



BSI Standards Publication

**Selection, use, care and  
maintenance of personal  
protective equipment for  
preventing electrostatic risks  
in hazardous areas (explosion  
risks)**

**National foreword**

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A list of organizations represented on this committee can be obtained on request to its secretary.

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English version

**Selection, use, care and maintenance of personal protective  
equipment for preventing electrostatic risks in hazardous areas  
(explosion risks)**

This Technical Report was approved by CEN on 21 March 2015. It has been drawn up by the Technical Committee CEN/CLC/JWG 7.

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## Foreword

This document (CEN/CLC/TR 16832:2015) has been prepared by Technical Committee CEN/CLC/JWG 7 "PPE against electrostatic risks", the secretariat of which is held by NEN.

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## Introduction

European Standards for personal protective equipment (PPE) are developed to ensure compliance with the European Directive 89/686/EEC. Since the primary aim of this directive is to guarantee a free market in the European Union, these standards are made to meet the needs for a common set of safety requirements and test methods.

The actual use of PPE is not covered by this directive, nor by related standards.

This Technical Report has been developed to meet the needs for a document on selection, use, care and maintenance. Regulations on health and safety are based on Directive 89/686/EEC, giving minimum requirements on the selection and use of PPE in the workplace. EU Member States may impose more stringent requirements and may define exposure limits.

The information in this Technical Report has been produced to assist employers in making the necessary decisions regarding the selection, use, care and maintenance of PPE. The guidance given may also be useful for other parties such as suppliers of PPE or services, inspection agencies, insurance companies, etc.

The purpose of this Technical Report is to highlight the main areas that an employer needs to consider.

This Technical Report may serve as guidance and as a checklist when a company is preparing its own management system or programme for PPE.

## 1 Scope

This Technical Report sets out guidance for the selection, use, care and maintenance of clothing and related items of personal protective equipment designed to prevent hazards caused by static electricity in hazardous areas.

Static electricity should not be confused with mains supply electricity, or other forms of electric current; the requirements for protection against static electricity are different to the requirements for protection against hazards associated with electric current. Protection against electrostatic risks should not be confused with protection against electric arc; the former is concerned with electrical properties and the latter is concerned with heat, flame and projectile protection.

Directive 89/686/EEC requires that PPE intended for use in explosive atmospheres must be so designed and manufactured that it cannot be the source of an electric, electrostatic or impact induced arc or spark likely to cause an explosive mixture to ignite. Whereas this Technical Report addresses electrostatic ignition risks, it does not address other possible sources of ignition. Nevertheless, other possible sources of ignition are required to be considered when certifying PPE to the requirements of Directive 89/686/EEC.

NOTE EN 13463-1 gives guidance on assessing possible ignition sources in non-electrical equipment that may be used for some items of PPE.

## 2 Normative references

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

EN 1081, *Resilient floor coverings — Determination of the electrical resistance*

EN 1149-1, *Protective clothing — Electrostatic properties — Part 1: Test method for measurement of surface resistivity*

EN 1149-2, *Protective clothing — Electrostatic properties — Part 2: Test method for measurement of the electrical resistance through a material (vertical resistance)*

EN 1149-3, *Protective clothing — Electrostatic properties — Part 3: Test methods for measurement of charge decay*

EN 1149-5, *Protective clothing — Electrostatic properties — Part 5: Material performance and design requirements*

CEN/TR 15321:2006, *Guidelines on the selection, use, care and maintenance of protective clothing*

EN 16350, *Protective gloves — Electrostatic properties*

IEC 60079-10-1, *Explosive atmospheres — Part 10-1: Classification of areas — Explosive gas atmospheres (IEC 60079-10-1)*

IEC 60079-10-2, *Explosive atmospheres — Classification of areas — Combustible dust atmospheres (IEC 60079-10-2)*

CLC/TR 60079-32-1:2015, *Explosive atmospheres — Part 32-1: Electrostatic hazards, Guidance (IEC/TS 60079-32-1:2013)*

EN 60079-32-2:2015, *Explosive atmospheres — Part 32-2: Electrostatics hazards — Tests (under consideration) (IEC 60079-32-2:2015)*