

## APPLICATION

Insulating gloves ELSEC are applicable for electrical purposes exclusively as the basic personal protective tool for live working at voltages up to 1 kV or as an additional protective measure for live working at voltages exceeding 1 kV.

## CHARACTERISTIC

ELSEC gloves of insulating material have an ergonomic shape and are made from high-quality natural latex using a fully automated production line. Each glove is individually numbered and electrically tested using a computer-controlled testing arrangement. A report of this test is attached to each glove package. The ergonomic shape and elasticity of the glove make comfortable and easy manual work even when anti-perspiration inner cotton glove and/or protector leather gloves are worn over. Five classes of ELSEC gloves are produced fulfilling different voltage test requirements.

There are:

- **00** (2,5 kV),
- **0** (5 kV),
- **1** (10 kV),
- **2** (20 kV)
- **3** (30 kV)

ELSEC gloves are category RC gloves according to EN 60903:2003 + AC2:2005 standard and have special properties increasing their resistance to:

**R** – acid, oil, and ozone.

**C** – resistant to extremely low temperature.

Category R combines the characteristics of categories:

**A** – resistant to acid;

**H** – resistant to oil;

**Z** – resistant to ozone;

Five sizes of ELSEC gloves are produced: 8, 9, 10, 11, 12.

**The ELSEC gloves have been tested against the thermal influence of electric arc according to the requirements described in the standards:**

**1/ PN-EN 61482-1-1: 2009**

**2/ ASTM F2675/F2575M – 13**



**Technical characteristic of ELSEC gloves according to EN 60903:2003 + AC2:2005**

Type		ELSEC 2,5	ELSEC 5	ELSEC 10	ELSEC 20	ELSEC 30
Catalog number		S5911000	S5912000	S5913000	S5914000	S5915000
Class/Category, acc. to EN 60903:2003 + AC2:2005		00/RC	0/RC	1/RC	2/RC	3/RC
Designation of maximum use voltage	AC [V] rms	500	1 000	7 500	17 000	26 500
	DC [V]	750	1 500	11 250	25 500	39 750
AC tests	Proof test voltage [kV] rms	2,5	5	10	20	30
	Maximum proof test current [mA] rms, (routine test)	12	12	14	16	18
	Withstand test voltage [kV] rms	5	10	20	30	40
DC tests	Proof test voltage Avg [kV]	4	10	20	30	40
	Withstand test voltage Avg [kV]	8	20	40	60	70
Length [mm]		360	360	360	360	360
Maximum thickness of the gloves, <i>gloves of categories A, H, Z, and R may require additional thickness which shall not exceed 0,6 mm.</i>		0,5 mm	1,0 mm	1,5 mm	2,3 mm	2,9 mm
Average tensile strength is not less than		16 MPa	16 MPa	16 MPa	16 MPa	16 MPa
Average elongation at break not be less than		600%	600%	600%	600%	600%
Size		8, 9, 10, 11,12	8, 9, 10, 11,12	8, 9, 10, 11,12	8, 9, 10, 11,12	9,10, 11,12
Cuff		Straigth	Straigth	Straigth	Straigth	Straigth

## COMPOSITION

ELSEC insulating gloves are made in whole from natural latex.

## REQUIREMENTS

1. ELSEC gloves meet the applicable essential health and safety requirements included in Regulation (EU) 2016/425 of the European Parliament and of the Council of 9 March 2016
2. ELSEC gloves meet the requirements of harmonized standards:
  - EN 60903:2003 + AC2:2005 "Live working. Gloves of insulating material"
  - EN 420:2003 + A1:2009 „Protective gloves. General requirements and test methods.”
3. The ELSEC electrical insulating protective gloves have a positive assessment of the EU-type examination and certificate no. UE/335/2020/1437 issued by CENTRAL INSTITUTE FOR WORK PROTECTION - NATIONAL RESEARCH INSTITUTE, ul. Czerniakowska 16, 00-701 Warsaw.
4. ELSEC gloves are approved for use in underground workings with "b" and "c" levels of methane explosion hazard and "A" and "B" levels of coal dust explosion hazard.
5. The manufacturer declares that each glove introduced into the market has been positively electrically tested according to EN 60903:2003 + AC2:2005 standard.

## INSTRUCTION IN USE AND LIMITATIONS

1. The used voltage of gloves shall not exceed the maximum use voltage appropriate for a given class of gloves.
2. No gloves should be used unless they have been electrically tested within a maximum period of 6 months, whereas in the case of stored new gloves if the date of the last electrical test is more than 12 months
3. Gloves impaired or leaky shall not be used. In case of any doubts of glove's condition it shall not be used, but shall be controlled according to periodical inspection and electrical retesting requirements. Gloves which become wet in use or by washing shall be dried thoroughly, but not in a manner that will cause the temperature of the gloves to exceed 65 °C and shall be powdered with talcum.
4. Periodic re-testing shall be performed according to requirements of EN 60903:2003 + AC2:2005. For class 00 and class 0 gloves, a check for air leaks and a visual inspection may be considered adequate to detect cracks and damages. Electrical tests can be performed alternatively. However, a routine dielectric test shall be performed for gloves of classes 1, 2, and 3. Gloves being used intensively are recommended to be tested within 90 days.
5. The gloves should be used in places with an ambient temperature between -40 ° C and + 55 °C.

## STORAGE

Gloves should be stored in their original container or package at the ambient temperature between +5 °C and +35 °C in a dark and dry place, not exposed to direct sunlight, artificial light, or other sources of ozone. Care should be taken to ensure that gloves are not compressed or folded.

## WARRANTY

The manufacturer provides two years warranty for electro insulating gloves ELSEC.

Product Catalog number	Data sheet number
S5910000	KK-001/2022/ELSEC