BS ISO 10256-5:2017

BSI Standards Publication

Protective equipment for use in ice hockey

Part 5: Neck laceration protectors for ice hockey players

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National foreword

This British Standard is the UK implementation of ISO 10256-5:2017. Together with BS EN ISO 10256-1:2016, BS EN ISO 10256-2, BS EN ISO 10256-3, BS EN ISO 10256-4 and BS EN ISO 10256-6, it supersedes BS EN ISO 10256:2003 which will be withdrawn upon publication of all parts of this standard.

The UK participation in its preparation was entrusted to Technical Committee SW/136, Sports, playground and other recreational equipment.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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INTERNATIONAL STANDARD

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Protective equipment for use in ice hockey —

Part 5: Neck laceration protectors for ice hockey players

Équipement protectif destinées à être utilisées en hockey sur glace —

Partie 5: Protège-cous contre les lacérations pour joueurs de hockey sur glace

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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 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.

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

This document was developed primarily from neck laceration protector standards previously published by Bureau de Normalisation du Québec (BNQ) (CAN/BNQ 9415-370) and the European Committee for Standardization (CEN/TS 15256:2005).

A list of all the parts in ISO 10256 can be found on the ISO website.

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Introduction

The intention of neck laceration protection is to reduce the frequency and severity of lacerations to the neck while playing ice hockey. The protective function is such that the penetration of a skate blade is counteracted.

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

ISO/TC 83/SC 5 is aware that specifications for the performance of the neck laceration protector are required to reduce the risk of injury in ice hockey. The goal of the subcommittee is to promote the use of improved materials and/or constructions as they become available to meet the future requirements of the sport of ice hockey. ISO/TC 83/SC 5 recognizes that in order to provide for comfort, fit and use, neck laceration protectors should be constructed from materials providing the appropriate performance characteristics.

The intent of this document is to reduce the risk of lacerations to the neck without compromising the form or appeal of the game.

Ice hockey is a sport in which there is a risk of injury. This document is intended only for neck laceration protectors used for ice hockey. Ice hockey neck laceration protectors do not afford protection from impacts to the neck or spine, nor do they protect against axial compressive loading of the cervical spine. Severe head, brain or spinal injuries, including paralysis or death, may occur even though an ice hockey neck laceration protector meeting the requirements of this document is used.

In order for a neck laceration protector to perform adequately, it needs to be in good condition, fit properly, be worn properly and not be altered in any way.

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INTERNATIONAL STANDARD ISO 10256-5:2017(E)

Protective equipment for use in ice hockey —

Part 5: Neck laceration protectors for ice hockey players

1 Scope

This document specifies performance requirements and test methods for neck laceration protectors used in ice hockey. Neck laceration protectors are needed to reduce the risk of direct laceration to the neck caused by contact of a hockey skate blade.

The tests required to ensure that a neck laceration protector conforms to the requirements of this document do not attempt to predict the performance of the neck protector in all possible situations. This document does not address protection from the impact of pucks, sticks or other objects.

This document does not address accessories that are associated with a neck laceration protector.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 6330, *Textiles — Domestic washing and drying procedures for textile testing*

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

3 Terms and definitions

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

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

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at https://www.iso.org/obp/

3.1
anatomical form
solid or hollow object defined by its shape and size, used to support a *neck laceration protector* (3.6) for the verification of the test requirements of this document

3.2
anvil
round or square sectioned rigid metal block with a specified shape at its upper end used to transmit the force of impact from the inside of the test specimen to the force transducer

3.3
bib
part of a *neck laceration protector* (3.6) that lies over the anterior thoracic region

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3.4
median plane
vertical plane that passes through the *neck laceration protector* (3.6) from front to back and divides the neck laceration protector into right and left halves

3.5
model
category of a *neck laceration protector* (3.6) that does not differ in essential elements

Note 1 to entry: The essential elements are the materials, design, construction, marking requirements and retention system.

Note 2 to entry: The same model can be available in several sizes and colours.

3.6
neck laceration protector
cut resistant device worn to reduce the risk of external laceration injury from skate blades in the *protected area* (3.8)

3.7
neck part
part of a *neck laceration protector* (3.6) that surrounds the cylindrical portion of the anatomical neck form

3.8
protected area
area of the *neck laceration protector* (3.6) that is subject to testing as defined in this document

3.9
easy access
ability to open the protector and position it away from the wearers neck without any tools when the wearer is laying supine (i.e. on the back, facing upward) and without lifting the head from the ground

4 General requirements

4.1 Innocuousness/materials

4.1.1 In addition to the requirements of ISO 10256-1:2016, 4.1, the requirements in 4.1.2 to 4.1.4 shall apply. Examination shall be made according to 5.3.1.

4.1.2 The neck laceration protector shall be made with no removable parts in the protected area.

4.1.3 If any of the materials used tend to shrink when laundered, this aspect shall be taken into consideration in order to assure that the protective material covers the protected area after laundering.

4.1.4 The protective materials shall be attached securely to each other and to the other materials in such a way that they provide continuous protection in the protected area, ensure the comfort of the user and do not shift during normal use.

4.2 Ergonomics, ease of use and adjustment

4.2.1 The neck protector shall comply with the requirements of ISO 10256-1:2016, 3.2.

4.2.2 The neck laceration protector shall be compatible with other equipment such as shoulder pads, helmet and facial protector.

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4.2.3 The neck laceration protector shall be quickly and easily adjustable and in the event of an emergency, it shall allow easy access to the protected area.

4.2.4 The neck laceration protector shall be designed and manufactured so that it remains in place during normal ice hockey play when worn according to the manufacturer's instructions.

4.3 Protected area and area of coverage

When examined according to 5.3.3.1, the protective material of the neck laceration protector shall cover the protected area as shown in Figure 1.

4.4 Cut resistance

When tested according to 5.3.5, the protective area of the neck laceration protector shall meet the specified minimum cut resistance requirements for the test method performed.

When tested according to the method in Annex A, there shall be no cuts detected on the artificial neck foam, nor cut through the bottom layer (the one found in contact with the skin of the user) of the neck laceration protector.

When tested according to the method in Annex B, there shall be no cut through the entire thickness of the neck protector within the cut test area.

4.5 Permanence of markings

When tested in accordance with 5.3.4, permanent markings shall remain legible for the useful life of the neck laceration protector under normal use and maintenance following the manufacturer's care and maintenance recommendations.

5 Test methods

5.1 Test apparatus tolerances

Unless otherwise specified, the dimensions of the cut test apparatus shall have a tolerance of ±2 %.

5.2 Test samples and conditioning

5.2.1 Test samples

Only new and complete neck laceration protectors, as offered for sale, shall be tested. The neck laceration protectors shall be inspected visually, and by hand, prior to conditioning. The number of samples required for each test is specified in Table 1.

5.2.2 Sample preparation and conditioning

5.2.2.1 Washed and dried

All neck laceration protector samples shall be washed three times according to ISO 6330 using the manufacturer's instructions.

After each wash, the protector shall be hung in ambient conditions according to ISO 6330 and according to the manufacturer's instructions.

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