SLOVENSKI STANDARD

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Tekstilije - Gorljivost otroġkih noļ nih oblaļ il - Specifikacija

Textiles - Burning behaviour of children's nightwear - Specification

Textilien - Brennverhalten von Kindernachtwäsche - Anforderungen

Textiles - Comportement au feu des vetements de nuit des enfants - Spécification

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English Version

Textiles - Burning behaviour of children's nightwear - Specification

Textiles - Comportement au feu des vêtements de nuit des enfants - Spécification

Textilien - Brennverhalten von Kindernachtwäsche - Anforderungen

This European Standard was approved by CEN on 26 April 2007.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN 14878:2007) 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of an identical text or by endorsement, at the latest by November 2007, and conflicting national standards shall be withdrawn at the latest by November 2008.

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

The contents of this standard consider those items of nightwear and nightwear fabrics that could pose a significant risk of injury to children from the hazards presented by the potential to catch fire.

Accident statistics (see Bibliography) indicate the most common sources of ignition to be:

a) cooking appliances;

b) sitting too close to a fire;

c) use of matches;

d) use of smoking materials;

e) candles used primarily for decoration.

Consideration was given to garments and other such items intended for use by babies under the age of six (6) months. On the basis that babies of this age are not yet mobile, i.e. they are unable to crawl or walk, the risk was considered low.

The principle upon which this standard is based is the acceptance that most, but not all, fabrics used in the manufacture of children’s nightwear will ignite when exposed to a small flame. On this premise therefore, there is no requirement for a specific ignitability test. The specification requires that the parameters of time of flame spread and surface flash are measured using a specified test procedure (EN 1103).

The risk of fire may be diminished in some situations by the use of a suitable flame retardant. However, the application of a flame retardant could be considered to present a health risk. Both points of view were discussed in the feasibility study, prepared under a Mandate (M/263) that preceded the Standardization Mandate.

Following the publication and implementation of this standard in CEN countries, 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 standards. The period is also to allow the supply chain, from manufacturer to the consumer, to be cleared on non-conforming garments.

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

Introduction

The aim of this European Standard is to define a harmonised procedure for the specification of children's nightwear or fabrics intended for children's nightwear with regard to their burning behaviour.

Within the scope of this specification it is not possible to cover all the potential hazards that may create an unsafe garment; conversely, indefinable specific hazards in certain styles/design of garment may not present a risk. It is therefore recommended that an individual risk assessment is carried out on any garment in order to ensure that it does not present a hazard to the wearer and can therefore be deemed to be a 'safe' garment. This includes the use of applied flame retardant treatments. Durability of such finishes will require assessment. No European Standard method addressing durability of such treatments has yet been established.

1 Scope

This European Standard specifies requirements for the burning behaviour of children's nightwear and nightwear fabrics intended for such garments when tested in accordance with EN 1103 but without the washing procedure.

2 Normative references

The following referenced documents are indispensable for the application 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 1103, *Textiles - Fabrics for apparel - Detailed procedure to determine the burning behaviour*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 1103 and the following apply.

3.1
nightwear
garments that are either sold as nightwear or intended to be worn as nightwear, e.g. bathrobes, dressing gowns, night shirts, nightdresses and pyjamas

3.1.1
babies' nightwear
nightwear intended to be worn by babies (see 3.3)

3.1.2
children's nightwear
nightwear intended to be worn by children (see 3.4)

3.2
pyjamas
either two or several piece nightwear garment comprising trouser, shorts or briefs and top. It may also comprise one-piece pyjama type with top integral to trouser. The trouser may be with or without feet

3.3
babies
babies up to six (6) months of age and having a height up to 68 cm

3.4
children
young persons over six (6) months and up to the age of fourteen (14) years. Girls having a height between 68 cm and 176 cm and boys between 68 cm and 182 cm

3.5
specimens
representative pieces of the product which are tested together with any lining/substrate or treatment

3.6
multi-layer fabrics
fabric produced from a series of separate layers, intimately combined at a stage prior to garment production, e.g. quilted fabrics

3.7
fabric assembly
series of fabrics assembled as they would be at the garment manufacturing stage (excluding threads and trimmings), for the purpose of testing

4 Principle

The properties of time of flame spread and surface flash are evaluated by submitting a sample to the application of a specified test method contained in EN 1103. EN 1103 contains a cleansing procedure which is not applied to any test material covered by this standard as a single wash has been found to have little or no effect on finishes used on nightwear.

5 Toxicology of flame retardant

A flame retardant is a substance used to impart improved fire behaviour to a material. When a flame retardant is applied to a textile to be used in nightwear conforming to this standard, it will be the responsibility of the manufacturer/retailer placing the chemically treated flame retardant nightwear on the European market to ensure the finish being used has been adequately assessed for risk of toxicity and/or eco toxicity and is considered safe for its intended use by the EU Scientific Committee on Health and Environmental Risks (SCHER).

Any flame retardant used to impart a degree of reduction of any of the measured parameters shall be able to provide this reduction during the expected life of the garment. It shall therefore be able to resist the normal washing procedures to which the garment could reasonably be expected to be subjected.

6 Fabric and garment sampling

6.1 Fabrics

6.1.1 At least one sample shall be taken that is representative of the bulk, of sufficient size to provide the specimens for the test. Three specimens shall be taken in the machine direction and three specimens in the cross direction.

6.1.2 Where multi-layer fabrics or fabric assemblies are tested, they should be tested in the arrangement which is to be used in the garment. The order of the layers in the test specimen and the face to which the test flame is applied, should be noted in the test report.

6.2 Fabric from garments

The specimens can be taken from one or more styles of garments made of the same fabric and finishing route.

6.3 Shortage of material

If it is not possible to obtain a single test specimen of the size required in EN 1103, pieces shall be joined, cut from the same or different garments of the same type, in the same direction, using butt joints held together with five equally spaced staples across the width of the specimen. Overlapping joints shall not be used and no more than three pieces are to be used to form any one specimen. This should be noted in the test report.

6.4 Range testing

6.4.1 Conventional testing allowing the characterization of the sensitivity of the product with regard to the fire behaviour taking into account the variation of one or more parameters (i.e. mass per unit area; colour; surface appearance; volumic mass etc) from a reduced number of test specimens determined after evaluation provided that the results obtained on the various samples give the same results.

6.4.2 The range testing can be carried out on a component of the range, representing the most unfavourable cases. For example, when a material exists in several colours, with different surface appearances, the result of the testing can be applied to the range, based on the results of tests carried out on some appearances and colours, from the complete range provided.

7 Test method

The measurement of time of flame spread and surface flash shall be carried out in accordance with EN 1103. All test procedures are to be completed on the garment/fabric as received. All test procedures are to be completed on the garment/fabric without washing or otherwise cleansing (see Clause 4).

8 Number of tests

8.1 General

For a nightwear product (see 3.1) or nightwear fabric to claim a particular class, all the relevant criteria given in Table 1 Class A or B shall be met.

8.2 Flame spread and surface flash

8.2.1 For the compliance parameters of time of flame spread and surface flash, the selection of the class is based on the results of tests in accordance with EN 1103.

8.2.2 If at least two specimens (out of six) give a result belonging to a lower class, the material shall belong to this lower class.

8.2.3 If only one specimen (out of six) gives a result belonging to a lower class, three extra specimens shall be tested in the same direction as the one giving the worst result.

8.2.4 If none of the extra three specimens gives a result belonging to the lower class, the material belongs to the original class.

8.2.5 If at least one of the extra three specimens tested gives a result belonging to the lower class, then the material belongs to the lower class.

9 Requirements

For the purposes of this standard, the various categories of nightwear fabrics are classified as in Table 1. It is assumed that the satisfaction of a higher class will satisfy all the criteria of the lower classes.