



National Standards Authority of Ireland

STANDARD

**I.S. EN 1149-3:2004**

ICS 13.340.10

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**PROTECTIVE CLOTHING - ELECTROSTATIC  
PROPERTIES - PART 3: TEST METHODS FOR  
MEASUREMENT OF CHARGE DECAY**

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EUROPEAN STANDARD  
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English version

**Protective clothing - Electrostatic properties - Part 3: Test  
methods for measurement of charge decay**

Vêtements de protection - Propriétés électrostatiques -  
Partie 3: Méthodes d'essai pour la mesure de l'atténuation  
de la charge

Schutzkleidung - Elektrostatische Eigenschaften - Teil 3:  
Prüfverfahren für die Messung des Ladungsabbaus

This European Standard was approved by CEN on 2 February 2004.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

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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## Content

	page
<b>Foreword</b> .....	<b>3</b>
<b>1 Scope</b> .....	<b>5</b>
<b>2 Normative references</b> .....	<b>5</b>
<b>3 Terms and definitions</b> .....	<b>5</b>
<b>4 Test methods</b> .....	<b>6</b>
<b>5 Reporting</b> .....	<b>12</b>
<b>Annex A (informative) Explanatory notes</b> .....	<b>19</b>
<b>Annex ZA (informative) Clauses of this European Standard addressing essential requirements or other provisions of EU Directives</b> .....	<b>20</b>

## Foreword

This document (EN 1149-3:2004) has been prepared by Technical Committee CEN/TC 162 "Protective clothing including hand and arm protection and life jackets", 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of an identical text or by endorsement, at the latest by October 2004, and conflicting national standards shall be withdrawn at the latest by October 2004.

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.

Annex A is informative.

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

- Part 1: Surface resistivity (Test methods and requirements)
- 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 4<sup>1)</sup>: Garment tests
- Part 5<sup>1)</sup>: Performance requirements

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, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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<sup>1)</sup> In course of preparation.

## **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 diverse nature of garment materials.

Two test methods are described for measuring the rate of dissipation of electrostatic charge of garment materials, i.e. the charge decay. In both cases, charge is monitored by observation of the electrostatic field it generates and this is done using non-contacting field measuring instruments. The principal difference between the methods is the technique used to generate the electrostatic charge. Triboelectric charging relies on the charge generated as two materials come into contact, rub together and subsequently separate. Induction charging involves an electrode placed beneath the test surface and is raised to a defined potential. Induced charge on the test material influences the net field that is observed by a field-measuring probe positioned above the test surface.

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