Protective clothing - electrostatic properties - Part 1: surface resistivity

Reference number : EN 1149-1

Status : European Standard

Scope : This standard defines a test method and requirements for electrostatic properties of protective clothing.

CONTENT

General requirements:

For homogeneous materials the surface resistivity : $< 5 \times 10^{10}\ \Omega$

For inhomogeneous materials which are coated or laminated at least one surface shall comply with the requirement :

- Resistivity : $< 5 \times 10^{10}\ \Omega$

Inhomogeneous materials containing conducting threads shall have

- a resistance $<10^{9}\ \Omega$
- a grid pattern of conducting threads
- a maximum space of 10 mm between the conducting threads

Design requirements:

According to EN 340

- A two piece suit or a one piece suit:
  - covering the body, arms and legs
  - direct contact with the skin (at neck and wrists, through folds at the end of the garment)
- width of closure accessories < 10 mm

Test method:

UA cylindrical and annular electrode concentrically arranged (type A: stainless steel, brass type: B). The insulation resistance between inner and outer electrode $> 10^{14}\Omega$

The specimen is placed on an insulating base plate and the electrode assembly is placed on the specimen. A DC potential of 100 ± 5 V is applied, after 15 ± 1 s the resistance is measured.

- The surface resistivity ρ in Ohm: $\rho = k \times R$
  - k: geometrical factor of the electrode (type A: 19,8 and type B: 5,7)
  - R: measured resistance

Marking:

According to EN 340

Information for the user:

According to EN 340

- information that the electrostatic propensity decreases with the number of cleaning procedures and wearing time.
- information when and how to maintain the electrostatic properties.

Pictogram: