

ISIKUKAITSEVAHENDID. SILMA- JA NÄOKAITSE.
SÕNAVARA

Personal protective equipment - Eye and face protection
- Vocabulary (ISO 4007:2018)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 4007:2018 sisaldab Euroopa standardi EN ISO 4007:2018 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 4007:2018 consists of the English text of the European standard EN ISO 4007:2018.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 05.12.2018.	Date of Availability of the European standard is 05.12.2018.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 01.040.13, 13.340.20

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:
Koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:

Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

English Version

Personal protective equipment - Eye and face protection -
Vocabulary (ISO 4007:2018)

Équipement de protection individuelle - Protection des
yeux et du visage - Vocabulaire (ISO 4007:2018)

Persönliche Schutzausrüstung - Augen- und
Gesichtsschutz - Wörterbuch (ISO 4007:2018)

This European Standard was approved by CEN on 31 August 2018.

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, Serbia, 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: Rue de la Science 23, B-1040 Brussels

European foreword

This document (EN ISO 4007:2018) has been prepared by Technical Committee ISO/TC 94 "Personal safety -- Personal protective equipment" in collaboration with Technical Committee CEN/TC 85 "Eye protective equipment" the secretariat of which is held by AFNOR.

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 2019, and conflicting national standards shall be withdrawn at the latest by June 2019.

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

This document supersedes EN ISO 4007:2012.

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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 4007:2018 has been approved by CEN as EN ISO 4007:2018 without any modification.

Contents

Page

Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
3.1 Risks and hazards	1
3.2 Optical radiation	2
3.3 Sources of non-ionizing radiation	4
3.4 Radiometry and photometry	7
3.5 General terms	13
3.5.1 Types and components of eye and face protectors	13
3.5.2 Geometrical properties of eye and <i>face</i> protection	17
3.5.3 Terms relating to the non- <i>lens</i> part of <i>protectors</i>	19
3.5.4 Welding protectors	20
3.5.5 Secondary lenses for welding protectors	21
3.5.6 Mesh protectors	21
3.5.7 Protection from short circuit electric arc	22
3.6 Optical materials	23
3.7 Optical properties of components and <i>lenses</i>	24
3.8 Optical properties of <i>lenses</i> , excluding <i>transmittance</i>	27
3.9 Wearer characteristics	31
3.10 Filters, absorption, transmission and reflection	32
3.10.1 General terms	32
3.10.2 <i>Polarized radiation</i> and <i>polarizing filters</i>	48
3.10.3 Welding filters	50
3.11 Test equipment	53
4 Glossary of abbreviations and symbols	55
Annex A (informative) Spectral weighting functions and spectral distributions	57
Bibliography	67
Index	69

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 on 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 the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 94, *Personal safety — Protective clothing and equipment*, Subcommittee SC 6, *Eye and face protection*.

This third edition cancels and replaces the second edition (ISO 4007:2012), which has been technically revised. This third edition builds on the second edition, which was partly based on EN 165.

The main changes compared to the previous edition are as follows.

- The word “*ocular*” has been changed to “*lens*” to describe the transparent material through which the wearer looked.
- Some terms have been moved and renumbered to more suitable positions, e.g. some of the terms that were in the “properties of materials” subclause are now in the “transmittance” subclause.
- 52 new terms have been added, over 100 terms or definitions have been modified and sources have been updated. Greater information about the source of definitions is given where these have been copied from other standards.
- The following terms have been deleted: *giant-pulsed laser*, *haze*, *He-Ne laser*, *optical class*, *protective ocular*, *radiation power*, *untinted ocular*, *very-high-pressure (intensity) mercury vapour lamp*.
- A term relating to the transmittance between 380 nm and 400 nm has been added. Although the definition for UV-A continues to take the wavelength limits of 315 nm to 380 nm, many of the terms and definitions relating to UV-A allow the upper limit to be either 380 nm or 400 nm, depending upon the application.
- Terms relating to “*mesh protectors*” and “*additional lenses*” have been added for use in the appropriate standards.
- hyphens have been removed from many terms relative to the second edition, e.g. in “*eye-protector*” and “*dark-state*”, but have been kept in “*as-worn*”, “*blue-light*” and “*gradient-tinted*”, and in those cases where they would generally be used in English.

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.

This document is a preview generated by EVS

Personal protective equipment — Eye and face protection

— Vocabulary

1 Scope

This document defines and explains the principal terms used in the field of personal eye and face protection.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

NOTE See also the CIE International lighting vocabulary: Available at: <http://eilm.cie.co.at/>.

3.1 Risks and hazards

3.1.1

safety, noun

freedom from *risk* (3.1.4) that is not tolerable

Note 1 to entry: The term “safe” is often understood by the general public as the state of being protected from all *hazards* (3.1.3). However, this is a misunderstanding: “safe” is rather the state of being protected from recognized hazards that are likely to cause *harm* (3.1.2). Some level of *risk* is inherent in products or systems. The use of the terms “safety” and “safe” as descriptive adjectives should be avoided when they convey no useful extra information. In addition, they are likely to be misinterpreted as an assurance of freedom from risk. The recommended approach is to replace, wherever possible, the terms “safety” and “safe” with an indication of the objective. For example, use “protective helmet” instead of “safety helmet”. See also ISO/IEC Guide 51:2014, Clause 4.

[SOURCE: ISO/IEC Guide 51:2014, 3.14, modified — the term has been identified as a noun, and “which” in the definition has been changed to “that”.]

3.1.2

harm

injury or damage to the health of people, or damage to property or the environment

[SOURCE: ISO/IEC Guide 51:2014, 3.1]

3.1.3

hazard

potential source of *harm* (3.1.2)

[SOURCE: ISO/IEC Guide 51:2014, 3.2]