

# SLOVENSKI STANDARD

## SIST EN ISO 10819:2013

01-oktober-2013

Nadomešča:  
SIST EN ISO 10819:1998

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### Mehanske vibracije in udarci - Vibracije dlan-roka - Merjenje in vrednotenje prenosov vibracij z rokavice na dlan roke (ISO 10819:2013)

Mechanical vibration and shock - Hand-arm vibration - Measurement and evaluation of the vibration transmissibility of gloves at the palm of the hand (ISO 10819:2013)

Mechanische Schwingungen und Stöße - Hand-Arm-Schwingungen - Messung und Bewertung der Schwingungsübertragung von Handschuhen in der Handfläche (ISO 10819:2013)

Vibrations et chocs mécaniques - Vibrations main-bras - Mesurage et évaluation du facteur de transmission des vibrations par les gants à la paume de la main (ISO 10819:2013)

**Ta slovenski standard je istoveten z: EN ISO 10819:2013**

#### **ICS:**

13.160	Vpliv vibracij in udarcev na ljudi	Vibration and shock with respect to human beings
13.340.40	Varovanje dlani in rok	Hand and arm protection

**SIST EN ISO 10819:2013** en,fr,de

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN ISO 10819**

July 2013

ICS 13.340.40; 13.160

Supersedes EN ISO 10819:1996

English Version

**Mechanical vibration and shock - Hand-arm vibration -  
Measurement and evaluation of the vibration transmissibility of  
gloves at the palm of the hand (ISO 10819:2013)**

Vibrations et chocs mécaniques - Vibrations main-bras -  
Mesurage et évaluation du facteur de transmission des  
vibrations par les gants à la paume de la main (ISO  
10819:2013)

Mechanische Schwingungen und Stöße - Hand-Arm-  
Schwingungen - Messung und Bewertung der  
Schwingungsübertragung von Handschuhen in der  
Handfläche (ISO 10819:2013)

This European Standard was approved by CEN on 29 May 2013.

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.

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.

CEN members are the national standards bodies of 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 United Kingdom.



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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## Foreword

This document (EN ISO 10819:2013) has been prepared by Technical Committee ISO/TC 108 "Mechanical vibration, shock and condition monitoring" in collaboration with Technical Committee CEN/TC 231 "Mechanical vibration and shock" 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 January 2014, and conflicting national standards shall be withdrawn at the latest by January 2014.

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 ISO 10819:1996.

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.

For relationship with EU Directive, see informative Annex ZA, which is an integral part of this document.

The main changes to the first edition EN ISO 10819:1996 are stronger criteria for antivibration gloves and the addition of a method for measuring the material thickness.

To place anti-vibration gloves on the market of the European Union (EU), manufacturers or their authorised representatives established within the EU shall make sure that they cover all Basic Health and Safety Requirements (BHSRs) applicable to their products under the foreseeable conditions of use for which such Personal Protective Equipment (PPE) is intended (EU Directive 89/686/EEC on PPE). If the relevant harmonized European Standards do not cover all applicable BHSRs they have, in addition to the application of these standards, to assess the conformity to those BHSRs not covered by using other relevant technical specifications and test methods.

This European Standard EN ISO 10819 is intended to confirm the vibration reducing properties of gloves placed on the EU market as anti-vibration gloves.

To mark anti-vibration gloves with the CE conformity mark they must also satisfy the BHSRs of the PPE Directive using harmonised European Standards, such as EN 388 and EN 420. As such, manufacturers or their authorised representatives established within the EU shall make an application for type-examination to an approved inspection body (notified body).

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 10819:2013 has been approved by CEN as EN ISO 10819:2013 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 mandate given to CEN by the European Commission and the European Free Trade Association to provide one means of conforming to Essential Requirements of the New Approach Directive 89/686/EEC on Personal protective equipment.

Once this standard is cited in the Official Journal of the European Union under that Directive and has been implemented as a national standard in at least one Member State, compliance with the normative clauses of this standard 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.

**WARNING** Other requirements and other EU Directives may be applicable to the products falling within the scope of this standard.

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INTERNATIONAL  
STANDARD

ISO  
10819

Second edition  
2013-07-15

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**Mechanical vibration and shock —  
Hand-arm vibration — Measurement  
and evaluation of the vibration  
transmissibility of gloves at the palm  
of the hand**

*Vibrations et chocs mécaniques — Vibrations main-bras — Mesurage  
et évaluation du facteur de transmission des vibrations par les gants à  
la paume de la main*  
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## ISO 10819:2013(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.

The committee responsible for this document is ISO/TC 108, *Mechanical vibration, shock and condition monitoring*, Subcommittee SC 4, *Human exposure to mechanical vibration and shock*.

This second edition cancels and replaces the first edition (ISO 10819:1996), of which it constitutes a technical revision. The main changes are stronger criteria for antivibration gloves and the addition of a method for measuring the material thickness.

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## Introduction

Because of the growing demand to reduce health risks associated with exposure to hand-transmitted vibration, gloves with vibration-reducing materials are often used to attenuate vibration transmitted to the hands. These gloves normally provide little reduction in hand-transmitted vibration at frequencies below 150 Hz. Some gloves can increase the vibration transmitted to the hands at these low frequencies. Gloves with vibration-reducing materials that meet the requirements of this International Standard to be classified as an antivibration glove can be expected to reduce hand-transmitted vibration at frequencies above 150 Hz. These gloves can reduce but not eliminate health risks associated with hand-transmitted vibration exposure.

Field observations indicate that gloves with vibration-reducing materials can result in positive and negative health effects. Positive health effects can occur with gloves that reduce finger tingling and numbness and that keep the hands warm and dry. Negative health effects can occur with gloves that increase the vibration transmitted to the hands at low frequencies and that increase hand and arm fatigue because they increase the hand grip effort required to control a vibrating machine.

Gloves tested in accordance with the requirements of this International Standard are evaluated in a controlled laboratory environment. The actual vibration attenuation of a glove in a work environment can differ from that measured in a controlled laboratory environment.

Vibration transmissibility measurements made in accordance with the requirements of this International Standard are performed only at the palm of the hand. The transmission of vibration to the fingers is not measured. When evaluating the effectiveness of a glove with a vibration-reducing material used to reduce vibration transmitted to the hand, vibration transmission to the fingers should also be assessed. However, research subsequent to the publication of this International Standard is needed to develop a measurement procedure that can be used to measure the vibration transmissibility of gloves at the fingers.

The measurement procedure specified in this International Standard only addresses glove properties that can reduce health risks associated with hand-transmitted vibration in work environments. It does not address glove properties necessary to reduce other hand-related health and safety risks in work environments.

The measurement procedure specified in this International Standard can also be used to measure the vibration transmissibility of a material that is being evaluated for use to cover a handle of a machine or for potential use in a glove.

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