

**Tahkete aineosakeste vastane  
kaitseriietus. Osa 1: Nõuded  
kemikaalide eest kaitsvale riietusele,  
mis tagab kogu keha kaitse lendlevate  
aineosakeste eest**

Protective clothing for use against solid particulates -  
Part 1: Performance requirements for chemical  
protective clothing providing protection to the full  
body against airborne solid particulates (type 5  
clothing)

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 13982-1:2005 sisaldab Euroopa standardi EN ISO 13982-1:2004 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 25.01.2005 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 13982-1:2005 consists of the English text of the European standard EN ISO 13982-1:2004.</p> <p>This document is endorsed on 25.01.2005 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
--	---

<p><b>Käsitlusala:</b></p> <p>This part of ISO 13982 specifies the minimum requirements for chemical protective clothing resistant to penetration by airborne solid particles (type 5). These garments are full-body protective clothing, i.e. covering trunk, arms and legs, such as one-piece coveralls or two piece suits, with or without hood or visors, with or without foot protection. Requirements for component parts, such as hoods, gloves, boots, visors or respiratory protective equipment might be specified in other International and European Standards.</p>	<p><b>Scope:</b></p> <p>This part of ISO 13982 specifies the minimum requirements for chemical protective clothing resistant to penetration by airborne solid particles (type 5). These garments are full-body protective clothing, i.e. covering trunk, arms and legs, such as one-piece coveralls or two piece suits, with or without hood or visors, with or without foot protection. Requirements for component parts, such as hoods, gloves, boots, visors or respiratory protective equipment might be specified in other International and European Standards.</p>
---	---

ICS 13.340.10

Võtmesõnad:

ICS 13.340.10

English version

Protective clothing for use against solid particulates - Part 1:  
Performance requirements for chemical protective clothing  
providing protection to the full body against airborne solid  
particulates (type 5 clothing) (ISO 13982-1:2004)

Vêtements de protection à utiliser contre les particules  
solides - Partie 1: Exigences de performance des  
vêtements de protection contre les produits chimiques  
offrant une protection au corps entier contre les particules  
solides transportées par l'air (vêtements de type 5) (ISO  
13982-1:2004)

Schutzkleidung gegen Teilchen fester Chemikalien - Teil 1:  
Leistungsanforderungen an Chemikalienschutzkleidung, die  
für den gesamten Körper einen Schutz gegen schwebende  
Teilchen fester Chemikalien gewähren (Kleidung Typ 5)  
(ISO 13982-1:2004)

This European Standard was approved by CEN on 12 November 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.

CEN members are the national standards bodies of 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.



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

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

## Foreword

This document (EN ISO 13982-1:2004) 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, in collaboration with Technical Committee ISO/TC 94 "Personal safety - Protective clothing and equipment".

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 May 2005, and conflicting national standards shall be withdrawn at the latest by May 2005.

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.

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.

## Annex ZA (Informative)

### Clauses of this European Standard addressing essential requirements or other provisions of EU Directives

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association to provide a means of conforming to Essential Requirements of the New Approach Directive 89/686/EEC.

Once this standard is cited in the Official Journal of the European Communities under that Directive and has been implemented as a national standard in at least one Member State, compliance with the clauses of this standard confers, within the limits of the scope of this standard, a presumption of conformity with the relevant Essential Requirements of that Directive and associated EFTA regulations.

**Table 1 – Correspondence between this European standard and Directive 89/686/EEC**

Clause/ sub-clauses of the Standard	Essential Requirements of Directive 89/686/EEC, Annex II	
4.1	1.2.1.1	Suitable constituent materials
4.1	1.3.2	Lightness and design strength
4.2	1.3.2	Lightness and design strength
4.2.1	3.10.2	Protection against cutaneous and ocular contact
4.3	1.3.1	Adaptation of PPE to user morphology
4.3	1.3.3	Compatibility of different classes or types of PPE designed for simultaneous use
4.3.1	1.1.2.1	Highest level of protection possible
4.3.1	1.2.1.2	Satisfactory surface condition of all PPE parts in contact with the user
4.3.2	1.1.1	Ergonomics
4.3.2	1.1.2.1	Highest level of protection possible
4.3.2	1.2.1.3	Maximum permissible use impediment
4.3.2	3.10.2	Protection against cutaneous and ocular contact
5	1.4	Information supplied by the manufacturer
5	2.12	PPE bearing one or more identification or recognition marks directly or indirectly relating to health and safety
6	1.3.3	Compatibility of different classes or types of PPE designed for simultaneous use
6	1.4	Information supplied by the manufacturer
6	2.12	PPE bearing one or more identification or recognition marks directly or indirectly relating to health and safety

**WARNING:** Other requirements and other EU Directives may be applicable to the product(s) falling within the scope of this standard.

---

---

**Protective clothing for use against solid  
particulates —**

**Part 1:**

**Performance requirements for chemical  
protective clothing providing protection  
to the full body against airborne solid  
particulates (type 5 clothing)**

*Vêtements de protection à utiliser contre les particules solide —*

*Partie 1: Exigences de performance des vêtements de protection contre  
les produits chimiques offrant une protection au corps entier contre les  
particules solides transportées par l'air (vêtements de type 5)*



**PDF disclaimer**

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

© ISO 2004

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
Case postale 56 • CH-1211 Geneva 20  
Tel. + 41 22 749 01 11  
Fax + 41 22 749 09 47  
E-mail [copyright@iso.org](mailto:copyright@iso.org)  
Web [www.iso.org](http://www.iso.org)

Published in Switzerland

## Contents

Page

Foreword .....	iv
Introduction .....	v
1 Scope .....	1
2 Normative references .....	1
3 Terms and definitions .....	1
4 Performance requirements .....	2
5 Marking .....	4
6 Information supplied by the manufacturer .....	5
Bibliography .....	7



## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 13982-1 was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 162, *Protective clothing including hand and arm protection and lifejackets*, in collaboration with Technical Committee ISO/TC 94, *Personal safety — Protective clothing and equipment*, Subcommittee SC 13, *Protective clothing*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

ISO 13982 consists of the following parts, under the general title *Protective clothing for use against solid particulates*:

- *Part 1: Performance requirements for chemical protective clothing providing protection to the full body against airborne solid particulates (type 5 clothing)*
- *Part 2: Test method of determination of inward leakage of aerosols of fine particles into suits*

## Introduction

It is necessary to determine the suitability of type 5 clothing for each specific chemical substance and its acceptable exposure limits in relation to the inward leakage of the type 5 garment. Hence, it is possible, that this type of clothing does not offer adequate protection from aerosols of highly hazardous substances, where a type 1 garment might be necessary to obtain the level of protection needed.



# Protective clothing for use against solid particulates —

## Part 1:

# Performance requirements for chemical protective clothing providing protection to the full body against airborne solid particulates (type 5 clothing)

## 1 Scope

This part of ISO 13982 specifies the minimum requirements for chemical protective clothing resistant to penetration by airborne solid particles (type 5). These garments are full-body protective clothing, i.e. covering trunk, arms and legs, such as one-piece coveralls or two piece suits, with or without hood or visors, with or without foot protection. Requirements for component parts, such as hoods, gloves, boots, visors or respiratory protective equipment might be specified in other International and European Standards.

This part of ISO 13982 is applicable only to airborne solid particulates. It is not applicable to other forms of challenge by solid chemicals, e.g. penetration of chemical dust through materials by rubbing or flexing, which may form the object of separate standards.

## 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.

ISO 3758, *Textiles — Care labelling code using symbols*

ISO/TR 11610, *Protective clothing — Vocabulary*

ISO 13982-2:—<sup>1)</sup>, *Protective clothing for use against solid particulates — Part 2: Test method for determination of inward leakage of aerosols of fine particles into suits*

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

EN 12941:1998, *Respiratory protective devices — Powered filtering devices incorporating a helmet or a hood — Requirements, testing, marking*

EN 14325:2004, *Protective clothing against chemicals — Test methods and performance classification of chemical protective clothing materials, seams, joins and assemblages*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/TR 11610 apply.

1) To be published.