



BSI Standards Publication

PPE for firefighters — Test methods and requirements for PPE used by firefighters who are at risk of exposure to high levels of heat and/or flame while fighting fires occurring in structures

Part 9: Fire hoods

National foreword

This British Standard is the UK implementation of ISO 11999-9:2025. It supersedes BS ISO 11999-9:2016, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PH/14, Firefighters' personal protective equipment.

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

Contractual and legal considerations

This publication has been prepared in good faith, however no representation, warranty, assurance or undertaking (express or implied) is or will be made, and no responsibility or liability is or will be accepted by BSI in relation to the adequacy, accuracy, completeness or reasonableness of this publication. All and any such responsibility and liability is expressly disclaimed to the full extent permitted by the law.

This publication is provided as is, and is to be used at the recipient's own risk.

The recipient is advised to consider seeking professional guidance with respect to its use of this publication.

This publication is not intended to constitute a contract. Users are responsible for its correct application.

© The British Standards Institution 2025
Published by BSI Standards Limited 2025

ISBN 978 0 539 24501 1
ICS 13.340.10; 13.340.20

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 April 2025.

Amendments/corrigenda issued since publication

Date	Text affected
------	---------------



International Standard

ISO 11999-9

PPE for firefighters — Test methods and requirements for PPE used by firefighters who are at risk of exposure to high levels of heat and/or flame while fighting fires occurring in structures —

Part 9: Fire hoods

*Équipement de protection personnelle pour pompiers —
Méthodes d'essai et exigences pour les équipements de protection
personnelle utilisés par les pompiers qui sont à risque d'une
exposition à des niveaux élevés de chaleur et/ou de flamme quand
la lutte contre les incendies survient dans les structures —*

Partie 9: Casques

**Second edition
2025-04**

Reference number
ISO 11999-9:2025(en)

Full document details: BS ISO 11999-9:2025

© 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
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 General design requirements	2
4.1 General	2
4.2 Innocuousness	3
4.3 Flexibility	3
4.4 Facial opening	3
4.5 Yoke interface area	3
4.6 Sizing	3
4.7 Labels	3
4.8 Seam construction	3
4.9 Particulate protection	3
5 Sampling and pre-treatment	4
6 Performance requirements	5
6.1 General	5
6.2 Limited flame spread	5
6.2.1 General	5
6.2.2 Flame resistance (surface ignition)	5
6.2.3 Flame resistance (bottom edge)	6
6.3 Heat resistance	7
6.4 Heat transfer (flame exposure)	7
6.5 Heat transfer (radiant exposure)	7
6.6 Heat transfer (combined flame and radiant exposure)	7
6.7 Residual strength of material following radiant heat exposure	8
6.8 Seam bursting strength	8
6.9 Dimensional change	8
6.10 Thread heat resistance	8
6.11 Particulate protection	8
6.12 Water vapour resistance	8
7 Complete fire hood test - opening size retention test	9
8 Report	9
9 Compatibility	9
10 Marking	9
11 Information supplied by manufacturer	9
Annex A (normative) Donning, doffing and shape retention test	10
Annex B (normative) Particulate test	11
Annex C (normative) Determination of property values	12
Annex D (normative) Uncertainty of measurement	13
Bibliography	15

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 document 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).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

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 ISO/TC 94, *Personal safety — Protective clothing and equipment*, Subcommittee SC 14, *Fire-fighters' personal equipment*.

This second edition cancels and replaces the first edition (ISO 11999-9:2016), which has been technically revised.

The main changes are as follows:

- the design requirement have been amended and added to (particulate protection)
- all the heat and flame properties have been brought to amended single levels (see [Table 1](#));
- all the mechanical properties have been brought to amended single levels (see [Table 1](#));
- additional tests have been added or changed (including resistance evaporative transfer (RET), size retention)

A list of all parts in the ISO 11999 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.

PPE for firefighters — Test methods and requirements for PPE used by firefighters who are at risk of exposure to high levels of heat and/or flame while fighting fires occurring in structures —

Part 9: Fire hoods

1 Scope

This document specifies the minimum design and performance requirements for a fire hood as part of personal protective equipment (PPE) to be used by firefighters, primarily but not solely to protect against exposure to flame, high thermal loads and particulate protection.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 3146, *Plastics — Determination of melting behaviour (melting temperature or melting range) of semi-crystalline polymers by capillary tube and polarizing-microscope methods*

ISO 3175-2, *Textiles — Professional care, drycleaning and wetcleaning of fabrics and garments — Part 2: Procedure for testing performance when cleaning and finishing using tetrachloroethene*

ISO 5077, *Textiles — Determination of dimensional change in washing and drying*

ISO 6942:2022, *Protective clothing — Protection against heat and fire — Method of test: Evaluation of materials and material assemblies when exposed to a source of radiant heat*

ISO 8559-1:2017, *Size designation of clothes — Part 1: Anthropometric definitions for body measurement*

ISO 9151, *Protective clothing against heat and flame — Determination of heat transmission on exposure to flame*

ISO 11092, *Textiles — Physiological effects — Measurement of thermal and water-vapour resistance under steady-state conditions (sweating guarded-hotplate test)*

ISO 11999-1:2024, *PPE for firefighters — Test methods and requirements for PPE used by firefighters who are at risk of exposure to high levels of heat and/or flame while fighting fires occurring in structures — Part 1: General*

ISO 11999-2, *PPE for firefighters — Test methods and requirements for PPE used by firefighters who are at risk of exposure to high levels of heat and/or flame while fighting fires occurring in structures — Part 2: Compatibility*

ISO 13688:2013+Amd 1:2021, *Protective clothing — General requirements*

ISO 13935-2, *Textiles — Seam tensile properties of fabrics and made-up textile articles - Part 2: Determination of maximum force to seam rupture using the grab method*

ISO 13938-1, *Textiles — Bursting properties of fabrics — Part 1: Hydraulic method for determination of bursting strength and bursting distension*