

P E R S O N A L S A F E T Y



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PERSONAL SAFETY





MO-11000



MO-11001



MO-11003



SAFETY GLASSES

Stylish safety glasses made from tough polycarbonate, Protection against UV radiation and ejections of solid particles. Adjustable sides. Delivered with pouch. Clear and tinted models available.

Product Number	Characteristic	UV Protection	Resistance
MO-11000	Clear lenses	99.5 % < 370 mm	Level F Impact: 6mm steel ball launched at 45 m/s
MO-11001	Tinted lenses	99.5 % < 370 mm	
MO-11003 *	Tinted lenses	UV/IR protection, welding filter	

CAUTION: DO NOT USE FOR WELDING OPERATIONS



MO-11010



MO-11011



SAFETY OVER-GLASSES

Safety glasses made from tough polycarbonate, offering 98% UV protection. Adjustable sides. Delivered with pouch. MO-11010 MO-11011 Clear and tinted models available.

Product Number	Characteristic	UV Protection	Resistance
MO-11010	Clear lenses	100 % 180 < 400 mm	Level F Impact: 6mm steel ball launched at 45 m/s
MO-11011	Tinted lenses	100 % 180 < 400 mm	

CAUTION: DO NOT USE FOR WELDING OPERATIONS



MO-184 MO-186
Helmet not included



MO-186

FACE SHIELD

Protect yourself from short circuit arcs when working on switchboards;
 + No metallic parts
 + Adjustable
 + Colourless 1.5mm anti-condensation, polycarbonate face shield
 + Two models available, with Brow shield & Clip-on to hardhat.

Product Number	Description
MO-184	Clip onto helmet
MO-186	Brow Shield



MS-124



MS-125

LED HEADLAMP

Can be worn either on the head or any kind of helmet.

MS-124

- + Powered by 1 battery. AA LR6: 20 hours
- + Lumens max: 34 Lumens
- + Light wiring for a wide, short distance beam or a long-range directional beam, or a combination of the two for optimal lighting. 1 flash mode.
- + Range 32m

MS-125

- + Powered by 1 battery. 30 hours
- + Lumens max: 145 Lumens
- + Light current for a wide, short distance beam, or a long-range directional, or the combination of the two for 1 flash mode.
- + Range 75m

Product Number	Description	Sealing	Weight (g)
MS-124	5 led's headlamp	IPX7	75
MS-125	Headlamp	IPX6	80



1000V INSULATING GLOVES—SINGLE COLOUR

- + Tested to IEC-60903 Category M, Class 0
- + Made from 1mm thick specially treated latex
- + Weight: 200g
- + Available in 4 sizes
- + Individually tested and shipped in a sealed plastic bag marked with test date

Product Number	Description
CG-10-A	Size 8
CG-10-B	Size 9
CG-10-C	Size 10
CG-10-D	Size 11



LEATHER OVERGLOVES

- + Used as outer glove.
- + Silicon grain leather, very supple.
- + Large protective cuff in chrome tanned hide.
- + Velcro strap.

Product Number	Description
CG-98-A	8
CG-98-B	9
CG-98-C	10
CG-98-D	11



LEATHER OVERGLOVES

- + Used as outer glove.
- + Silicon grain leather, very supple.
- + Large protective cuff in chrome tanned hide.
- + Velcro strap.
- + Designed for use with >1000V insulating gloves

Product Number	Description
CG-99-C	10
CG-99-D	11



COTTON UNDER-GLOVES

- + To be used under insulating rubber gloves

Product Number	Description
CG-80-H	Men
CG-80-F	Women



MS-135



MS-134

INSULATING BOOTS

- + Made from high quality dielectrical rubber, very flexible and resistant.
- + Anti-perforation composite sole and shell.
- + Anti-slip sole.
- + Protection against step and touch hazardous potential gradients.

Product Number	Voltage
MV-135-*	20 000 V
MV-134-*	1000 V
* Add sizes: 39, 40/41, 42, 43, 44, 45, 46/47, 48, 49/50 Example: MV-135-40/41	



RUBBER GLOVES BOX

- + To be placed in high voltage sub-stations or be carried around.
- + Specially designed for protecting insulating gloves.
- + This plastic box also ensures the protection against UV radiation of insulating gloves.
- + The transparent cover enables to check gloves presence.
- + Bottle of talc included.
- + Can be fixed on wall.

Product Number	Overall length (mm)	Weight (kg)
CG-35/2	101 X 224 X 476	1.850



CARRY BAG

- + Made from reinforced waterproof fabric for transport of rubber gloves in vehicles and tool boxes.
- + Rear loop for belt and snaps.

Product Number	Overall length (mm)	Weight (g)
CG-36	60 x 180 x 400	0.12



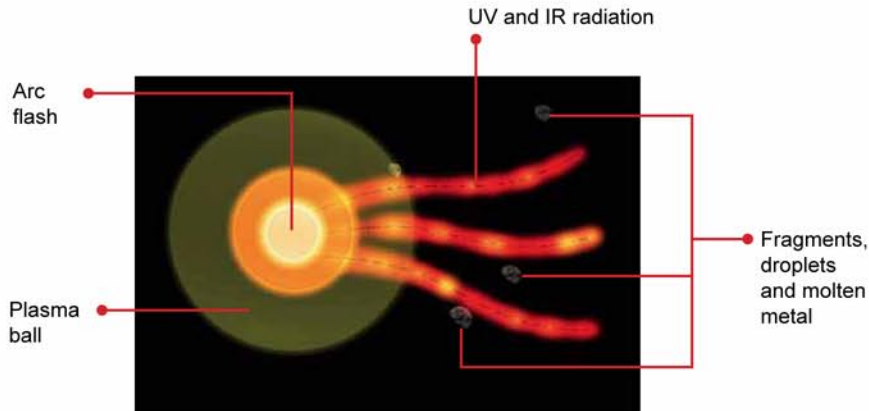
BAGS FOR INSULATING MATS

- + Especially designed for carrying and protecting insulating mats.
- + Equipped with a shoulder strap and a plastic window for instructions and storage identification.

Product Number	Description	Length (cm)
MP-01	For MP-42/16 and MP-42/66	70
MP-02	For MP-42/11	110

THE "ARC FLASH" PHENOMENON

An electric arc follows a short circuit. It produces nearly instant effects with serious consequences without proper protection.



- + The arc's main manifestation is its thermal effect. The heat energy released, which is proportional to the voltage, intensity, and fault length, can be considerable (19,000°C), melting the metal and charring the insulation.
- + Blast effect, caused by the very rapid release of energy in a limited volume of air (similar to an explosion).
- + Light effect with high ultraviolet and infrared radiation.
- + Ionisation effect that can trigger an arc on nearby active sections.

In addition to these effects, particles may be projected, and the metal may melt.

When electric arc danger exists, heat-resistant clothing must be worn.

The arc's characteristics are given by:

- + The resistance value of the free arc, expressed in cal/cm² according to NFPA 70 E, ASTM standards, and IEC 61482-1-1.
- or
- + The protection class (1 or 2) with a constrained arc according to IEC 61482-1-2.

PROTECTION AGAINST ARC FLASH

The following are used to determine the proper equipment for protecting against an electric arc:

- + The maximum fault current value.
- + The phase/ground rated voltage at the site of the risk.
- + The distance between the source of the arc and the reception surface.
- + The AC cycle number and the mono or three-phase circuit type.
- + The location where the arc is produced (confined space).

After recording these parameters, we can estimate the level of risk and determine the proper protective clothing and PPE to use: **8 to 100 cal/cm² or class 1 or 2.**

For more information, please contact our technical department.



Fire-retardant clothing in case of exposure to an electric arc, confirming to IEC 61482-2 and the regulation NFPA 70E.



INSULATING GLOVES FOR "ARC FLASH" PROTECTION

Latex insulating gloves designed especially to provide electrical insulation and heat protection from an electric arc.

Arc resistance:

- + 21.6 cal/cm² according to ASTM (F1959 and glove standard project).
- + Class 1 at 150 mm and Class 2 at 300 mm according to IEC 61482-1-2.
- + Two-colour latex with a life indicator (white undercoat).

Product Number	Class	Voltage	Thickness (mm)	Length (mm)	Weight (g)
CG-11-(*)	0	≤ 1000 V	1	360	230
(*) References to be completed by size A, B, C or D					



NOMEX III® UNDERGLOVES

+ 100% Nomex III® fire-resistant and heat-resistant undergloves. Protects the hands against heat of up to 100°C. Ideal protection for "arc flash" equipment.

Product Number	Characteristics	Quantity per box	Weight (g)
CG-37	One size	5 pairs	32



"ARC FLASH" GLOVES

- + Protects the hands against the heat of an electric arc of up to 65 cal/cm².
- + ASTM F 1506-02a standard, tests according to ASTM F1959.
- + NFPA 70E compliant

Product Number	Characteristics	Length (mm)	Weight (g)
CG-65-CAL	One size	355	265



HIGH-VISIBILITY "ARC FLASH" PARKA

- + 100% waterproof parka.
- + Resistant to arc flash and flames.
- + Ideal protection for "arc flash" equipment.
- + 19 cal/m²
- + ASTM F 1891
- + ANSI 107 Class 3 Level 2.
- + Round neckline with a hood.
- + High quality tissue.
- + Tightening velcro/
- + Large pockets with a Velcro flap.
- + Zip closure and pressure flap.

Product Number	Characteristics	Weight (g)
M-882082	One size	924



ARC FLASH FACE SHIELD KIT (10 cal/cm²)

- + Electrician ABS helmet
- + Large field of view
- + Anti UV and IR polycarbonate 1.5 mm thickness
- + Chin Protection

Product Number	Composition	Description	Weight (g)
KIT-ARC-01	M-881956	1 x Face shield with chin cup 10 cal/cm ² , absorbs > 99.9% of harmful UV radiation, 70% light transmission, tested to ASTM F 2178 specifications	1500
	MO-182/1-B	1 x ABS helmet electrically insulated EN397, EN 50365, ANSI Z89.1 20kV.	
	M-87384	1 x carrying bag for face shield and helmet	



ARC FLASH JACKET AND PROTECTIVE COVERALL KITS (8 or 10 cal/cm²)

- + Made from Indura ultra soft which is comfortable and light
- + Carry bag for kit
- + Kit contains Protective hood, safety glasses, face shield on electrician helmet, jacket and protective coverall



Product Number	Capacity cal/cm ²	Weight (g)
KIT-ARC-08-C-(*) *1	8 cal/cm ²	4100
KIT-ARC-10-C-(*) *2	10 cal/cm ²	4200
KIT-ARC-10-J-(*) *3	10 cal/cm ²	3075
KIT-ARC-10-JP-(*) *4	10 cal/cm ²	4400



Composition of KITS	
M-881956	1 Face shield with chin cup 10 cal/cm ² , absorbs > 99.9% of harmful UV radiation, tested to ASTM F2178 specifications
MO-182/1-B	1 ABS helmet electrically insulated EN397, EN 50365, ANSI Z89.1, 20kV.
MO-11000	1 safety glasses EN 166/EN 170
M-881960	1 arc flash protective hood (10 cal/cm ²), only with coverall.
---	1 protective coverall 8 or 11 cal/cm ² *1, ASTM F1506 and NFPA 70E Standards or 1 arc flash protective jacket 11 cal/cm ² , ASTM F1506 and NFPA 70E Standards.
M-87384	1 carrying bag for face shield and helmet.
M-87295	1 all kit carrying bag.



(*) Reference to be completed by the size M, L or XL.
Size S to 3 XL on request.

- *1 For reference KIT-ARC-08-C-(*)
- *2 For reference KIT-ARC-10-C-(*)
- *3 For reference KIT-ARC-10-J-(*)
- *4 For reference KIT-ARC-10-JP-(*)

ARC FLASH PROTECTIVE KITS (25, 40, 55, 65 or 100 cal/cm²)



Product Number	Capacity cal/cm ²	Weight (g)	Colour
KIT-ARC-25-B-(*) *1	25 cal/cm ²	6000	KAKI ■
KIT-ARC-40-B-(*) *2	40 cal/cm ²	6900	GREY ■
KIT-ARC-55-B-(*) *3	55 cal/cm ²	8000	GREY ■
KIT-ARC-65-B-(*) *4	65 cal/cm ²	8000	CAMEL ■
KIT-ARC-100-B-(*) *5	100 cal/cm ²	8000	CAMEL ■



KIT-ARC-25-B(*)



KIT-ARC-40/55-B(*)



KIT-ARC-65/100-B(*)

Composition of KITS	
M-881968 *1 M-881961 *2 M-881973 *3 M-881976 *4 M-881979 *5	1 x arc flash protective hood with an integrated face shield 25 *1, 40 *2, 55 *3, 65 *4 or 100 *5 cal/cm ² , ASTM F2178 and NFPA 70E Standards
MO-182/1-B	1 x ABS helmet electrically insulated EN397, EN 50365, ANSI Z89.1, 20kV.
---	1 x arc flash protective bib overall 25 *1, 40 *2, 55 *3, 65 *4 or 100 *5 cal/cm ² , ASTM F1506 and NFPA 70E Standards
---	1 x arc flash protective coat 25 *1, 40 *2, 55 *3, 65 *4 or 100 *5 cal/cm ² , ASTM F1506 and NFPA 70E Standards
MO-1100	1 x safety glasses EN 166/EN 170
M-87384	1 x carrying bag for face shield and helmet
M-87295	1 x all kit carrying bag

(*) Reference to be completed by the size M, L or XL.
Size S to 3 XL on request.

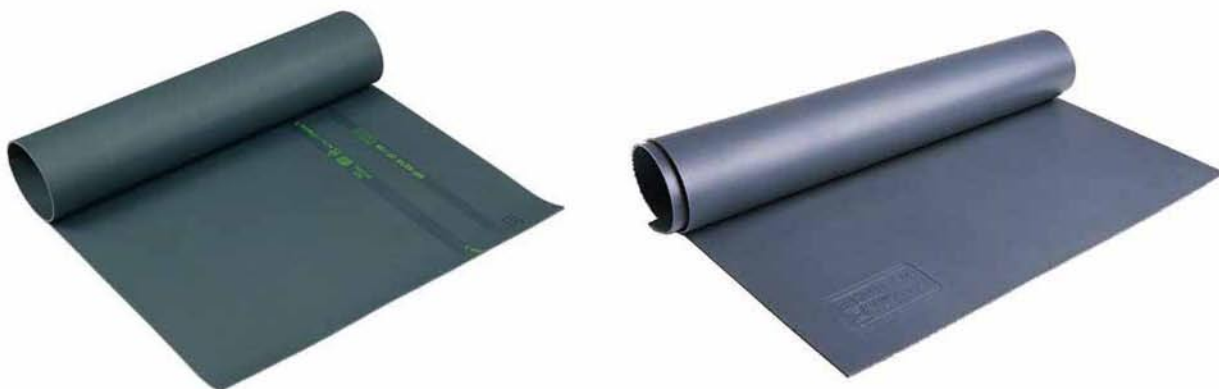
1 For reference KIT-ARC-25-B-(), kaki outfit.

2 For reference KIT-ARC-40-B-(), grey outfit.

3 For reference KIT-ARC-55-B-(), grey outfit.

4 For reference KIT-ARC-65-B-(), brown/camel outfit.

5 For reference KIT-ARC-100-B-(), brown/camel outfit.



INSULATING MATS

- + The matting is manufactured of elastomer compounds with slip-resistant surface.
- + High quality dielectrical surface.
- + Tested to IEC-61111.
- + High quality dielectrical rubber
- + Regulatory mark clearly indicating the mat features

Product Number	Class	Voltage	Thickness (mm)	Size (mm ²)	Weight (g)
MP-42/11	3	≤ 26.5 kV	3	1000 x 1000	4500
MP-42/16	3	≤ 26.5 kV	3	600 x 1000	2900
MP-42/66	3	≤ 26.5 kV	3	600 x 600	1800

FOR PLACING INFRONT OF PANELS

Product Number	Class	Voltage	Thickness (mm)	Size (mm ²)	Weight (g)
MP-60/03-5	3	≤ 26.5 kV	3	600 x 5000	14 000
MP-60/03-10	3	≤ 26.5 kV	3	600 x 10 000	28 000
MP-100/03-5	3	≤ 26.5 kV	3	1000 x 5000	25 000
MP-100/03-10	3	≤ 26.5 kV	3	1000 x 10 000	53 500
MP-60/05-5	4	≤ 36 kV	5	600 x 5000	28 000
MP-60/05-10	4	≤ 36 kV	5	600 x 10 000	44 000
MP-100/05-5	4	≤ 36 kV	5	1000 x 5000	45 000
MP-100/05-10	4	≤ 36 kV	5	1000 x 10 000	89 000

INSULATING MATS ADAPTED TO HIGH VOLTAGE

- + The matting is manufactured of elastomer compounds with slip-resistant surface.
- + High quality dielectrical surface.
- + Tested to IEC-61111.
- + High quality dielectrical rubber

Product Number	Thickness (mm)	Size (mm ²)	Weight (g)
MP-100/10-5	10	1000 x 5000	87 000
MP-100/10-10	10	1000 x 10 000	154 000



INSULATING PLATFORMS (INDOOR MODELS)

- + Moulded insulating material, one-piece
- + 50 x 50 cm

Product Number	Class	Rated Insulation	Standards	Height (mm)	Weight (g)
CT-7-25/1	4	≤ 24 kV	UNE 204 001 ≤ 36 kV	220	3700
CT-7-40/1	5	≤ 24 kV	UNE 204 001 ≤ 45 kV	260	3800



INSULATING PLATFORMS (INDOOR MODELS)

ADAPTED TO THE B HIGH VOLTAGE

- + Solid plate with moulded insulating material
- + 52 x 52 cm
- + 40 cm thickness

Product Number	Rated Insulation	Height (mm)	Weight (g)
CT-7-63	≤ 63 kV	515	3350



INSULATING PLATFORMS (OUTDOOR MODELS)

- + Solid plate with moulded insulating material
- + 52 x 52 cm
- + 40 cm thickness
- + Insulating skirts

Product Number	Rated Insulation	Numbers of skirts/foot	Height (mm)	Weight (g)
CT-9-25	≤ 24 kV	2	350	6000
CT-9-45	≤ 45 kV	3	435	6500
CT-9-63	≤ 63 kV	4	515	7000



COMPACT PORTABLE RESCUE KIT

This compact kit is designed especially to be carried in a vehicle for safety electrical intervention. Made in two part (of moulded material: PEHD), the case is also on its red part, an insulating platform.

Composition of the kit:

- + 1 insulating platform
- + 1 telescopic insulating stick
- + 1 voltage detector with autotest
- + 1 rescue hook
- + 1 insulated cable cutter
- + 1 pair of insulating gloves
- + 1 pair of insulating boots
- + 1 talcum powder can
- + 1 safety instructions and safety first aid posters
- + 1 adhesive tape (black and yellow).

Product Number	Tension	Weight (kg)	Dimensions (mm)
CZ-53-R	24kV	18.5	710 x 570 x 240
CZ-53-R/2	36kV	18.5	710 x 570 x 240



LIFE SAVING RESCUE KITS FOR M.V. SUBSTATIONS WALL MOUNTED KIT

In case of an electrical accident, quick response is essential: seconds gained or lost can decide the life or death of a victim. Our life saving equipment is designed to make all necessary materials immediately available to rescue personnel.

It includes:

- + 1 rescue telescopic stick
- + 1 voltage detector with flexible antenna contact (with autotest)
- + 1 cable cutter with insulated handles
- + Forged steel blades maximum opening: 30 mm
- + 1 insulating platform, 24 kV high voltage or 36kV high voltage insulating gloves, insulating boots
- + Insulating gloves, insulating boots
- + Safety instructions on the plastic board
- + 1 talcum powder can.

Product Number	Tension	Weight (kg)	Dimensions (m)
CZ-54-R	24kV	21	0.84 x 0.745 x 0.27
CZ-55-R	36kV	21	0.84 x 0.745 x 0.27



ELECTRICIAN COVERALL

Coverall without metallic part, avoiding any flash hazards.
100% cotton.

- + Gusset back.
- + 2 flattened breasts pockets closed by injected zips every plastic part hidden.
- + Tape measure pocket on right back leg.
- + Neck jumper
- + Front closed by injected zip every plastic part hidden.
- + 2 flattened thighs pockets.

Product Number	Size for Product Number (*)	Size	Chest Size
MV-104/ (*)	1	20/21	85/92
	2	22/23	23/25
	3	24/25	101/108
	4	26/27	109/116
	5	56/59	117/124
	6	30/31	125/132
	7	32/33	19/20

(*) Reference to be completed by the size, eg : MV-104/02.

DUST-PROOF EQUIPMENT

Combination

Waterproof non-woven polypropylene, 3 layers SMS 68 g/m².

- + Hood with an elastic drawstring.
- + Zipper with flap.
- + Elastic wrists, ankles, and waist in the back.



MO-131/1



MO-131/2

Product Number	Characteristics	Weight (g)
MO-132	One size XL - White	240

Dust masks FFP3 SL

Protects against dust and very fine toxic liquids and solids, up to 50 times VL (asbestos protection only for maintenance operations).

- + Breathing valve.
- + Disposable.

Product Number	Characteristics	Qty. Per Pack	Weight (g)
MO-131/1	Shell mask	5	34
MO-131/2	Bendable mask	20	18