
**Protective equipment for use in ice
hockey —**

**Part 3:
Face protectors for skaters**

*Équipements de protection destinés à être utilisés en hockey sur
glace —*

Partie 3: Protections faciales pour les skateurs

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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.

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 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.

The committee responsible for this document is ISO/TC 83, *Sports and other recreational facilities and equipment*, Subcommittee SC 5, *Ice hockey equipment and facilities*.

This first edition of ISO 10256-3, together with ISO 10256-1, ISO 10256-2, ISO 10256-4, ISO 10256-5, and ISO 10256-6 cancels and replaces the ISO 10256:2003, which has been technically revised.

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*
- *Part 3: Face protectors for skaters*
- *Part 4: Head and face protection for goalkeepers*
- *Part 5: Neck laceration protection for ice hockey players*

The following parts are under preparation:

- *Part 6: Lower leg protectors for ice hockey players*

Introduction

Ice hockey is a high speed, collision sport in which there is a risk of injury. The object of this part of ISO 10256 is to specify requirements for face protectors, taking into account the risks inherent in participating in the sport, many of which cannot be eliminated by protective equipment. By playing this sport, participants accept the risk of serious injury, paralysis, or death.

The intention of 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.

Face protectors can consist of eye protectors (visors) or full face protectors. They are always worn in conjunction with an ice hockey helmet. Face protectors are 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 is intended to be as closely fitting as possible consistent with comfort. In use it is essential that the helmet and associated face protector are securely fastened, with any chin strap or neck strap adjusted according to manufacturer's instructions.

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Protective equipment for use in ice hockey —

Part 3: Face protectors for skaters

1 Scope

This part of ISO 10256 specifies performance requirements and test methods for face protectors (including visors) for use in ice hockey and is intended to be used in conjunction with ISO 10256-1.

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

- a) construction and area of coverage;
- b) resistance to puck impact;
- c) penetration;
- d) field of vision;
- e) geometric (visual) optics and acuity;
- f) transmittance and haze;
- g) marking and information.

This part of ISO 10256 applies to face protectors worn by

- players other than goalkeepers, and
- certain functionaries (e.g. referees).

NOTE 1 The requirements of a Clause take precedent over a figure.

NOTE 2 The intent is to reduce the risk of injury to the face without compromising the form or appeal of the game.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 10256-1:2016, *Protective equipment for use in ice hockey — Part 1: General requirements*

ISO 10256-2:2016, *Protective equipment for use in ice hockey — Part 2: Head protection for skaters*

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

ASTM D 1003, *Standard Test Method for Haze and Luminous Transmittance of Transparent Plastics*

CSA Z262.6-14, *Specifications for facially featured headforms*

3 Terms and definitions

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

3.1

CIE standard illuminants

illuminants A and D65 defined by the CIE in terms of relative spectral power distributions

Note 1 to entry: See ISO 11664-2 developed with the International Commission on Illumination (CIE).

3.2

chin cup

protective component which covers the load bearing area

Note 1 to entry: As defined in [Figure 5](#).

3.3

chip

readily visible particle missing from the protector with an area bigger than 9 mm²

3.4

collimated light source

ratio of the visible light (380 nm to 780 nm) transmitted by a medium to the incident light

Note 1 to entry: As referenced to CIE Standard Illuminant A and a standard photopic observer.

3.5

combination

combined unit of a full-face protector or visor placed on a hockey helmet with which it is designed to be used

3.6

diopetre

unit of focusing power, expressed in reciprocal metres (m⁻¹), of a lens or surface, or of the vergence (refractive index divided by the radius) of a wavefront

3.7

face protector

protector, specially adapted to a helmet that is designed to protect the wearer's face against injury

3.7.1

full-face protector

device intended to reduce the risk of injury to the face of ice hockey participants

Note 1 to entry: As defined in [5.9.1](#).

3.7.2

visor

device intended to reduce the risk of injury to the eyes of ice hockey participants

Note 1 to entry: As defined in [5.9.2](#).

3.8

field of vision

<optical quality> extent of vision through the mounted protector in the "as worn" position measured with reference to the entrance pupil of the stationary eye when the protector is placed on the appropriate headform

Note 1 to entry: See [Figure A.1](#).

3.9 field of vision directions

3.9.1

inferior

downward

angle in the vertical plane measured downwards from the horizontal

3.9.2**nasally**

angle in the horizontal plane measured from the primary position of gaze to the left for the right eye and from the primary position of gaze to the right for the left eye

3.9.3**superior****upward**

angle in the vertical plane measured upwards from the horizontal

3.9.4**temporally**

angle in the horizontal plane measured from the primary position of gaze to the right for the right eye and from the primary position of gaze to the left for the left eye

3.10**fracture**

full thickness crack, breaking, or complete separation of material

3.11**glabella**

most prominent midline point between the eyebrows identical to the bony glabella of the frontal bone

3.12**goniometer**

positioning device that moves the headform such that the angular rotation and movement in reference to the corneal eye point in both the horizontal and vertical directions can be recorded

3.13**haze**

<wide angle scatter> percentage of transmitted light that, in passing through the specimen, deviates from the incident beam by forward scattering (total angle) as caused by imperfections in the ocular that reduce clarity of vision

3.14 impact sites for testing face protectors**3.14.1****impact site eye**

point in the horizontal plane 25° from the median plane and in the direction of the eye

Note 1 to entry: See [Figure 2](#).

3.14.2**impact site mouth**

point in the intersection between the horizontal plane and the median plane in the direction of the center of the mouth in the horizontal plane

Note 1 to entry: See [Figure 2](#).

3.14.3**impact site side**

point halfway between the mouth level and the eye level in the horizontal plane, 25° from the median plane, and in the direction of the central vertical axis

Note 1 to entry: See [Figure 2](#).

3.15**interpupillary distance****IPD**

distance in millimetres between the centres of the pupils of both eyes on the facially featured headform