TECHNICAL LEAFLET
FLEX & GRIP® RANGE
COMPOSITE GLOVES

Descriptive :

Range of two tones insulating composite gloves, conform with EN 60903:2003 and IEC 60903:2002 standards, to be used exclusively against electrical shocks. The high levels of mechanical resistances allow to use the FLEX & GRIP® without leather protectors. Over more, the formula of the outside surface has been developed in order to give some non slipping characteristics even used in wet environment.

Summary table :

Class	Thickness in mm (1)	Proof test voltage (2)	Max. Use Voltage (2)	References
BT	2.1	5 000	1 000	GICN 0
1	2.6	10 000	7 500	GICN 1
2	3.1	20 000	17 000	GICN 2
3	3.6	30 000	26 500	GICN 3
4	4.8	40 000	36 000	GICN 4

Sizes available : BT : 7 to 12 – Cl1 to 3 : 8 to 12 – Cl4: 9 to 12
Length 36 or 41cm (Cl. 4 only 41 cm)

(1) ***Maximum thicknesses***

(2) Electrical tests are done in alternating current

Mechanical requirements :

- Tensile strength > 16 Mpa
- Elongation at break > 600 %
- Tension set < 15%

Specific mechanical requirements :

- Abrasion resistance > 0,05 mg/t
  ↳ Loss of material by cycle
- Cutting resistance 2.5
  ↳ Equivalent level 2 in EN 388
- Tear resistance 25 N
  ↳ Equivalent level 2 in EN 388
- Résistance to puncture > 60 N
  ↳ Equivalent level 2 in EN 388

SPECIAL PROPERTIES of our FLEX &GRIP® RANGE

- *CATEGORY H (oil resistance)*

Conditioning of gloves by immersion for 24 hr in oil (liquid 102) at 70 ± 2 °C:
↳ Proof and withstand test voltage
↳ Mechanical resistance : > 50% of non conditioning gloves

- *CATEGORY A (resistance to acid)*

Conditioning of gloves by immersion for 8 hr in sulphuric acid solution (32° Be) heated at 23 ± 2 °C:
↳ Proof and withstand test voltage
↳ Mechanical resistance : > 75% of non conditioning gloves

- *CATEGORY Z (resistance to ozone)*

Conditioning of gloves for 3 hr in a chamber at 40 ± 2 °C and in a 1 ± 0.01 mg/m^3 ozone concentration
↳ Visual control
↳ Proof and withstand test voltage

- *CATEGORY C : (resistance to very low temperatures)*

Conditioning of gloves for 24 hr at -40 ± 3 °C. and then shall be folded at the wrist in order to be placed between two polyethylene plate and being subjected to a force of 100 N for 30 seconds :
↳ Visual control
↳ Proof and withstand test voltage

- *CATEGORY R = A + Z + H*

THERMAL TESTS :

- *RESISTANCE TO LOW TEMPERATURE :*

Conditioning of gloves for 1 hour at -25 ± 3°C. Tests are satisfactory if no tearing, breaking or cracking after folding is visible on the cuff and if the gloves pass the proof test voltage and the withstand test voltage.

- *FLAME RETARDANCY TEST :*

Application of a flame at a finger tips for 10 seconds. Test is satisfactory if, after 55 seconds, the flame has not reached the marker located 55 mm away at the other end.

AGEING REQUIREMENTS :

Conditioning of the gloves in an air oven at 70 ± 2°C for 168 hr :
- the tensile strength and the elongation at break must be at least equal to 80% of non-conditioning gloves. The tension set must not exceed 15%.
- Gloves must pass the proof test voltage and the withstand test voltage.

PERIODICAL RETESTING :

No gloves of classes 1, 2, 3 and 4, not even those held in storage, should be use unless they have been tested within a maximum period of 6 months […]. The test consist of a visual inspection followed by a routine test.
From the annex E (informative) of the EN-60903 standard

PACKING :

Each pair of gloves is packaged in an opaque sachet with a direction of use inside.
On the packaging, the following information is given : class, size, categories, type of cuff, length of gloves, test date, manufacture and validation batch numbers.
Sachet and direction for use are part of the PPE and must be kept with the gloves.

MARKING :