SLOVENSKI STANDARD
SIST EN 16781:2018

01-oktober-2018

Tekstilni izdelki za otroke - Varnostne zahteve in preskusne metode za otroške spalne vreče, ki se uporabljajo v posteljici

Textile child care articles - Safety requirements and test methods for children's sleep bags for use in a cot

Textile Artikel für Kleinkinder und Säuglinge - Sicherheitstechnische Anforderungen und Prüfverfahren für Babyschlafsäcke

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Articles textiles de puériculture - Exigences de sécurité et méthodes d'essai pour les gigoteuses

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ICS:

97.160	Tekstilije za dom. Perilo	Home textiles. Linen
97.190	Otroška oprema	Equipment for children

SIST EN 16781:2018 **en,fr,de**

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EUROPEAN STANDARD

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Textile child care articles - Safety requirements and test methods for children's sleep bags for use in a cot

Articles textiles de puériculture - Exigences de sécurité et méthodes d'essai pour les gigoteuses destinées à être utilisées dans un lit à nacelle

Textile Artikel für Kleinkinder und Säuglinge - Sicherheitstechnische Anforderungen und Prüfverfahren für Babyschlafsäcke

This European Standard was approved by CEN on 8 February 2018.

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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 CEN-CENELEC Management Centre has the same status as the official versions.

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European foreword

This document (EN 16781:2018) has been prepared by Technical Committee CEN/TC 248 “Textiles and textile products”, 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of an identical text or by endorsement, at the latest by February 2019, and conflicting national standards shall be withdrawn at the latest by February 2019.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

Following the publication and implementation of this document in CEN member countries, it has been agreed by CEN TC 248 that there should be an 18 month transition period from the date of availability to allow manufacturers to develop and produce garments that conform to the standard. This period is also to allow the supply chain, from manufacturer through to the consumer, to be cleared of non-conforming children's sleep bags for use in a cot.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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Introduction

The European Commission Mandate N° M/497, followed by Product and Service safety in the Directorate-General Health and Consumers, under the title "Standardisation mandate to CEN, CENELEC and ETSI on the safety of child-care articles; Cluster 2- risks in the sleeping environment; Mattresses for cots, cot bumpers, suspended beds for children, duvets for children, sleep bags for children", issued on 2011-10-20 and accepted by CEN BT on 2011-12-20, requested that CEN develop standards or specifications including safety requirements and test methods, warnings and instructions to adult users in order to address the possible hazard posed by these products.

The aim of this European Standard is to minimize the main *risks posed by products in the sleep environment of babies and young children, such as:*

— internal asphyxiation (choking);

— entrapment;

— hyperthermia (overheating);

— strangulation;

— external asphyxiation (suffocation);

— flammability;

— injuries due to falls;

— injuries due to ingestion of small parts;

— injuries due to chemicals.

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For the development of this document, attention was paid to:

— the child's stages of development (age, height, weight, ability, etc.). Sleep bags were studied in relation to children up to 3 years of age.

— the intended or foreseeable use of the product, bearing in mind a child's behaviour. Such behaviour exposes children to injury in ways that differ from those of adults, making children a particularly vulnerable group in society;

— the hazard presented by the product in the circumstances under which the product and the child come into contact with each other.

IMPORTANT — In order to comply with the essential safety requirements, this document is hazard based. As this document only deals with a particular textile child-care article, i.e. children's sleep bags, design characteristics have been specified only when necessary in order to introduce inherently safe design. These characteristics have been specified in a manner which allows compliance to be checked by interested parties, from designers to market surveillance authority officers.

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1 Scope

This document specifies requirements for the safety of children's sleep bags which are used in the children's sleeping environment (i.e. not under supervision), and designed to provide sufficient warmth so as to remove the need for additional bedding when sleeping in a cot or similar product (e.g. crib/cradle) in which a child is contained. It is applicable to products for use by younger children based on the ability of the children to not being able to climb out of the cot (approximately under the age of 24 months).

NOTE The informative Annex D lists topics of further investigations, which might lead to necessary improvement of the safety requirements of children's sleep bags.

This document does not apply to products designed for use during the care of premature children or children of low birthweight or for outdoor use or to products designed to keep a child warm in a pushchair or car seats (e.g. foot muff).

If a part of the children's sleep bag is designed to offer additional function (e.g. play function), this part will, in addition to the following requirements, be subjected to safety requirements related to relevant standards (see A.1).

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.

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EN 71-1:2014, *Safety of toys - Part 1: Mechanical and physical properties*

EN 71-3:2013,[1] *Safety of toys - Part 3: Migration of certain elements*

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EN 1103, *Textiles - Fabrics for apparel - Detailed procedure to determine the burning behaviour*

EN 1162, *Feather and down - Test methods - Determination of the oxygen index number*

EN 1164, *Feather and down - Test methods - Determination of the turbidity of an aqueous extract*

EN 12935, *Feather and down - Hygiene and cleanliness requirements*

EN 16732, *Slide fasteners (zips) - Specification*

EN ISO 105-E01, *Textiles - Tests for colour fastness - Part E01: Colour fastness to water (ISO 105-E01)*

EN ISO 139, *Textiles - Standard atmospheres for conditioning and testing (ISO 139)*

EN ISO 6330, *Textiles - Domestic washing and drying procedures for textile testing (ISO 6330)*

EN ISO 11092, *Textiles - Physiological effects - Measurement of thermal and water-vapour resistance under steady-state conditions (sweating guarded-hotplate test) (ISO 11092)*

EN ISO 14184-1, *Textiles - Determination of formaldehyde - Part 1: Free and hydrolysed formaldehyde (water extraction method) (ISO 14184-1)*

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[1] Impacted by EN 71-3:2013+A2:2017

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EN ISO 17226-1, *Leather - Chemical determination of formaldehyde content - Part 1: Method using high performance liquid chromatography (ISO 17226-1)*

ISO 105-F10, *Textiles — Tests for colour fastness — Part F10: Specification for adjacent fabric: Multifibre*

ISO 4915, *Textiles — Stitch types — Classification and terminology*

ISO 5085-1, *Textiles — Determination of thermal resistance — Part 1: Low thermal resistance*

ISO 7000, *Graphical symbols for use on equipment — Registered symbols*

3 Terms and definitions

For the purposes of this document, the following terms and definitions 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 http://www.iso.org/obp

3.1
sleep bag
bedding item consisting of a full length fabric bag, which may be single or multi-layered or filled, with a neck opening and armholes, designed to contain a child and may be used in conjunction with a sleepwear

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3.2
cot
bed for a child consisting of a base and enclosed by high sides to prevent the child from falling out

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3.3
harm
injury or damage to the health of people

[SOURCE: ISO/IEC Guide 51:2014, 3.1, modified - “or damage to property or the environment” has been deleted.]

3.4
hazard
potential source of *harm (3.3)*

[SOURCE: ISO/IEC Guide 51:2014, 3.2]

3.5
risk
combination of the probability of occurrence of *harm (3.3)* and the severity of that harm

[SOURCE: ISO/IEC Guide 51:2014, 3.9, modified — Note 1 to entry has been deleted.]

3.6
inherently safe design
measures taken to eliminate *hazards (3.4)* and/or to reduce *risks (3.5)* by changing the design or operating characteristics of the product or system

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[SOURCE: ISO/IEC Guide 51:2014, 3.5]

3.7
cord
cord, chain, ribbon, string or tape of any textile or non-textile material, including elastic material

3.8
asphyxiation
insufficient supply of air to the airways

Note 1 to entry: Insufficient supply of air could be caused, e.g. by closing off the flow of air as a result of choking or suffocation or by entrapment in an unventilated, confined space.

[SOURCE: EN 71-1:2014, 3.3]

3.9
choking
closing off the flow of air as a result of internal *asphyxiation (3.8)*

Note 1 to entry: Choking can, for example, be caused by inhalation of an object, by an object becoming wedged in the mouth or pharynx, or by an object becoming lodged over the entrance to the lower airways.

[SOURCE: EN 71-1:2014, 3.9]

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3.10
suffocation
closing off the flow of air as a result of airway obstruction external to the mouth and nose

[SOURCE: EN 71-1:2014, 3.59]

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3.11
monofilament thread
single thread of man-made fibre

3.12
burr
roughness, caused by not cleanly severing or finishing the material

[SOURCE: EN 71-1:2014, 3.6]

3.13
surface flash
rapid spread of flame over the surface of a material without ignition of its basic structure

[SOURCE: ISO 4880:1997 and its note to entry: Note 1 to entry: “However, if the latter occurs simultaneously or sequentially with surface flash, it is not considered as a part of surface flash.”]

3.14
three dimensional embellishment
decorative item attached to a cord that is thicker and/or wider than the cord itself

[SOURCE: EN 14682:2014, 2.21]

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4 Requirements and test methods

NOTE Rationales for the inclusion of some of the requirements given in this document are given in Annex A. Table A.1 summarizes the relation between the design characteristics (4.1) and the hazards (4.2).

4.1 Design characteristics (see A.2)

4.1.1 General

4.1.1.1 Children's sleep bags shall not have any hood or other head covering (A.5), legs (A.1) or pockets (A.2.2).

4.1.1.2 When the children's sleep bag is fastened as intended, there shall be no openings which allow the child's legs to penetrate and which would permit the child to walk.

4.1.1.3 Children's sleep bags shall not have any bulky seams or hard objects in the back panel (A.2.2).

4.1.1.4 Only buttons, metal press fasteners or slide fasteners shall be used for fastening the neck opening and the arm opening (see A.2.5).

4.1.1.5 Children's sleep bags shall not be designed, manufactured or supplied with magnetic components (see A.3.3.4.).

4.1.2 Neck openings

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4.1.2.1 Requirements

Neck opening, in relation to the child height, shall comply with the requirements according to Table 1, when measured in accordance with 4.1.2.2 (see A.2.3).

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NOTE Complementary approaches based on arm openings and chest width is given in informative Annex D.

Table 1 — Sleep bag's neck openings in relation to the child height

Child height (cm)	Neck opening circumference		Information given for convenience: *approximate age, based on child height* (*months*)
	minimum (cm)	maximum (cm)	
50 to 65	28	32	*0 to 6*
65 to 80	30	39	*3 to 20*
80 to 95	31	41	*12 to 24*

4.1.2.2 Test method

Fold the sleep bag along an axis between the centre-back and centre-front points taking care to align the fastenings (see Figure 1). Apply hooks to both the centre-back and centre-front points. Suspend the sleep bag using one hook so that the axis described is in a vertical orientation. Support the body of the sleep bag so as to avoid twisting or distortion of the neck opening during testing.

Apply a mass to the lower hook so that the total mass of hook and mass applies a force (F) of (2,5 ± 0,2) N to the neck opening.

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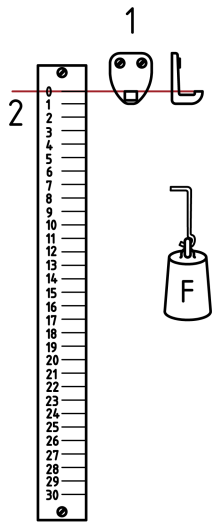
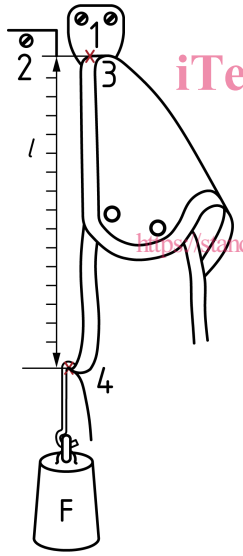
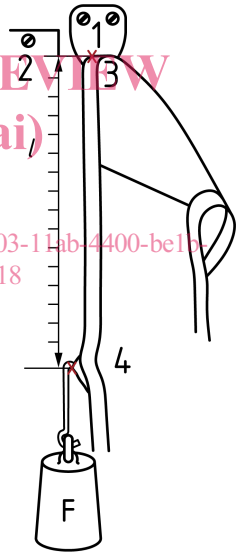
Using a ruler graduated in divisions of not greater than 1 mm, measure the length of the neck opening (l) between the centre-back and centre-front points to the nearest 1 mm. The neck opening circumference is equal to twice the length of neck opening measured.



a) example of measurement devices



b) neck opening measurement (example of sleep bag with press fasteners at shoulder)



c) neck opening measurement (example of sleep bag with seam at shoulder)

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Key

1 fixed hook
2 centre back
3 centre front
l length of the neck opening measurement
F force applied

Figure 1 — Principle of the neck opening measurement