



SLOVENSKI STANDARD
SIST EN ISO 10256:2003
01-december-2003

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SIST EN 967:1998

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Head and face protection for use in ice hockey (ISO 10256:2003)

Kopf- und Gesichtsschutz zur Benutzung beim Eishockey (ISO 10256:2003)

ITeH STANDARD PREVIEW
Protections de tete et de visage destinées a etre utilisée en hockey sur glace (ISO 10256:2003)
(standards.iteh.ai)

Ta slovenski standard je istoveten z: EN ISO 10256:2003
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ICS:

13.340.20	Varovalna oprema za glavo	Head protective equipment
97.220.20	Oprema za zimske športe	Winter sports equipment

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English version

Head and face protection for use in ice hockey (ISO 10256:2003)

Protections de tête et de visage destinées à être utilisées en hockey sur glace (ISO 10256:2003)

Kopf- und Gesichtsschutz zur Benutzung beim Eishockey (ISO 10256:2003)

This European Standard was approved by CEN on 1 August 2003.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

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

Management Centre: rue de Stassart, 36 B-1050 Brussels

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Foreword

This document (EN ISO 10256:2003) has been prepared by Technical Committee ISO/TC 83 "Sports and recreational equipment" in collaboration with Technical Committee CEN/TC 158 "Head protection", the secretariat of which is held by BSI.

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 March 2004, and conflicting national standards shall be withdrawn at the latest by March 2004.

This document supersedes EN 967:1996.

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(s).

For relationship with EU Directive(s), see informative annex ZB, 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, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

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Endorsement notice

The text of ISO 10256:2003 has been approved by CEN as EN ISO 10256:2003 without any modifications.

NOTE Normative references to International Standards are listed in Annex ZA (normative).

Annex ZA (normative)

Normative references to international publications with their relevant European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE Where an International Publication has been modified by common modifications, indicated by (mod.), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN</u>	<u>Year</u>
ISO 960	1998	Plastics - Polyamides (PA) - Determination of water content	EN ISO 960	1997

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Annex ZB

(informative)

Clauses of this European Standard addressing essential requirements or other provisions of EU Directives

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:

- Directive 89/686/EEC
- Directive 93/68/EEC
- Directive 93/95/EEC
- Directive 96/58/EC

Compliance with this Standard provides one means of conforming with the specific essential requirements of the Directives concerned and associated EFTA Regulations.

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

The following clauses of this document are likely to support requirements of the Directives:

Table ZB.1 - Relationship between this European Standard and Directives

EN ISO 10256 Clauses	Directives
5.2.1, 5.2.2, 5.3.1, 5.3.2, 5.4.1, 5.4.2	1.1
5.1.1, 5.1.2, 5.1.3	1.2
5.2.5	1.3
8, 9	1.4
5.2.5	2.1
5.3, 5.4	2.3
5.2.5	2.5
5.2.5	2.9
8	2.12
5.2.3, 5.2.4, 5.3.2, 5.3.3, 5.4.2, 5.4.3, 6.4, 6.8	3.1

Head and face protection for use in ice hockey

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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 10256 was prepared by Technical Committee ISO/TC 83, *Sports and recreational equipment*, Subcommittee SC 5, *Ice hockey equipment and facilities*.

This second edition cancels and replaces ISO 10256:1996, ISO 10257:1996 and EN 967:1996.

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Introduction

The intention of head and face protection is to reduce the frequency and severity of localized injuries to the head and that part of the face surrounded by the protector. The protective function is such that the force from impacts against the protector is distributed and dampened and the penetration of objects is counteracted.

Head and face protection for use in ice hockey comprise helmets and an associated face protector. Face protectors can consist of eye protectors (visors) or full-face protectors. Helmets are tested and assessed as a separate unit, but face protectors are always tested and assessed together with the helmet or helmets for which the face protector is intended.

To achieve the performance of which it is capable, and to ensure stability on the head, a helmet and associated face protector should be as closely fitting as possible consistent with comfort. In use, it is essential that the helmet and associated face protector be securely fastened, with any chin strap or neck strap adjusted according to the manufacturer's instructions.

ISO/TC 83/SC 5 is aware that specifications for the performance of the helmet and the face protector are required to reduce the risk of injury in ice hockey. There was consensus that most of today's head and face protectors meet the performance requirements of this International Standard. However, the goal of ISO/TC 83/SC 5 is to promote the use of better materials and/or constructions as they become available to meet the future requirements of the sport of ice hockey. ISO/TC 83/SC 5 is also aware that in order to provide for comfort and correct fitting and use, helmets and face protectors should have low mass consistent with providing the appropriate performance characteristics.

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Head and face protection for use in ice hockey

1 Scope

This International Standard specifies performance requirements and test methods for head and face protection for use in ice hockey.

NOTE 1 The intent is to reduce the risk of injury to the head and face without compromising the form or appeal of the game.

NOTE 2 Ice hockey is a sport in which there is a risk of injury. This International Standard is intended only for helmets and face protectors used for ice hockey. Ice hockey helmets afford no protection from neck or spinal injury. Severe head, brain or spinal injuries, including paralysis or death, may occur in spite of using an ice hockey helmet in accordance with this International Standard.

Performance requirements and test methods, where appropriate, are given for the following:

- a) construction;
- b) shock absorption;
- c) puck-impact resistance;
- d) penetration;
- e) retention-system properties;
- f) field of vision;
- g) marking and information.

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The head and face protection is intended for use by

- a) players,
- b) goalkeepers and
- c) certain functionaries (e.g. referees).

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 6487:2002, *Road vehicles — Measurement techniques in impact tests — Instrumentation*

EN 960:1994, *Headforms for use in the testing of protective helmets*

CAN/CSA Z262.4-00, *Ice hockey pucks*

ASTM F1446, *Standard test methods for equipment and procedures used in evaluating the performance characteristics of protective headgear*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1 General

3.1.1 acceleration of a body

a
(self-explanatory)

NOTE Acceleration is measured in metres per second squared, in units of g .

3.1.2 acceleration of a body due to gravity

g
(self-explanatory, $g = 9,806 \text{ m/s}^2$)

3.1.3 central vertical axis

line relative to the headform that lies in the median plane of symmetry, and that is normal to the basic plane at a point equidistant from the front and back of the headform

3.1.4 Gadd Severity Index

GSI
weighted impulse criterion measure that estimates the injury hazard to the human head based on an impact and determined from the acceleration-time wave form, and mathematically defined by the equation

$$\text{GSI} = \int_{t_0}^{t_0 + t_1} a^{2,5} dt$$

where

a is the acceleration of a body, in metres per second squared;

t is the time in seconds, at the 5 g level;

t_1 is the time of impact, i.e. pulse duration, in seconds, measured from the 5 g level.

3.1.5 Planes

3.1.5.1 basic plane of the human head Frankfurt Horizontal

plane that is located at the level of the external upper borders of the ear canal (external auditory meatus) and the inferior margins of the orbits of the eyes

3.1.5.2 basic plane of a headform

plane relative to the headform that corresponds to the basic plane of the human head

3.1.5.3**reference plane**

construction plane parallel to the basic plane of the headform at a distance from it which is a function of the size of the headform

3.1.5.4**frontal plane**

vertical plane that is perpendicular to the median and reference planes and passes through the crown of the headform

See Figure 1.

3.1.5.5**horizontal plane**

plane that passes across the body at right angles to both the frontal and median planes

See Figure 1.

3.1.5.6**median plane**

vertical plane that passes through the headform from front to back and divides the headform into right and left halves

See Figure 1.

3.1.6**permanent marking and warning**

information that remains legible and cannot be removed in its entirety under normal use conditions

See Clause 8.

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3.2 Helmet**3.2.1****retention system**

system which secures the helmet firmly to the head by passing under the mandible, in whole or in part, when adjusted according to the manufacturer's instructions

3.2.2**drop height**

vertical distance between the lowest point (impact point) of the elevated helmet and the impact surface

3.2.3**fastening system**

those devices used to connect all components of the helmet

3.2.4**helmet**

device intended to reduce the risk of head injury to ice hockey participants and including

- a) the outer covering and shock-attenuating system,
- b) the retention system,
- c) all associated hardware, and
- d) the manufacturer's attachments

NOTE a) to d) can be discussed individually in relation to their function as part of the helmet as a whole.