SLOVENSKI STANDARD
oSIST prEN ISO 4007:2009

01-junij-2009

Osebna varovalna oprema - Varovanje oļ i in obraza - Slovar (ISO/DIS 4007:2009)

Personal protective equipment - Eye and face protection - Vocabulary (ISO/DIS 4007:2009)

Persönliche Schutzausrüstung - Augen- und Gesichtsschutz - Wörterbuch (ISO/DIS 4007:2009)

Équipement de protection individuelle - Protection du visage et des yeux - Vocabulaire (ISO/DIS 4007:2009)

Ta slovenski standard je istoveten z: **prEN ISO 4007**

ICS:

01.040.13	Varstvo okolja in zdravja. Varnost (Slovarji)	Environment and health protection. Safety (Vocabularies)
13.340.20	Varovalna oprema za glavo	Head protective equipment

oSIST prEN ISO 4007:2009 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

DRAFT
prEN ISO 4007

March 2009

ICS 01.040.13; 13.340.20

English Version

Personal protective equipment - Eye and face protection - Vocabulary (ISO/DIS 4007:2009)

Équipement de protection individuelle - Protection du visage et des yeux - Vocabulaire (ISO/DIS 4007:2009)

Persönliche Schutzausrüstung - Augen- und Gesichtsschutz - Wörterbuch (ISO/DIS 4007:2009)

This draft European Standard is submitted to CEN members for parallel enquiry. It has been drawn up by the Technical Committee CEN/TC 85.

If this draft becomes a European Standard, 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.

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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.

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

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Foreword

This document (prEN ISO 4007:2009) has been prepared by Technical Committee ISO/TC 94 "Personal safety - Protective clothing and equipment" in collaboration with Technical Committee CEN/TC 85 "Eye protective equipment", the secretariat of which is held by AFNOR.

This document is currently submitted to the parallel Enquiry.

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 EC Directive(s).

Endorsement notice

The text of ISO/DIS 4007:2009 has been approved by CEN as a prEN ISO 4007:2009 without any modification.

DRAFT INTERNATIONAL STANDARD ISO/DIS 4007

ISO/TC **94**/SC **6** Secretariat: **BSI**

Voting begins on: **2009-03-05**

Voting terminates on: **2009-08-05**

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Personal protective equipment — Eye and face protection — Vocabulary

Équipement de protection individuelle — Protection du visage et des yeux — Vocabulaire

[Revision of first edition (ISO 4007:1977)]

ICS 01.040.13; 13.340.20

ISO/CEN PARALLEL PROCESSING

This draft has been developed within the International Organization for Standardization (ISO), and processed under the **ISO-lead** mode of collaboration as defined in the Vienna Agreement.

This draft is hereby submitted to the ISO member bodies and to the CEN member bodies for a parallel five-month enquiry.

Should this draft be accepted, a final draft, established on the basis of comments received, will be submitted to a parallel two-month approval vote in ISO and formal vote in CEN.

To expedite distribution, this document is circulated as received from the committee secretariat. ISO Central Secretariat work of editing and text composition will be undertaken at publication stage.

Pour accélérer la distribution, le présent document est distribué tel qu'il est parvenu du secrétariat du comité. Le travail de rédaction et de composition de texte sera effectué au Secrétariat central de l'ISO au stade de publication.

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 4007 was prepared by Technical Committee ISO/TC 94, *Personal safety - Protective clothing and equipment*, Subcommittee SC 6, *Eye and face protection*.

This second cancels and replaces the first edition (1977), which has been technically revised.

Introduction

This draft Standard draws heavily on EN 165, Personal Eye-protection – Vocabulary, and other European eye protection standards, for which the Working Group is very grateful.

Where terms and definitions have been copied from other ISO standards, the date of the Standard has been included so that, if the definition in the original Standard is subsequently revised, there is no confusion as to which definition is to be used for purposes o Eye and Face Protection.

There is no term and definition for α-blocking wavelength, because there is no agreement at present on what the definition or requirement should be. It is hoped to add a definition in the near future, and this may be that selected in the current revision process of ISO 13666 – Ophthalmic Optics – Spectacle lenses - Vocabulary

Personal protective equipment — Eye and face protection — Vocabulary

1 Scope

This International Standard defines and explains the principal terms used in the field of personal eye and face protection, including those terms used in the various Standards of ISO/TC 94/SC 6.

NOTE This International Standard includes terms copied from the standards cited in clause 2. At the time of publication of this standard, the quoted terms are identical to those in ISO 8624: 2002, ISO 13666: 1998, CIE 17.4 1987 and ISO/IEC Guide 51. If, due to future revision of these standards, there should be a disagreement between ISO 4007 and ISO 8624, ISO 13666, CIE 17.4 or ISO/IEC Guide 51, then the definitions in the latest version of ISO 8624, ISO 13666, CIE 17.4 or ISO/IEC Guide 51 take precedence.

2 Normative references

The following referenced documents are indispensable for the application 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 48 *Rubber, vulcanized or thermoplastic - Determination of hardness (hardness between 10 IRHD and 100 IRHD)*

ISO 472 *Plastics - Vocabulary*

ISO 8624 *Ophthalmic optics – Spectacle frames – Measuring system and terminology*

ISO 10012-1: 1992 *Quality assurance requirements for measuring equipment -- Part 1: Metrological confirmation system for measuring equipment* (Withdrawn)

ISO 13666 *Ophthalmic optics – Spectacle lenses – Vocabulary*

CIE 17.4 *International Lighting Vocabulary (identical to IEC 60050(845)*

ISO/CIE 10526 *CIE standard colorimetric illuminants*

ISO/CIE 10527 *CIE standard colorimetric observers*

IEC 60050(845) *International Electrotechnical Vocabulary – Chapter 845: Lighting (identical to CIE 17.4)*

ISO/IEC Guide 51 *Safety aspects – Guidelines for their inclusion in standards*

IEC/EN 60825-1 *Safety of laser products – Part 1: Equipment classification and requirements*

3 Terms relating to hazards

3.1
safety
sécurité
freedom from unacceptable **risk**

NOTE The use of the words '**safety**' and 'safe' as descriptive adjectives should be avoided because they convey no useful extra information. In addition, they are likely to be interpreted as an assurance of guaranteed freedom from **risk**. The recommended approach is to replace, wherever possible, the words **safety** and safe by an indication of the objective.

EXAMPLE Use “protective **helmet**” instead of “**safety helmet**”.

[ISO/IEC Guide 51: 1999]

3.2
harm
dommage
physical injury or damage to the health of people or damage to property or the environment

[ISO/IEC Guide 51: 1999]

3.3
hazard
phénomène dangereux
potential source of **harm**

NOTE The term **hazard** can be qualified in order to define its origin or the nature of the expected **harm** (e.g. electric shock **hazard**, crushing **hazard**, cutting **hazard**, toxic **hazard**, fire **hazard**, drowning **hazard**).

[ISO/IEC Guide 51: 1999]

3.4
risk
risque
combination of the probability of occurrence of **harm** and the severity of that **harm**

[ISO/IEC Guide 51: 1999]

3.5
reasonably foreseeable misuse
mauvais usage raisonnablement prévisible
use of a product, process or service in a way not intended by the supplier, but which may result from readily predictable human behaviour

[ISO/IEC Guide 51: 1999]

4 Terms relating to optical radiation and sources of radiation

4.1 Terms relating to optical radiation

4.1.1
optical radiation
optische Strahlung
rayonnement optique
electromagnetic radiation at wavelengths between the region of transition to X rays ($\lambda \approx 1$ nm) and the region of transition to radio waves ($\lambda \approx 1$ mm)

[CIE 17.4/IEC 60050: 1987(845-01-02)]

NOTE This is usually subdivided into the following spectral ranges, with a possible overlap at the longer wavelength limit of UV:

— **ultraviolet radiation** UV 1 nm to 380 nm or 400 nm ;

— **visible radiation** VIS 380 nm to 780 nm ;

— **infrared radiation** IR 780 nm to 1 mm.

4.1.2
UV-radiation; ultraviolet radiation
UV-Strahlung; Ultraviolett-Strahlung
rayonnement ultraviolet
optical radiation for which the wavelengths are shorter than those for **visible radiation**.

NOTE 1 For **ultraviolet radiation**, the range between 1 nm and 400 nm is commonly subdivided into:

— UV-A 315 nm to 400 nm

— UV-B 280 nm to 315 nm

— UV-C 100 nm to 280 nm

[CIE 17.4/IEC 60050: 1987(845 – 01-05)]

— Extreme UV This zone below 100 nm exists in vacuum only and is not applicable to eye and face protection. Its lower limit is taken as 1 or 10 nm.

NOTE 2 For purposes of sunglasses for general use, the upper limit of UV-A is taken as 380 nm, since the potential biological affects upon the anterior eye do not warrant a transmission limitation above 380 nm within the UV-A. This limit of 380 nm coincides with that taken in ophthalmic optics and in ISO 20473:2007 *Optics and photonics - Spectral bands*.
For medical purposes, e.g. protection for PUVA treatment, dermatologists use 400 nm.

NOTE 3 The UV-C range is defined as:

— Far UV (FUV) 190 nm to 280 nm

— Vacuum UV (VUV) 100 nm to 190 nm (ISO 20473:2007)

NOTE 4 For eye-protection, only the longer wavelength part of the UV-C range from 190 nm to 280 nm is of importance. This range is not contained in solar radiation and only occurs in a few artificial radiation sources.

4.1.3
visible radiation, light
Sichtbares Spektralgebiet; VIS
domaine spectral visible
any **optical radiation** capable of causing a visual sensation directly.

[CIE 17.4/IEC 60050: 1987(845-01-03)]

NOTE 1 There are no precise limits for the spectral range of **visible radiation** since they depend upon the amount of **radiant power** reaching the retina and the responsivity of the observer. The lower limit is generally taken between 360 nm and 400 nm and the upper limit between 760 nm and 830 nm.

NOTE 2 For purposes of eye and face PPE, the wavelength range is taken to be between 380 nm and 780 nm

4.1.4
IR-radiation; infrared radiation
infrarote Strahlung; IR-Strahlung
rayonnement infrarouge
optical radiation for which the wavelengths are longer than those for **visible radiation**

NOTE For infrared radiation, the range between 780 nm and 1 mm is commonly subdivided into:

— IR-A 780 nm to 1 400 nm ;

— IR-B 1 400 nm to 3 000 nm ;

— IR-C 3 000 nm to 1 mm.

[CIE 17.4/IEC 60050: 1987 (845-01-04)]

4.1.5
monochromatic light, monochromatic radiation
Monochromatisches Licht
lumière monochromatique
radiation characterized by a single frequency

[CIE 17.4/IEC 60050: 1987 (845-01-07)]

NOTE 1 Although frequency is the more fundamental property, the wavelength in air (or *in vacuo*) is the more commonly used attribute used to characterize a **monochromatic radiation**.
NOTE 2 **optical radiation** extending over a very narrow range of wavelengths (e.g. such as that emitted by a laser) that can be characterized by a single wavelength value (usually the mean) is regarded as monochromatic.

4.1.6
illuminant
Lichtart
illuminant
radiation with a relative spectral power distribution defined over the wavelength range that influences object colour perception.

[CIE 17.4/IEC 60050: 1987 (845-03-10)]

NOTE In everyday English this term is not restricted to this sense, but is also used for any kind of **light** falling on a body or scene.

4.1.7
CIE standard illuminants
Normalichtarten CI
illuminants normalisés CIE
illuminants A, B, C, D_{65} and other **illuminants** D, defined by the CIE in terms of relative spectral power distributions

CIE 17.4/IEC 60050: 1987 (845-03-12)

NOTE 1 These **illuminants** are intended to represent

A Planckian radiation with a temperature of 2856° K
B direct solar radiation (obsolete)
C average daylight
D_{65} Daylight including the ultraviolet section;

NOTE 2 CIE 17.4/IEC 60050: 1987 (845-03-11) gives: '**daylight illuminant**; illuminant having the same or nearly the same relative spectral power distribution as a phase of daylight'.