

# TECHNICAL LEAFLET FLEX & GRIP® RANGE COMPOSITE GLOVES



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boddingtonselectricaltd



## Description:

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	0574
1	2.6	10 000	7 500	0575
2	3.1	20 000	17 000	0576
3	3.6	30 000	26 500	0577
4	4.8	40 000	36 000	0578



### 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 2.5  
Equivalent level 2 in EN 388
- Cutting resistance 2.5  
Equivalent level 2 in EN 388
- Tear resistance 25 N  
Equivalent level 2 in EN 388
- Resistance to puncture > 60 N  
Equivalent level 2 in EN 388

Sizes available : 8 to 12 - Length 41cm (Cl. 4 only 41 cm)

(1) Maximum thicknesses

(2) Electrical tests are done in alternating current

### SPECIAL PROPERTIES of our FLEX & GRIP® RANGE

#### • CATEGORY H (oil resistance)

Conditioning of gloves by immersion for 24 hr in oil (liquid 102) at  $70 \pm 2$  °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  $23 \pm 2$  °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  $40 \pm 2$  °C and in a  $1 \pm 0.01$  mg/m3 ozone concentration

Visual control

Proof and withstand test voltage

#### • CATEGORY C : (resistance to very low temperatures)

Conditioning of gloves for 24 hr at  $-40 \pm 3$  °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  $-25 \pm 3$  °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  $70 \pm 2$  °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

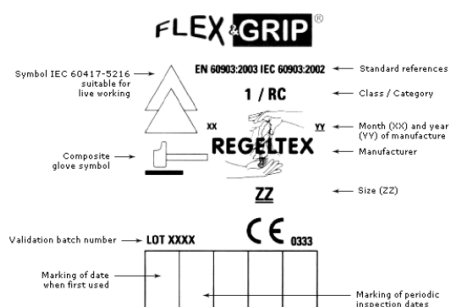
### PACKING :

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 :



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