichloromethane	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	ClC6H4Cl	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-dissocyanatophthalene	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	CH3OCH2CH2CH3	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	ClC7H15O2	24468-93-1	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)2C(OH)CH2CH(OH)CH3	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-Diaminodimethylamine	NH2C(CH2)2NH2	111-40-0	ABEK	P3	MC	1.00	ppm
2,2-dihydroxydiethylamine	(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	88-99-1		P3	MC	0	mg/m3
2,4,6-tetrayl	(NO2)3C6H2N(NO2)CH3	479-45-8	A	P3	MC	2	mg/m3
2,5-Furandione	C4H2O3	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	CHF2OOC2FCF	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	C5H8O2	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-Octanone	C8H16O2	57-57-8			ARI or A AIR		
2-Pentanol acetate	CH3COOCH(CH3)CH2	626-38-0	A		MC	125	ppm
2-Phenyl propylene	C6H5O(CH2)=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-Propanoic acid	CH2=CHCOOH	79-10-7	A		DM or MC	2,000	ppm
2-Propyl acetate	CH3COOCH2CH2CH3	108-21-4	A		MC	250.00 (ST)	ppm
2-Propynyl alcohol	C3H3OH	107-19-7	A		MC	1	ppm
3,3-dichlorobenzidine salts	NH2C1C6H3Cl2CH3	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	C8H14O	78-59-1	A		MC	4.00	ppm
3a,4,7,7a-tetrahydro-4,7-methanoindene	C10H12	77-73-6	A	P3	MC	5.00	ppm
3-Heptanone	CH3CH2C(=O)CH2CH2CH3	106-35-4	A		MC	50	ppm
3-Methyl-1-butanol acetate	CH3COOCH2CH2CH(CH3)2	123-82-2	A		DM or MC	100	ppm
3-Methyl-5-heptanone	C2H5COCH2CH2CH(CH3)CH2CH3	541-85-5	A		MC	25	ppm
4-Methylpentan-2-one	CH3COCH2CH2CH(CH3)2	108-10-1	A		MC	50	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.

### 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



OEL  
OCCUPATIONAL  
EXPOSURE LIMIT

Substances	Chemical formula	N° CAS	Gas filter	Particules filter	MC/DM*	OEL	Unit of measure - limit
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	C6H6 N2 O2	100-01-6	A	P3	MC	8	mg/m3
4-nitrochlorobenzene	ClC6H4NO2	100-00-5	AB	P3	MC	1.00	mg/m3
5-Methyl-2-hexanone	CH3COCH2CH2C(CH3)2	110-12-3	A		MC	50	ppm
6,9-methano- 2,4,3-benzo-dioxathiepin-3-oxide	C8H6O3OS	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	74-88-2			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	NH4OS(ON)2H2	7773-96-0		P3	MC	5.00	mg/m3
Ammonium chloride	NH4Cl	12125-02-9	K	P	MC	10	mg/m3
Amyl acetate ether	CH3COO(CH2)4CH3	628-83-7	A		MC	100	ppm
Anhydrous hydrogen bromide:	H Br	10035-10-6	B	P3	MC	3	ppm
Anene	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	7803-82-3			ARI or A AIR	0	ppm
Antimony trioxide	OSb2	1308-94-4		P3	DM or MC	0.500	mg/m3
Argon	Ar	7440-37-1			ARI or A AIR		ppm
Arsenic G 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, amianta	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)	C6H9ClN5	1912-24-9		P3	DM or MC	5.000	mg/m3
Azithiylene	CH2N2	334-88-3	ABEK	P3	MC	0.20	ppm
Aziane	C2H5N	151-56-4	K 450		MC		ppm
Azum	Nal3	26628-22-8		P3	DM or MC	0	mg/m3
Azodicarbonamide	C2H4N4O2/NH2CON=CONH2	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)	(CH2O)2O	542-88-1	A2	P3	MC	0.05	mg/m3
Benomyl (iso)	C14H19N4O3	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	C6H12	110-82-7	A		DM or MC	300.000	ppm
Benzyl butyl phthalate	C18H20O4	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=CHCOOCH2CH(OH)CH3	999-81-1	A		MC	1	ppm
BGE	C7H14O2	2426-08-6	A		MC	5.60	ppm
Biotite	H2KAl3SiO4)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	CH3HOO3	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	1303-96-2		P3	DM or MC	10.000	mg/m3
Borane- 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)	C8H13BrN2O2	314-40-9	AB	P3	DM or MC	1.000	ppm
Bromine	Br2	7726-95-8	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
Bromothylene	CH2=CHBr	583-80-2	AX		DM or MC	5.000	ppm
Bromioform	CHBr3	75-25-2	A		MC	0.50	ppm
Bromomethane	CH3Br	74-83-9	AX		MC	5	ppm
Butane	CH3CH2CH2CH3	106-97-8	AX		MC	600.000	ppm
Butyl acrylate	CH2=CHCOOCH2CH2CH2CH3	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 ethanolate	CH3COO(CH2)3CH3	123-86-4	A		MC	150	ppm





Substances	Chemical formula	N° CAS	Gas filter	Particulates filter	MC/DM*	OEL	Unit of measurement
Butyl methyl ketone /MBK	CH3CO(CH2)2CH3	591-78-6	A		MC	5.00	ppm
Butylamine	CH3(CH2)2CH2CH2NH2	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	2351-79-1	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)	C10H9Cl4NO2S	2425-08-1	A		MC	0.10	mg/m3
Carbaryl (iso)	CH3NHCOC(C1)OH7	63-25-2	A		DM or MC	5.000	mg/m3
Carbofuran (iso)	C12H5FN03	1563-68-2	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	CS2	75-15-0	AX		MC	10.00	ppm
Carbon hexachloride	C13CCl3	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
Cellulosilver®	C2H5OCH2CH2OH	110-90-5	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
Chloridan	C10H8Cl8	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	10049-94-4	B		DM or MC	0.100	ppm
Chloroacetic acid chloride	ClCH2COCl	79-04-9	A	P3	MC	0.05	ppm
Chloroacetylide	ClCN	508-77-4	B 450		MC	0.30	ppm
Chlorodimethyl ether	CH3OCH2O	107-30-2			ARI or A AIR		
Chloroethane	CH3CH2Cl	75-00-3	AX		DM or MC	1000.000	ppm
Chloroethanoic 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	ClSO3S	7790-94-5	E	P3	MC	1.00	mg/m3
Chlorothene	CH3Cl3	71-55-6	A		MC	300.00	ppm
Chlorpyrifos	C8H11Cl3N3O3PS	2921-88-2	A	P3	DM or MC	0.200	mg/m3
Chromic acid (crs3)	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
Crab® herbicide No. 1	C6H3O2OCH2CH2OSi3Na	136-78-7		P3	MC	5.00	mg/m3
Cressils (all isomers)	C7H8 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	CH3(CH2)5	108-97-2	A		DM or MC	400.000	ppm
DBP	DBH4(COOCAH)2	84-74-2	A	P3	MC	5.00	mg/m3
Dca	C2O2	7572-29-4			ARI or A AIR	0.100	ppm
DDH	C5H6O2N2O2	118-52-5	ABEK	P3	MC	0.20	mg/m3
DDT	(C6H4Cl)2CHCl3	50-29-3		P3	MC	1	mg/m3
D- N- Butyl Phosphate	(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
Diamline (mboca)	CH2(C6H4NH2)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	65399-93-2	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	(C14H3)3(C6H3O)2H	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	C2H5O2CH5	60-29-7	AX		MC	400.00	ppm
Diethyl phthalate	DBH4(COO2CH5)2	84-66-2	A	P3	DM or MC	5.000	mg/m3
Diethyl sulphate	C4 H10 O4 S	84-67-5	A	P3	MC	VLE	ppm
Diethylene imidoxide	C4H8ON	110-91-8	A		MC	20	ppm
Difluorodichloromethane	CF2F2	75-61-6			ARI or A AIR	100.000	ppm
Disocetyl phthalate	C28 H46 O4	26761-40-0	A	P3	DM or MC	5.000	mg/m3
Disononyl phthalate	C28 H42 O4	28553-12-0	A	P3	DM or MC	5.000	mg/m3
Disocetyl phthalate	C24 H38 O2	27554-26-3	A	P3	DM or MC	5.000	mg/m3
Disopropylamine	(CH3)2CH2NH	108-18-9	K		MC	5	ppm
Dimethyl carbinol	(CH3)2CHOH	67-63-0	A		MC	400	ppm
Dimethyl ester of 12-benzenedicarboxylic acid	CH3(CH2)10COOCH3	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	CH3CO2CH2CH3	96-22-0	A		DM or MC	200.000	ppm
Dimethylaminoethanol	CAH11NO/(CH3)2NCH2CH2OH	108-01-0	A		MC	? 2	ppm
Dimethylvinylmethane	(CH2)2CH2(NH)2	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 periodoxysulphate (measured as s2o8)*	H2 K2 S2 O8	7727-21-1	AB	P	MC	1.00	mg/m3
Direx®	C6H3Cl2NHNHCO(CH3)2	330-54-1		P3	DM or MC	10.00	mg/m3
Disodium periodoxysulphate (measured as s2o8)	Na2 O8 S2	7775-27-1	A	P3	MC	1.00	mg/m3
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)	C8H10O2PS3	298-04-4	ABE	P3	MC	0.10	mg/m3

Substances	Chemical formula	N° CAS	Gas filter	Particules filter	MC/DM*	OEL	Unit of measure	
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)2NHNH2	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	C12H8Cl8O	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	CH3COOCH2CH3	107-87-9	A		MC	200	ppm	
Ethyl acrylate	CH2=CHCOOCH2CH5	140-88-5	A		MC	5.00	ppm	
Ethyl alcohol	CH3CH2OH	64-17-5	A		MC	1000	ppm	
Ethyl chloroformate	C3H5ClO2 / CClOCC2H5	541-41-3			ARI or A AIR	1	ppm	
Ethyl ester of formic acid	CH3CH2COOH	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)2NCS]2Fe	14484-84-1		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	CH3OCH2COH3	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	CCl2F2CCl2F	76-12-0	A		MC	500.00	ppm	
Freon® 112a	CCl3CClF2	76-11-9	A		MC	500.00	ppm	
Freon® 113	CCl2FCF2CF2	76-13-1			ARI or A AIR	1000	ppm	
Freon® 114	CClF2CF2CF2	76-14-2			ARI or A AIR	1000.000	ppm	
Freon® 12	CCl2F2	75-71-9			ARI or A AIR	1000.000	ppm	
Freon® 21	CHClF2	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	C8H10O2	122-60-1	A		MC	1	ppm	
Glycol dinitrate	O2NOC2H4OC2ONO2	628-96-6	A	P	MC	0.20	ppm	
Graphite	C	7440-44-0		P2/P3	DM or MC	5.000	mg/m3	
Guthion®	C10H12O3PS2N2	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	BrF3	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	
Hexahydrodimethylphenol	CH3C6H4OH	25639-42-3	A		MC	50	ppm	
Hexalin	C6H12OH	108-93-0	A		MC	50.00	ppm	
Hexamethyl phosphoramide	(C(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	0.340	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	150-78-5		P3	MC	5	mg/m3	
Hydrous magnesium silicate	MgSi34O10(OH)2	14807-99-6		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	C8 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	
Isobutylmethyl ketone	(CH3)2C=CHCOCH3	141-79-7	A		MC	10.00	ppm	
Isosulfurane	C3 F5 H2 O	28675-46-7			ARI or A AIR	50	ppm	
Isophorone diamine diisocyanate	C12H18N2O2	4089-71-9	A		MC	VLE-0.01	ppm	
Isopropyl chloroformate	CAHP(ClO2)/(CH3)2CHOCOCl	108-23-6	A	P3	MC	? 1.00	ppm	
Isosulverone	[(CH3)2CHCH2]2CO	108-93-8			MC	25.00	ppm	
Jasminol 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 propene	(CH3)2CO	67-64-1	AX		MC	500	ppm	
Lead and compounds (except lead alkyls)	Pb	74-39-92-1		P3	MC	150.00	µg / m3	
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	
LPB (Liquefied Petroleum Gas)	Mix: C3 C4 C5 C6 C8 C9 CA C10	68406-85-7			ARI or A AIR	1000.00	ppm	

## TECHNICAL INFORMATION

Substances	Chemical formula	N° CAS	Gas filter	Particulates filter	MC/DM*	OEL	Unit of measure-ment
Magnesite	MgCO3	546-93-0		P3	DM or MC	5.000	mg/m3
Magnesium oxide, fume and dust (as mg)	MgO	1309-48-4			DM or MC	15	mg/m3
Malathion (iso)	C10H18O6PS2	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			DM or MC	1	mg/m3
Manganese tricarbonyl(methylcyclopentadienyl	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)2	101-68-8	A	P3	MC	0.01	ppm
Meacrylate	CH2=C(C1CN(CCO)CH3	137-05-3	A	P3	MC	2.00	ppm
Mercury 6 its inorganic divalent compounds	Hg	7439-97-8	Hg	P3	DM or MC	0.050	mg/m3
Mesitylene	C6H3(CCH3)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	AB		MC	0.50	ppm
Methanol	CH3OH	67-58-5	AX		MC	200	ppm
Methoxymyl (iso)	CH3C(SCH3)N(CO)1/2NHCH3	16752-77-5		P3	MC	3	mg/m3
Methoxy-att	(C6H4OCH3)2CHCOCH3	72-43-5	A	P3	DM or MC	15.000	mg/m3
Methyl acetate	CH3COOCH3	78-20-9	AX		MC	200.00	ppm
Methyl ester of formic acid	HCOCCH3	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	75-58-9	AX 450		MC	100.00	ppm
Methyl parathion	(CH3O)2P(S)(O)C6H4NO2	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-1-BUTYL ETHER	C5 H12 O	1634-04-4	AX	P3	MC	25	ppm
Methylene oxide	CH2O	50-00-0	ABE		MC	0.50	ppm
Methylstyrene	CH2=CHC6H4CH3	25073-15-4	A		MC	100	ppm
Miak	CH3COCH2CH2CH(CH3)2	110-12-3	A		MC	50	ppm
Mibc	(CH3)2CHCH2CH2CH(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
Monofluorotrifluoromethane	CClF3	75-69-4			ARI or A AIR	1000	ppm
N- Butyl chloroformate	C5 H10 Cl O2	582-34-7	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
Navade(B)	C4H8O2(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	C5 H8 N 2	100-74-3	A	P3	MC	5.00	ppm
Ng	CH2N2O3CH3CH2N2O3	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	C5H4N4CH7NCH3	54-11-5	A	P3	DM or MC	1	mg/m3
Nitraprin	C10H9NCOO3	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
NM- Dimethylethylamine	C4 H11 N	588-56-1	K	P3	MC	5.00	ppm
N-Nitroso-N,N-dimethylamine	(CH3)2NNO	62-75-9	A	P3	MC		
N-octane	CH3(CH2)6CH3	11-85-9	A		MC	75.00	mg/m3
Nonyphenols	C16H24O	25154-52-3	A	P3	MC		
N-phenylmethylaniline	C8H9NCH3	100-81-8	A		DM or MC	1	ppm
N-Trichloromethylmercapto-4-cyclohexene 1,2-dicarboximide	C9H8Cl3N2O5	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	(NH2C6H4OCH3)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			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	88-72-5	A		MC	5.00	ppm
Osmium oxide	OsO4	20816-12-0	B	P3	MC	0	mg/m3
Oxooctyl alcohol	C7H15CH2OH	26852-21-8	A		MC	50	ppm
Ozone	O3	10028-15-8	AB2		MC	0	ppm
P -Aramid respirable fibres	(C14 H10 O2 N2) n	28125-61-1		P3	DM or MC	0.50	fibres/ml
P- toluenesulphonyl chloride	C7 H7 S O2 Cl	98-58-9	AB	P3	DM or MC	5.00 (ST)	mg/m3
Paracetamol	C8 H8 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	10028-13-8	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	C6H10O4	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
Phorate	(C2H5O)2P(S)CH2SC2H5	298-02-2	A	P3	MC	0	mg/m3
Phosphorus oxychloride	POCl3	10025-87-3	B	P3	MC	0	ppm
Phosphorus pentasulphide	P2S5/PS4S10	1314-80-3	B 450	P3	MC	1.00	mg/m3

\*MC/DM = Overall masks / Half-mask

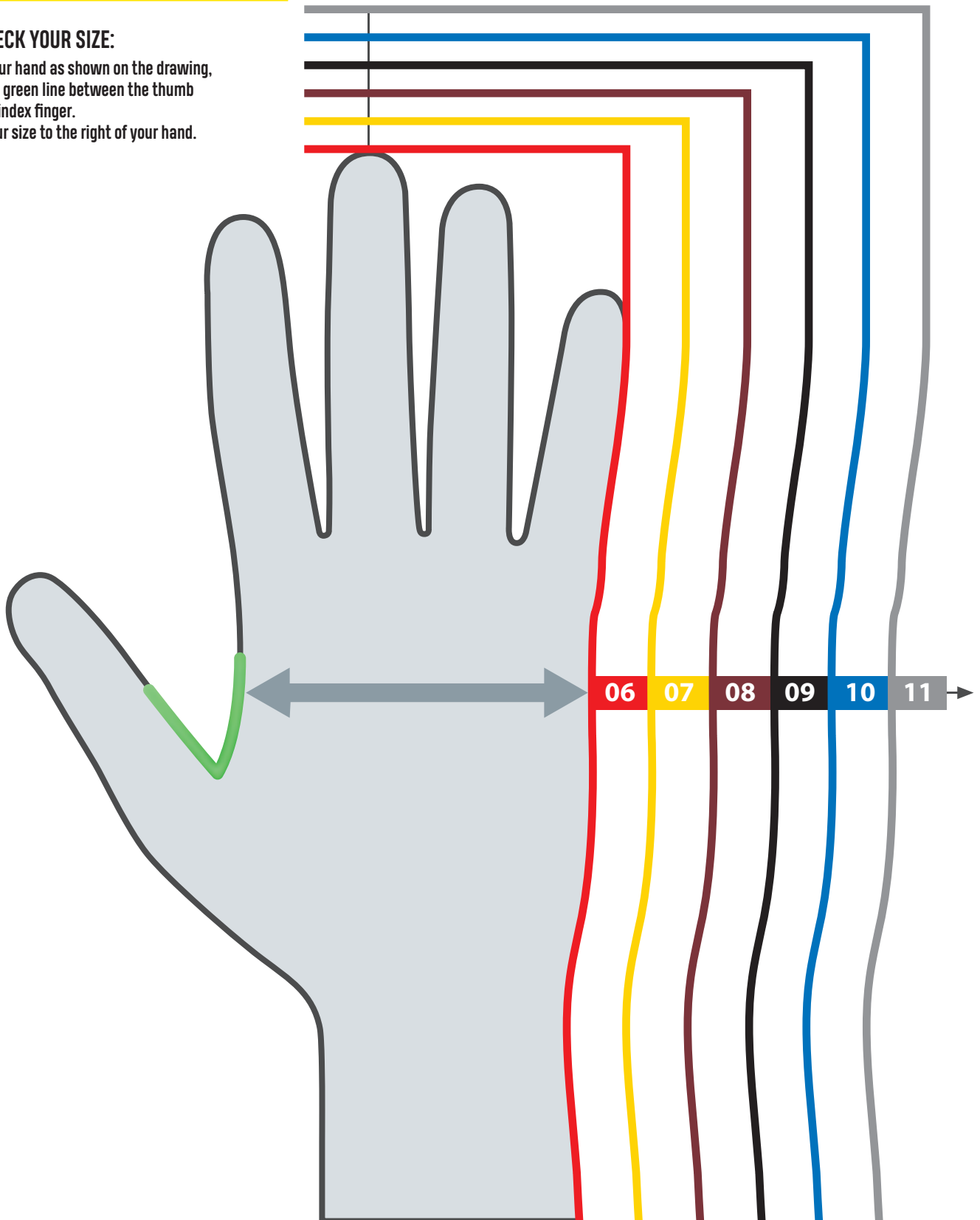
Substances	Chemical formula	N° CAS	Gas filter	Particles filter	MC/DM*	OEL	Unit of measure
Phosphorus pentoxide		1314-56-3	A	P3	DM or MC	2.00 (ST)	mg/m <sup>3</sup>
Phosphorus trichloride	PCl3	7719-12-2	B 450	P3	MC	0	ppm
Phosphorus, yellow	P4	7723-14-0			ARI or A AIR	0	mg/m <sup>3</sup>
Picloram (iso)	CBH3C1O2N2	1918-02-1	AB	P3	MC	5.00	mg/m <sup>3</sup>
Piperazine hydrochloride	C4H10N2 HCl	142-84-3		P3	MC	5.00	mg/m <sup>3</sup>
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/m <sup>3</sup>
Polychlorinated biphenyl	CBH3C12CBH2C13	11097-89-1	AB	P3	MC	0.10	mg/m <sup>3</sup>
Polychlorinated biphenyls (pcb's)	C12 H10 - x) Clx	1336-36-3			ARI or A AIR	0.500	mg/m <sup>3</sup>
Potassium bromate	K Br O3	7789-01-2		P3	DM or MC		
Potassium hydroxide	KOH	1310-58-3		P3	MC	2.00 (ST)	mg/m <sup>3</sup>
P-quinone	OC6H4O	108-51-4	A	P3	MC	0.10	ppm
Primary isomyl alcohol	(CH3)2CHCH2CH2OH	123-51-3	A		MC	100	ppm
Propranolol	C15 H21 N O2	525-66-6	A	P3	DM or MC	2	mg/m <sup>3</sup>
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	CH3CN02CHCHN02OH	6423-43-4	A	P3	MC	0	ppm
Pvc (polyvinyl chloride) (resp. Dust)	(C2 H3 Cl) N	9002-86-2		P3	MC	4	mg/m <sup>3</sup>
Pyridine	C5H5N	110-88-1	A	P3	MC	5	ppm
Pyrophosphate	Na4P2O7	7722-88-5		P3	MC	5	mg/m <sup>3</sup>
Quartz	SiO2	14808-60-7		P3	DM or MC	0.050	mg/m <sup>3</sup>
RDX	C3H6N6O6	121-82-4		P3	DM or MC	1.500	mg/m <sup>3</sup>
Resorcinol	CBH4(OH)2	108-48-3	A	P3	MC	10	ppm
Rhodium (as rh) metal fume and dust	Rh	7440-16-6		P2/P3	DM or MC	0	mg/m <sup>3</sup>
Rotanone (iso)	C23 H22 O6	83-79-4	A	P3	MC	5	mg/m <sup>3</sup>
Saccharose	C12H22O11	57-50-1		P2/P3	DM or MC	10	mg/m <sup>3</sup>
Sac-Hexyl acetate	C8 H16 O2	108-84-9	A		MC	50	ppm
Seekay wax	CDH4C4	1335-88-2	A	P3	DM or MC	2	mg/m <sup>3</sup>
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/m <sup>3</sup>
Silica, fused (resp. Dust)	O2 Si	80676-86-0		P3	MC	0	mg/m <sup>3</sup>
Silicane	SiH4	7803-62-5			ARI or A AIR	5.000	ppm
Silicon (resp. Dust)	Si	7440-21-3		P3	MC	4	mg/m <sup>3</sup>
Silicon monocarbide	SiC	409-21-2		P3	DM or MC	5.000	mg/m <sup>3</sup>
Silver, metallic	Ag	7440-22-4		P3	MC	0	mg/m <sup>3</sup>
Sodium bisulphite	NaHSO3	7631-90-5		P2/P3	MC	5	mg/m <sup>3</sup>
Sodium hydroxide	NaOH	1310-73-2		P3	MC	2.00 (ST)	mg/m <sup>3</sup>
Sodium metabisulphite	Na2S2O5	7681-57-4	B	P3	MC	5.00	mg/m <sup>3</sup>
Sodium monofluoroacetate	FCF2COONa	62-74-8		P3	DM or MC	0	mg/m <sup>3</sup>
Subtilisins	Bacillus subtilis	1385-21-7			ARI or A AIR	0	mg/m <sup>3</sup>
Sulfur fluoride	SF6	2551-82-4	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	5774-22-7	B	P3	MC	0.01	ppm
Sulphur tetrafluoride	SF4	7783-80-0			ARI or A AIR	0	ppm
Sulphuril difluoride	SO2F2	2689-79-8	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/m <sup>3</sup>
TCP	(CH3C6H4)4O3PO	78-30-8	A	P3	DM or MC	0	mg/m <sup>3</sup>
TDI	CH3C6H4(NCO)2	584-84-9	A2B2	P3	MC	VLE=0.01	ppm
TEA	(C2H5)3N	121-44-8			MC	10.00	ppm
Tedp	[(CH3O2C)2P(S)]2O	3689-24-5	ABE	P3	MC	0	mg/m <sup>3</sup>
Tellurium 5 compounds	Te	13494-80-9		P2/P3	DM or MC	0	mg/m <sup>3</sup>
Tellurium fluoride	TeF6	7783-80-4			ARI or A AIR	0	ppm
Tepp (iso)	[(CH3O2C)2P(S)]2O	107-48-3	A	P3	MC	0	mg/m <sup>3</sup>
Tert-Butyl ester of acetic acid	CH3COOC(CH3)3	540-88-5	A		DM or MC	200	ppm
Tetrachloroethylene	C2Cl4	127-18-4	A		MC	50.00	ppm
Tetraethyl silicate	(C2H5)4SiO4	78-10-4	A		MC	10	ppm
Tetramethyl silicate	(CH3O4Si)	681-84-5	A		MC	1	ppm
tetramethyl succinodinitrile	(CH3)2C(CN)(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/m <sup>3</sup>
THF	C4H8O	109-99-9	A		MC	200	ppm
Thio-4,4' bis (tert-butyl-6m-cresol)	(CH3)(OH)C6H4CH3)2S	96-69-5		P3	DM or MC	5.000	mg/m <sup>3</sup>
Thiophenol	CBH5SH	108-98-5	A		MC	0	ppm
Thiram (iso)	CBH2N2S4	137-26-8	A	P	MC	5	mg/m <sup>3</sup>
Tin compounds, inorganic, except snh4 (as sn)	Sn	7440-31-5		P3	MC	2	mg/m <sup>3</sup>
Titanium peroxide	TiO2	13463-67-7		P3	MC	4	mg/m <sup>3</sup>
TMA	(CH3)3N	75-50-3	K		MC	10	ppm
Toluene	CBH5CH3	108-88-3	A		MC	100.00	ppm
Tributyl ester of phosphoric acid	(CH3)3CH2)3O3PO	126-73-8	A	P3	MC	2.50	mg/m <sup>3</sup>
Trichloroethanoic acid	CCl3COOH	76-03-9	B	P3	MC	1	ppm
Trichlorohydrin	CH2ClCH2ClCH2Cl	96-18-4	A		MC	10.00	ppm
Tricyclohexyltin hydride	(C6H11)3SnH	13121-70-5	A	P3	MC	5.00	mg/m <sup>3</sup>
Triglycidyl isocyanurate (tgic)	C12 H15 N3 O6	2451-82-9	AB	P3	DM or MC	VLE	mg/m <sup>3</sup>
Triodomethane	CHI3	775-07-8	A		MC	0.80	ppm
Triene	ClCH=CCl2	79-01-6	A		MC	75.00	ppm
Trimethyl carbinol	(CH3)3COH	75-65-0	A		MC	100	ppm
Trinitrotolual	CH3C6H2(NO2)3	118-96-7	A	P3	MC	1	mg/m <sup>3</sup>
Tungsten 6 compounds (as w) (soluble)	W	7440-33-7		P3	MC	1	mg/m <sup>3</sup>
Turnpentine	C10 H16 (approx)	8006-84-2	A		MC	100	ppm
Uranium compounds, natural, soluble (as u)	U	7440-61-1		P3	MC	0	mg/m <sup>3</sup>
Vac	CH2=CHOOCCH3	108-05-4	A		MC	VLE =4	ppm
VOC	CH2=CCl	75-35-4	AX	P3	MC	VLE	ppm
Warfarin (iso)	C19H16O4	81-81-2		P2/P3	DM or MC	0	mg/m <sup>3</sup>
White spirit	n/a	8052-41-3	A		MC	350.00	mg/m <sup>3</sup>
Xylene (all isomers)	CBH10	1302-20-7	A		MC	100	ppm
Y-BHC (iso)	CBH6Cl6	58-89-9	B		MC	1	mg/m <sup>3</sup>
Yttrium	Y	7440-65-5		P3	MC	1	mg/m <sup>3</sup>
Zinc chloride, fume	ZnCl2	7646-85-7		P3	MC	1	mg/m <sup>3</sup>
Zinc distearate (resp. Dust)	Zn(C18H35O2)2	557-05-1		P3	MC	5.00	mg/m <sup>3</sup>
Zinc oxide fume	ZnO	1314-13-2		P3	DM or MC	5	mg/m <sup>3</sup>
Zirconium compounds (as zr)	Zr	7440-67-7		P2/P3	DM or MC	5	mg/m <sup>3</sup>



## 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




EN420  
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).
- **Pass the dexterity test.**
- **Conform to the labelling, information and identification instructions.**

SIZES AS PER STANDARD EN420

Glove size 	Palm circumference (mm) 	Length (mm) 	Minimal length (mm)
6	152	160	220
7	178	171	230
8	203	182	240
9	229	192	250
10	254	204	260
11	279	215	270
12	304	226	280

### ► STANDARDIZED LABELING/IDENTIFICATION

Each protective glove is clearly identified by a standardized 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 standardization pictogram(s) with their performance ratings.



### EN511 ► COLD 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
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	$-10^{\circ}\text{C} \leq T < 0^{\circ}\text{C}$		
2	$-30^{\circ}\text{C} < T$	$0^{\circ}\text{C} \leq T < 10^{\circ}\text{C}$	
3		$-15^{\circ}\text{C} < T$	$5^{\circ}\text{C} < T$
4		$-30^{\circ}\text{C} < T$	$-10^{\circ}\text{C} < T$



### EN407 ► HEAT AND FIRE RISK

The EN407 standard specifies the test methods, the general requirements, the thermal performance and the labelling of gloves 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
1 to 4	1 to 4
	RESISTANCE TO LARGE MELTING 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.

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 ISO 374-1, 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	N° CAS
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

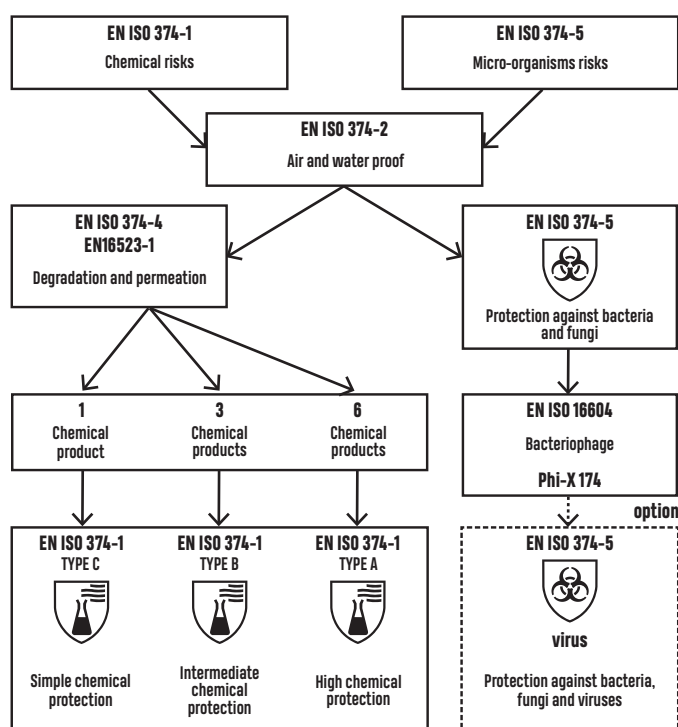


➤ **EN ISO 374-5 AGAINST THE DANGERS  
OF MICRO-ORGANISMS**

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 :



**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.



# TECHNICAL INFORMATION



**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 performances have appeared.

## PERFORMANCE LEVELS REQUIREMENTS

1 to 4	1 to 5	1 to 4	1 to 4	A to F	ø or P
					RESISTANCE TO 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.

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	-

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

## Marking example:



4233X P

TEST RESISTANCE TO CUT IN 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:

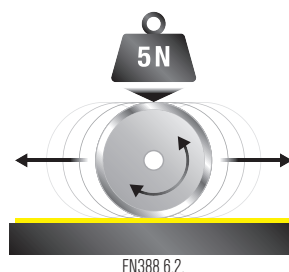


4543D or 4X43D

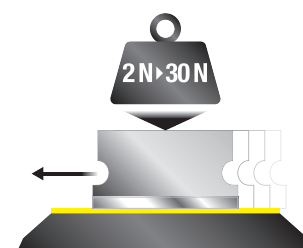
## Cut by blade, 2 test methods:

**EN388 6.2.:** For low to middle risks 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 5.1.1. 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



# CHEMICAL RESISTANCE TABLE

	n°CAS	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	631-81-9	***	***	***	***
Ammonium carbonate	10361-28-2	***	***	***	***
Ammonium chloride	12125-02-9	***	***	***	***
Amyl acetate	/	*	*	*	*
Amyl alcohol	7141-0	***	***	***	***
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 (lockhead)	/	*	***	***	*
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 fluorophosphate	/	***	***	***	***
Calcium hydrate	1305-62-0	***	***	***	***
Calcium nitrate	10124-37-5	***	***	***	***
Carbonic acid	/	*	**	**	**
Carbon tetrachloride	56-23-5	***	*	**	*
Castor oil	/	***	***	***	***
Chlorinated lime	7778-54-3	***	***	***	***
Chlorine	7782-50-5	***	***	***	***
Chloroacetone	/	***	***	***	***
Chloroform	67-66-3	***	*	*	*
Chromic acid	7738-91-5	***	*	*	*
Citric acid	77-92-4	***	***	***	***
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	***	*	**	**
Croscote	8001-58-9	*	***	***	***
Cresol	1319-77-3	***	***	***	***
Crystallisable acetic acid	64-19-7	***	***	**	*
Cutting oils	/	***	***	***	***
Cyclohexane	110-92-7	***	*	**	**
Cyclohexanol	108-93-0	***	***	***	***
Cyclohexanone	108-94-1	*	*	*	*
Diacetone alcohol	/	***	***	***	*
Dibutyl ether	142-98-1	***	*	***	***
Dibutyl phthalate	84-74-2	**	*	***	***
Diehanolamine	111-42-2	***	***	***	***
Diesel oils	/	***	*	***	*
Diluted sulphuric acid (battery)	/	***	***	***	***
Diethylphthalate	117-81-7	***	***	***	***
Dyes (hair dyes)	/	***	***	***	***
Ethyl acetate	141-79-6	***	*	*	*
Ethyl alcohol (or ethanol)	64-17-5	***	***	***	***
Ethylamine	75-04-7	*	*	***	*
Ethylamine	/	*	***	***	*
Ethylene dichloride	107-06-2	***	*	*	*
Ethylene glycol	107-21-1	***	***	***	***
Fertilisers	/	***	***	***	***
Fish and shellfish	/	*	***	***	*
Fuming agents	/	***	***	***	***
Fluorides	/	***	***	***	***
Formaldehyde	50-00-0	***	***	***	***
Fuel oil	/	***	*	***	*
Fuels	/	***	*	***	*
Furfural (furfural or furfuraldehyde)	98-01-1	***	**	***	*
Gas oil	/	***	*	***	*
Gasoline	/	***	**	***	*
Glycerin	56-81-5	***	***	***	***
Glycarophthalic 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	***	***	***	***

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

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.

	n°CAS	Natural latex	Neoprene	Nitrile	PVC vinyl
Isobutyl ketone	/	***	***	***	*
Kerosene	/	***	*	***	*
Lard oil	/	***	***	***	*
Linseed oil	/	***	*	***	*
Lubricants oils	1309-48-4	***	***	***	***
Magnesia	78-29-9	*	***	*	*
Methyl acetate	67-56-1	***	***	***	***
Methyl alcohol (or methanol)	/	***	*	***	*
Methyl ethyl ketone	/	***	*	***	*
Methyl isobutyl ketone	/	***	*	***	*
Methyl salicylate	109-58-8	***	***	***	***
Methylamine	74-89-5	***	**	***	***
Methylvinylcarbazole	100-61-9	*	*	***	***
Methylcyclopentane	96-37-7	*	*	***	*
Methylene chloride	75-09-2	*	***	*	*
Methylformate	/	*	***	*	*
Milk and dairy products	/	*	***	***	***
Mineral greases	/	*	*	***	*
Monomethylamine	141-43-5	***	***	***	***
Naphtalene	/	***	*	***	*
Naphtalene	91-20-3	***	*	***	*
N-butylamine	109-73-9	***	***	***	***
Nickel chloride	7783-54-9	***	***	***	***
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	10103-48-5	***	***	***	***
Phosphoric acid	7664-39-3	***	***	***	***
Phosphate resins	/	***	*	***	*
Potash flakes	/	***	***	***	***
Potassium acetate	127-08-2	***	***	***	***
Potassium bicarbonate	298-14-8	***	***	***	***
Potassium carbonate	584-09-7	***	***	***	***
Potassium chloride	7447-40-7	***	***	***	***
Potassium cyanide	151-50-8	***	***	***	***
Potassium manganate	7722-84-7	***	***	***	***
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 bisulphate	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	7757-82-8	***	***	***	***
Soybean oil	/	***	***	***	*
Stannic chloride	/	*	***	***	***
Stearic acid	57-11-4	**	***	**	**
Styrene	100-42-5	***	*	*	*
Sulphites, bisulphites, hyposulphites	/	***	***	***	***
Sulphuric ether (pharmacy)	/	*	***	***	*
Tartaric acid	/	***	***	***	***
Tetrahydrofuran	127-18-4	***	*	***	*
THF - tetrahydrofuran	109-99-9	**	*	***	*
Toluene	108-88-3	*	*	***	*
Tributyl phosphate	126-73-8	*	**	***	*
Trichloroethylene	78-06-6	*	*	***	*
Tricresyl phosphate	1330-78-5	***	**	***	***
Trinitrobenzene	/	***	*	***	*
Trinitrotoluol	/	***	*	***	*
Triphenyl phosphate	115-86-6	*	***	***	*
Turbin oil	/	***	*	***	*
Turpentine	/	***	*	***	*
Vinegar and condiments	/	***	***	***	***
Washing powders	/	***	***	***	***
Water paint	/	***	***	***	***
Weed killers	/	***	***	***	***
Wood turpentine	/	***	*	***	*
Xylene	/	***	*	***	*
Xylophene	/	***	*	***	*
Zinc sulphate	7733-02-0	***	***	***	***



# TECHNICAL INFORMATION

## FOOD COMPATIBILITY



### FOOD COMPATIBILITY IS GOVERNED BY:

**Regulation (EC) N° 1935/2004 of the European Parliament and of the Council of 27<sup>th</sup> 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

### ► PROTECTION 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.

EN13982-1  
TYPE 5

### ► PROTECTIVE CLOTHING FOR USE 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
EN13982-1	5	Against dust (asbestos)
EN14605	4	Against mists
EN14605	3	Against sprays

#### EXAMPLES OF APPLICATIONS

Applications	Risks	Level of protection
Work / Maintenance	Fouling	Category I / Non PPE
Industrial cleaning	Exposure to hazardous chemical substances and particles	Type 6 Type 5
Asbestos abatement / removal (dust > 1 micron)	Contact with particles or fibres	Type 5
Agriculture and horticulture (Handling of herbicides / pesticides / fungicides / fertilizers...)	Contact with harmful elements	Type 4
Paint spraying (Solvents)	Contact with low-concentrate aerosols	Type 4
Paint spraying (Preparation / Mixing)	Contact with high concentrate aerosols	Type 3
Laboratories / Chemical Industries	Projection of chemical products	Type 3
Emergency / Rescue Personnel	Bacteriological contamination	Type 4-B Type 3-B



# TECHNICAL INFORMATION

TESTS									
General performance	Tests & Specific performance	Level of protection							
		1a	1b	1c	2	3 <sup>a</sup>	4 <sup>a</sup>	5	6 <sup>a</sup>
Performance requirements for the whole garment	Internal pressure	X	X	X	-	-	-	-	-
	Leak to interior	-	X <sup>b</sup>	X	X	-	-	-	-
	Penetration by a jet of liquid	-	-	-	-	X	-	-	-
	Penetration by a spray	-	-	-	-	X	X	-	-
	Against solid particles	-	-	-	-	-	-	X	-
	Penetration by a spray	-	-	-	-	-	-	-	X
Performance requirements for the constituent materials of the garment	Abrasion / Tearing / Perforation / Seams	X	X	X	X	X	X	X	X
	Resistance to tensile strength	X	X	X	X	X	X	-	X
	Resistance to flame	X	X	X	X	X	X	X	X
	Resistance to cracking by bending	X	X	X	X	X	X	X	-
	Resistance to cracking by bending at -30°C	X	X	X	X	X	X	-	-
	Resistance to permeation	X	X	X	X	X	X	-	-
	Resistance to penetration by liquids	-	-	-	-	-	-	-	X
	Impermeability to liquids (repulsion)	-	-	-	-	-	-	-	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).

b - Applicable for suits whose respiratory mask is separate and removable.

## HEAT PROTECTIVE CLOTHING

EN11611



A1 Class 2

### ► PROTECTION USED IN WELDING AND ALLIED PROCESSES

This standard sets out 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.

EN14116



3 / 501 / 75

### ► PROTECTION AGAINST HEAT AND FLAME

This standard sets out the performance requirements for limited flame spread materials and material assemblies used in protective clothing. Limited flame spread materials and material assemblies are used to make protective clothing in order to reduce the risks of flammability of the garment and the dangers it may cause. They are suitable for protection against accidental contact with small igniting flames, in conditions with no significant heat danger.

**Indice:** 1 / 2 or 3

**Nb:** Number of washes

**I:** Industrial wash

**T0:** Service temperature



## 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. And antistatic clothing are 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  $10^9 \Omega$ , for example, by wearing appropriate footwear such as the safety shoes stated in EN ISO 20345, or by other suitable means.



### EN381

#### ► 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:

- EN381-5** Specifies the requirements for leg protectors.
- EN381-7** Specifies the requirements for protective gloves.
- EN381-9** Specifies the requirements for protective gaiters.
- EN381-11** Specifies the requirements for upper body protectors.

The cut tests are conducted using 4 chain speeds:

16 m/s	<b>Class 0</b>
20 m/s	<b>Class 1</b>
24 m/s	<b>Class 2</b>
28 m/s	<b>Class 3</b>

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).

#### Marking:

##### EPICEA 3

##### EN381-11



Class 0

##### MELEZE 3

##### EN381-5



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 inside the garment and inside the test chamber).

The classes are as follows:

CLASS	NOMINAL PROTECTION FACTOR
3	500
2	50
1	5



# TECHNICAL INFORMATION



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 <sup>2</sup>	0,50 m <sup>2</sup>	0,14 m <sup>2</sup>
Retroreflective material (Bands)	0,20 m <sup>2</sup>	0,13 m <sup>2</sup>	0,10 m <sup>2</sup>

### 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).

EN13356

## ► VISUAL ACCESSORIES FOR NON PROFESSIONAL USE

This standard specifies optical performance requirements for accessories that are worn, attached to, or carried by individuals and designed for non-professional use. The visualization accessories conforming to this standard are intended to visually indicate the presence of the user when illuminated by vehicle headlights on unlit roads. This standard does not apply to clothing.

## 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):** /<sub>cler</sub> of the garment

**X:** Class of air permeability, **AP**

**X:** Class of resistance to water penetration **WP** (Optional)

NORDLAND	
EN342	0,705 m <sup>2</sup> K/W (B)
	3
	X



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 and are not only for outdoor use such as in the construction industry, but 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, **R<sub>ct</sub>**

**X:** Class of air permeability, **AP**

**X:** /<sub>cler</sub> of the garment (Optional)

**X:** Class of resistance to water penetration

**WP** (Optional)

ALASKA2

EN14058



3  
3  
0,285 m<sup>2</sup> K/W  
X



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.

TESTS				
	Code	EN343	EN342	EN14058
Class of thermal resistance (in m <sup>2</sup> K/W)	R <sub>ct</sub>	-	-	X
Class of water vapour resistance (in m <sup>2</sup> Pa/W)	R <sub>et</sub>	X	-	-
Class of air permeability (in mm/s)	AP	-	X	X
Resistance to water penetration (in Pa)	WP	X	X (optional)	X (optional)
Resultant effective thermal insulation (in m <sup>2</sup> K/W) Measured on a moving manikin	/ <sub>cler</sub>	-	X	X

**X:** Resistance to water penetration, **Wp**

**X:** Water vapour resistance, **R<sub>et</sub>**

OTAKE

EN343



3  
1





• **THERMAL RESISTANCE ( $R_{cl}$ ) IN  $m^2 \cdot K/W$ :**

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.

• **WATER VAPOUR RESISTANCE ( $R_{ev}$ ) IN  $(m^2 \cdot Pa)/W$ :**

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 3 classes (from 1 to 3) from the least breathable to the most breathable.

• **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.

• **RESISTANCE TO WATER PENETRATION (WP) IN PASCAL:**

Measurement of the outer material and seams' resistance to water penetration under a water pressure of (980  $\pm$  50) Pa/min.  
Divided into 3 levels (1 to 3) from the least impermeable to the most impermeable.

• **RESULTANT EFFECTIVE THERMAL INSULATION:**

Measured on moving dummy ( $I_{cl,er}$ ).  
The thermal insulation coefficient, expressed in  $m^2 \cdot K/W$ , 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**

**AMBIENT TEMPERATURE CONDITIONS FOR HEAT BALANCE FOR DIFFERENT LEVELS OF ACTIVITY AND EXPOSURE DURATIONS**

Standard applicable	ACTIVITY						
	Insulation $m^2 \cdot K/W$	Very light Stationary standing 75 W/m <sup>2</sup>		Wearer moving lightly 115 W/m <sup>2</sup>		Wearer moving medium 170 W/m <sup>2</sup>	
	$I_{cl,er}$	8h	1h	8h	1h	8h	1h
EN14058	0.170	19°C	11°C	11°C	2°C	0°C	-9°C
EN14058	0.230	15°C	5°C	5°C	-5°C	-8°C	-19°C
EN342	0.310	11°C	-2°C	-1°C	-15°C	-19°C	-32°C
EN342	0.390	7°C	-10°C	-8°C	-25°C	-28°C	-45°C
EN342	0.470	3°C	-17°C	-15°C	-35°C	-38°C	-58°C
EN342	0.540	-3°C	-25°C	-22°C	-44°C	-49°C	-70°C
EN342	0.620	-7°C	-32°C	-29°C	-54°C	-60°C	-83°C

**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



## SAFETY SHOES-BOOTS

### STANDARDS

#### EN ISO 20344

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 ► SPECIFICATION FOR SAFETY FOOTWEAR FOR THE WORKPLACE.

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

#### ► SPECIFICATION FOR OCCUPATIONAL SHOES MARKED «O».

These shoes are different from safety/protective footwear in that they have no protective toe cap for impact and crushing.

#### EN ISO 61340-4-3

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

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

Upper (upper part of the 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
<b>ALL MATERIALS</b>	<b>SB:</b> basic properties	<b>OB:</b> basic properties
<b>CLASS 1</b> Leather shoes and other materials, except rubber or polymer shoes	<b>S1:</b> basic properties plus: - closed back - anti-static - energy absorbing heel - outsole resistance against hydrocarbons	<b>O1:</b> basic properties plus: - closed back - hydrocarbon-resistant sole - anti-static - energy absorbing heel
	<b>S2:</b> the same as S1 plus: - waterproof	<b>O2:</b> the same as O1 plus: - waterproof
	<b>S3:</b> the same as S2 plus: - puncture resistant sole - studded sole	<b>O3:</b> the same as O2 plus: - puncture resistant sole - studded sole
<b>CLASS 2</b> All rubber shoes (fully cured*) or all polymer (fully moulded)	<b>S4:</b> basic properties plus: - closed back - anti-static - energy absorbing heel - outsole resistance against hydrocarbons	<b>O4:</b> basic properties plus: - anti-static - energy absorbing heel
	<b>S5:</b> the same as S4 plus: - puncture resistant sole - studded sole	<b>O5:</b> the same as O4 plus: - puncture resistant sole - studded sole
<b>HYBRID SHOES</b> Rubber foot (fully cured) or all polymer (fully moulded) / Top leather upper and other materials	<b>SBH:</b> properties specific to hybrid safety shoes	<b>OBH:</b> properties specific to hybrid work shoes

SYMBOLS FOR INDIVIDUAL SPECIFICATIONS  
EN ISO 20345

Whole shoe	Puncture resistant sole	P
	<b>Electrical properties:</b>	
	Conductive shoe	C
	Antistatic shoe	A
	Insulating shoe	See EN50321
	<b>Resistance to aggressive environments:</b>	
	Heat-insulated sole	HI
	Sole insulated against cold	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	HRO
	Oil-resistant outsole	FO
	Isolation of the sole against heat. Sandbox test 150°C, 30 minutes of exposure (HI-1)	HI

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



## PERFECT SAFETY

Fall arrest equipment includes different products which have to be adapted for each risk to ensure the necessary protection.



## THE HARMONIZED EUROPEAN STANDARDS

All protective equipment against falls from a height are submit to European standards. You will find, below, a summed up presentation of every standard.

### GENERAL STANDARDS

#### EN363 ► FALL ARREST EQUIPMENT

Set of personal protective equipment against falls from height, linked to one another and intended to stop a fall. A fall arrest equipment must contain at least a full body harness and a fall arrest equipment.

#### EN364 ► TEST METHOD

Describes the different test methods of the various PPE against falls from height, as well as the test equipment.

#### EN365 ► GENERAL REQUIREMENTS FOR THE INSTRUCTIONS FOR USE AND THE MARKING

Description of the marking that must figure on the PPE against falls from height and of the information which must appear on the instructions for use.

Instructions for periodic inspections shall include inter alia:

- 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 be only carried out by a competent person in strict compliance with the manufacturer periodic inspection procedures.

#### VISUAL INSPECTION FOR:

Harnesses, belts, lanyards, ropes, energy absorbers, self retractable devices that cannot be dismantled (e.g. AN102), connectors, our kit components (except ELARA270), temporary anchors (tripod, LV201 ...)

#### MECHANICAL INSPECTION FOR:

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

## SPECIFIC STANDARDS

#### 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.

#### 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.

#### 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.





## 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.

## 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.

## EN358 ► WORK POSITIONING SYSTEM

A work positioning system consists of components (work positioning belt and lanyard) linked to one another to form a complete equipment.

## EN813 ► SEAT HARNESSSES

## EN1891 ► SHEATHED BRAIDED ROPE WITH A LOW COEFFICIENT OF ELONGATION (STATIC ROPES)

## EN12841 ► ROPE ACCESS SYSTEM

A rope device for work positioning. There are several types of device:

- Type A: 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.

## 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.

## EN567 ► EQUIPMENT FOR MOUNTAINEERING AND CLIMBING

Safety requirements and test methods for blockers.

## EN12275 ► MOUNTAINEERING AND CLIMBING EQUIPMENT

Safety requirements and test methods for connectors.

- 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.

## EN12278 ► MOUNTAINEERING AND CLIMBING EQUIPMENT

Safety requirements and test methods for pulleys.

## EN341 ► PPE AGAINST FALLS FROM HEIGHT

Descending devices, classified according to the following data

- Class A: Descent energy  $W$  up to  $7.5 \times 10^6$  J
- Class B: Descent energy  $W$  up to  $1.5 \times 10^6$  J
- Class C: Descent energy  $W$  up to  $0.5 \times 10^6$  J
- Class D: For a single descent. The descent energy depends on the maximum descent height and the maximum nominal load.



**EN795 2012 ➤ ANCHORAGE DEVICES**

Element 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°.

**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 persons simultaneously.

**OTHER STANDARDS****EN1498****➤ RESCUE STRAP****Directive 2006/42/CE****➤ FOR THE MACHINES OR EQUIPMENTS WITH MOBILE FUNCTION.****EN13463-1****➤ NON-ELECTRICAL EQUIPMENT FOR POTENTIALLY EXPLOSIVE ATMOSPHERES**

Basic method and requirements (risk analysis).

**EN13463-5****➤ NON-ELECTRICAL EQUIPMENT FOR POTENTIALLY EXPLOSIVE ATMOSPHERES**

Protection constructional safety "c" regarding the main mechanical devices: joints, bearings, gears, belts, clutch chains, brakes, coupling devices, conveyor belts. It sets out the requirements to be respected for the design and maintenance instructions.

It sets out the requirements and tests to be conducted according to the type of component.

**DIRECTIVE 93/42/EEC  
EU REGULATION 2017/745****FOR THE MEDICAL DEVICES OR ACCESSORIES.****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 1<sup>st</sup> digit indicates the protection from dust, the 2<sup>nd</sup> digit the protection from water intrusion.





## A

### ABRASION

Abrasion means wear through the action of friction. For the mechanical standard EN388 for gloves, EN343 for clothing and EN ISO20344 for shoes, the test consists of knowing when the product will deteriorate. The level is thus used to provide an indication of resistance and longevity.

### ABS

Acrylonitrile Butadiene Styrene (ABS) is a thermoplastic used by the industry for rigid, light and molded products. This material is used for the construction of the hull of hard hats and for the casing of self-retracting fall arresters

### ACCOMMODATIVE (REFLEX)

The cristallin acts as a lens enabling focusing in distance thanks to a muscle. Presbyopia (near-sightedness) is caused when it does not work properly. The accommodative reflex ensures clear vision.

### ACETATE

A fibre obtained by the action of artificial resins on cellulose and with: low weight, excellent optical properties, heat stability, good resistance to most chemical products. It does have some disadvantages however: low resistance to abrasion and scratching, risk of ignition near a heat source greater than 100°C.

### ACRYLIC

Synthetic fibre often resembling wool: Very high elasticity (so does not crease) - Very lightweight - Heat insulation equal to wool - Very high resistance to abrasion and traction. It is thermoplastic, has low absorbent power and dries very quickly.

### ACTIVATED CARBON

Activated carbon, or absorbent carbon or medicinal carbon, is carbon which has been treated by pyrolysis to increase its absorbency. The basic material used is often coconut, but it can be wood, bone or some other carbon. A grain of activated carbon has a network of pores and channels similar in dimension to molecules. Activated carbon creates a chemical principle enabling toxic gas / vapour molecules to be captured.

### AEROFRESH CONTROL

System developed by Delta Plus, used to ventilate the shoe at the instep and ankle by means of an air vent.

### AEROSOLS

In chemistry, an aerosol is a set of solid or liquid particles, in suspension in a gaseous medium. An aerosol is a suspension of very fine particle (colloidal size) in a gas (risk of contamination of the air ways). A cloud is an example of an aerosol. Other examples are mist, smoke or the cloud of dust given off when you shake out a rug.

### AEROSOLS AND AQUEOUS FOGS

Small droplets produced during pulverization.

### ALUMINISED (LINING)

The DELTALU aluminised lining combines heat insulation performance with lightness ; polyester wad on aluminium foil batting (perforated). It is a real barrier inside garments protecting against the cold and the wind.

### ANCHOR LINE

Element on which a sliding fall arrester moves. The anchor line can be a rope, a cable or a rail.

### ANCHORAGE POINT

Element to which a fall arrest system can be connected.

### ANTI-MIST (AB)

Surface treatment for lenses realized by dip coating the lens to prevent the formation of mist. This treatment is incompatible with mirror treatment of the lens itself.

### ANTI-SCRATCH (AR)

Surface treatment of lenses to prevent superficial scratches. This treatment is obtained by dipping the lens in a «silicone» based solvent. It is colourless on the lense and does not alter vision.

### ANTISTATIC

Property of a product, which prevents or limit the formation of static electricity. It is often requested in industrial environments for the risks of electrical discharge. Antistatic protective clothing are mainly used in explosive risk environments such as: chemical plants, refineries, weapons factories, mines. They are also widely used to protect materials sensitive to electrical discharge such as on electronics manufacturing or semi-conductor assembly sites. Finally, they are used in controlled-atmosphere sites such as automobile paint workshops, the aim being to prevent the emission of particles which may be deposited on bodywork paint.

### APV

Assumed Protection Value: complete and precise method for mesuring the hearing protector attenuation

- Attenuation per frequency (63Hz, 125Hz, 250Hz, 500Hz, 1000Hz, 2000Hz, 4000Hz & 8000Hz).
- Mean Attenuation: mean attenuation every 16 people tested.
- Standard Deviation: statistical presentation of the results.
- Assumed Protection: minimum attenuation at each Frequency level.

It is computed by subtracting the standard deviation from the mean attenuation for each considered frequency.

### APF

Assigned Protection Factor.  
Formula used to define the level of protection achieved in the workplace by 95% of operators trained in the wearing of respiratory protective devices or RPD and properly using after control a well maintained and adjusted device. Maximal concentration allowed corresponds to:  $NPF \times OEL$ .

### AQL

Initials which mean «Average Quality Level». The standard ISO N° ISO2859 determines sampling for controls batch by batch, the AQL thus gives the maximum number of gloves with defects on 100.



## ARAMIDES

Thermostable fibres used mainly in heat-proof applications. There are two types: para-aramides such as Kevlar® (anti-cut & resistant to flame and heat) and meta-aramides such as Nomex® (antistatic & resistant to flame and heat).

## ARCH SUPPORT SYSTEM

This is an anatomical piece which provides rigidity to the instep and gives greater stability to the foot.

## ARMBAND

Armbands are pieces of fabric worn around the arm. Fluorescent armbands are accessories, used for greater visibility. Attention these are not PPE.

## ASSEMBLY

Assembly is the stage which consists of assembling the shoe upper on the form with the insole. Manufacturing occurs when this is assembled to the various midsoles and outsoles.

## ATTACHMENT

(DORSAL) Connection point of a fall arrester on a harness.

(STERNAL) Connection point of a fall arrester on a harness.

(LATERAL) Connection point of a work restraint system or work positioning.

(VENTRAL) Connection point of a work restraint system or work positioning.

## B

## BACK PAD

Element of a harness used to cross the straps at the back and position the D-ring at the correct height.

## BIAS (FABRIC ON THE)

It is the use of a fabric part in its transversality (angle 45°) in order to obtain a flexible and deformable part. Examples of applications: strips or ribbons to be adapted to rounded forms (edge of a cuff, inside belt of trousers, etc.).

## BLOUSON

A blouson is a short garment which only covers the torso and hugs the waist. A long jacket is an alternative between a blouson and a parka.

## BLUE (LIGHT)

Harmful light emitted between 380 and more than 500 nanometres.

Examples: intense sunlight, light used for the sedimentation of ceramics in dentistry, etc.

## BRUSHED

Fabric on which one or both sides have a furry aspect obtained by the brushing operation.

The operation consists of passing the fabric over a rotating drum fitted with metal teasels. This treatment gives the article a soft, thick feel, making it warmer and bulkier, but removes toughness.

## BUMP CAP

Bump cap and anti-scalp (EN812 standard). It is a PPE widely used in industry, especially for indoor use to protect the skull against shock contact with hard surfaces that could cause minor injuries.

It can not replace the helmet, in case it is required to wear a helmet with EN397 standard.

## BUMPER CAP

Protective toecap designed to protect against premature wear on the front of the sole.

## BURSITIS

Bursitis is an occupational illness of the knee, often occurring in tile layers, welders, floor covering layers, etc...

It comes in form of a gradual and slow increase in the volume of a bursa due to repeated microtraumas.

## BUTT (LEATHER)

Part corresponding to the croup of the animal at the bottom of the skin (grain).

## C

## CANVAS (WEAVE)

The plain weave, is the basic fabric weave, and is characterised by inversed and alternating arrangement of the warp yarns on the weft yarns. There is no difference between the right and wrong sides of the fabric. This weave is particularly resistant to abrasion and very easy to waterproof.

## CARBON (FIBRE)

The carbon fibre is used in materials for its anti-static properties.

## CARROUSEL (INJECTION)

It's a machine with several injection stations (12 18 24 30 36) used to make soles.

## CEMENTED (ASSEMBLY)

The most widely used manufacturing process for shoes in general: it consists of gluing the sole to the insole.

## CEMENTED (SEAM)

Assembly procedure for seams by hot gluing to guarantee the sealing of seams for coated materials.

## CHEST STRAP

Strap used in the design of a harness with the role of maintaining the position of the harness straps on the shoulders in order to prevent any risk of losing the harness in the event of a fall. The chest strap is not obligatory on a harness.

## CHIN STRAP

Element used to prevent a safety helmet from falling. It may be simple or with a chin-cup, with two or four fastening points used for work at height.





### CHLORINATED (GLOVE)

A washing process for the latex glove, washed in chlorinated water to produce unpowdered gloves. The advantages of unpowdered glove is: it is easier to put the glove on (a velvety contact), improves comfort and reduces the allergenic effect of the natural latex proteins carried by the powder.

### CLEARANCE

The clearance is the height between the foot of a person equipped with a fall arrest system and the nearest obstacle.

### CLOGGING

Phenomenon of dust filter saturation. As respiratory protection is provided by a mechanical barrier (interlacing of fibres and electromagnetic reaction), when the filter is saturated, clogging occurs; the user feels difficulty in breathing.

### CLOSING

This is the step during which the various parts of the upper, collar, vamp, quarters, gussets are assembled.

### COATING

Coating is the operation by which the surface of a textile or leather is coated with a layer of chemical product with the aim of giving it properties of chemical resistance, or to enhance its mechanical resistance. They are mainly found in the form of polyvinyl chloride (PVC), polyurethane (PU), and natural (Latex) or synthetic (Nitrile, Neopren) elastomer. There are many applications, from tarpaulins to imitation leather including proofing of protective clothing.

### CONCENTRATION

Quantities of chemical products in the air breathed by a worker at his workstation, and which may adversely affect his health. Hence the need to have concentration limits below which the risks of intoxication are low or non-existent (TLV/STEL).

### CONFINED SPACE

A confined space is characterized by a volume/ dimension ratio such as the natural exchange of indoor air with outdoor air being reduced and able to cause asphyxiation, intoxication, fire or explosion. In these areas, the risks are increased by various gas or smoke fumes. Examples: wells, tanks, sewers, ditches, accessible collectors, valve chambers, tanks...

### CONNECTOR

Connecting element. A connector can be a carabiner or a hook.

### COTTON

Natural textile fibre made of silky filaments surrounding the cotton seed: it is comprised of about 94% cellulose. Comfort, easy cleaning and good absorbency are its main properties.

### CUFF

15 cm gauntlet found on welding gloves to protect wrist and forearm against molten metal splash.

## D

### DECIBELS

Acoustic pressure, in other words the intensity or amplitude of sounds and noises, expressed in decibels (dB), and determines the danger to humans. The safety level has been fixed at 85 dB: above this, pain occurs, and injuries appear.

Decibels are usually measured using a sound meter which converts the sound signal into an electric current.

### DEFLECTOR

This is the role played by the helmet because of its rounded shape, it deflects the trajectory of a moving object, without stopping it suddenly, preventing a violent impact.

### DERMIS

The skin of the animal, comprised of two layers: the grain (external part of the dermis) and the flesh split (internal part of the dermis). Using the tanning process, the dermis is transformed into leather.

### DESCENDER

A descent / rescue device for lowering Vertically at a limited speed from a raised to a lower point. For use for one or more people.

### DESIGNER

Person in charge of creating the shoe design integrating all the technical design elements.

### DIELECTRIC (harnesses and absorbers)

Dielectric harness and absorber, non-conductive renderings. Insulated thanks to the plastic coating of all the metal buckles.

### DIOPTER

Unit of power of optical systems used to determine the measurement of refraction, i.e. the ability of a medium or an object to deflect light rays. Unit of power equal to the inverse of the focal distance, expressed in metres. The focal distance is the distance between the lens or the refracting medium, and the point at which these rays converge (where they meet). The human visual system is 60 diopters (40 for the cornea and 20 for the cristallin).

### DIPPED (GLOVE)

Glove manufacturing process by dipping the form of a ceramic hand in baths of various compositions depending on the material used. The next step is firing in ovens (vulcanisation).



## DIRECTIVE (ATEX)

This European regulation, which aims to improve the health and safety of workers at risk from explosive environments, is the result of the application of 2 directives:

- Directive 1999/92/EC for the protection of workers potentially at risk from explosive environments.
- Directive EU 2014/34 for machines intended for use in explosive environments.

PPE are not governed by these two directives, they are even explicitly excluded from the Directive EU 2014/34 (Chapter I, Section 4 1,2,d). They may be used in ATEX regulated zones as part of an overall explosion risk prevention system.

The EU 2016/425 regulation for PPE takes into account the risks of explosion in Annex II, paragraph 2.6. : "PPE for use in explosive environments.

PPE for use in explosive environments must be designed and manufactured in such a way that it cannot be the seat of an electric or electrostatic arc or result from an impact, capable of igniting an explosive mixture."

## DMF

Dimethylformamide N or N-dimethylformamide is a common solvent used in organic chemistry. DMF may be a carcinogenic substance, although the EPA (Environmental Protection Agency) does not consider it a cancer risk. The new innovative manufacturing process, also called PU Water, is 100% based on water. No solvents, such as DMF, are used, strengthening innocuousness.

## DOLOMIA

Dolomia is a sedimentary carbonate rock comprised of at least 50% dolomite. It is a double calcium and magnesium carbonate, which crystallizes into lozenge-shaped prisms (rhombohedral). Dolomia is a sedimentary rock comprised mainly of the mineral dolomite (between 90 and 100%) and calcite, which do not have the same density (dolomite: 2.87; calcite: 2.71), playing a fundamental role in rock erosion.

The Dolomia test, conducted using Dolomia dust, is an optional test for filtering face pieces (EN149:2001 A1:2009) guaranteeing longer lasting performances of resistance to penetration.

## DRILEX®

Drilex® is a technical lining found in top of the range sports shoes. This lining is comprised of 2 fibres and enables absorption of perspiration and evacuation of humidity to the outside (antibacterial and anti-odour).

## DUAL GRIP

Name of an outsole offering a grip system suited to smooth or friable surfaces, with a large contact tread pattern, and central channels to evacuate liquids.

## DUAL-DENSITY (SOLE)

Dual-density means the sole is made of 2 superimposed parts; the underpart in contact with the ground is more rigid whereas the upper part is more flexible and shock absorbent.

## DUNGAREE

Dungaree are work garments comprised of trousers and a bib on the chest with shoulder straps. More commonly known as dungarees.

## DUSTS

Solid particles suspended in the air.

## E

### EAR DEFENDER

Element of ear defenders (with the headband and the foam) which provides the sound attenuating effect.

### EARPLUGS

Disposable or reusable ear defenders (EN352-2): inserted in the ear canal to plug the conduit. Usually made of polyurethane or PVC, they can also come with a cord, a headband and a detectable metal insert (for use in the food processing industry).

### ECO-DESIGNED

Delta Plus develops eco-designed products whose environmental impacts are reduced to a minimum. Thus, throughout the lifespan of the product, the use of energy is minimized, the use of raw materials such as organic cotton and reduced packaging are given priority.

### EDGED (SEAM)

Seam consisting of covering another seam with a band of fabric compatible with that of the garment to provide better sealing.

### ELASTANE

Extensible fibre made of synthetic elastomer yarns. Elastane is always mixed with other fibres to give the fabric its properties: suppleness, elasticity and crease-proofing.

### ELECTRIC ARC

An electric arc is a visible electric current in a nonconductive media (gas, air, vacuum...).

The arc is created when the non-conductive material ionizes, which occurs more easily when conducting surfaces are nearby. The position of an electric arc is stable: once it has found the shortest path, it remains there (minimum energy principle). The whole difficulty for arc welding is therefore to master the arc using a continuous movement so that it keeps the desired form despite the fact that the emitting surface (or more rarely the receiving surface) is sometimes an acute angle.

Electrical arc welding produces a huge quantity of localized heat generating the fusion of materials, making strong joins that remain after cooling.

### ELECTRIC FLASHOVER

Electric flashovers are electrical burns without the current passing through the body. In low voltage, following an electric arc, the skin injuries are superficial and mainly affect the hands and face.

Protection is provided by the polycarbonate of a thickness >1.4mm. The best protection is provided by a face shield.

### ENERGY ABSORBER

Fall arrester composed of a lanyard with an energy dissipating device, which guarantees to stop a fall from height safely under normal conditions of use.

### ENERGY DISSIPATOR

Component of a fall arrester designed to dissipate the kinetic energy accumulated during the fall.



## ERGONOMICS

Studies and research into the methodical organisation of work and the arrangement of protective equipment according to the anatomical possibilities of people.

## ESD

ELECTROSTATIC DISCHARGE, electrostatic discharge.

Any contact and any physical separation of solid materials may generate electrostatic charge. A person, or a garment worn by the person, may be electrically charged. Where appropriate, the ESD can cause damage, if the charged person or object comes into contact with an ESD sensitive device (microchips, semiconductors, printed circuit boards...).

EN 61340-5-1 (Protection of electronic devices against electrostatic phenomena) defines the general requirements of the areas protected against ESD, EPA (ESD Protected Areas).

To be admitted into an EPA area, depending on the configuration of the workstation, clothing and footwear must be subjected to specific electrical charge dissipation tests determined by European and American standards. Based on the results of these tests, the product will have the special ESD marking. Other PPE (gloves, head protection and fall arrest system) are not mentioned in this standard.

## F

## FABRIC

Any material obtained by interlacing of the warp and weft yarns, and made on a loom or weaving machine. Fabric with a plain weave structure is usually called plain weave.

## FALL ARREST HARNESS

Body harness system designed to stop falls, a harness is one element in a fall arrest system. It should be designed to hold the individual during and after the fall with an angle of 50° from the vertical.

## FALL ARREST SYSTEM

Protective equipment against falls from height or fall-arrest systems are comprised of 3 elements:

- a body holding system designed to stop falls (fall arrest harness).
- a linking sub-system designed to stop a fall from height (self-retracting fall-arrester, sliding fall-arrester or energy absorbing lanyard).
- a safe anchorage point.

## FALL INDICATOR

Mechanical and visual device that allow to identify if a fall arrester suffered a drop impact.

## FILTERING MEDIA

Type of respiratory protection device used either in positive pressure (assisted ventilation) or in negative pressure (free ventilation).

## FINISH

Finishes are treatments used on some fabrics or yarns, to give them special properties, such as flame proofing, antistatic, water repellent, etc.

## FLAME PROOFING

Treatment of textile materials with non flammable substances to reduce the risks of fire or slow flame spread.

## FLANNEL

Lightly brushed fabric, soft and fluffy to the touch, originally made of wool.

## FLAP

See valve.

## FLASH

Surface treatment of a lens giving it a mirrorer aspect. The mirror effect on lens reflects the intensity of the light and heat to reduce eye strain during exposure to bright light, and to limit headaches resulting from this exposure. This treatment is not compatible with anti-fog treatment. The colour of the treatment can be gold or other.

## FLEECE

Thick, soft fabric, brushed on both sides.

## FLOCK (GLOVE)

Cotton fibers deposited as a finishing process. Flocking provides a pleasant and soft contact and reduces perspiration.

## FLUCTUATING

Noise whose fluctuations are greater than 5dB during the period of measurement.

## FOAM

Element of ear defenders (with the headband and the ear cups) which attenuates the noise and provides comfort. It's inside the ear cups.

## FOOD (SOLE)

White or light-coloured sole to prevent marks on the floor; anti-slip sole as it is used on very slippery surfaces.

## FREQUENCY

Frequency is expressed in hertz. Only sounds with frequencies of between 20 and 20 000 Hz are audible.

At a frequency of between 20 and 200 Hz, the audible sound is lowpitched. Below that, they are infrasounds.

At a frequency of between 2000 and 20 000 Hz, the audible sound is high-pitched. Above that, they are ultasounds.

## FUMES

Small particles suspended in the air (aerosols).



## G

### GAUGE

This is the width of the stitch. It corresponds to the number of needles used in 1 English inch (2.54 cm). Example: gauge 7 corresponds to 7 needles in 1 inch. The higher the gauge, the finer the stitch. Gauges are 7, 10, 13, 14.

### GLASS FIBRE

Glass fibre is a very fine filament of glass. By extension, composite materials strengthened with this fibre (usually associated with polymers) are also called glass fibre.

Monolithic glass is a very fragile material but when spun to a diameter less than one tenth of a millimetre, it loses its fragility and becomes a highly mechanically resistant material.

### GRAIN LEATHER

External part of the dermis, with no mechanical modifications. This is the most supple and resistant part of leather.

### GUSSET

It is the part of the shoe on either side of the tongue. It protects and seals the closure.

## H

### HACCP

Hazard Analysis Critical Control Point. This is a method of quality control in the food industry, used to:

- identify and analyse the risks associated with various stages in the production process of a foodstuff.
- define the means required to control them.
- ensure that these means are implemented effectively and efficiently.

It is a systematic and rational approach to controlling microbiological, physical and chemical hazards in food.

### HARNESS

An element of the harness. The most of arm webbing are starshape with 4 or 6 arms. Webbing with 6 fixing points or more, ensure better distribution of the force exerted on the helmet. Webbing can be made of polyethylene, or textile for better absorption of perspiration.

### HARNESS (SAFETY HELMET)

It can be made of textile material or polyethylene. Its role is to absorb the impact of a falling object. It is comprised of two elements: the headband and the webbing.

### HEADBAND

Element of ear defenders (with the muffs and the foam), it maintains the pressure of the protection on the ears.

### HEADGEAR

It is one of the elements of the harness of safety helmet. It is often made of low density polyethylene (LDPE). It is adjusted by a tightening system with rack (ratchet), or by a sliding system (tightening straps with notches).

### HEAT SEALED (SEAM)

Seams covered on one side with a band of fabric compatible with that of the garment and hot-welded for increased protection and sealing.

### HML

High Medium Low: 3 levels of frequency measurement.

### HYDROPHILIC

A hydrophilic fabric is comprised of water-absorbent materials (e.g. cotton, wool, etc.).

### HYDROPHOBIC

A hydrophobic fabric is comprised of materials that do not absorb water. (e.g. polyamide, acrylic, polyester...).

## I

### IMPACT FORCE

This is the force subjected to the body at the moment of the fall, expressed in daN (decaNewton).

### IMPERMEABLE

An impermeable fabric is used to make products which is completely water and air tight.

Water proofing is usually done by the application of a coating. The coating is a deposit of a plastic film (PVC, polyurethane or acrylic) on the surface of a textile. For example, rain suits with their polyurethane or PVC coatings, boots in PVC or dipped glove.

### IMPULSE

Noise the sound level of which increases considerably almost instantaneously.

### IMPUTRESCIBLE (LEATHER)

After the tanning process, the leather becomes imputrescible, meaning it cannot rot.

### INFRARED

Infrared (IR) radiation is electromagnetic radiation of a wavelength longer than that of visible light, but shorter than that of microwaves. Infrared radiation has wavelengths between about 750 nm and 1 mm, spanning five orders of magnitude.

### INFRASOUNDS

Sounds of a frequency too low to be heard by humans (< 20 Hz). The average human ear only hears sounds within a certain range of frequencies between about 30 Hz (below that the sounds are called infrasounds) and 15 kHz (above which the sounds are called ultrasounds). Some physiologists even extend the limits of this range from 20 Hz to 20 kHz.

### INJECTION (SOLE)

Sole or zip manufacturing system, liquid material is injected into a mould, this material then solidifies and takes the form of the mould.

### INJECTION POINT

Point through which the press injects polyethylene into the mould and which is cut on removal from the mould.





## INNOCUOUSNESS

The innocuousness of a product guarantees the fact that it contains no materials which may cause allergies to sensitive people. Innocuousness is an integral part of the basic requirements of protective clothing in EN340 or gloves in EN420. Usually, the pH of materials, the chromium VI content of leathers, the nickel emission of metallic materials, azoic dyes and the solidity of the dyes are tested.

## INSOLE

This is the sole inside the shoe, in contact with the sole of the foot.

## INTERLOCK

Basic knitting weave, each side are the same.

Interlock has good dimensional stability which doesn't ladder too much. Widely used to make sports clothing.

## INTERMITTENT

Noise whose fluctuations fall to the ambient level several times.

## IP

The IP protection rating is a standard defined by the CE 60529 standard. This index classifies the degree of protection against intrusions of Solid bodies (dust for example) and liquids (water, oil, etc.). The first figure corresponds to the effective protection against solid bodies. The Second digit corresponds to the effective protection against Liquid bodies. The IP66 rating therefore corresponds to being totally Dustproof and splash-resistant.

## J

### JACKET

A jacket is a garment with sleeves, closed in the front, covering the torso to the waist or hips.

### JERSEY

Light and supple knits with a different right and reverse side. Widely used to make t-shirts and undergarments. The advantages of jersey are suppleness and comfort.

## K

### KEVLAR®

Para-aramide fibre manufactured by DuPont de Nemours. It combines lightness and resistance. For equal weight, Kevlar® is five times tougher than steel. Its properties: very resistant to cutting, carbonises between 425°C and 475°C; does not melt; self-extinguishing; dimensional stability; chemical stability; alteration of colour under UV.LL

### KINETIC ENERGY

Energy that a body has as a result of its motion.

### KNIT

All fabrics made of stitches or interlaced loops, made using needles or hooks. Knits are extensible. The basic fabrics are: rib, interlock, jersey.

## KNITTED CUFF

Flexible, elastic knitted band finishing a collar, sleeves, legs, bottom of some garments.

Used to tighten wrists, collars, etc.

- Integrated cuff (knitted at the same time as the main piece).
- Pieced-cuff (knitted separately and stitched).

## L

### LAMINATED (FABRIC)

A laminated fabric is a complex of several layers of woven, knit or non-wovens assembled to enhance their performances.

2-layer laminate is used to describe a fabric laminated on 2 layers with a waterproof fibre usually on the outer layer. The inner layer is usually thicker and softer for greater comfort against the skin.

3-layer laminate is a fabric laminated in 3 layers, usually with waterproofing on the outer layer, comfortable fabric on the inner layer and sandwiched between the two, a waterproof- breathable membrane.

### LANYARD

Generic term, a lanyard can be made of synthetic fibre rope, metal cable, webbing or a chain. A lanyard may not exceed 2 m in length.

### LAST

The last is the basis for any study of the shoe which determines the general look, the volume and fit. It is made of wood for the study and then in plastic for production. The length of the foot, perimeter at the joint, foot width, and instep height are used to determine the size of a shoe and make the basic last.

### LIFELINE

This is an anchor line to which a fall arrest system is connected to safeguard the horizontal movements of a person working at height. The anchor line can be a rope, a strap, a cable or a rail.

### LINING

This is the part in contact with the foot. Often made of leather or textile, it improves the solidity of the shoe and acts like a second skin for comfort.

### LOOSE SOIL

Irregular, uneven surface.

## M

### MANUAL ADJUSTMENT

Tightening system for safety helmets, using a sliding plastic strap. This system differs from the rack and ratchet system.

### MECHANICAL REVISION

Class III mechanical fall protection PPE must be inspected at least once a year to ensure the proper functioning of the PPE. This inspection is also mandatory after a possible fall stop.



## MEMBRANE

This is a thin polymer film (PU or polyester) applied to the inner surface of a fabric to enhance waterproofing and breathability.

## MESH

An alveolar fibre, used to enable air circulation and evacuate perspiration.

## MICROFIBRE

Light, very fine and soft synthetic textile fibre with soft touch, skin of peach aspect.

## MIDSOLE

The midsole is also called the comfort sole, whereas the outsole is in contact with the ground; together they make up the two parts of a shoe sole.

## MIG/MAG (WELDING)

MIG (Metal-arc Inert Gas) or MAG (Metal-arc Active Gas) welding (the only difference between the two is the gas used to protect the welding bath), both indicated in AWS terminology as GMAW (Gas Metal Arc Welding), is a semi-automatic welding process.

The metals are melted by the heat energy released by an electric arc which erupts in a protected atmosphere between a fuse electrode wire and the parts to be assembled.

## MIRRORED

See flash.

## MOULDED

Moulding is a technique which consists of shaping an object using a mould which is hollow to hug the form of the desired object.

The moulded material must be able to change from the liquid to the solid state or be thick but sufficiently consistent to be able to be removed from the mould without deforming.

A wide range of materials can be moulded:

- metals
- plastics. The manufacturing process for frames is injection moulding.

A part production technique for large or very large production runs, this moulding can be in disk or in form.

## N

## NANOMETRES

Unit of measurement (1 millionth of a mm) used to calculate the wavelength of light. Maxwell in 1865 succeeded in demonstrating that light is an electromagnetic wave whose field is measured in nanometres, with a visible and invisible spectrum. The wavelength determines the colour of the light. The human eye is only sensitive to wavelengths between 400 and 700 nm.

## NATURAL LATEX

This is a natural polyisoprene from the *Hevea brasiliensis*. It is part of the elastomer family, and is therefore elastic, supple and robust. It also has the properties of being impermeable to water, and resistant to detergents and some alcohols.

## NBR (NITRILE)

This is a type of Nitrile: Nitrile Butadiene Rubber (NBR).

## NFC

Near Field Communication is a recent technology that allows the user to establish communication between 2 compatible devices at short distance using a shortwave technique. The NFC is Available in most smartphones.

## NITRILE

It is a synthetic latex. Its vulcanisation gives it properties similar to natural latex and many advantages (resistance to abrasion; excellent performance in oily and greasy environments; good resistance to chemical products).

## NON WOVEN

Non-wovens are used to make numerous products: single-use garments, quilt padding, sleeping bags, cleaning cloths, baby's nappies, floor and wall coverings, reinforcements, garment padding, etc...

The three production processes for the lap of non-wovens are:

- dry spinning - the fibres are used directly off the cards to make mattresses of fibres.
- by wet spinning a process similar to paper manufacture is used.
- by melt spinning the synthetic filaments are extruded in a current of hot air then lapped.

## NON-INVERTING DEVICE

Element added to a sliding fall arrester to prevent installing it upside down on the anchor line.

## NOSE CLIP

A flexible piece located at the top of single-use half-masks (on the nose), to adjust the face piece to the user's morphology.

## NOTIFIED BODY

A Notified Body in the framework of the EU 2016/425 Regulation is a conformity assessment body, body that performs conformity assessment activities including calibration, testing, certification (Module B) and inspection (Module C2 and D).

A notified body is inspected by the competent authorities of the Member States.

## NPF

Nominal Protective Factor.

Formula used to define the level of protection provided by wearing a respiratory protective mask, and in standard test conditions:  $NPF = 100 / TIL (\%)$ .

The maximum exposure concentration corresponds to:  $NPF \times MEV$ .

## NUBUCK (LEATHER)

Grain leather the surface of which has been buffed, giving it a fine velvety and silky aspect.

## NYLON

Registered trade name of DuPont de Nemours. It is a polyamide.



## O

**OIL-WATER REPELLENT**

Leather treatment using mineral or synthetic oils or fluorinated resins, to make it resistant to water and/or oil penetration. This treatment gives the leather better mechanical performance for abrasion and increases the comfort (flexibility) of the glove, hence increased dexterity and lifespan.

**OPTICAL BASE**

This is the radius of curvature of the lens. The most curved optical base is 9; the least curved is 4; the most common is 6.

**OPTICAL CLASS**

Parameter which measures the optical quality of the lens. There are 3 classes of optical quality. The 1st corresponds to the best quality and is recommended for permanent wearing of glasses. The 2nd class is used for intermittent wearing and the 3rd only for very brief wearing.

**OUTSOLE**

The sole, also called the outsole, is the part of the shoe in contact with the ground. As a result, it must be as tough as possible. With the midsole, it comprises the two parts of the sole of a shoe.

**OUTSOLE**

The sole is the under part of the shoe. It is in contact with the ground. Several soles can be used to make up protective footwear. The materials used to make them, their sculpture and the manufacturing process will ensure the ergonomic performance required, i.e.: Grip, Anti-slip, Safety & Wearer comfort.

**OVERALL**

Single-piece garment covering the whole body.

**OVERCAST (SEAM)**

Seams made using overcast stitch consisting of interlacing three threads around two edges of the fabric to be assembled.

**OVERGLASSES**

Protective glasses designed to be worn over spectacles.

**OXFORD**

Thick-yarned plain weave with a lustrous finish similar to the Oxford weave of cotton shirts.

## P

**PANOFLEX®**

Flexion zones integrated into the sole to enhance flexibility.

**PANOSHOCK®**

Delta Plus innovation: piece of expanded rubber which absorbs and reduces shock waves to the spinal column.

**PARKA**

A parka is by definition shorter than a coat, longer than a jacket or a blouson, and is impermeable.

**PATTERN CUTTER**

Person who makes the templates or patterns for garments: uppers for shoes, patterns for clothing, before cutting and assembly.

**PERMEATION**

Although the glove shows no porosity or imperfection, the chemical product may gradually pass through the glove, and come into contact with the skin. The standard EN374 assesses this performance: the time (in minutes) taken by the chemical substance to integrate and pass through the protective material is measured (1 mg/m²).

**PHYLON®**

PHYLON® is a synthetic materials, supple, ultra light, shock absorbent, used in running shoes by all the major sports brands; it is an EVA insert (Ethylene Vinyl Acetate) moulded, expanded.

**PIGMENTED (SPLIT LEATHER)**

Split leather coated with a layer of pigment. This is an economical, quality and resistant shoe leather.

**PIQUE EFFECT (STITCH)**

Knitted fabric with a raised waffle texture.

**PLATING**

Knitting process consisting of obtained two different fabric sides, each with a different type of yarn. Also used to combine two advantages: comfort and resistance for example.

**POLAR FLEECE**

Stitch brushed on one or both sides to obtain an aspect as soft as velvet. Polar fleece provides unrivalled comfort thanks to its lightness, its softness, its breathability and its extensibility. As this stitch is not wind breaking, polar fleece complexes with microporous membranes have been developed.

**POLO**

Polos are originally sports shirts with a turned-down collar, more specifically of Jersey.

**POLYAMIDE**

Synthetic fibre resistant to traction and abrasion. This is an elastic fibre that recovers its original shape after deformation. It dries rapidly as it absorbs little water. It is insect-resistant (especially against mites).



## POLYCARBONATE (PC)

Polycarbonate is a polymer (plastic) which has excellent mechanical properties and thermal resistance enabling it to be used at temperatures of up to 120°C. It has optimal shock resistance, hence its use in many sectors. It filters 99.9% of UV between 0 and 380 nm, UV 400 treatment extends this protection to 400 nm and absorbs part of the blue light in the light spectrum. Its sensitivity to chemical agents and to ultraviolet rays limits its use, however.

## POLYESTER

Synthetic fibre with several advantages similar to those of polyamides: resistance to traction and friction; good elasticity; uncreasable; solidity of dyes; easy care; high resistance to abrasion, resistance to acids, bases and solvents, and to heat. It can be mixed with wool and cotton, which makes up for its inability to absorb transpiration, its rough texture and its tendency to pilling.

## POLYETHYLENE

Polymer obtained by polymerisation of ethylene molecules. This is a material, with good chemical resistance, high stability, and easily recycled.

Polyethylenes (PE) are classified according to their density:

- LDPE (low density) is a supple plastic, used for helmet harnesses for example.
- HDPE (high density) is a hard plastic, used for the shell of helmets for example.

HSPE (high strength) provides good mechanical performances in particular against cutting, such as the fibre TAEKI for example.

## POLYMER

A polymer is the name of a chain of molecules used to make synthetic filaments before being melted and transformed into yarns. The polymerization operation is a process to manufacture a polymer by connecting small molecules (monomer) into a molecular chain of multiple molecular weight (mass).

## POLYMERIZATION

Chemical process by which resins or plastics are fixed to textile materials by means of heat to obtain canvas with coating.

## POLYPROPYLENE (PP)

Belongs to polyolefin fibres, structurally very similar to polyethylene. Polypropylene can be used as a plastic (helmets) or as a fibre (woven or non woven).

This material is easily recyclable, resistant to friction (abrasion) and to traction. It is grease-resistant. Its melting point is higher than 160°.

## POLYTEXTURE

Material effect by association of weaving. Example: Ripstop with a box-effect.

## POLYURETHANE (PU)

Polyurethane is a polymer transformed into synthetic resin or foam used in coatings, in some membranes and in the manufacture of elastane yarns (Lycra®). Polyurethane is frequently used for coating, making fabrics waterproof. Garments made with such coatings are often breathable and very good alternative solutions to much more expensive products made using waterproof breathable membranes. It has very good mechanical resistance (wear, abrasion, tearing and micro-cuts).

## PONGEE

Fabric with a silky, shiny finish.

## POPLIN

Tightly woven cotton plain weave used primarily for shirts.

## POWDERED (GLOVE)

Finishing process using a powder deposit (usually corn starch). The result is pleasant to the touch and soft which limits transpiration. For disposable gloves, the powdering facilitates donning and removal.

## PPE

Personal Protective Equipment.

According to the EU 2016/425 Regulation, any equipment designed and manufactured to be worn or held by a person for protection against one or more risks to that person's health or safety, and any interchangeable components which are essential for the protective function of this equipment.

## PRE-FILTER

Thin filter for protection against dust (P2 or P3), to be used on full and half-masks, associated with anti-gas filters (A/B/E/K) in order to obtain a combined gas and dust filter.

## PU WATER (MANUFACTURING)

Innovative manufacturing process for PU coated gloves, 100% water-based, i.e. no solvents, such as DMF, are used to ensure the bonding of the polyurethane (PU) and the support. As well as limiting the environmental impact of manufacturing, this technology minimizes the quantity of coating that penetrates inside the glove, making the support softer and more comfortable, as it limits transpiration and the accumulation of heat.

## PUPILLARY (REFLEX)

The eye's adaptation to light intensity: the pupil dilates or retracts.

## PVC

Polyvinyl chloride is a polymer usually known by its abbreviation PVC. PVC resists many solvents, acids and chemical products (in particular hydrocarbons). Fabrics coated with PVC are real barriers against bad weather. However, they should be worn for a limited time depending on the temperature in the working environment.

## Q

## QUILTED

Insulating lining made by superimposing materials held together by decorative stitching (fleece + lining).





## R

### RAGLAN (SLEEVE)

Sleeve assembled on the bias, from the neck to the underarm. There are no shoulder or underarm seams, making for greater ease of movement.

### RATCHET

Tightening system of the headband for safety helmet, for easier adjustment, using a ratchet.

### REINFORCEMENT

Insert (often made of leather) stitched to the glove in the zones most exposed to the risks of abrasion and cutting (Palm reinforcement, Web reinforcement between the thumb and index finger) or lateral or in front of the shoes.

### RESTRAINT (SYSTEM)

System designed to attach a person to an anchorage point so as to prevent any fall from height.

### RETRO REFLECTIVE (BAND)

These are bands fixed to high-visibility garments. 3M Scotchlite™ uses 2 types of technologies, microprisms (better contrast, rigidity suited to some garments) and microbeads (resistant to washing, high flexibility), and offer several different types of bands (stitched or sealed). Retro reflective materials are used to reflect light by day and by night.

### REVERSE GRAIN

Use of the inner part of the grain enabling considerable suppleness to be maintained, and significantly improving resistance to abrasion. Water-repellent treatment applied to reverse grain is ten times more effective than on the grain itself.

### RIB

1x1 / 2x1 / 2x2 type knits (the first and the second figure respectively indicate the number of column in relief and column in hollow seen on the face place) used to make very elastic and reversible knits. Used mainly to make sweaters, cuffs and hose and undergarments.

### RIPSTOP

This is a box-effect fabric weave (thicker yarn) that prevents tears from spreading while reducing the weight of the fabric.

### ROLLING

Action of crushing leather on its whole surface with a roller to make it firmer and more flexible.

### RUBBER

Synthetic elastomer made from oil and with elastic and resistance properties. The advantages of this material are to offer mechanical properties of good grip, good resistance to abrasion, contact heat and to oils and grease.

## S

### SATIN (WEAVE)

A fabric with a «satin» type weave is characterised by a shiny and smooth aspect. The yarn density gives it the advantage of not igniting as easily as «plain» weave. With special treatments, such as Proban®, flame retardants, it is a flame resistant material widely used for PPE.

### SCIVING

Operation to thin the leather to prevent over-thickness during assembly.

### SEAT STRAP

Strap used in the design of a harness with the dual role of seat and force distribution in the event of a fall, hence preventing too violent a force between the legs and any resulting consequences. The seat strap is not obligatory on a harness.

### SELF-RELEASE (SYSTEM)

Chinstrap mechanism, ensure proper operation. According to standard EN397: the system should be triggered by a force > 150 N and < 250 N.

### SELF-RETRACTABLE FALL ARRESTER

Device with automatic blocking system and an automatic lanyard tensioning system.

### SHANK

Used to support the instep. Very often made of wood, then steel, it is also now made of composite material. Its role is to maintain the instep, or arch of the foot.

### SHELL (SAFETY HELMET)

The shell is one of the components in a safety helmet (external part). Its role is to limit injuries by contact impacts (crushing and penetration).

It is made by injection from two types of materials:

- HPDE (high density polyethylene), an efficient material, the most economical and widely used.
- ABS (acrylonitrile butadiene styrene), a more rigid material.

### SILICONE (FREE GLOVE)

Silicones are polymers derived from sand. They are present more or less everywhere, in the form of mastics, glues, joints, anti-foam additives for washing powders, cosmetics, medical equipment, electrical cable insulation sheaths, high-performance grease, etc...

A certified silicone-free glove has a considerable advantage in industries requiring the total absence of silicone in their manufacturing or assembly process, for example in the automobile industry to guarantee paint without marks.



## SIZE

Half pelt cut from head to tail along the line of the backbone.

Set of measurements of the shoe volume, usually determined by the length and width of the foot, measured around the joint of the toes (toe width). Additional measurement tables, such as the height of the instep, determine the various sizes.

There are three main measurement systems in use in the world:

- french sizes (from 17 to 48).
- english sizes (1 to 13 feet).
- american sizes (equivalent to the English sizes + 0.5).

## SLIDING FALL ARRESTER

Fall arrester with an automatic blocking function and a guidance system. The fall arrester moves along an anchor line. It accompanies the user in his movements with no manual intervention needed by him. In the event of a fall, the fall arrester automatically blocks on the anchor line.

## SNR

Single Number Rating: a simple and widely used method to measure the attenuation noise, even if not really precise (measurement of decibels without taking account of frequencies).

## SOFTSHELL

Soft shell materials are hybrid materials. Between the polar fleece and the windbreaker, «softshells» combine several advantages: keep in body heat, evacuate humidity and act as a barrier to external aggressions, mainly wind and fine rain. It may be laminated to enhance performances (breathable, water repellent).

## SOLVENT (FREE COATING)

A solvent is a liquid that has the property of dissolving and diluting other substances without changing them chemically and without changing itself. The new innovative manufacturing process, also called PU Water, is 100% based on water. No solvent, such as DMF, is used to ensure the bond between the polyurethane (PU) and the support.

## SOUND

A sound is an acoustic vibration, a movement of particles in an elastic medium: the air.

Sound is characterised by its intensity (amplitude of variations in air pressure): high or low which is expressed in decibels (dB). Sound is also characterised by its height: high or low-pitched (number of oscillations per second) which is expressed in Hertz (Hz).

## SPLICE

The process of weaving one end of a stranded rope or cable into the other in order to create a loop.

## SPLIT

Internal part of the dermis, obtained by splitting or any other operation to remove the outer layer. The resistance to abrasion and heat are split advantages (after heat treatment).

## STABLE

Noise whose fluctuations do not exceed 1dB during the measurement period.

## STEEL

Use for the anti-puncture sole for its resistance to a force of 1100N and use for safety shoe toecap for its resistance to 100 or 200 joules.

## STEL

Short term exposure limit.

Concentration measured in mg/m<sup>3</sup> or in ppm over a maximum time of 15 minutes that it is advisable not to exceed.

## STIFFENER

A semi-rigid part inserted between the upper and the lining, located at the back of the shoe to prevent flattening and hold the heel in place.

## STRAPS (MAIN)

The main straps are elements which are used in the design of a fall arrest harness. They should support a person's body during and after the fall. Other straps in the design of a harness are called secondary straps.

## STROEBEL (STITCH)

This stitch is just the over stitch known to seamstresses; a single thread is chain-stitched to assemble the insole to the upper...

## STRUCTURE

In knitting, the method of interlacing stitches is called the structure. The three basic knit structures are jersey, interlock and rib.

## STYLIST

Person in charge of creating the sketch for a product (shoe, garment, glasses...) integrating technical elements and design constraints.

## SUEDE (LEATHER)

Split suede leather is made from the flesh and buffed to obtain the suede aspect, like Nubuck, but which is from the grain.

## SUPPORTED (GLOVE)

The dipped form is covered (or not: non supported) with a jersey or interlock cotton knit glove. A supported glove has better mechanical protections and comfort than an unsupported glove.

## SWEATBAND

Sheep or lambskin prepared by vegetable tanning, finished without dye and mainly used in linings.

## SWIVELLING CONNECTOR

Element often added to a connector or a fall arrester enabling separate rotation of the two parts.

## SYNTHETICS

Fibres of chemical origin: in this family are the polyesters, the polyamides, acrylics, para-aramides, polyethylenes, elasthanes, etc.



## T

### TAEKI® (FIBRE)

Synthetic fibre made of high-strength polyethylene (PEHT). It has exceptional mechanical properties, in particular against abrasion and cutting. 2<sup>nd</sup> generation TAEKI fibre is much softer than the 1st generation, thus providing greater comfort.

### TANNING

Tanning transforms the raw hide into an unfinished tanned hide, making it rot-proof, receptive to finishing treatments and chemically stable.

There are different types of tanning:

- vegetable tanning (natural plant extract tannins).
- mineral tanning (usually with chromium salts).
- mixed tanning (vegetable tanning retanned with chromium).

### TASLON

Rough textured fabric. The very tight crossing of its fibres makes it a robust fabric.

### THERMOFUSING

Bonding operation using pressure and heat (high visibility strip on a garment, interlining in a collar...

### THIMBLE

Element added inside an end loop to protect from wear generated by the friction.

### THINSULATE™

Registered trade mark of 3M. It is a web of synthetic insulating non-woven combining heat, comfort and finesse. It is water repellent.

### THT (HEAT-PROOF LEATHER)

Treatment used to make the leather more resistant to contact heat and reduce shrinkage on contact with a flame. The leather remains supple despite contact with a heat source.

### TIL

Total Inward Leakage.

It corresponds to the performance of the filtering face piece, and is expressed in %. The lower the %, the greater the protection performance.

FFP1: 22%

FFP2: 8%

FFP3: 2%

### TOECAP (SAFETY)

Steel, aluminium or composite shell to protect against the risk of impact and crushing of the toes. Performance is measured at 100 or 200 joules. These are the two main tests; there is also rust resistance (metal toecap), resistance to heat, to hydrocarbons, and to cold for composite toecaps.

### TRIPOD

Temporary and carrying anchorage device to be used for vertical movements in confined space.

### T-SHIRT

T-shirts are cotton garments covering the torso, without a collar, most often short-sleeved, the shape of which is reminiscent of a T.

### TWA

Time Weighted Average.

Concentration measured in mg/m<sup>3</sup> or in ppm, for an exposure time equal to the work day (workday of 8 hours), corresponding to the toxic risk.

### TWILL

A fabric with a «twill» weave is characterised by ribbing (diagonal relief ) on the rightside of the fabric, the underside is different. «Twill» weave is a weave that resists wear and traction.

### TYVEK®

The basic material in Tyvek® is polyethylene. Under the effects of pressure and heat (Flash spinning), a multitude of continuous filaments are obtained which are melt bonded to give a non-woven that is lightweight, flexible and resistant.

## U

### ULTRASOUNDS

Sounds of a frequency too high to be heard by humans (> 20 000Hz).

### ULTRAVIOLET

Ultraviolet (UV) light is electromagnetic radiation with an intermediate wavelength between that of visible light and that of X-rays. Ultraviolet can be subdivided into near UV (380-200 nm wavelength) and extreme UV (200-10 nm). Sunburns are primarily due to UV-B. UV-A cause of sunburns during very long exposures. High intensity of UV-B (315-280 nm) are dangerous for eyes and can cause "welder's flash" or photokeratitis.

### UNITS OF MEASUREMENT (YARNS)

The Tex, Decitex (Dtex), Denier (D) or Metric count (Nm) are units of measurement for yarns used to qualify their size also known as «Thread count».

### UPPER

Top part of the shoe located above the sole, comprising the tongue, the collar and the quarters.

## V

### VALVE

Also called a flap, it provides additional comfort to the mask, by rapidly lowering its temperature at the moment of expiration and rejection of CO<sub>2</sub>. It is on disposable masks (product code V), half masks or full face masks.

### VAMP

Front part at the level of the instep and on the sides.



## VENTILATION

Holes located at the top of the shell to enable better evacuation of heat and perspiration.

Ventilated helmets therefore do not pass the electric test (440 VAC), except for ventilations located at the bottom of the shell, as the test is conducted by immersing the shell to half-height.

## VERIFICATION

Visual inspection of Class III fall-based PPE with textile base.

## VEST

A vest is a short garment without sleeve, which covers top of the body.

## VINYL

Synthetic thermoplastic polymer. It is used for disposable gloves. It is impermeable to water, alcohol and detergents, but it is not elastic.

## VISIBLE (LIGHT)

Visible light visible spectrum or optical spectrum is the part of the electromagnetic spectrum which is visible to the human eye. There is no definite limit to the visible spectrum: the human eye adapting to light usually has maximum sensitivity at light of wavelength about 550 nm, which corresponds to a yellow-green colour.

## VULCANISATION

Vulcanisation is a process invented by Goodyear, which consists of heating the rubber at high temperature to obtain its transformation. This process is used for dipped gloves, placed in an oven after dipping in materials.

## W

### WADDLED (LINING)

Lining associated with a thickness of fleece to enhance the heat performance of the garment.

### WARP

It is the vertical yarns of knitted fabric in opposite to horizontal yarns.

### WATER REPELLENT (FABRIC)

Finish deposited on the fabric to give it the property of not letting droplets of water penetrate the fibre, but allowing them to slide off. It can be said that the drops of water are repelled. The fabric is not waterproof.

### WATER REPELLENT (LEATHER)

Leather treatment using mineral or synthetic oils or fluorinated resins, to make it resistant to water penetration. This treatment gives the leather better mechanical performance for abrasion and increases the comfort (flexibility) of the glove, hence increased dexterity and lifespan.

### WATERPROOF (SEAMS)

Seam on which a waterproof plastic film is applied to prevent water penetration by capillarity (passage of water by absorption of yarns and/or stitching holes) into an assembly. Assembly seam covered using thermofusing of a band of material compatible with that of the garment to prevent infiltration of water and waterproof the garment.

## WEAVE

Method of interlacing warp and weft yarns in woven materials. Each weave has its own aesthetic and mechanical properties. The main fabric weaves are plain, serge, satin. The three basic knit weaves are jersey, interlock, rib. In knitting, the method of interlacing stitches is called the structure.

## WEFT

These are the horizontal yarns in woven fabrics, as opposed to vertical warp yarns.

## WELDING

Glasses or hood with various shades of filters suitable for welding work; disposable masks with charcoal filter, welding goggles and helmets with special tinted filter, to protect the eyes and face during welding.

## WINCH

Lifting device for lifting things (eg equipment) or people, according to the type of product, in rescue procedure

## WORK POSITIONING (SYSTEM)

A system used to maintain a user at the workstation in a given position.

## WRIST CUFF

Knitted finish of the glove wrist, to hold the glove on the wrist and prevent any penetration of dust and waste inside the glove.

## Z

### ZIP (REVERSE STITCH)

Zip whose stitch is placed on the reverse so that only the ribbon can be seen. It is used for an aesthetic effect and to prevent friction.

### ZIP (WATERTIGHT)

Reverse stitch zip covered with a PU membrane to ensure watertightness. It is used on waterproof and technical products.





## HEAD PROTECTION

AIR COLTAN	43	KILIMANDJARO CLEAR	19	MEIA YELLOW	17
ASO2 CLEAR	7	KILIMANDJARO CLEAR AB	19	MENTALPHA	41
ASO2 SMOKE	7	KILIMANDJARO SMOKE	19	MILO CLEAR	17
BALBI 2	31	KISKA2 CLEAR	14	MILO SMOKE	17
BARRIER 2	23	KISKA2 SMOKE	14	MURIA 1	21
BARRIER PLATE 2	23	LIPARI2 CLEAR	15	NECKALPHA	41
BASALPHA	41	LIPARI2 T5	15	ONYX	34
BASEBALL DIAMOND V	36	M1100	58	PACAYA CLEAR	10
BASEBALL DIAMOND V UP	36	M1100V	58	PACAYA CLEAR LVVIZ	9
BASGAMMA	33	M1100VB	59	PACAYA CLEAR STRAP	10
BASWELD	23	M1104	58	PACAYA CLEAR STRAP LVVIZ	8
BLOW2 CLEAR	5	M1200	58	PACAYA SMOKE	10
BLOW2 LIGHT MIRROR	5	M1200V	58	PACAYA SMOKE LVVIZ	8
BLOW2 MIRROR	5	M1200VB	59	PACAYA T5	10
BRAVA2 CLEAR	18	M1200VBW	59	PICO 2	31
BRAVA2 LIGHT MIRROR	18	M1200VP	59	PITON 2 CLEAR	19
BRAVA2 MIRROR	18	M1200VPLUS	57	PITON CLEAR	19
BRAVA2 SMOKE	18	M1200VPW	59	PIT-RADIO 3	45
BRAVA2 YELLOW	18	M1200VW	58	QUARTZ I	40
CASOUD 3	25	M1204	56	QUARTZ UP III	38
CASOUD2HE	25	M1204V	56	QUARTZ UP IV	38
COLTAN	43	M1300V	57	RIMFIRE CLEAR	6
CONIC DISPLAY	51	M1300V2	58	RIMFIRE MIRROR	6
CONIC010	51	M1300VB	59	RIMFIRE POLARIZED	6
CONIC200	51	M1300VP	59	RUIZ 1	21
CONIC500	51	M1304V	56	RUIZ 1 ACETATE	21
CONICAP01	50	M1304VW	56	SAJAMA	21
CONICAP01BR	50	M2FP2V	58	SCREEN	24
CONICC0200	51	M2FP2VPLW	57	SCREEN PLATE	24
CONICC0PLUS200	50	M2FP2VW	58	SEPANG 2	47
CONICDE010	51	M2FP3V	57	SILVERSTONE 2	47
CONICFIRO10	49	M3FP1	58	SPA 3	48
CONICFIRO50	49	M6000 A1	65	SPIDER REFILL FFP2	54
CONICFIROE010	49	M6000 P2	65	SPIDER REFILL FFP2W	54
CONICFIT010	49	M6000 P2 CLIP	65	SPIDER REFILL FFP3	54
CONICMOVE01	50	M6000 P3	65	SPIDERMASK P2 X5	54
CONICMOVE01BR	50	M6000E A2	65	SPIDERMASK P2W X5	54
CONICPLUS200	50	M6000E ABEK1	65	SPIDERMASK P3 X5	54
CONICSOFO10	49	M6000E PREP2	65	SUPER QUARTZ	39
DEAR BOX	51	M6000E PREP3	65	SUZUKA 2	48
DYNAMIC JUGALPHA	41	M6100 JUPITER	64	THUNDER CLEAR	11
DYNAMIC JUGBETA	34	M6200 JUPITER	64	THUNDER SMOKE	11
EGON CLEAR	16	M6400 CHEM KIT	65	TOBA 3 T5	25
EGON LIGHT MIRROR	16	M6400 JUPITER	64	VISIONYXPR	34
EGON SMOKE	16	M6400 MARS KIT	65	VISOR FLASH	28
EGON YELLOW	16	M6400 SPRAY KIT	65	VISOR HOLDER	31
EZ-COM	45	M9000 P3	61	VISOR T-GUARD	27
FILM GOGGLE	20	M9000E A2	61	VISOR TORIC CLEAR	27
FILTER 11	25	M9000E A2B2	61	VISOR TORIC T5	27
FILTER-IN	25	M9000E A2B2E2	61	VISORG	30
FORESTIER 3	39	M9000E A2B2E2K2	61	VISORG MINI	30
FUEGO	14	M9000E A2B2E2K2HGP3	61	VISOR-H	31
FUJ12 CLEAR	11	M9000E A2B2E2K2P3	61	VISOR-HOLD MINI	31
FUJ12 GRADIENT	11	M9000E A2B2E2P3	61	VISORPC	30
GALERAS CLEAR	20	M9000E A2B2P3	61	VISORPC MINI	30
GALERAS SMOKE	20	M9000E A2P3	61	VISOR-U	31
GO-SPECS TEC CLEAR	7	M9000E AX	61	VULCAN02 CLEAR	15
GRANITE PEAK	33	M9000E AXP3	61	VULCAN02 PLUS CLEAR	15
GRANITE WIND	33	M9000E B2	61	VULCAN02 SMOKE	15
HARNESS 0	34	M9000E B2P3	61	WINTER CAP	40
HARNESS V	36	M9000E E2	61	YAS MARINA	46
HEKLA2 CLEAR	16	M9000E E2P3	61	ZIRCON 1	40
HELIUM BLUE BLOCKER	13	M9000E K2	61		
HELIUM DETECTABLE	12	M9000E K2P3	61		
HESTICKER	41	M9200 - ROTOR GALAXY	62		
INTERHYKIT	46	M9300 - STRAP GALAXY	62		
INTERLAGOS	46	MAGNY HELMET 2	48		
JUGALPHA	41	MAGNY-COURS 2	48		
JUGGAMMA	33	MEIA CLEAR	17		
KAIZIO	42	MEIA SMOKE	17		



## HAND PROTECTION

50MAC	128	FB149	128	VE702P	87
51FEDF	128	FBF15	125	VE702PG	87
ALPHA VE905	116	FBF50	125	VE702PN	87
APOLLON VV733	101	FBN49	129	VE712GR	91
APOLLON WINTER CUT VV737	73	FC115	133	VE713	89
APOLLON WINTER VV735	100	FCN29	129	VE715GR	91
APOLLONIT VV734	88	FIB49	127	VE722	91
ATHOS VV902	97	FIBKV02	126	VE726	90
ATON VV731	100	FP159	129	VE727	90
BASF PVCC400	109	GFA115K	134	VE728	90
BASF PVCC600	109	GFBLE	128	VE729	90
BOREE VV901	97	HERCULE VV750	100	VE730OR	102
BOROK VV903	97	HESTIA VV702BC	86	VE733	102
BUCH520V	127	HESTIA VV702NO	86	VE799	103
CA515R	134	KCA15	135	VENICLEAN V1340	123
CA615K	134	KPG10	135	VENICUT D HEAT & CUT FOAM	76
C8HV2	127	LA500	103	VENICUT F XTREM CUT	73
CHEMSAFE PLUS VV836	107	LA600	116	VENICUT F XTREM CUT TOUCH	72
CHEMSAFE PLUS WINTER VV837	107	LAT50	112	VENICUT10	86
CHEMSAFE VV835	106	NEOCOLOR VE530	111	VENICUT20	83
C0131	137	NI015	117	VENICUT30	83
COB40	137	NI150	117	VENICUT32	80
CP149	137	NI155	117	VENICUT32 ESD	84
CRYOG	136	NI170	117	VENICUT33	83
CT402	129	NI175	117	VENICUT34	83
DC103	130	NITREX VE801	115	VENICUT36GR	82
DCTHI	125	NITREX VE802	114	VENICUT41GN	78
DF132	125	NITREX VE803	114	VENICUT42GN	78
DPC8HV2	127	NITREX VE830	115	VENICUT43	79
DPCT402	129	NITREX VE840	114	VENICUT44	79
DPCT502	129	NITREX VE846	115	VENICUT47	78
DPDC103	130	NYSOS VV904	96	VENICUT50	76
DPFBN49	129	PETRO ESD VE781	84	VENICUT52	76
DPLAT50	112	PETRO VE786	108	VENICUT53NO	75
DPNI015	117	PETRO VE780	108	VENICUT54BL	75
DPPVC7327	109	PICAFLORE VE240	118	VENICUT55	79
DPTC715	133	PM159	137	VENICUT56	79
DPV1371	123	PM160	137	VENICUT57G3	77
DPVE450	116	PVC7327	109	VENICUT58	77
DPVE702P	87	PVC7335	109	VENICUT59	75
DPVE702PG	87	PVCGRIP35	109	VENICUT59 LIGHT PLUS	75
DPVE702PN	87	SAFE & STRONG VV811	88	VENICUT5M	79
DPVE712GR	91	SAFE & TOUCH VV905NO	97	VENICUT5X1	74
DPVE715	91	SOFT-NIT VE470	113	VENIFISH VE990	112
DPVE716	91	TC716	133	VENIPLUS V1383	122
DPVE727	90	TER250	133	VENIPLUS V1500	120
DPVE730	102	TERK400	132	VENIPRO VE450	116
DPVENICUT34	83	THEMIS VV792 ESD	84	VENITACTYL V13008100	121
DPVENICUT42GN	78	THRYM VV736	98	VENITACTYL V1310	123
DPVV733	101	TIG15K	134	VENITACTYL V1371	123
DPVV733E	101	TOUTRAVO VE509	110	VENITACTYL V14008100	121
DPVV735	100	TOUTRAVO VE510	110	VENITACTYL V1400PB100	121
DPVV831	102	TOUTRAVO VE511	111	VENITACTYL V14508100	121
DS202RP	130	TP169	137	VENIZETTE VE920	112
DUOCOLOR VE330	118	VE200	118	WET & DRY VV636BL	89
ECONOCUT5M	77	VE440	116	XTREM HEAT TERK500	135
EOS NOCUT VV910	92	VE630	103	ZEPHIR VE210	118
EOS NOCUT WINTER VV913	92	VE631	103		
EOS OBM VV911	94	VE702	87		
EOS VV900JA	95	VE702GR	87		



## DISPOSABLE WEAR

BLOUSPE	156	DT223	153	P0109	156
BLOUSPO	156	DT250	148	P0110	157
DT111	159	DT300 DELTACHEM	146	P0111	157
DT115	154	DT301 DELTACHEM	146	P0112	157
DT115CV	154	DT302 DELTACHEM	146	P0115	157
DT117	150	KITVI	159	SURCHPE	159
DT119	149	MANCHBE	158	SURCHPLUS	159
DT125	151	MANCHBL	158	SURCHPO	159
DT215	154	MASOU	158	TABPO02	156
DT215CV	154	MASOUG	158	TABPO04	156
DT216	154	MASOUV	158	TOQUE	157
DT221	152	P0106	156		

## WORKWEAR

AGRA	195	M2SA2	184	MCSA2	176
ATOLL	202	M2VE2	185	MCVE2	176
BADGE	202	M2VHV	198	METEOR	201
BALI	194	M5BE2	171	MOGI2	164
CEINT04	202	M5C02	170	MOPA2	164
COMET	201	M5GI2	171	MSLPA	193
DMACHBER	181	M5PA2	168	NAPOLI	191
DMACHCOM	180	M5SA2	170	OFFSHORE	201
DMACHGIL	181	M5SGI	192	PALIGPA	193
DMACHPAN	181	M5SPA	192	PALIGVE	193
DMACHSAL	180	M5VE2	171	PANOSTRPA	190
DMACHVES	181	M6BER	189	PHBE2	200
GENOA	194	M6COM	188	PHPA2	200
LAZIO	195	M6GIL	189	PHVE2	200
LULEA2	191	M6PAN	189	ROMA	195
M2BE2	185	M6SAL	188	STAR	201
M2C02	184	M6VES	189	TURINO	195
M2CZ2	184	MAPOC	203	VERONA	202
M2GEN	203	MCCDZ	177	ZIMA	203
M2GI2	185	MCC02	176		
M2PA2	185	MCCOM	177		
M2PHV	198	MCPA2	174		

## OUTDOOR WEAR

304	243	GRANDERS	226	NATORI	225
305	243	HALDEN	225	NEVE	237
400	243	HELSINKI2	217	NEW DELTA	222
850	242	HORTEN2	230	NORDIC	237
ALASKA2	216	ISOLA	218	NORTHWOOD2	222
ALMA	236	JURA	237	OTAKE	239
ANZIO	235	KARA	237	RANDERS	223
BEAVER	234	KOLDYPANTS	208	RENO	223
BRIGHTON	233	KOLDYTOP	208	SHERMAN	233
CARSON	214	KOPER	213	SIERRA2	227
CHAMONIX	237	LECCO	235	SLIGO	240
CLUSES2	227	LIDINGO	241	STOCKTON2	229
DARWIN3	218	LITE	239	TATRY	212
DMACHGIW	228	LULEA2	232	TOFINO	241
DMACHPAW	228	M2PW2	229	TYPHOON	241
DOON	221	MA400	243	VERNON	236
EOLE	212	MARMOT	234	VIGO	213
FIDJ12	224	MILTON2	210	YEMAN	211
FINNMARK	215	MOOVE	220		
GALWAY	240	MOTION	221		
G-DOON	226	MYSEN2	232		
GOTEBORG	215	NAGOYA	234		



## TECHNICAL WEAR

208V2	256	FREEWAY HV	254	NORDLAND	262
604V2	256	GILP2	257	OFFSHORE	255
605V2	256	GILP4	257	OPTIMUM2	249
ALMA	264	ICEBERG	262	PHBE2	259
AUSTRAL II	263	IGLOO II	263	PHPA2	259
BALTIC	264	KOLDYPANTS	264	PHVE2	259
BAUCE2	257	KOLDYTOP	264	RENO HV	254
BRASSJA	257	KOMODO2	265	RUNWAY	250
CAFR1	265	KOMODO2HV	265	SSVFR	265
CO600	266	LAPONIE II	263	STAR	255
COMET	255	LEGA	252	STRADA 2	250
DOONHV	253	M2PHV	258	TABALPV	267
DOUGLAS 3	261	M2VHV	258	TABLIVE	267
EASYVIEW	251	MANCHB	267	TABNIT	267
EPICEA 3	261	MARMOTHV	253	TABPU	267
ERABLE 3	261	MELEZE 3	261	TARMAC	248
FARGO HV	251	METEOR	255	TASOUB	267
FIDJI HV	254	MOONLIGHT2	252		

## FOOT PROTECTION

22180	307	GOULT II S1P SRC	286	PERTUIS3 S1P SRC	278
45400	307	JAVON 2 E	306	PHOCEA S3 SRC	279
46500	307	JET2 S1 SRC	289	PHOENIX S3 SRC	279
ARONA S1P SRC	300	JET2 S1P SRC	289	PRATO	307
ASTI S1P SRC	296	JET2 S3 SRC	288	PRISM S1P SRC	279
AURIBEAU3 S1P SRC	278	JOUCAS2 NO SRC	306	PROTON S1P SRC	279
BRISTOL S3 SRC	301	JOUCAS2 SRC	306	RICHMOND S1 SRC	301
BROOKLYN S3 SRC	292	JUMPER2 S1 SRC	289	RIMINI III S1P SRC	287
CADEROUSSE S3 SRC	281	JUMPER2 S1P SRC	289	ROBION3 S2 SRC	301
CALYPSO S3 SRC	280	JUMPER2 S3 BUMPER SRC	288	SAGA S3 SRC	274
CARAVELLE S3 SRC	274	JUMPER2 S3 FUR HC SRC	288	SAKHA S3 SRC	304
CAROMB S1P SRC	281	JUMPER2 S3 FUR SRC	288	SAMARA S3 SRC	304
CHAUSSETT	307	JUMPER2 S3 SRC	288	SAMY S3 SRC	276
CHAUSSON	307	LACET XL	307	SANTANA S3 SRC	280
COBRA4 S3 SRC	286	LAUTARET 3	305	SAULT2 S3 SRC	282
COMO S1P SRC	297	MAESTRO S3 SRC	280	SAULT2 S3 SRC ESD	284
CONCORDE S3 SRC	274	MANHATTAN S3 SRC	292	SMASH S1P SRC	294
DELTA FLY S1P SRC	290	MAUBEC 3 SBEA SRC	301	SUMMER S1P SRC	297
DELTA SPORT S1P SRC	292	MAZAN S1P SRC	281	TANGARA S1P SRC	287
D-SPIRIT S1P SRC	295	MIAMI S1P CAMO SRC	300	TW302 S3 SRC	272
D-SPIRIT S3 SRC	295	MIAMI S1P SRC	300	TW402 S3 SRC	272
D-STAR S1P SRC	295	MIAMI S2 SRC	301	VIAGI S1P SRC ESD	284
ECRINS S5 SRC	305	MIAMIXL S1P SRC	298	VIENS2 S4 SRC	306
ESKIMO SBHP SRC	302	MIWA S3 M SRC	286	VIRAGE S1P SRC	297
FENNEC3 S1 SRC	287	MONTBRUN S3 SRC	281		
FENNEC3 S1P SRC	287	MORNAS SRC	305		
GARGAS II S1P SRC	286	NOMAD S3 SRC	276		
GIGNAC2 S5 SRC	306	OHIO3 S3 SRC	278		

## FALL PROTECTION

AM002X5	361	AN201200CC	340	AN211200CDD	340
AM007	356	AN201200CD	340	AN213100CDD	342
AM009	361	AN203100CC	342	AN213200CCC	341
AM018	361	AN203200CC	341	AN213200CDD	341
AM022X2	361	AN203200CD	341	AN218R2CDD	339
AM025X2	361	AN208R2CD	339	AN218S200CDD	339
AM027	361	AN208S200CD	339	AN230CD	338
AM030	361	AN211200CCC	340	AN235200CD	338





## FALL PROTECTION

AN235200PR	338	HA200	331	PROTECTOR METAL AN115F	348
AN240CDD	338	HA203	331	PROTECTOR METAL AN115T	348
AN245200CDD	338	HAPAD	331	PROTECTOR METAL AN116F	348
AN245200PRR	338	HAR11	328	PROTECTOR METAL AN116T	348
AN30010	353	HAR12	328	PROTECTOR METAL AN11730F	348
AN30020	353	HAR12GILNO	328	PROTECTOR METAL AN11730T	348
AN30030	353	HAR14	329	PROTECTOR TETRA AN14006F	346
AN401	352	HAR22H	327	PROTECTOR TETRA AN14006T	346
AN410	352	HAR23H	327	PROTECTOR TETRA AN14008F	346
AN420	352	HAR24H	326	PROTECTOR TETRA AN14008T	346
AN430	352	HAR25HA	326	PROTECTOR TETRA AN15006F	344
AN701	354	HAR42EL	325	PROTECTOR TETRA AN15006T	344
AN801	354	HAR44EL	325	PROTECTOR TETRA AN15010F	344
AN802	354	HARVSSI	331	PROTECTOR TETRA AN15010T	344
ANATOM HAR32	324	IPN LV130	356	PROTECTOR TETRA AN15015F	344
ASCAB AN071	354	JAGUAR HAR36TCP	320	PROTECTOR TETRA AN15015T	344
ASCORD AN065	353	L0005200	360	RA038_	371
ASDRISS2 AN068	352	L0007100	360	RAH33	367
CABLE LIGNE LV301	359	L0007150	360	RESCUEHUB TC063	368
CAIMAN LV135	355	L0007150CD	360	ROPE ACCESS KIT TC039	370
CAMELEON AN066	352	L0030100	356	SAFECORD TC007	362
CAMELEON AN066A	352	L0030150	356	SPEEDLINE LV201	358
DAYAK LV120G	355	L0030200	356	TC001	362
DESCENDER TC062	370	L0045200	360	TC002	362
DESCORD TC006	362	L0047100	360	TC003	362
ELARA130	337	L0047150	360	TC004	362
ELARA140	336	L0047150AD	360	TC005	363
ELARA150	335	L0147150	360	TC008	371
ELARA160	337	L0147150CDD	360	TC009	363
ELARA170	335	LV100	355	TC012	362
ELARA190	336	LV102050	331	TC015	363
ELARA270	334	LV102100	356	TC016	363
ELARA280	334	LV102150	356	TC022	367
ELARA320	333	LV105	355	TC025	363
ELARA340H	332	LV106	355	TC029	363
ELARA350H	332	LV400	357	TC040	363
ELARA390H	333	LV401	357	TC044	362
EOLIEN HAR35	324	LV402	357	TC064	369
EOLIEN HAR35A	324	LV403	357	TC102C	367
EX021	330	MAXIBLOC	349	TC105	367
EX030200	330	MEDBLOC AN13006C	349	TR003C	364
EX030400	330	MINIBLOC AN102	350	TR003K	364
EX118	330	PROTECTOR ELEVATOR TR01720F	348	TRA101	364
EX120	328	PROTECTOR ELEVATOR TR01720T	348	TRA102	364
EX220	327	PROTECTOR ELEVATOR TR01730F	348	TRA103	364
FENNEC AN06310	353	PROTECTOR ELEVATOR TR01730T	348	TRA20	364
FENNEC AN06320	353	PROTECTOR EXTRA LARGE AN19040T	347	TRA22	364
FENNEC AN06330	353	PROTECTOR EXTRA LARGE AN19060T	347	TRA30	364
FIXBLOC AN105	350	PROTECTOR LARGE AN18020T	347	TRA32	364
GALAGO HAR35TC	322	PROTECTOR LARGE AN18030T	347	TRBAG	364
GALAGO HAR35TCA	322	PROTECTOR LOAD AN517 - AN518	351	TRBAG3	364
GIRAFE TRG20	366	PROTECTOR LOAD AN530	351	TRG01	366
				TRG02	366
				TRG03	366





## HEAD PROTECTION



Anti-mist



Non reflecting



Anti-mist N



Antistatic



Anti-scratch



UV filtration up to 400 nm



Anti-scratch K

## HAND PROTECTION



Anti-vibration



Anti-slip



Waterproof,  
water repellent



Breathable  
coating



Second skin  
effect



Thickness



Ergonomics



Fine touch



High comfort



Washable 30°C x 5



Hand wash



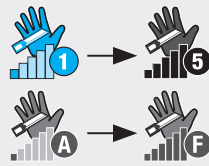
Lightweight



Multilayer



Resistant  
to heat contact



Resistant to cutting



Cold resistant



Shock resistant



DMF free



Latex free



Silicone free



Tactile

## FALL ARREST WORK SITUATIONS

MOVEMENTS ► ► VERTICAL  
► HORIZONTAL + N° CORRESPONDING



VERTICAL MOVEMENT ON  
A PERMANENT STRUCTURE



LONG VERTICAL MOVEMENT  
OR MOVEMENT ON INCLINED  
SURFACE



LONG VERTICAL MOVEMENT  
OR MOVEMENT ON INCLINED  
SURFACE FOR ROPE ACCESS WORK



SHORT VERTICAL MOVEMENT  
OR MOVEMENT ON INCLINED  
SURFACE (LESS THAN 3 M)



VERTICAL MOVEMENT  
CONFINED SPACE



LONG HORIZONTAL MOVEMENT  
ON HORIZONTAL SURFACE



LONG HORIZONTAL MOVEMENT  
ON VERTICAL STRUCTURE



SHORT HORIZONTAL MOVEMENT  
(LESS THAN 3 M)



LONG MOVEMENT WITH MULTI  
CONNECTION /DISCONNECTION



WORK POSITIONING



MOVEMENT ON LIFELINE



RESTRAINT



RESCUE AND EVACUATION



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