Kaitseriietus. Elektrostaatilised omadused. Osa 1: Katsemeetod pindtakistuse mõõtmiseks

Protective clothing - Electrostatic properties - Part 1: Test method for measurement of surface resistivity

EESTI STANDARDI EESSÕNA **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN 1149-1:2006 sisaldab Euroopa standardi EN 1149-1:2006 ingliskeelset teksti. Käesolev dokument on jõustatud 30.08.2006 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 1149-1:2006 consists of the English text of the European standard EN 1149-1:2006. This document is endorsed on 30.08.2006 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: This European Standard specifies a test method for materials intended to be used in the manufacturing of electrostatic dissipative protective clothing (or gloves) to avoid incendiary discharge. This test method is not applicable for materials to be used in the manufacturing of protection clothing or gloves against mains voltages.	**Scope:** This European Standard specifies a test method for materials intended to be used in the manufacturing of electrostatic dissipative protective clothing (or gloves) to avoid incendiary discharge. This test method is not applicable for materials to be used in the manufacturing of protection clothing or gloves against mains voltages.

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Võtmesõnad: arvutamine, elektrostaatiline kaitse, graafilised sümbolid, individuaalne kaitsevarustus, info, kaitseriietus, konstruktsioon, märgistamine, rõivad, tehnilised andmed, testid, tulekaitse, õnnetuse vältimine

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Protective clothing - Electrostatic properties - Part 1: Test method for measurement of surface resistivity

Vêtements de protection - Propriétés électrostatiques - Partie 1: Méthode d'essai pour la résistivité de surface

Schutzkleidung - Elektrostatische Eigenschaften - Teil 1: Prüfverfahren für die Messung des Oberflächenwiderstandes

This European Standard was approved by CEN on 24 May 2006.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

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Foreword

This document (EN 1149-1:2006) has been prepared by Technical Committee CEN/TC 162 “Protective clothing including hand and arm protection and lifejackets”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2006, and conflicting national standards shall be withdrawn at the latest by December 2006.

This document supersedes EN 1149-1:1995.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

EN 1149 consists of the following parts, under the general title "Protective clothing – Electrostatic properties":

— Part 1: Test method for measurement of surface resistivity

— Part 2: Test method for measurement of the electrical resistance through a material (vertical resistance)

— Part 3: Test methods for measurement of charge decay

— Part 5: Performance requirements[1]

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

[1] This document is under development.

Introduction

This European Standard is part of a series of test methods and requirements for electrostatic properties of protective clothing. Different parts are necessary, because of the various fields of application and materials. The method of this European Standard is most appropriate for materials for which the electrostatic dissipative behaviour is based on surface conductivity. It determines resistance over short distances and may not be appropriate for evaluating full garments.

1 Scope

This European Standard specifies a test method for materials intended to be used in the manufacturing of electrostatic dissipative protective clothing (or gloves) to avoid incendiary discharge. This test method is not applicable for materials to be used in the manufacturing of protection clothing or gloves against mains voltages.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 340:2003, *Protective clothing — General requirements*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
surface resistance
resistance in ohm (Ω) as determined by using specified electrodes placed on the surface of the material

3.2
surface resistivity
resistance in ohm (Ω) between opposite edges of a square of the material along the surface of the material

NOTE The surface resistivity is independent of the electrode dimensions and is calculated by multiplying the measured surface resistance by an appropriate factor.

4 Test method

4.1 Principle

The specimen is placed on an insulating base plate and an electrode assembly is rested on the specimen. A DC potential is applied to the electrode assembly and the resistance of the fabric is measured.

4.2 Apparatus

4.2.1 Electrodes

The electrodes shall consist of a cylindrical and an annular electrode which are arranged concentrically with each other. The electrodes made of stainless steel are shown in Figure 1. The insulation resistance between the inner and the outer electrode shall be not less than 10^{14} Ω when determined in accordance with the method described in 4.4.2.

4.2.2 Flat base plate

A flat base plate shall consist of insulating material of surface resistivity not less than 10^{14} Ω (see 4.4.2), of a thickness between 1 mm and 10 mm and it shall be larger than the overall dimensions of the electrode. This plate is used as a support for the specimen during the measurement, and is rested in turn on an earthed conducting surface, e.g. metal plate.