BS EN 16779-1:2018

BSI Standards Publication

Textile child care articles - Safety requirements and test methods for children's cot duvets

Part 1: Duvet (excluding duvet covers)

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National foreword

This British Standard is the UK implementation of EN 16779-1:2018.

BSI, as a member of CEN, is obliged to publish EN 16779-1:2018 as a British Standard. However, attention is drawn to the fact that during the development of this European Standard, the UK committee voted against its approval.

The UK participation in its preparation was entrusted to Technical Committee TCI/66/-/1, Risks in the sleeping environment.

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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Textile Artikel für Kleinkinder und Säuglinge - Sicherheitstechnische Anforderungen und Prüfverfahren für Kinderbettdecken - Teil 1: Bettdecken (ausgenommen Bettbezüge)

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European foreword

This document (EN 16779-1:2018) 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of an identical text or by endorsement, at the latest by February 2019, and conflicting national standards shall be withdrawn at the latest by February 2019.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 cot duvets.

EN 16779 is composed with the following parts:

— *Textile child care articles — Safety requirements and test methods for children's cot duvets — Part 1: Duvet (excluding duvet covers)* [the present document; currently at Formal Vote stage];

— *Textile child care use articles — Safety requirements and test methods for children's cot duvets — Part 2: Duvet covers (excluding duvets)* [currently in preparation].

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 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 ingestion of small parts;

— injuries due to chemicals.

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

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

— the intended or foreseeable use of the cot duvet, 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 cot duvet in the circumstances under which the cot duvet 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 cot duvets, 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 European Standard specifies requirements for the safety of children's cot duvets, excluding removable duvet covers, used in the child's sleeping environment (i.e. not under supervision), and designed to provide sufficient warmth when sleeping in a cot or similar product (e.g. crib/cradle) in which a child is contained. This document specifies requirements for cot duvets suitable for children up to 36 months. Cot duvets with permanent decorative outer fabrics also known as cot quilts or coverlet are also in the scope.

NOTE The informative Annex E lists topics of further investigations which might lead to necessary improvement of the safety requirements of children's cot duvets.

The requirements for removable cot duvet covers are excluded from this document and are covered in EN 16779-2.

If a part of the children's cot duvet is designed to offer additional function (e.g. play function), in addition of the following requirements, this part will 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.

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

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 16732:2015, *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)*

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

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

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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
cot duvet
bedding item intended to cover the child's body, consisting of a filling material permanently sewn into a textile cover intended to be used with or without duvet cover in the cot or in a similar product

Note 1 to entry: The terms "cot quilt" or "coverlet" are interchangeable with "cot duvet".

3.2
cot duvet cover
removable bedding item intended to envelop cot duvet(s)

3.3
cot
bed for a child consisting of a base and enclosed by high sides to prevent the child from falling out

3.4
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.]

3.5
hazard
potential source of *harm* (3.4)

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

3.6
risk
combination of the probability of occurrence of *harm* (3.4) and the severity of that harm

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

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3.7
inherently safe design
measures taken to eliminate *hazards* (3.5) and/or to reduce *risks* (3.6) by changing the design or operating characteristics of the product or system

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

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*

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]

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]

3.11
cord
cord, chain, ribbon, string or tape of any textile or non-textile material, including elastic material

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, 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, 63, 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."]

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3.15
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]

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 to 4.6).

4.1 Design characteristics (see A.2)

4.1.1 General

4.1.1.1 Children's cot duvets shall not be designed, manufactured or supplied with drawstrings or cords (see A.3.2).

4.1.1.2 Children's cot duvets shall not have any pockets (see A.2.3),

4.1.1.3 Maximum dimensions: 120 cm x 140 cm (see A.2.2 and Annex D), measured on cot duvet lying flat and without pretension.

4.1.1.4 Children's cot duvets shall not be manufactured with plastic transfer (e.g. plastic print) or coated fabrics (see A.3.4).

4.1.1.5 Children's cot duvets shall not be designed, manufactured or supplied with magnetic components (see A.3.3.3.).

4.1.2 Cot duvet ensemble

An ensemble of two or more individual and separable cot duvets shall be designed so that the child cannot slide between the individual cot duvets (e.g. ensemble combined and inserted into a single cot duvet cover which shall then be closed).

4.1.3 Threads (including cot duvet seams)

4.1.3.1 Single thread chain stitches, as described in ISO 4915, are not permitted (see A.3.1.1).

4.1.3.2 Seams shall have a seam allowance (distance between the fabric edge and sewing line) of no less than 5 mm (see A.3.3.2).

4.1.3.3 Seams shall be sewn so as to meet one of the following conditions (see A.3.3.2):

a) a minimum of 10 stitches per 3 cm;

b) if fewer than 10 stitches per 3 cm is used then the seam shall be tested as follows:

   Use clamps with jaws to which discs with a diameter of 19 mm are affixed. Attach the clamps not less than 30 mm apart and equidistant to the seam. Gradually apply a force of (70 ± 2) N between the two clamps over a period of approximately 5 s. Maintain the force for 10 s. Apply the test to this seam only once. Determine whether the front part of the 12 mm probe (see Figure 1) can be inserted through any one opening in the seam, using a maximum force of 10 N.

NOTE Decorative stitches and quilting stitches are excluded from this requirement.

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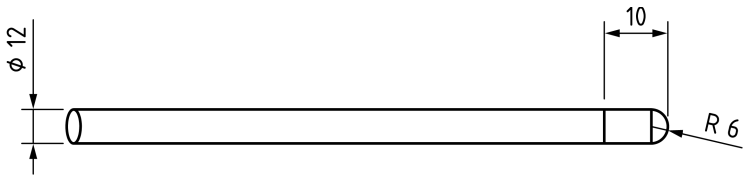

Figure 1 — Test Probe for seams

4.1.3.4 For exposed faces of the article, the maximum length of uncut float threads or uncut stitches shall be 10 mm, and the maximum length for cut threads or cut stitches shall be 20 mm (see A.3.1.2).

4.1.3.5 Monofilament threads shall not be used (see A.3.1.2, A.3.5.).

4.1.4 Labels

4.1.4.1 Labels shall not be attached on the cot duvet either in form of a loop (loop label), nor in a way they may create a loop when the cot duvet is used (see A.3.1.1, A.3.1.2).

4.1.4.2 Heat sealed or laser cut materials shall not have sharp edges (see A.3.5.).

NOTE Test methods are referred in 4.2.3.2.

4.1.4.3 The ends of labels or the edge of raw edge fabric shall be secured to prevent unravelling (see A.3.1.2). The security of the ends of the labels can be confirmed by carrying out a tactile inspection.

4.1.4.4 Labels with free end shall have no more than 75 mm in length (see A.3.2).

4.1.5 Embellishments

4.1.5.1 There shall be no three dimensional embellishments, such as pom-poms, tassels, beads, sequins, diamantés, glitter prints (e.g. plastic glue glitter and spread over glitter) or cords on children's cot duvets (see A.3.3.1).

4.1.5.2 There shall be no embellishments on slide fastener puller.

4.1.6 Fabrics and filling materials

Fabrics and filling materials shall not contain any hard, sharp or foreign objects (i.e. any items which are not intended to be present such as needle, staple, nail, unattached press fastener, wood splinter, or insect or other infestation) (see A.3.5.).

NOTE Test methods are referred in 4.2.3.2.

4.1.7 Slide fasteners

4.1.7.1 Requirements

4.1.7.1.1 Slide fasteners shall comply with EN 16732:2015, at least the performance requirements of code C and with the requirements of Table 2, as stated in EN 16732:2015.

4.1.7.1.2 The top stops and the elements (teeth) shall be free from burrs and sharp edges (see A.3.5.).

Where components of a slide fastener could come into contact with the skin, the use of a plastic slide fastener with plastic top stops and bottom stops is recommended, in preference to a slide fastener with claw-type metal stops.

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