



SLOVENSKI STANDARD

oSIST prEN 16781:2024

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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 Säuglinge und Kleinkinder - Sicherheitstechnische Anforderungen und Prüfverfahren für Kinderschlaftsäcke zur Nutzung in einem Babybett

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

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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'essais pour les gigoteuses d'enfants utilisées dans un lit à nacelles

Textile Artikel für Kleinkinder und Säuglinge - Sicherheitstechnische Anforderungen und Prüfverfahren für Babyschlafsäcke für Gebrauch in einem Kinderbettgestell

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 248.

If this draft becomes a European Standard, 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.

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prEN 16781:2024 (E)**European foreword**

This document (prEN 16781:2024) has been prepared by Technical Committee CEN/TC 248 “Textiles and textile products”, the secretariat of which is held by BSI.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 16781:2018, which has been technically revised. The main changes compared to the previous edition are as follows:

- prEN 16781:2024 has been restructured to be hazard-based;
- Clause 1 The scope has been clarified;
- Clause 2 Additional normative references are added to update to either specification standards (EN 16732, CEN/TS 17394-1) or standardised test methods (EN 17394-2, CEN/TS 17394-3, CEN/TS 17394-4, EN 17667);
- Clause 3 New terms and definitions have been added;
- 5.1.1 Requirements on slide fasteners, buttons and press fasteners have been clarified. Requirement related to weighted sleep bag has been added;
- 5.1.1.1.7 A child height range has been added in the requirement table, as well as requirements for sleep bag length;
- 5.1.1.2.1 The test method for the neck opening circumference has been improved to determine the neck opening circumference at the relaxed state as it is when the sleep bag is used by taking into consideration the mechanical behaviour of any sleep bag materials;
- 5.1.2 Requirements related to entrapment hazards have been clarified regarding the textile and non-textile materials;
- 5.1.3 Requirements on attached components refer to CEN/TS 17394-1:2021 and test methods on attached components refer to EN 17394-2, CEN/TS 17394-3 or CEN/TS 17394-4;
- 5.1.4 Requirements and test method on the sleep bag length have been added;
- 5.1.5 The definition of the back zone has been revised and detailed;
- 5.2 Requirements on migration limits for certain substances have been updated;
- 5.3 Requirements on thermal resistance have been detailed and the test method refers to EN 17667;
- 6.2, 6.3 and 6.4 Declaration of the thermal resistance related to multi-seasonal sleep bags has been added;
- 6.4 A warning and an information have been added;
- Annex A is added to deal with inherently safe design;
- Annex B Some clarifications have been introduced. Rationale for sleep bag length has been added;

- Annex C Examples of the relationship between ambient room temperature of the sleep environment, thermal resistance of the child sleep bag and choice of sleepwear have been added;
- Annex E Summary of specific marking, purchase information and user instruction has been updated;
- Annex ZA is added for the correspondence of the requirements between this document and the EU Directive.

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, see informative Annex ZA, which is an integral part of this document.

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.

iTeh Standards (<https://standards.iteh.ai>) Document Preview

[oSIST prEN 16781:2024](https://standards.iteh.ai/catalog/standards/sist/a1b7f8ce-1a1e-4dad-919c-65dd11fb03e9/osist-pren-16781-2024)

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Introduction

The European Commission Mandate 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 document is to minimize the main *hazards posed by products in the sleep environment of babies and young children*.

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

- the child’s stages of development (age, height, weight, ability, etc.). The safety of child-care articles, in relation to the risks in the sleeping environment (articles such as mattresses for cots, cot bumpers, suspended beds for children, duvets for children, sleep bags for children) was studied in relation to children up to 3 years of age. In this document, the main hazards (suffocation and overheating) are more common to children up to 24 months;
- 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.

Where sleep bags are used by hospitals when nursing sick children, openings for access for tubing to the patient or monitoring devices to monitor the patient, or use of fastenings durable to industrial laundry processing used by hospitals, are considered.

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.

1 Scope

This document specifies requirements for the safety of children's sleep bags which are used in the children's domestic 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 children up to the age of 24 months.

NOTE The informative Annex F 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
- designed for children of low birthweight (i.e. 2,5 kg – see B.1), or
- for use by children who have the ability to climb out of a cot, or
- for use by children when sleeping in a bed, 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 B.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.

EN 71-3:2019+A1:2021, *Safety of toys — Part 3: Migration of certain elements*

EN 1103:2005, *Textiles — Fabrics for apparel — Detailed procedure to determine the burning behaviour*

EN 1162:1996, *Feather and down — Test methods — Determination of the oxygen index number*

EN 1164:1998, *Feather and down — Test methods — Determination of the turbidity of an aqueous extract*

EN 12935:2001, *Feather and down — Hygiene and cleanliness requirements*

prEN 16732:2024,¹ *Slide fasteners (zips) — Specification*

CEN/TS 17394-1:2021, *Textiles and textile products — Part 1: Safety of children's clothing — Security of attachment of attached components to infants' clothing — Specification*

EN 17394-2:2020, *Textiles and textile products — Part 2: Safety of children's clothing — Security of attachment of buttons — Test method*

1 prEN 16732 (WI00248747) is under CEN Enquiry preparation. CEN enquiry from 2024-02-01 to 2024-04-25.

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CEN/TS 17394-3:2021, *Textiles and textile products — Part 3: Safety of children's clothing — Security of attachment of metal mechanically applied press fasteners — Test method*

CEN/TS 17394-4:2021, *Textiles and textile products — Part 4: Safety of children's clothing — Security of attachment of components except buttons and metal mechanically applied press fasteners — Test method*

EN 17667:2022, *Test method — Determination of thermal resistance of filled textile articles and similar items using small guarded hotplate apparatus*

EN ISO 105-A01:2010, *Textiles — Tests for colour fastness — Part A01: General principles of testing (ISO 105-A01:2010)*

EN ISO 105-A11:2012, *Textiles — Tests for colour fastness — Part A11: Determination of colour fastness grades by digital imaging techniques (ISO 105-A11:2012)*

EN ISO 105-E01:2013, *Textiles — Tests for colour fastness — Part E01: Colour fastness to water (ISO 105-E01:2013)*

EN ISO 139:2005,² *Textiles — Standard atmospheres for conditioning and testing (ISO 139:2005)*

EN ISO 3071:2020, *Textiles — Determination of pH of aqueous extract (ISO 3071:2020)*

EN ISO 4045:2018, *Leather — Chemical tests — Determination of pH and difference figure (ISO 4045:2018)*

EN ISO 6330:2021, *Textiles — Domestic washing and drying procedures for textile testing (ISO 6330:2021)*

EN ISO 14184-1:2011, *Textiles — Determination of formaldehyde — Part 1: Free and hydrolysed formaldehyde (water extraction method) (ISO 14184-1:2011)*

EN ISO 17226-1:2021, *Leather — Chemical determination of formaldehyde content — Part 1: Method using high performance liquid chromatography (ISO 17226-1:2021)*

ISO 105-F10:1989,³ *Textiles — Tests for colour fastness — Part F10: Specification for adjacent fabric: Multifibre*

ISO 4915:1991, *Textiles — Stitch types — Classification and terminology*

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 <https://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

² As impacted by EN ISO 139:2005/A1:2011.

³ As impacted by ISO 105-F10:1989/A1:2009.

3.1

sleep bag

bedding item consisting of a full-length fabric bag with neck opening and armholes and designed to contain a child

Note 1 to entry: The sleep bag is not considered to be a garment.

Note 2 to entry: The sleep bag can be single or multi-layered, and with or without filling material.

Note 3 to entry: The sleep bag can be used in conjunction with sleepwear.

3.2

cot

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

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

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

3.7

drawstring

cord, chain, ribbon, string or tape, made of any textile or non-textile material including elastic material, which passes through a channel, loop(s) or eyelet(s) or similar, to adjust the size of the opening, or part of the garment or to fasten the garment itself

[SOURCE: EN 14682:2014, 2.5]

3.8

cord

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

prEN 16781:2024 (E)**3.9****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+A1:2018, 3.4]

3.10**choking**

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

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+A1:2018, 3.9]

3.11**suffocation**

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

[SOURCE: EN 71-1:2014+A1:2018, 3.59]

3.12**monofilament thread**

single thread of man-made fibre

3.13**burr**

roughness, caused by not cleanly severing or finishing the material

[SOURCE: EN 71-1:2014+A1:2018, 3.6]

3.14**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."]

3.15**label**

piece of material displaying information and permanently attached to the textile product

3.16**hang tag**

label intended to be removed from the textile product before first use

3.17**small part**

component or piece of a component which when dropped, without compression, into the small parts cylinder (Figure 1) in any orientation, fits entirely within the cylinder

Dimensions in millimetres

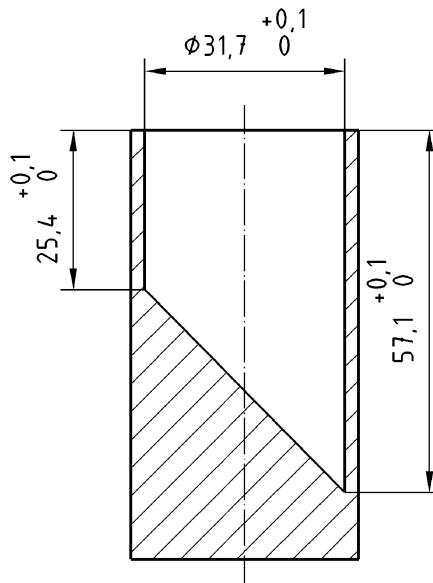


Figure 1 — Small parts cylinder

3.18 back zone

area on the back of the sleep bag, when laid down flat, starting at the side neck point and extending downwards from the side neck point and finishing on both sides with a margin inwards from armholes and sides

Note 1 to entry: See Figure 7.

3.19 child height

stature (3.19.1) or *recumbent length* (3.19.2) of a child

3.19.1 stature

vertical distance from the highest point of the head in the median line to the ground

Note 1 to entry: Identical to stature (body height) in ISO 7250-1.

Note 2 to entry: The term *height* is commonly used and covers both *stature* (3.19.1) and *recumbent length* (3.19.2).

[SOURCE: EN ISO 8559-1:2020, 5.1.1]

3.19.2 recumbent length

horizontal distance from the vertical plate to which the soles touch to the crown of the head in the median line

Note 1 to entry: The term 'height' is commonly used and covers both *stature* (3.19.1) and *recumbent length* (3.19.2).

[SOURCE: EN ISO 8559-1:2020, 5.1.2]

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3.20

press fastener

fastening device consisting of a male component and a female component that are attached to different parts of a garment and which are fastened by aligning the two components and pressing them together

Note 1 to entry: Press fasteners include poppers and snaps.

Note 2 to entry: These may be functional or decorative.

[SOURCE: CEN/TS 17394 3:2021, 3.1]

3.21

slide fastener (zip)

fastening device consisting of two flexible, interlocking stringers, with or without end stops, and one or more sliders so arranged that by moving the slider along the stringers in one direction an opening is formed, and by moving it in the other direction the opening is closed

[SOURCE: prEN 16732:2024, 3.1]

3.22

locking device

device incorporated in the slider unit restricting its free movement along the slide fastener length in an opening direction

Note 1 to entry: The locking device might operate either automatically on release of the puller or by manual pressure on the puller.

[SOURCE: prEN 16732:2024, 3.8]

3.23

weighted sleep bag

sleep bag in which one or more areas include additional functional weighting for the sole purpose of increasing the pressure on the body

3.24

traceability

ability to trace the history, application, location or source(s) of a material or product throughout the supply chain

[SOURCE: ISO 9000:2015, 3.6.13, modified — The wording has been modified. Notes 1 and 2 to entry have been deleted.]

4 General

The requirements provided in this document are the characteristics for a sleep bag which are considered to result in inherently safe design.

NOTE 1 Inherently safe design is gathered in Annex A. Table A.1 summarizes the relationship between inherently safe design and hazards and for which the entries are related to the design.

NOTE 2 Rationales for the inclusion of some of the requirements given in this document are given in Annex B. Table B.1 summarizes the relationship between inherently safe design and hazards and for which the entries are related to the hazards.