SLOVENSKI STANDARD
oSIST prEN ISO 10256-2:2015

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Varovalna oprema za uporabo pri hokeju na ledu - 2. del: Zaščita glave za drsalce (ISO/DIS 10256-2:2015)

Protective equipment for use in ice hockey - Part 2: Head protection for skaters (ISO/DIS 10256-2:2015)

Schutzausrüstung zur Benutzung beim Eishockey - Teil 2: Kopfschutz für Eisläufer (ISO/DIS 10256-2:2015)

Protections de tête et de visage destinées à être utilisées en hockey sur glace - Partie 2: Protecteurs de tête pour des joueurs de hockey sur glace (ISO/DIS 10256-2:2015)

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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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Protective equipment for use in ice hockey —

Part 2:
Head protection for skaters

Protections de tête et de visage destinées à être utilisées en hockey sur glace

ICS: 13.340.20; 97.220.20

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.

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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 was prepared by Technical Committee ISO/TC 83, *Sports Equipment*, Subcommittee SC 5, *Equipment and facilities for ice hockey*.

ISO 10256-1, 10256-2, 10256-3 and 10256-4 replace the second edition of ISO 10256 (2003)

ISO 10256 consists of the following parts, under the general title *Protective Equipment for use in Ice hockey*:

— *Part 1: General requirements*

— *Part 2: Head protection for skaters – performance requirements*

— *Part 3: Facial protection for skaters– performance requirements*

— *Part 4: Head and face protection for goalkeepers – performance requirements*

Introduction

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

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

Sub-committee 5 is aware that specifications for the performance of the helmet are required to reduce the risk of injury in ice hockey. There was consensus that most of today's head protectors meet the performance requirements of this standard. The goal of the sub-committee 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. Sub-committee 5 recognizes that in order to provide for comfort, fit and use, helmets should have a mass consistent with providing the appropriate performance characteristics.

Protective equipment for use in ice hockey – Part 2: Head protection for skaters

1 Scope

This International Standard specifies performance requirements and test methods for head protectors for use in ice hockey and shall be used in conjunction with ISO 10256-1.

NOTE 1 The requirements of a clause take precident over a figure.

NOTE 2 The intent of this International Standard is to reduce the risk of injury to the head without compromising the form or appeal of the game.

NOTE 3 Ice hockey is a sport in which there is a risk of injury. This International Standard is intended only for helmets 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.

Requirements and the corresponding test methods, where appropriate, are given for the following:

a) Construction and protected area
b) shock absorption
c) penetration
d) retention system properties
e) field of view
f) marking and information.

This International Standard applies to head protectors worn by

a) Players other than goalkeepers; and
b) certain functionaries (e.g. referees).

2 Normative references

The following referenced documents are indispensible 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 6487:2012, *Road vehicles — Measurement techniques in impact tests — Instrumentation.*

ISO 10256-1: 20XX, *Protective equipment for use in ice hockey – Part 1: General Requirements*

EN 960: 2006, *Headforms for use in the testing of protective helmets*

CSA Standard Z262.6-14, *Specifications for Facially Featured Headforms*

3 Definitions

For the purposes of this document, the definitions in ISO 10256-1 and the following apply.

3.1
drop height
vertical distance between the lowest point (impact point) of the elevated helmet and the impact surface on a drop test apparatus

3.2
fastening system
those devices used to connect the components of the helmet

3.3
field of view
projection outward of all retinal points (the nervous layer of the eye) at which visual sensations can be initiated

3.4
goniometer
positioning device that moves the headform such that the angular rotation and movement in both the horizontal and vertical directions can be recorded

3.5
helmet
— a device worn on the head that is intended to reduce the risk of head injury to ice hockey participants.

NOTE Helmets can include
(a) a shock-attenuating system;
(b) a retention system; and
(c) manufacturers' attachments.

3.6
helmet model
a category of helmets that have the same essential characteristics.
NOTE Essential characteristics include materials, dimensions, construction, retention system, and protective padding

3.7
helmet positioning index (HPI)
the vertical distance measured at the median plane, from the front edge of the helmet to the reference plane, when the helmet is placed on the reference headform

3.8
Impact sites (defined in relation to the headform using projected measurements) (see Figure 1)

3.8.1
crown
point where the central vertical axis meets the top of the headform

3.8.2
front
point on the median plane which is 50 mm above the anterior intersection with the reference plane

3.8.3
front boss
point 25 mm above the reference plane and 45° in a clockwise or counter-clockwise direction about the central vertical axis (see Figure 1).

3.8.4
non-prescribed
any impact site, except the six prescribed sites, on or above the test line and at least one-fifth of the circumference of the headform from any prior impact site use

NOTE The six prescribed impact sites are crown, front, front boss, rear, rear boss, and side.

3.8.5
side
point 25 mm above the reference plane on the mid-frontal plane.

3.8.6
rear
point at the posterior intersection of the median and reference plane

3.8.7
rear boss
point on the reference plane and 135° in a clockwise or counter-clockwise direction about the central vertical axis (see Figure 1).

3.9
liner
material inside the outer covering of the helmet, with the principal objective to absorb kinetic energy generated by an impact to the head, this material, or part of it, ensuring a snug comfortable fit of the helmet on the head

3.10
natural frequency
frequency at which a system will tend to oscillate when displaced from its static equilibrium position

3.11
outer covering (shell)
outer material that gives the helmet its form

3.12
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 manufacturer's instructions

3.13
support assembly

drop assembly in the monorail system minus the weight of the headform, ball arm, ball clamp, ball clamp bolts, and accelerometer

3.14
spherical impactor
a device made of low resonance material (for example, magnesium, aluminum alloy, or stainless steel) that couples mechanically with the ball arm connector of the drop assembly in place of the impact test headform and is used for system verification of the drop assembly.

3.15
test area
the area on and above the test line, where an impact site shall be located

3.16
test line
the line that defines the boundaries of the test area (see Figure 2)

4 Requirements

4.1 Innocuousness

The manufacturer shall provide written documentation indicating that the materials used in the construction of the helmet fulfil the requirements for innocuousness given in ISO 10256-1.

4.2 Ergonomics

Manufacturers shall provide documentation indicating that the helmet shall meet the requirements for ergonomics given in ISO 10256-1.

4.3 Attachments

4.3.1 Optional devices

Any optional devices fitted to the helmet shall be so designed that they are unlikely to cause any injury to the wearer or other players during contact or otherwise.

4.3.2 Fastener components

The fasteners for securing attachments to the helmet shall be so designed that the degree of protection afforded to the wearer by the helmet is not thereby reduced.

4.3.3 Eye and full-face protectors

The helmet shall be designed to allow eye or full-face protectors to be attached to the helmet without requiring any operation of machines by the user.