



DPC: 25/30501041 DC

BSI Group Headquarters

389 Chiswick High Road London W4 4AL

Tel: +44 (0)20 8996 9000

Fax: +44 (0)20 8996 7400

www.bsigroup.com

Date: 02 July 2025

Origin: European

Latest date for receipt of comments: 24 August 2025

Project No. 2024/02785

Responsible committee: PH/3/13

Interested committees:

Title: Draft BS EN ISO 16602-4 Protective clothing for protection against chemicals — Classification, labelling and performance requirements. Part 4: Test methods, classification and requirements for specific designs and ensemble components including gloves, footwear, and respirators.

Please notify the secretary if you are aware of any keywords that might assist in classifying or identifying the standard or if the content of this standard

- i) has any issues related to 3rd party IPR, patent or copyright
- ii) affects other national standard(s)
- iii) requires additional national guidance or information

WARNING: THIS IS A DRAFT AND MUST NOT BE REGARDED OR USED AS A BRITISH STANDARD. THIS DRAFT IS NOT CURRENT BEYOND 24 August 2025

This draft is issued to allow comments from interested parties; all comments will be given consideration prior to publication. No acknowledgement will normally be sent. **See overleaf for information on the submission of comments.**

No copying is allowed, in any form, without prior written permission from BSI except as permitted under the Copyright, Designs and Patent Act 1988 or for circulation within a nominating organization for briefing purposes. Electronic circulation is limited to dissemination by e-mail within such an organization by committee members.

Further copies of this draft may be purchased from BSI Shop <http://shop.bsigroup.com> or from BSI Customer Services, Tel: +44(0) 20 8996 9001 or email cservices@bsigroup.com. British, International and foreign standards are also available from BSI Customer Services.

Information on the co-operating organizations represented on the committees referenced above may be obtained from <https://standardsdevelopment.bsigroup.com/>.

Responsible Committee Secretary:

Direct tel:

E-mail:

Full document details: 25/30501041 DC

Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

- **Annotated drafts are not acceptable and will be rejected.**
- All comments should be submitted online at <https://standardsdevelopment.bsigroup.com/>. You will need to register in order to comment.

Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
------------------	------------------------

1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/ Figure/Table/Note	Type of comment	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	



DRAFT International Standard

ISO/DIS 16602-4

Protective clothing for protection against chemicals — Classification, labelling and performance requirements —

Part 4: Test methods, classification and requirements for specific designs and ensemble components including gloves, footwear, and respirators

ICS: 13.340.10

This document is circulated as received from the committee secretariat.

ISO/CEN PARALLEL PROCESSING

Reference number
ISO/DIS 16602-4:2025(en)

Full document details: 25/30501041 DC

ISO/TC 94/SC 13

Secretariat: **SNV**

Voting begins on:
2025-07-02

Voting terminates on:
2025-09-24

THIS DOCUMENT IS A DRAFT CIRCULATED FOR COMMENTS AND APPROVAL. IT IS THEREFORE SUBJECT TO CHANGE AND MAY NOT BE REFERRED TO AS AN INTERNATIONAL STANDARD UNTIL PUBLISHED AS SUCH.

IN ADDITION TO THEIR EVALUATION AS BEING ACCEPTABLE FOR INDUSTRIAL, TECHNOLOGICAL, COMMERCIAL AND USER PURPOSES, DRAFT INTERNATIONAL STANDARDS MAY ON OCCASION HAVE TO BE CONSIDERED IN THE LIGHT OF THEIR POTENTIAL TO BECOME STANDARDS TO WHICH REFERENCE MAY BE MADE IN NATIONAL REGULATIONS.

RECIPIENTS OF THIS DRAFT ARE INVITED TO SUBMIT, WITH THEIR COMMENTS, NOTIFICATION OF ANY RELEVANT PATENT RIGHTS OF WHICH THEY ARE AWARE AND TO PROVIDE SUPPORTING DOCUMENTATION.

© ISO 2025



Documents

Document Sharing Hub



COPYRIGHT PROTECTED DOCUMENT

© ISO 2025

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 General requirements for garments and ensembles	3
4.1 General	3
4.2 Vapour/gas resistant design	4
4.3 Inward-leakage and particulate resistant design	4
4.4 Liquid resistant designs	5
4.4.1 General	5
4.4.2 Testing and requirements	6
4.5 Face protection (Visor and face-piece)	7
4.5.1 Respiratory Protective Device (RPD)	7
4.5.2 Carbon dioxide content of inhaled air test	7
4.5.3 Air flow rate warning device	7
4.5.4 Overpressure at minimum and maximum air flow rate	8
4.5.5 Noise associated with the air supply to the suit	8
4.5.6 Integral visors	9
4.6 Breathing air and ventilation system	10
4.6.1 Airline pass-through	10
4.6.2 Air-supply system	10
4.6.3 Ventilating hose	10
4.6.4 Exhaust assemblage	11
4.7 Gloves and footwear	11
4.7.1 Integral/attached gloves	11
4.7.2 Over-gloves	11
4.7.3 Chemical protective footwear	11
5 Incompatibilities	12
Annex A (informative) Relationship between this European Standard and the essential requirements of Regulation (EU) 2016/425 of the European Parliament and of the Council of 9 March 2016 on personal protective equipment aimed to be covered	13
Bibliography	17

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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee [or Project Committee] ISO/TC 94, *Personal safety — Personal protective equipment*, Subcommittee SC 13, *Protective clothing*.

This second edition cancels and replaces the first edition ISO 16602:2007. The standard has completely been rewritten and split into parts, with the most significant changes compared to the previous edition relating to: (1) a new modular approach, (2) marking, (3) chemical protection.

A list of all parts in the ISO 16602 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document addresses the design requirements for chemical protective clothing by designating specific design types and providing classification of clothing, material, and component performance. This document is intended to provide comprehensive design requirements for the performance of chemical protective clothing together with ISO/DIS 16602-1 and ISO/DIS 16602-5.

This document is part of a series of standards for test methods and requirements for both limited use and reusable chemical protective clothing. ISO/DIS 16602 consists of the following parts, under the general title "Protective clothing for protection against chemicals — Classification, labelling and performance requirements":

- Part 1: General requirements;
- Part 2: Physical test methods, classification and requirements;
- Part 3: Chemical test methods, classification and requirements;
- Part 4: Test methods, classification and requirements for specific designs and ensemble components including gloves, footwear, and respirators;
- Part 5: Garment test methods, classification and requirements;
- Part 6: Guidance on Selection, Use, Care and Maintenance.

This series of documents is intended to provide a modular approach to design and specification for chemical protective clothing accommodating the variety and severity of risks found, and activities carried out, in the workplace. This document includes the requirements of ISO 8194 on radiation protection so that it can be withdrawn.

The Type 1 through Type 6 garments were originally created to differentiate garment performance through a specific garment test(s): These "Type" garments could not be placed in an intrinsic hierarchy, although the fabric barrier performances (intrinsic properties of the fabric and seams) created an indirect hierarchy in certain cases. For example, Type 1 is in general more protective than Type 2, Type 5 and Type 6; and Type 3 is, in general, more protective than Type 4 and Type 6. Although the Type 1-Type 6 system has been superseded by the modular approach, a correlation table will be available.

In the previous ISO 16602 (and EN equivalents EN 13034, EN 14605, EN 943 series, EN 1073 series, and EN 14325), there is a link between the garment tests, the Type (Type 1 through Type 6), and the physical and chemical requirements of materials and components. This revision of the ISO 16602 series (intended to be an EN ISO standard), applies a modular approach that breaks that link. Nevertheless, the existing test methods from ISO 16602 and in other European standards (e.g EN 14325:2018) have been used as the basis for this revision.

The selection of appropriate chemical protective clothing should be based on a risk assessment. In this assessment the user organization identifies the hazards, and determines:

- the potential for chemical contact with individual workers,
- the consequences of exposure, and
- the type of practices or controls needed to eliminate or minimize exposure.

When it is determined that chemical protective clothing is needed, the risk assessment should identify the chemical protective clothing required in terms of its overall performance requirements from physical characteristics, chemical protection and garment test perspective. ISO/DIS 16602-6 is intended to assist user organizations with these determinations.

