

# SLOVENSKI STANDARD

## SIST EN ISO 9151:2017

01-marec-2017

Nadomešča:

SIST EN 367:1996

SIST EN 367:1996/AC:2000

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**Varovalna obleka pred učinki toplote in ognja - Določanje prenosa toplote pri izpostavljenosti plamenu (ISO 9151:2016)**

Protective clothing against heat and flame - Determination of heat transmission on exposure to flame (ISO 9151:2016)

**iTeh STANDARD PREVIEW**

Schutzkleidung gegen Hitze und Flammen - Bestimmung des Wärmedurchgangs bei Flammeneinwirkung (ISO 9151:2016)

[SIST EN ISO 9151:2017](https://standards.iTeh.ai/catalog/standards/sist/3aa1d90f-a717-47ae-9419-26b969db50e5/sist-en-iso-9151-2017)

Vêtements de protection contre la chaleur et les flammes - Détermination de la transmission de chaleur à l'exposition d'une flamme (ISO 9151:2016)

**Ta slovenski standard je istoveten z: EN ISO 9151:2016**

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**ICS:**

13.340.10      Varovalna obleka      Protective clothing

**SIST EN ISO 9151:2017**      en

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EUROPEAN STANDARD

EN ISO 9151

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2016

ICS 13.340.10

Supersedes EN 367:1992

English Version

## Protective clothing against heat and flame - Determination of heat transmission on exposure to flame (ISO 9151:2016)

Vêtements de protection contre la chaleur et les  
flammes - Détermination de la transmission de chaleur  
à l'exposition d'une flamme (ISO 9151:2016)

Schutzkleidung gegen Hitze und Flammen -  
Bestimmung des Wärmedurchgangs bei  
Flammeneinwirkung (ISO 9151:2016)

This European Standard was approved by CEN on 6 November 2016.

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 CEN-CENELEC Management Centre or to any CEN member.

**iTeh STANDARD PREVIEW**

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 CEN-CENELEC Management Centre has the same status as the official versions.

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

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

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## European foreword

This document (EN ISO 9151:2016) has been prepared by Technical Committee ISO/TC 94 "Personal safety - Protective clothing and equipment" in collaboration with Technical Committee CEN/TC 162 "Protective clothing including hand and arm protection and lifejackets" 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 June 2017, and conflicting national standards shall be withdrawn at the latest by June 2017.

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

This document supersedes EN 367:1992.

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, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## Endorsement notice

The text of ISO 9151:2016 has been approved by CEN as EN ISO 9151:2016 without any modification.

**Annex ZA**  
(informative)  
**Relationship between this European Standard and the Essential Requirements of EU Directive 89/686/EEC**

This European Standard has been prepared under a Commission's standardization request M/031 to provide one voluntary means of conforming to essential requirements of Directive 89/686/EEC on the approximation of the laws of the Member States relating to personal protective equipment.

Once this standard is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this standard given in Table ZA.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding essential requirements of that Directive and associated EFTA regulations.

**Table ZA.1 — Correspondence between this International Standard and Annex II of the Directive 89/686/EEC Personal Protective Equipment**

Essential Requirements of Directive 89/686/EEC	Clause(s)/subclause(s) of this International Standard	Remarks/Notes
3.6, Protection against heat and/or fire	Complete Standard	Together with the requirements in the product standard

**WARNING 1** — Presumption of conformity stays valid only as long as a reference to this European Standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

**WARNING 2** — Other Union legislation may be applicable to the product(s) falling within the scope of this standard.

INTERNATIONAL  
STANDARD

ISO  
9151

Second edition  
2016-11-15

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

*Vêtements de protection contre la chaleur et les flammes —  
Détermination de la transmission de chaleur à l'exposition d'une  
flamme*

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## ISO 9151:2016(E)

## 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. [www.iso.org/directives](http://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. [www.iso.org/patents](http://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 on 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 the following URL: <http://www.iso.org/iso/foreword.html>

The committee responsible for this document is ISO/TC 94, *Personal safety — Protective clothing and equipment*, Subcommittee SC 13, *Protective clothing* and by Technical Committee CEN/TC 162, *Protective clothing including hand and arm protection and lifejackets* in collaboration.

This second edition cancels and replaces the first edition (ISO 9151:1995), of which Clauses/[subclauses 2, 3.3, 5.1, 5.2, 5.3, 5.6, 6, 8.1, 8.2, 9.1.2, 9.3.1, 9.3.2, 10](#), all figures, and [Annexes A and B](#) have been technically revised. Tolerances have been added to specified dimensions where appropriate. Results of a recent inter-laboratory trial have been added to [Annex A](#).

To improve reproducibility, the following major modifications have been made from the previous version of this test method:

- a) The percentage minimum purity of the propane used has been provided (see [5.2](#));
- b) Two alternative methods for constructing the calorimeter are described with additional information on the figures; additional instructions are given for inserting the calorimeter into the mounting block; and the total mass of the calorimeter and mounting block is specified (see [5.3](#));
- c) Tolerances for the dimensions of machined parts have been added to text and drawings where required;
- d) Control of air movement during testing is specified (see [Clause 6](#));
- e) The specified relative humidity and temperature ranges for the conditioning and testing atmospheres have been changed (see [8.1](#) and [8.2](#));
- f) Additional procedures for calibration and stabilization of thermocouple temperature, including a procedure to check on the linearity of the thermocouple output during regulation of the incident heat flux density, have been added (see [9.1.1](#) and [9.1.2](#)); and
- g) Test report requirements have been revised (see [Clause 10](#)).

## Introduction

Heat transmission through clothing is largely determined by its thickness including any air gaps trapped between adjacent layers. The air gaps can vary considerably in different areas of the same clothing assembly. The present method provides a grading of materials when tested under standard test conditions without an air gap.

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