

BS EN 14682:2014



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Safety of children's clothing — Cords and drawstrings on children's clothing — Specifications

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National foreword

This British Standard is the UK implementation of EN 14682:2014. It supersedes BS EN 14682:2007 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee TCI/66/-/2, Safety of children's clothing.

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

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Safety of children's clothing - Cords and drawstrings on children's clothing - Specifications

Sécurité des vêtements d'enfants - Cordons et cordons coulissants - Spécifications

Sicherheit von Kinderbekleidung - Kordeln und Zugbänder an Kinderbekleidung - Anforderungen

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Foreword

This document (EN 14682:2014) 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of an identical text or by endorsement, at the latest by June 2015, and conflicting national standards shall be withdrawn at the latest by June 2015.

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

This document supersedes EN 14682:2007.

EN 14682:2014 includes the following significant technical changes with respect to EN 14682:2007:

a) Clause 1 'Scope':

New clause for bags and purses that are often sold as co-ordinating accessories for children's clothing

b) Clause 2 'Terms and definitions':

- 1) Re-ordered to be more logical for user, with several new terms;
- 2) 2.10 definition for belt added, to differentiate from tied belt;
- 3) 2.11 revised definition of tie belt or sash;
- 4) 2.12 braces (suspenders) new definition;
- 5) 2.19 open to its largest and laid flat, new definition;
- 6) 2.20 relaxed natural state, new definition;
- 7) 2.21 three dimensional embellishment, new definition;
- 8) 2.22 hood neck and upper chest, changed to head, neck and upper chest. The use of the term 'head' ensures consistent terminology with parts of body specified and not parts of garment.

c) Clause 3 'Requirements':

- 1) 3.1.4 new NOTE to consider functional hanger loops. 3.2 and 3.3 term hood deleted and replaced by head.
- 2) Requirements now consider the different risks for front and back of garment, and specification corrected accordingly.
- 3) 3.2.1, 3.2.2, 3.2.3 decorative cords are now permitted for young children with restrictions which specifically consider strangulation hazards. This is consistent with permitting stitched embellishments, for example bows.

- 4) 3.2.5, 3.2.6 and 3.3.4, 3.3.5 deal with shoulder straps and halter neck styles. Ring and slider mechanisms are commonly used to permit adjustment of the strap in wear, to ensure close fit and functionality of the garment. The loops created by these straps will be variable, and may be greater than 7,5 cm. However as these are close fitting to the body, no loop should present an entrapment hazard.

3.4 has been revised. Examination of garments shows that those clothes that are worn from waist down can be defined as those that fit closely to the body to be functional. Strings at the waist on these garments when closed to the body will be low hazard, and some requirements have been relaxed. Other garments can be more flowing, for example unbuttoned coats. In these garments, requirements have been strengthened.

- d) 3.7 sleeves: The original text assumed strings protruded from lower hems only, and that sleeves were long or short. This did not reflect fashion. Clauses have been revised to consider strings other than at hems, and all lengths of sleeve
- e) Annex B: new paragraph to clarify that anthropometric data listed is that used to define children's sizes in EN 14682:2014, where the tallest children in Europe were considered.
- f) Annex C: enhanced to provide rationale for exclusions from scope, and rationale for requirements for lengths of drawstrings and cords. Explanation that manufacturers need to be more aware of how product is likely to be used, and not what it is called as a garment type.
- g) Annex D, new improved methods for measurement of
- sash or tied belt,
 - garment open to its largest and laid flat,
 - garment in its relaxed natural state.
- h) Annex F, improved figures provided to illustrate requirements.
- i) To assist the reader, throughout this European Standard, the terms defined in Clause 2 'Terms and definitions' are in italics.

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

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, 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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

The European Commission Mandate No. M/309, related to the safety of consumers of drawstrings or cords on children's clothing and issued on 9 March 2001, requested that CEN develops standards or specifications to consider cords and drawstrings on clothing intended for children up to age 14 years.

The aim of this European Standard is to minimize the risk of accidental entrapment by cords or drawstrings on children's clothing taking into account:

- a) the child's age;
- b) behaviour and activities of children for their age and stage of development, for example playing in playgrounds, climbing trees, travelling by bus or train, ability to look after themselves, and where relevant, level of supervision;
- c) national accident statistics indicate that serious accidents involving cords and drawstrings on children's clothing fall into two main groups by age of child;
 - 1) younger children: entrapment of hood cords in playground equipment such as slides, resulting in fatalities;
 - 2) older children and young persons: entrapment of cords and strings from the waist and lower hems of garments in moving vehicles such as bus doors, ski lifts and bicycles resulting in severe injuries or death from being dragged along or run over by the vehicle.

In addition, elasticated hood or neck cords have resulted in a number of facial injuries.

Children's clothing sold in the EU is usually sold by height as the primary measurement, sometimes with age as an additional indicator. Clothing for babies (up to around 1 year of age) is generally sold by length of the baby although some countries use the baby's weight. All chest, waist, and hip measurements are secondary measurements.

1 Scope

This European Standard specifies requirements for cords and drawstrings on children's clothing, including disguise costumes and ski apparel, up to the age of 14 years.

Within the scope of this European Standard, it is not possible to cover all potential hazards that may create an unsafe garment.

Conversely, identifiable specific hazards in certain styles/design of garment might not present a risk for certain age groups.

It is recommended that an individual risk assessment be carried out on any garment in order to ensure that it does not present a hazard to the wearer

This European Standard does not apply to the following (see Annex C for rationale):

- a) child use and care articles, for example bibs, nappies and soother holders;
- b) shoes, boots and similar footwear;
- c) gloves, hats, bonnets and scarves;
- d) neckties designed to be worn with a shirt or blouse;
- e) belts, with the exception of tied belts which are within scope;
- f) braces;
- g) religious clothing;
- h) celebratory clothing such as that worn at civil or religious ceremonies, national or regional festivals provided this is worn for limited periods and under supervision;
- i) specialist sportswear and activity wear generally worn for limited periods and under supervision, for example rugby shorts, wet suits, and dancewear, except where those garments are commonly worn as day wear or night wear;
- j) theatrical costumes used for theatrical performances;
- k) aprons intended to be worn over day wear, for limited periods and under supervision, to protect clothing from soiling during activities such as painting, cooking, or during meal times;
- l) bags and purses.

2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

- 2.1**
young child
person aged from birth to up age 7 years (that is up to and including 6 years and 11 months) which includes all children up to and including a height of 134 cm

Note 1 to entry: See Annex B.

2.2

older child and young person

person aged from 7 years up to age 14 years (that is up to and including 13 years and 11 months) which includes all boys of height greater than 134 cm up to 182 cm and girls of height greater than 134 cm up to 176 cm

Note 1 to entry: See Annex B.

2.3

children's clothing

all garments intended by design, production route or selling route to be worn by children up to the age of 14 years

2.4

functional cord

cord, chain, ribbon, string or tape, made of any textile or non-textile material including elastic material, which is used to adjust the size of the opening, or part of the garment or to fasten the garment itself

2.5

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

Note 1 to entry: The protruding length of the drawstring may increase when closure is effected.

Note 2 to entry: For some garments, a drawstring may be a loop with a tightening device rather than a single length with two ends that may or may not be tied.

2.6

decorative cord

non-functional cord, chain, ribbon, string or tape, made of any textile or non-textile material including elastic material, with free end with or without embellishment such as toggle, pom-pom, feather or bead, which is not intended to be used to adjust the size of the garment opening or fasten the garment itself

Note 1 to entry: Fringes are considered as a series of decorative cords.

Note 2 to entry: Free ends of fixed bows are considered as decorative cords.

2.7

elastic cord

cord containing yarns of rubber or elastodiene or elastane polymer or similar, having high extensibility and complete or near complete recovery

2.8

shoulder strap

cord, chain, ribbon, string or tape, made of any textile or non-textile material including elastic material, joining the front and back of a garment top together, which is close fitting and passes over the shoulder

2.9

halter neck cord

cord, chain, ribbon, string or tape, made of any textile or non-textile material including elastic material, worn round the back of the neck holding the garment (for example dress, blouse or bikini) top leaving the shoulder and back bare

2.10

belt (excluding tied belts)

strip of any material, with fastening mechanism such as buckle, worn round chest or waist area used to hold up clothing or as decoration

2.11

tied belt or sash

decorative or functional piece of any material of not less than 3 cm width tied round the chest or waist area of a garment

Note 1 to entry: Tied belt or sash may or may not fully encircle the body.

Note 2 to entry: If the width is less than 3 cm, these are considered as cords or drawstrings.

2.12

braces

suspenders

pair of shoulder straps, often elasticated, joining the front and back of a pair of trousers or skirt or similar garments covering the lower body used to hold the garment up

Note 1 to entry: Braces may be removable or permanently attached.

2.13

stirrup

strip of textile or non-textile material attached to both sides of the lower hem of a trouser such that it passes under the foot or shoe to create a close fit to the wearer

2.14

toggle

wooden, plastic, metal or otherwise composed piece attached to or present on, a drawstring, functional cord or decorative cord

Note 1 to entry: Toggles may or may not be functional.

2.15

loop

cord or narrow strip of fabric, which may be fixed or adjustable in length, where both ends are attached to the garment

2.16

zip puller

fitting attached to the slider body to facilitate manipulation

2.17

zip slider

moving component consisting essentially of a slider body and, normally, a puller, which opens or closes the fastener by separating or engaging the interlocking members

Note 1 to entry: The slider might incorporate a locking device. Alternative slider types are available with a flip-over puller or double pullers, to facilitate operation from both front and back sides.

2.18

adjusting tab

strip of textile or non-textile material not less than 2 cm in width intended to adjust the size of opening on a garment or for decoration, for example at the ankle or sleeve cuff

2.19

open to its largest and laid flat

garment or part of a garment extended to its fullest size to remove gathering or effect of elastication without deforming or stretching the fabric beyond its natural state, or damaging the garment construction or stitching

Note 1 to entry: See D.3.

2.20

relaxed natural state

measurement when garment is laid flat with garment part, for example waistband, in its natural position (neither extended nor contracted)

Note 1 to entry: See D.4.

2.21

three dimensional embellishment

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

Note 1 to entry: Thin materials such as plastic sleeving (boot lace ends) which are not thicker than the cord itself are not considered as three dimensional embellishments.

2.22

head, neck and upper chest area

whole of head, neck and throat, and upper front chest from shoulders to the top of the arm pits (axillae) excluding arm

Note 1 to entry: See Figure 1, zone A.

2.23

chest and waist area

front part of the body from the chest level with the armpits (axillae) to the hip level with the crotch

Note 1 to entry: See Figure 1, zone B.

2.24

below hip area

part of the body below the hip, level with the crotch

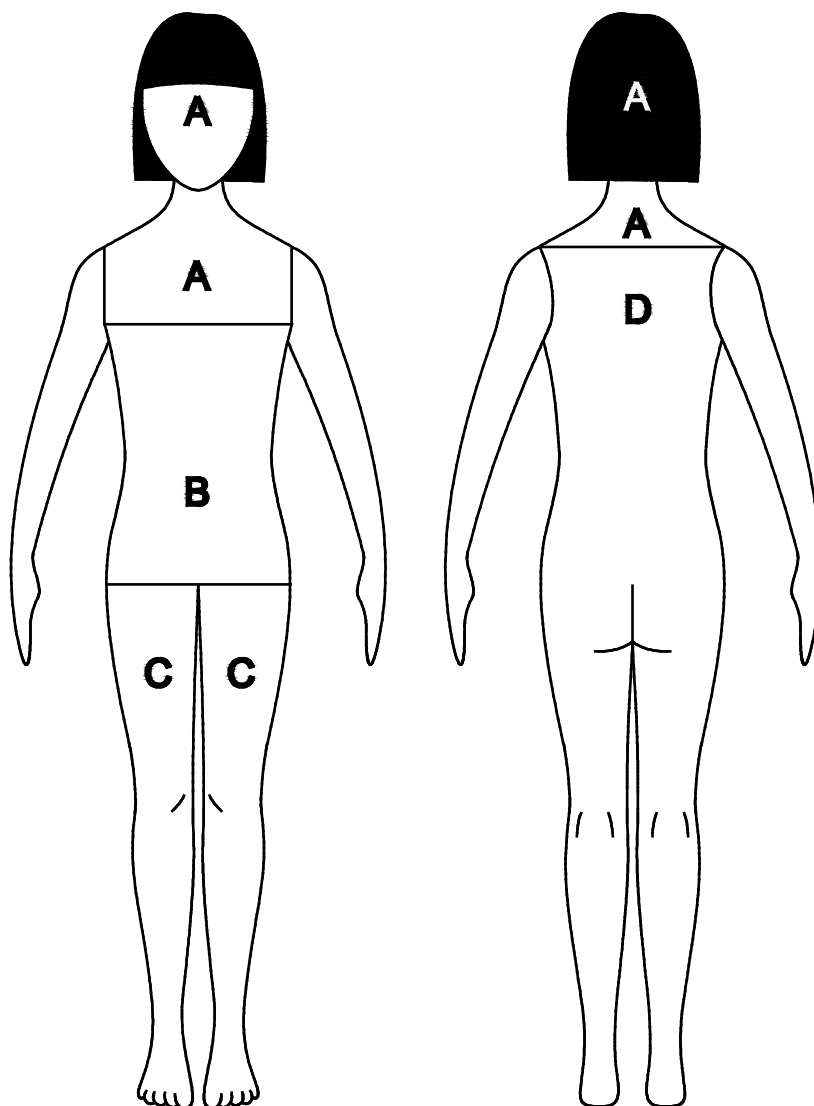
Note 1 to entry: See Figure 1, zone C.

2.25

back area

posterior part of the body and legs, excluding head and neck

Note 1 to entry: See Figure 1, zone D.



Key

- A head, neck and upper chest area
- B chest and waist area
- C below hip area
- D back area

Figure 1 — Body zones

2.26

short sleeve

sleeve designed to end at or above the elbow

2.27

long sleeve

sleeve designed to end below the elbow

3 Requirements

3.1 General

IMPORTANT. The requirements provided in this standard are applicable to the inside and outside of the garment. It is possible through risk assessment of the specific style that some features which are wholly inside the garment when worn may be acceptable as they are not a hazard to the wearer.

3.1.1 The free ends of *drawstrings*, *functional cords*, and *tied belts or sashes* shall have no knots or *three-dimensional embellishments* and shall be secured to prevent fraying, for example by heat sealing or bar tacking. The ends may be doubled or folded provided no hazard of entrapment is created. Knots and *three-dimensional embellishments* along the length of the free ends are not permitted.

3.1.2 *Toggles* shall only be used on *drawstrings* with no free ends, or *decorative cords* (for example, see Figure F.1 and F.8).

3.1.3 Where *drawstrings* are permitted, they shall be attached to the garment, for example using a bar tack, in at least one point positioned equidistant from the exit points (for example, see Figure F.3).

3.1.4 Fixed *loops*, which protrude from the garment, for example to fasten, or loops on fixed bows, shall be no more than 7,5 cm in circumference. Flat *loops* which do not protrude from the garments, for example belt *loops*, shall be no more than 7,5 cm in length, between the fixed points of attachment to the garment (for example, see Figure F.4).

NOTE Functional hanger loops and other loops inside the garment are permitted if a risk assessment shows that they are not a hazard to the wearer (see Annex E).

3.1.5 *Zip pullers* including any embellishment shall be not longer than 7,5 cm in length from *zip slider*.

3.1.6 *Zip pullers* with or without embellishment shall not hang below the lower edge of garments designed to finish at the ankle (for example, see Figure F.5)

3.1.7 All measurements shall be carried out in accordance with Annex D.

3.2 Head, neck and upper chest area on garments for young children (Figure 1, zone A)

3.2.1 Garments intended for *young children* shall not be designed, manufactured or supplied with *drawstrings* or *functional cords* in the *head, neck or upper chest area*.

3.2.2 *Decorative cords* shall not be permitted anywhere on the hood or at the back of the neck.

3.2.3 In other parts of neck and upper chest areas, *decorative cords* shall have free ends no longer than 7,5 cm, shall have no knots, toggles or three dimensional embellishments and shall not be positioned so they can tie across the throat.

Decorative cords shall not be made from *elastic cords*.

NOTE The hazard from elastic cords is that they may "snap" back to face or neck resulting in injury. Elasticated shoulder straps and halter necks fit close to the body and do not pose the same risk.

3.2.4 *Adjusting tabs* are permissible provided that the length is no more than 7,5 cm, and shall have no button, toggle, buckle on the free end which may present an entrapment hazard.

3.2.5 *Shoulder straps* shall be constructed such that, when worn, there shall be no free ends external to the garment. *Shoulder straps* may be permanently fixed to front and back, or attached to permit adjustment of strap length by for example buttons, press fasteners, provided the free end is inside the garment. The use of a clip or fastening of two cords is acceptable, provided these do not result in free ends of cords when garment is worn.

Where a mechanism, for example ring and slider, is used to adjust the length of the *shoulder strap*, the strap including the *loop* shall lie flat to the body when worn.

NOTE Where this mechanism is used, *the loop* will be of variable length. The general requirement for *flat loop* length 3.1.4 is not applicable, as the loop is flat to the body when worn.

Decorative cords attached to a *shoulder strap* shall not have free ends longer than 7,5 cm and fixed *loops* shall be no more than 7,5 cm in circumference (for example, see Figure F.6).

3.2.6 *Halter neck-style* garments shall be constructed with no free ends in the neck and throat (for example, see Figure F.7).

The use of a clip or fastening of two cords is acceptable, provided these do not result in free ends of cords when garment is worn.

Where a mechanism, for example ring and slider, is used to adjust the length of the *halter neck*, the strap including the *loop* shall lie flat to the body when worn.

NOTE Where this mechanism is used, the loop will be of variable length. The general requirement for flat loop length 3.1.4 is not applicable, as the loop is flat to the body when worn.

3.3 Head, neck and upper chest area on garments for older children and young persons (Figure 1, zone A)

3.3.1 *Drawstrings* shall not have free ends.

Drawstrings with no free ends shall have no protruding *loop* when the garment is open to its largest and laid flat. When the garment opening is at its smallest, i.e. the size it is intended to fit, the maximum protruding *loop* circumference shall be 15 cm (for example, see Figure F.8).

Where *toggles* are used for adjustment of drawstrings with no free ends, the *toggle* shall be fixed to the garment (see Figure F.1).

3.3.2 *Functional cords* shall be not more than 7,5 cm in length. *Functional cords* shall not be made from *elastic cords*.

NOTE The hazard from elastic cords is that they may "snap" back to face or neck resulting in injury. Elasticated shoulder straps and halter necks fit close to the body and do not pose the same risk.

3.3.3 *Decorative cords* shall not be more than 7,5 cm in length including any attachment or three dimensional embellishment. *Decorative cords* shall not be made from elastic cords.

NOTE The hazard from elastic cords is that they may "snap" back to face or neck resulting in injury, especially if they have a toggle.

3.3.4 *Adjusting tabs* are permissible provided that the length is no more than 7,5 cm, and shall have no button, toggle, buckle on the free end which may present an entrapment hazard.

3.3.5 *Shoulder straps* are permissible provided any free ends are no longer than 14 cm from the point at which they are to be tied and fixed loops are no more than 7,5 cm in circumference (for example, see Figure F.6).

Where a mechanism, for example ring and slider, is used to adjust the length of the *shoulder strap*, the strap including the loop shall lie flat to the body when worn.

NOTE Where this mechanism is used, the loop will be of variable length. The general requirement for flat loop length 3.1.4 is not applicable, as the loop is flat to the body when worn.

3.3.6 *Halter neck*-style garments shall be constructed with no free ends at the neck and throat (for example, see Figure F.7). The use of a clip or fastening of two cords is acceptable, provided these do not result in free ends of cords when garment is worn.

Where a mechanism, for example ring and slider, is used to adjust the length of the *halter neck* strap, the strap including the loop shall lie flat to the body when worn.

NOTE Where this mechanism is used, the loop will be of variable length. The general requirement for flat loop length 3.1.4 is not applicable, as the loop is flat to the body when worn.

3.4 Chest and waist area (Figure 1, zone B)

3.4.1 Garments worn from waist down without *shoulder straps, braces, or sleeves*, such as trousers, shorts, skirts, briefs, bikini bottoms, shall not have:

- a) free ends of *drawstrings* longer than 20 cm at each end when the garment is in a *relaxed natural state*. (for example, see Figure F.9);
- b) protruding *loops* on *drawstrings* with no free ends, when the garment is *open to its largest and laid flat*. Where *toggles* are used for adjustment of drawstrings with no free ends, the *toggles* shall be fixed to the garment (for example see Figure F.1);
- c) *functional cords* longer than 20 cm;
- d) *decorative cords* longer than 14 cm including any embellishment.

3.4.2 Garments other than those listed in 3.4.1 such as shirts, coats, dresses, and dungarees shall not have:

- a) *free ends of drawstrings* longer than 14 cm at each end when the garment is *open to its largest and laid flat*;
- b) protruding *loops* on *drawstrings* with no free ends when the garment is *open to its largest and laid flat*. Where *toggles* are used for adjustment of *drawstrings* with no free ends, the *toggles* shall be fixed to the garment (for example see Figure F.1);
- c) *functional cords* longer than 14 cm;
- d) *decorative cords* longer than 14 cm including any embellishment.

3.4.3 For all garments, *adjusting tabs* in the *waist area* shall be a maximum of 14 cm.

3.4.4 For *young children, tied belts or sashes* intended to be tied at the back of the garment are permissible provided that when untied and measured from the point where they are to be tied, they shall be no more than 36 cm in length. When untied, they shall not hang below the hem of the garment (for example, see Figures F.10 and F.11).

3.4.5 For *older children and young persons, tied belts or sashes* intended to be tied at the back of the garment are permissible provided that, when untied and measured from the point where they are to be tied they shall be no more than 36 cm in length (for example, see Figures F.10 and F.11).

3.4.6 For both age groups, *tied belts or sashes* intended to be tied at the front or at the side of the garment shall be acceptable provided that when untied they shall be no more than 36 cm in length measured from the point where they are to be tied (for example, see Figure F.12).

3.5 Lower edge of garments which hang below the crotch (Figure 1, zone C)

NOTE Where it is unclear if the lower edge of a garment is below the crotch, the requirements of 3.5 apply.

3.5.1 *Drawstrings, functional cords or decorative cords* including any *toggle* shall not hang below the lower edge of the garment (for example, see Figure F.13).

3.5.2 *Drawstrings, functional cords or decorative cords* at the lower edges of garments shall lie flat against the garment, when the garment is tightened or fastened.

3.5.3 In garments that are designed to finish at the ankle such as trousers, skirts and coats, the *drawstrings, functional cords and decorative cords* at the lower edge shall not be outside the garment.

NOTE *Stirrups* at the hem of trousers are permissible.

3.5.4 *Adjusting tabs* shall be no longer than 14 cm, shall not hang below the lower edge of the garment and shall have no button, toggle, buckle on the free end which may present an entrapment hazard. (for example, see Figure F.14).

3.6 Back area (Figure 1, zone D)

3.6.1 *Children's garments* shall not be designed to have *drawstrings or functional cords* that emerge from the back of the garment or to be tied at the back (for example, see Figure F.2).

3.6.2 *Decorative cords* shall not be more than 7,5 cm in length and shall have no knot, toggle or *three dimensional embellishment*.

3.6.3 *Adjusting tabs* shall be no longer than 7,5 cm, shall not hang below the lower edge of the garment and shall have no button, toggle, buckle on the free end which may present an entrapment hazard

3.6.4 *Tied belts or sashes* are permissible (see 3.4.4, and 3.4.5).

3.7 Sleeves

3.7.1 *Drawstrings, functional cords and decorative cords* at the lower edge of long sleeves shall not be outside the garment, when the garment is fastened (for examples, see Figure F.15).

3.7.2 *Drawstrings, functional cords and decorative cords* positioned below the elbow on long sleeves, shall not hang below the lower edge and free ends shall be no longer than 7,5 cm.

3.7.3 For *young children*, *drawstrings, functional cords and decorative cords* are permissible on short sleeves provided the sleeve finishes above the elbow and the maximum protruding length is 7,5 cm measured when the sleeve is *open to its largest and laid flat* (for example, see Figure F.16).

3.7.4 For *older children and young persons*, *drawstrings, functional cords and decorative cords* are permissible on short sleeves provided the sleeve finishes above the elbow and the maximum protruding length is 14 cm measured when the sleeve is *open to its largest and laid flat* (for example, see Figure F.16).

3.7.5 For both age groups, *adjusting tabs* are permissible on sleeves provided that they are no longer than 10 cm in length and when open shall not hang below the edge of the sleeve (for example, see Figure F.17).

3.8 Other parts of the garment

In all other areas of the garment, not previously addressed, the *drawstring* or *functional* and *decorative cords* shall protrude by no more than 14 cm when the garment is *open to its largest and laid flat*.

Annex A **(informative)**

Background

National accident statistics indicate accidents to children involving drawstrings, functional cords and decorative cords on children's clothing fall into two main groups.

Approximate age range 2 years to 8 years. Entrapment of hood or neck cords in playground equipment such as slides, resulting in strangulation.

Approximate age range 10 years to 14 years. Entrapment of cords and strings from waist and garment lower edges in moving vehicles such as bus doors, ski lifts and bicycles resulting in severe injuries or death either from being dragged or run over by a vehicle.

National legislation and voluntary agreements.

- a) In 1976, the UK introduced the Children's Clothing (Hood Cords) Regulations (since repealed in 2012) which provided that the hood of a child's outer garment (coat or similar) must not be designed to be secured by means of a cord drawn through the material. The Regulations significantly reduced the number of fatalities through strangulation. However, the garment size was defined by the chest measurement of the garment.

Changing fashion to loose fit and wadded garments allows clothing intended for children aged 5 years and upwards to fall outside the scope of the legalisation.

- b) In 1998, the Consumer Agency in Finland made an agreement with Finnish importers and manufacturers to avoid import and development of children's clothing with drawstrings or cords in the hood and neck area. This concerns especially small children under 120 cm in height.
- c) In 1999, the French Committee for Consumer Safety, Commission de la Sécurité des Consommateurs, introduced an experimental standard requesting manufacturers to restrict the use of cords on children's clothing. Recommendations included elimination of drawstrings and elasticated cords from the hood and neck area of garments, and restrictions on length, strength and elongation of cords and drawstrings on other areas of garments.
- d) In 2000, the German Federal Ministry of Economic and Technology reached a joint voluntary agreement with German manufacturers, importers and retailers of children's clothing to refrain from producing or distributing children's clothing sizes 0 to minimum 146 with continuous tear proof cords and drawstrings in the neck area. If decorative cords or drawstrings are used, they have to be non-functional and the length of these cords and drawstrings is limited to 8 cm.
- e) In 2002, the Swedish Consumer Agency and the Consumer Ombudsman reached an agreement with the textile industry and retailers of Sweden, to limit the use and length of drawstrings and cords on clothing for children up to size 170 cm.

Annex B (informative)

Anthropometric data

Anthropometric data was consulted to establish height guidance in relation to key age ranges used in this European Standard. To ensure protection of the relevant group, the 97 percentile data was used, taking into account both the tallest population of children in Europe (Netherlands and Germany) and the size intervals typically used in children clothing.

For all children aged 7 years, a figure of 134 cm was selected.

For children aged 14 years, a figure of 182 cm was used for boys and 176 cm used for girls.

The data in Tables B.1 and B.2 was used to set the definitions of children's stature in EN 14682:2004, the first edition of this European Standard.

Table B.1 — Stature of children aged 14 years by country

Country	Source	Female mean cm	Female 95 percentile cm	Female 97 percentile cm	Male mean cm	Male 95 percentile cm	Male 97 percentile cm
Netherlands	TNO/LUMC 1997	165		178	168		184
Germany	Der Kinderarzt 1993	162,69	174,53	176,06	164,3	180	182,03
Finland	Stakes 1998	164			170		
Germany	DIN 1981	161,7	172,9		167,8	180,4	
Norway	Waalder 1983	162,1			163,8		
UK	Pheasant 1988	159	170		163	178	
Hungary	Budavari 1982	157,4			162,8		
France	Joubert 1982	156			162		
Belgium	Ostyn 1980				158,4		174,2

Table B.2 — Stature of children aged 7 years by country

Country	Source	Female mean cm	Female 95 percentile cm	Female 97 percentile cm	Male mean cm	Male 95 percentile cm	Male 97 percentile cm
Netherlands	Steenbekkers 1993	128,6		139,7	128,7		137,7
Germany	DIN 33402 1986	128,00	137,6		128,00	137,60	
Finland	Sihvola 2000	126			127		
France	Joubert 1982	126			126		
Germany	Der Kinderarzt 1993	123,62	133,55	134,84	124,50	133,95	135,18
Norway	Waalder 1983	123,2			124,3		
UK	Pheasant 1988	122	131,50		123	132	
Hungary	Budavari 1982	120,4			121,9		

Annex C **(informative)**

Rationale

C.1 Rationale for “out of scope”

- a) Child use and care articles, for example bibs, nappies and soother holders. These are out of scope of CEN/TC 248 "Textiles and textile products" and are therefore out of scope of EN 14682. These items fall in the scope of CEN/TC 252 "Child use and care articles."
- b) Shoes, boots and similar footwear. These items fall out of scope of CEN/TC 248 "Textile and textile products" and are therefore out of scope of EN 14682. These items are in scope of CEN/TC 309 "Footwear".
- c) Gloves, hats, bonnets and scarves:
 - 1) Gloves. Gloves do not have long strings and no hazard was identified. If, however, a string is provided to join the pair of gloves, such that the cord passes through the sleeves of an outer garment, a hazard may be introduced. A full risk assessment will be necessary by the producer.
 - 2) Hats and bonnets. The only information available involving cords and drawstrings in relation to hats, bonnets, caps etc. appears to be relating to the strength of an elastic cord which can recoil on the face resulting in discomfort. No information was available at time of drafting this European Standard to suggest cords and strings on hats and bonnets presented a hazard of entrapment.
 - 3) Scarves. These are by nature long and designed to be worn round the neck. For young children, they are usually worn under adult supervision and may be designed in shorter lengths to reduce any potential tripping or entrapment hazard. Scarves should be fully risk assessed for hazards.
- d) Neckties designed to be worn with a shirt or blouse. In the majority of occasions, neckties are worn for formal events occasions where adult supervision is normal e.g. school, religious ceremonies. Studies of data indicate that neckties have been linked to fatalities; however, these have been reported as suicides, that is intended acts by the wearer and not accidental entrapment.
- e) Belts and braces. Belts and braces that are used to hold a garment up, for example trousers and skirts, are close fitting to the wearer and therefore not a hazard of strangulation or entrapment in moving vehicles. All garment accessories should be subject to risk assessment to ensure that a hazard is not introduced in wear
- f) Religious clothing. In certain religions, e.g. Judaism, under garments exist with long strings. These are worn all the time.
- g) Celebratory clothing such as that worn at traditional civil or religious ceremonies or regional or national festivals provided this is worn for limited periods and under continual supervision; generally this clothing is worn under supervision and not for travel on vehicles or while playing on climbing equipment. If however the garments are foreseen as having "normal" wear e.g. bridesmaid dress for party wear, it shall be classed in scope and meet the relevant specifications.

- h) Specialist sportswear and activity wear generally worn for limited periods and under supervision, for example rugby shorts, wet suits, and dancewear, except where those garments are commonly worn as day wear or night wear. The key to the risk assessment is foreseeable use. e.g. if the garment can only be worn for a specialist sports activity because it provides certain features, such as
- judogi, which is worn for the sport and not for everyday sports wear,
 - wetsuit with long zip puller at the back to enable the wearer to get the garment on and off,
 - rugby short worn for matches. Without the tie, the short will not stay on during rugby scrums.

NOTE Swim suits, bikinis, swimming trunks, board shorts worn on the beach and in the summer for unsupervised play are in scope. Similarly, replica football kits are usually worn by children for unsupervised play, and are in scope.

- i) Theatrical costumes used for theatrical performances; these are worn for supervised activity, usually rehearsal or performance.
- j) Aprons intended to be worn over day wear, for limited periods and under supervision, to protect clothing from soiling during activities such as painting, cooking, or during meal times. Overalls and aprons worn at school for lessons are by definition supervised activity. Young children in the home are also supervised. Consequently the risk of entrapment is extremely low.
- k) Bags and purses. These are accessories. All garment accessories shall be subjected to a full risk assessment to ensure a hazard is not introduced in wear.

In excluding garments from the scope of this European Standard, consideration was given to detailed available data.

Garments and other articles that are out of scope should be subject to a safety risk assessment as required by the General Product Safety Directive.

C.2 Requirements and acceptable lengths of drawstrings and cords

Before this European Standard was developed, some countries published voluntary requirements for limits on length of drawstrings, functional cords or decorative cords, however requirements were all different.

During the development of EN 14682:2004, the experts of the working group reviewed the different types of garments with strings of all kinds, the functionality of the strings and assessed the minimum length to facilitate a functional garment. This was compared with the accident data, and the *normal* classic style garments available.

The experiences of the UK and Ireland where legislation has been in place since 1976 demonstrated that elimination of drawstrings in hood was key to safer garments for young children. This was extended to include all drawstrings in hood and neck area for young children, and decorative and functional cords which tie cross the throat.

C.3 Rationale for different requirements for decorative cords and functional cords

Before this European Standard was developed, some countries published voluntary requirements for limits on length of drawstrings, functional cords or decorative cords, however requirements were all different, and the rationales were unclear. Rationales for these requirements unclear.

The kinds of activities, climatic conditions and cultural differences which are present across Europe vary enormously and have an influence on clothing design and where and how garments are worn.

Modes of transport to get to and from school include car, bicycle, boat, bus, train, skis, ski lift and walking. In some countries skiing is a specialist sport. In certain counties, ski-wear clothing is normal every day winter wear and is often worn to and from school.

Consideration of the levels of supervision of children during travel to and from school was noted.

Generally children up to around age 8 are all supervised, while those over age 11-12 are generally not supervised. However older children have the understanding and manipulation skills to untangle knots, or unhook themselves and so avoid entrapment.

In the absence of reliable accident or incident information to support limiting lengths of decorative or functional cords, the working group set the maximum permitted lengths based on the length of functional cord required to ensure the garment remained functional, and confirmed the requirements by risk assessment. It was confirmed that the presence of large knots, bulky stitched ends or toggles at the ends of cords or drawstrings was the greatest source of entrapment. Consequently these have been specified where they are considered to be a hazard of entrapment.

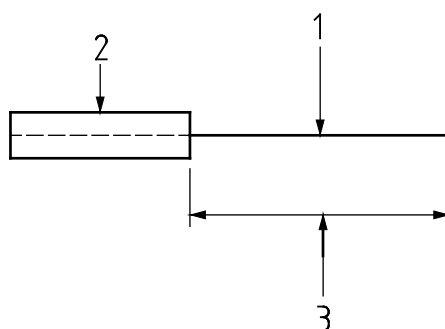
Decorative cords by their very nature have decoration in the form of toggles, and other items at the ends. These have been common for more than 20 years, it is therefore reasonable to assume that if these were a hazard these would have been reported in the accident data bases of the UK and USA which were consulted in the development of this standard. Noting the limited reported data, the requirements were set to severely limit the length of the cord, including any embellishment such that decorative cords cannot tie across the throat.

Annex D (normative)

Measurements

D.1 Cord length with one free end

All measurements shall be made with cords or loops in a relaxed state.

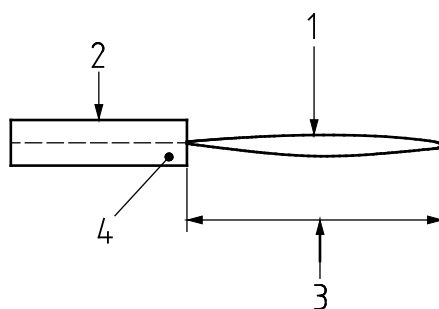


Key

- 1 cord - straight, one free end
- 2 garment
- 3 length of cord

Figure D.1 — Measurement of cords with one free end

D.2 Cords with no free ends



Key

- 1 cord - no free end
- 2 garment
- 3 length of loop
- 4 fixed ends both secured inside garment

NOTE The loop circumference is twice the flat length.

Figure D.2 — Measurement of cord with no free ends

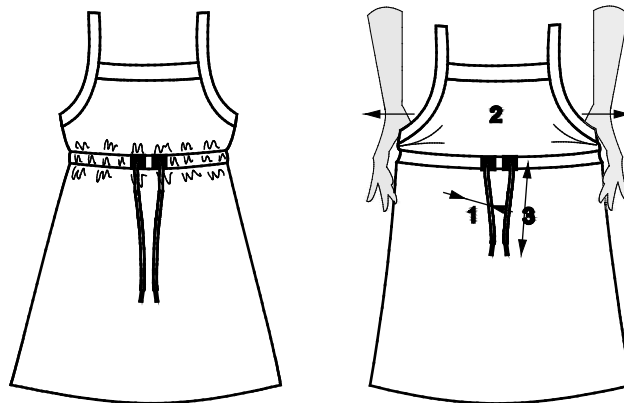
D.3 Garment open to its largest and laid flat

Drawstrings shall be pulled so that they are flat in the channel, with the garment in its relaxed natural state (see D.4).

Stretch the garment to remove possible gathering or effect of elasticsation without deforming the fabric or damaging the garment construction or stitching (see D.3).

While maintaining this extended position, lay the garment flat on the table and, without stretching the drawstring, straighten the drawstring, and measure its length from the exit point to the free end.

NOTE For elasticated garments it is recommended that this measurement is taken with two operatives, so one operative holds the garment to its largest width, while the other operative measures the drawstring.



Key

- 1 straighten cords
- 2 operative holds elasticated garment open to its largest and laid flat
- 3 measure length of cord

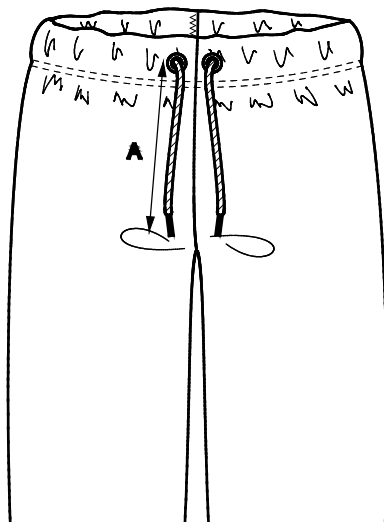
Figure D.3 — Measurement of drawstrings when garment is open to its largest and laid flat

D.4 Garment in its relaxed natural state

Drawstrings shall be pulled so that, without adjusting the size, they are flat in the channel.

Lay the garment flat on a table with garment part, for example waistband, in its natural position (neither extended nor contracted).

Without stretching the drawstring, straighten and measure the length from the exit point to the free end.



Key

A length of free end

Figure D.4 — Garment in its natural state

D.5 Length of sash or tied belt

With the sash or tied belt in place, lay the garment flat on the table with opening closed.

Position the sash or tied belt as if to tie in a knot.

Straighten the free ends of the sash or tied belt, and measure the length of the free ends (see Figure D.5).

If the sash or tied belt is not permanently attached to the garment, adjust the lengths of the free ends to be equal, then measure.

If the sash or tied belt is permanently attached and the free ends are not equal in length, the longest end shall be measured.



Key

- A width \geq 30 mm
- B length from position of tying

Figure D.5 — Measurement of length of sash or tied belt

Annex E (informative)

Risk assessment

A risk assessment in relation to the European standard shall be carried out by considering the risk of strangulation or entrapment by cords and strings on children's clothing. Examples of features which would necessitate a risk assessment are:

- decorative design features, e.g. bows, half belts, tabs, straps etc. are all features that shall be subjected to a risk assessment to establish that they do not present a hazard to the wearer of the garment;
- functional loops used on the inside of garments for display and hanging purposes shall be subjected to a risk assessment to establish that they do not present a hazard to the wearer of the garment.

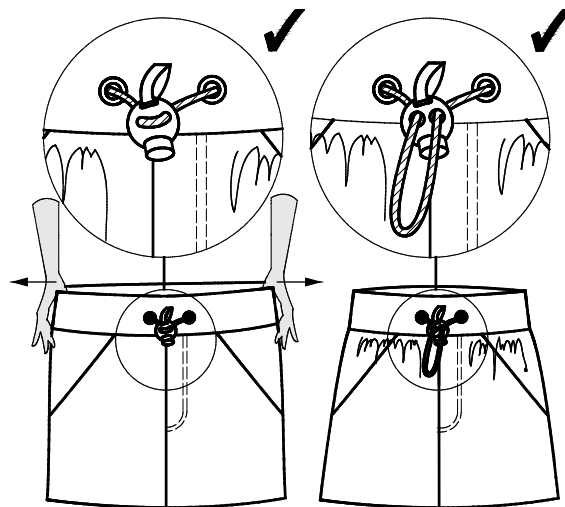
NOTE Other hazards from clothing will require separate consideration.

Annex F (informative)

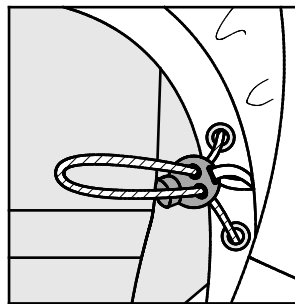
Examples of cords and drawstrings

General key for all figures in Annex F:

- ✓ acceptable (a tick)
- X not acceptable (a cross)



a)



b)

Figure F.1 — Example of toggle fixed to the garment on drawstring with no free ends (see 3.1.2 , 3.3.1, 3.4.1 b and 3.4.2 b)

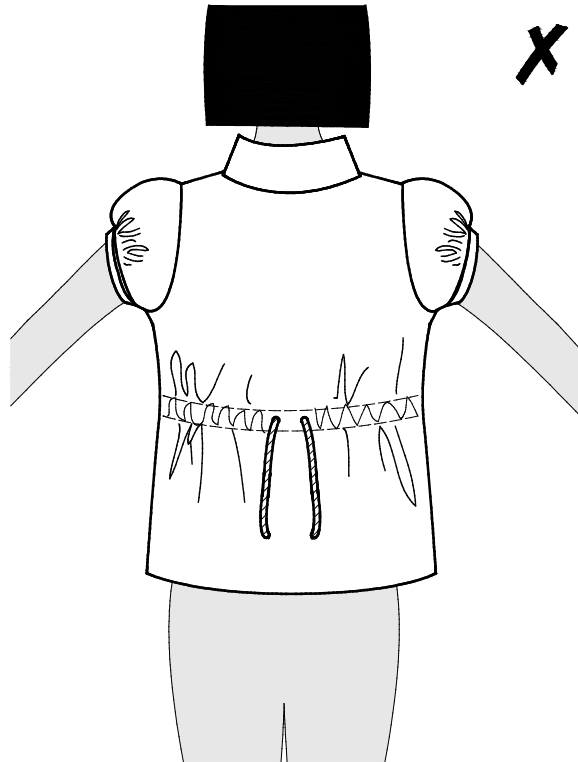


Figure F.2 — Example of unacceptable drawstring at back of garment (see 3.6.1)

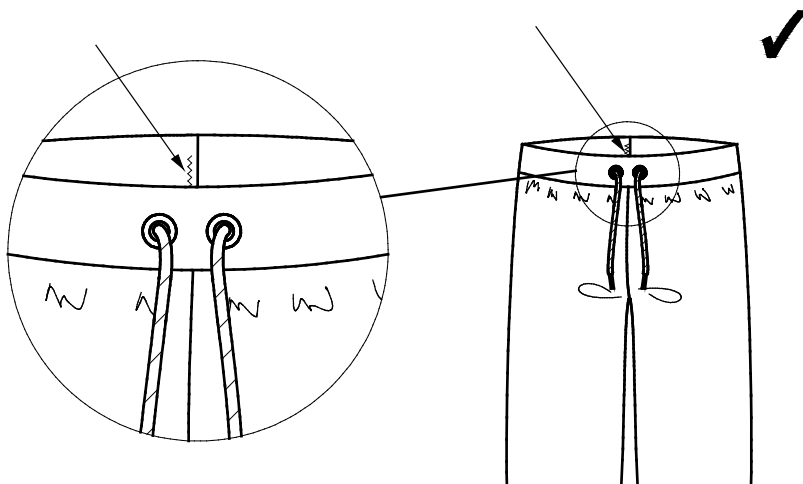
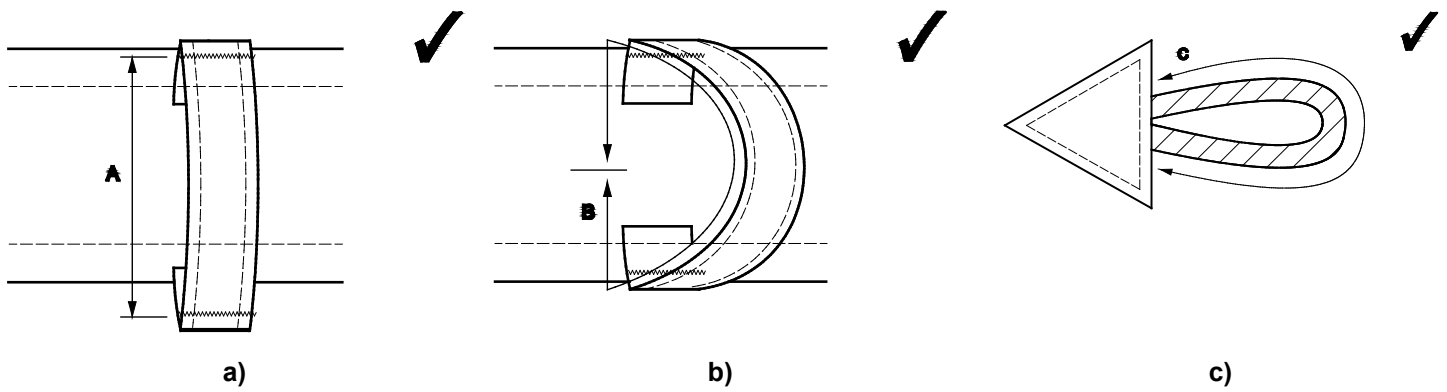


Figure F.3 — Example of drawstring with bar tacking (see 3.1.3)



Key

- a) flat loop, where A = distance between stitching
- b) fixed loop, where B = circumference
- c) fixed loop, as might be used for toggle closing of garment, where C = circumference

Figure F.4 — Examples of loops (see 3.1.4)

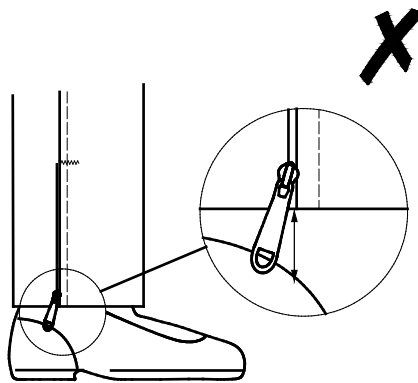
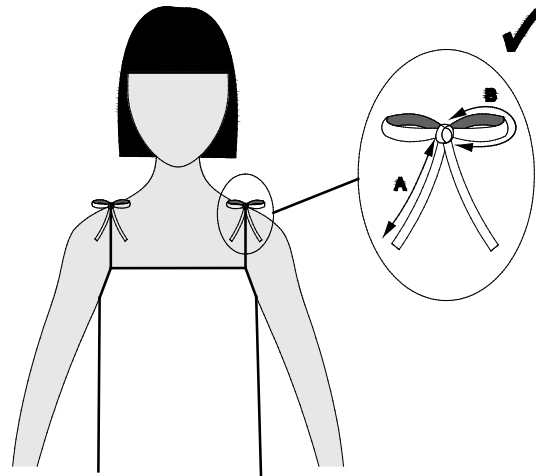


Figure F.5 — Example of unacceptable zip puller below lower edge of garment designed to finish at the ankle (see 3.1.6)



Key

- A length of decorative cord
- B circumference of fixed loop

Figure F.6 — Example of fixed bow on shoulder strap (see 3.2.5 and 3.3.5)

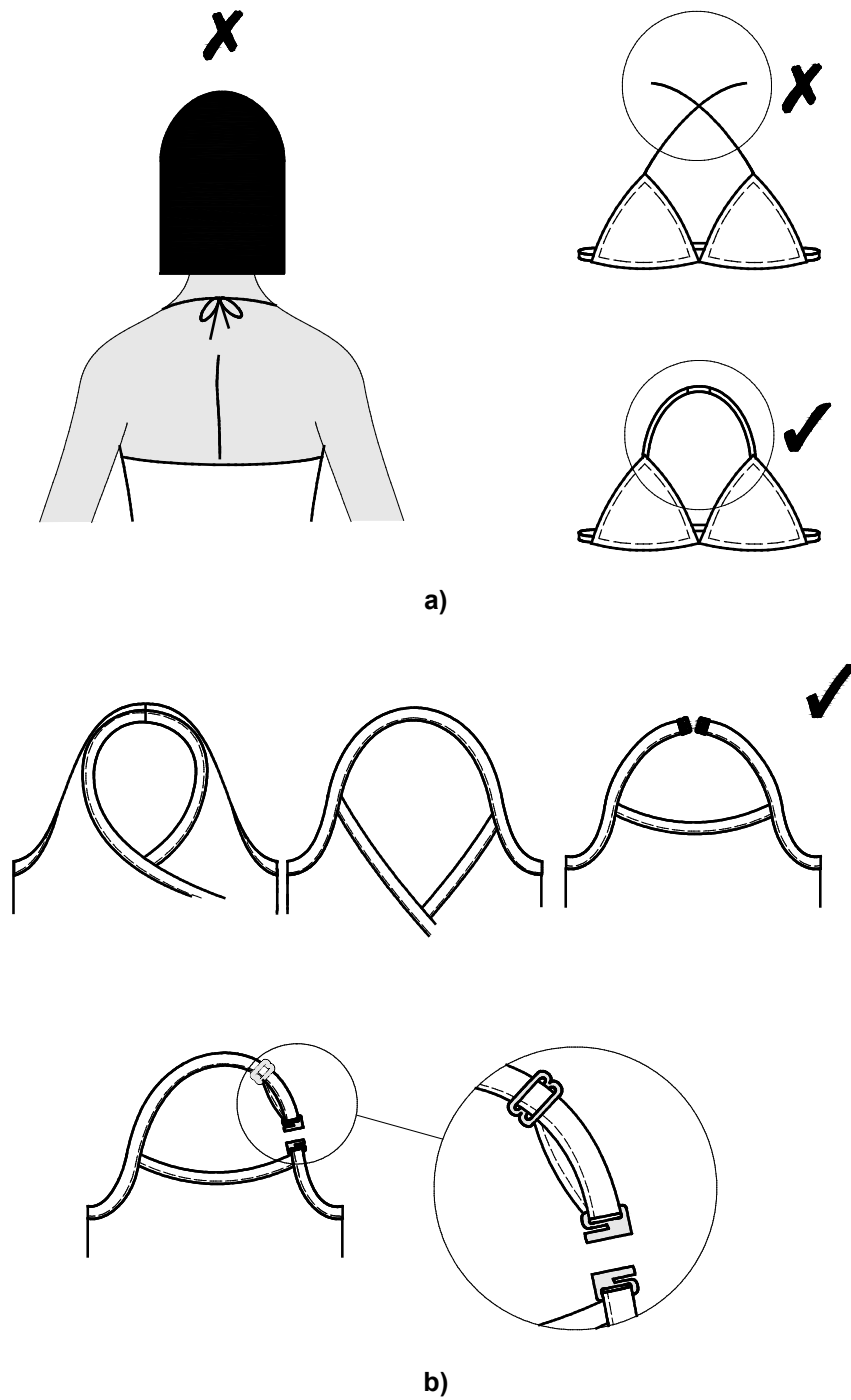


Figure F.7 — Examples of halter neck (see 3.2.6 and 3.3.6)

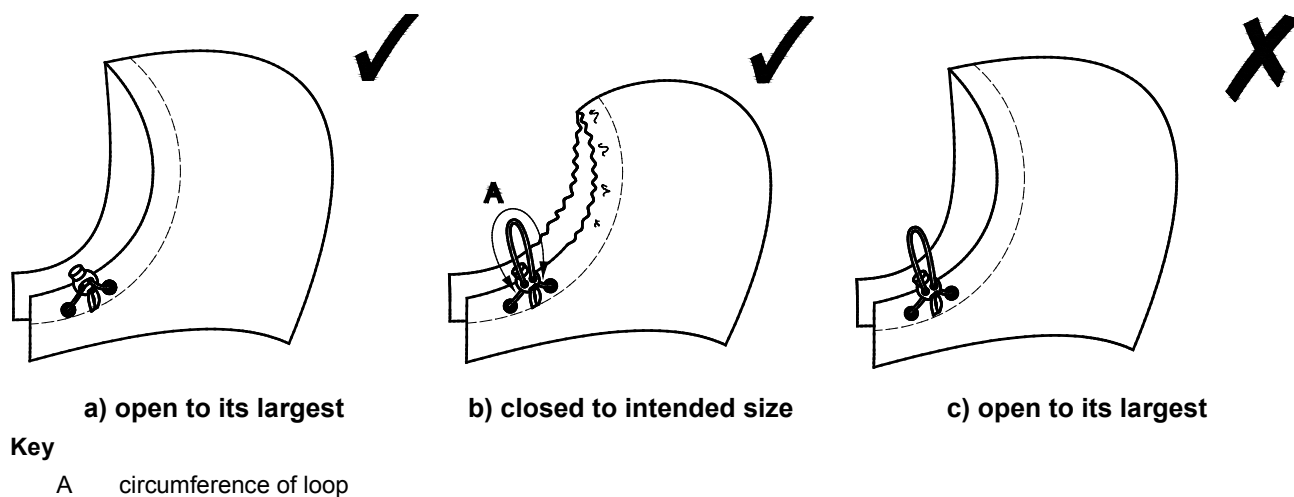
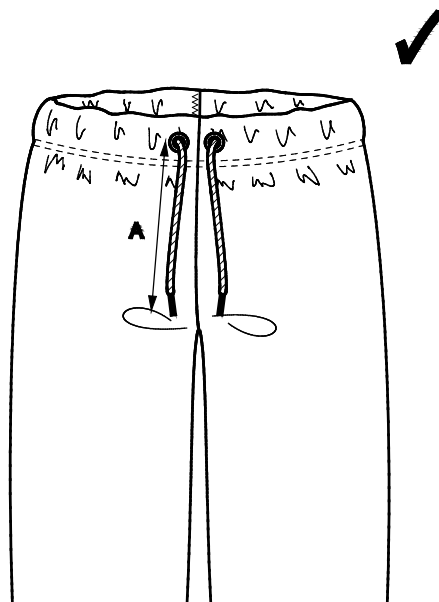


Figure F.8 — Examples of drawstring on hood for older children and young person (see 3.3.1)

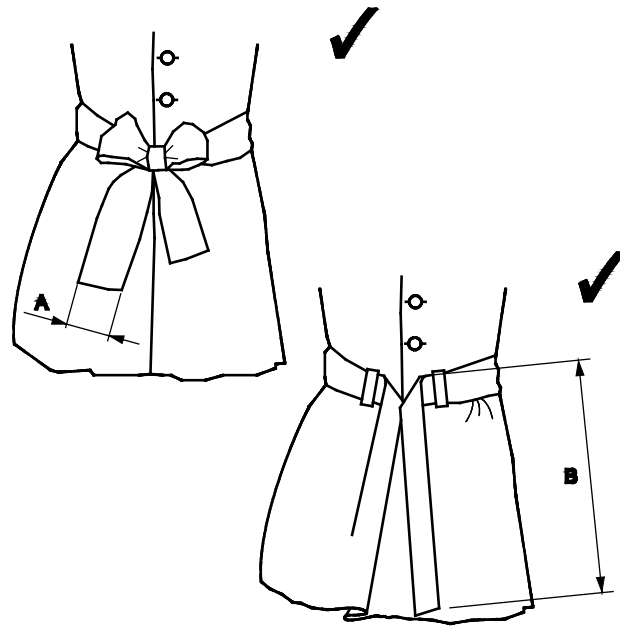


Key

A length of drawstring

Garment in *relaxed natural state*

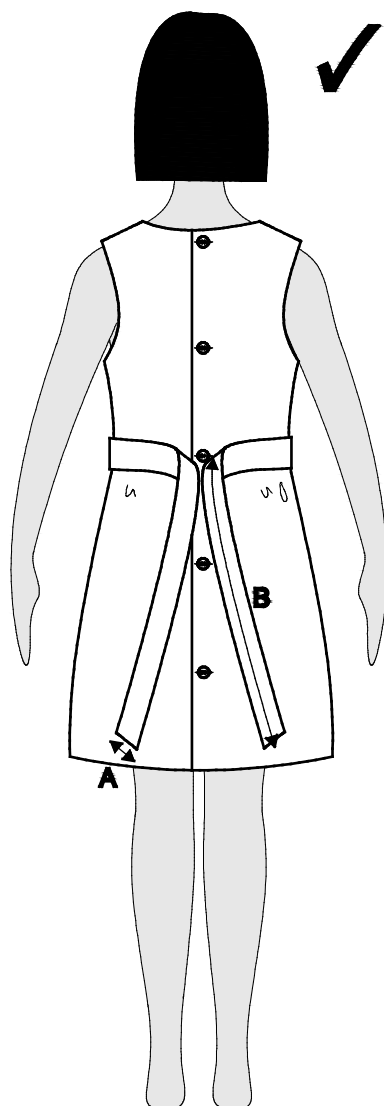
Figure F.9 — Example of waist drawstrings (see 3.4.1 a)



Key

- A width of sash or tied belt
- B length of sash or tied belt

Figure F.10 — Examples of sashes and tied belts (see 3.4.4 and 3.4.5)



Key

- A length of sash or tied belt
- B width of sash or tied belt

Figure F.11 — Example of back of garments showing permissible sashes and tie belts (see 3.4.4 and 3.4.5)



Key

- A belt width
- B belt length from where it is to be tied

Figure F.12 — Example of tied belt at front of garment (see 3.4.6)



Figure F.13 — Example of unacceptable cords at lower edge of garments hanging below the crotch (see 3.5.1)

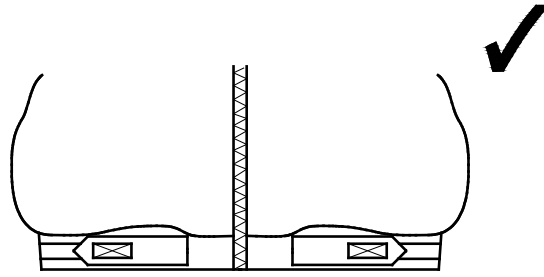


Figure F.14 — Example of adjusting tabs at lower edge of garment hanging below the crotch (see 3.5.4)

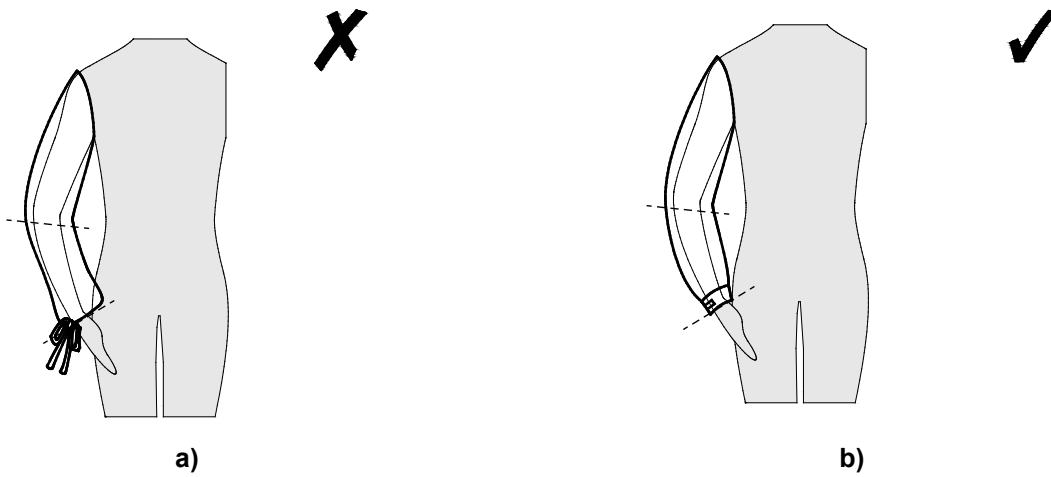
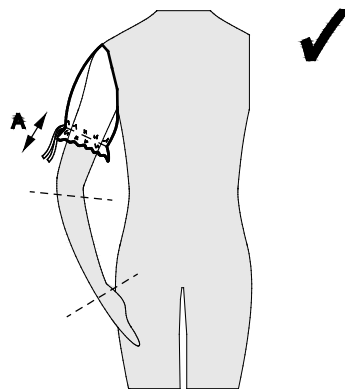


Figure F.15 — Examples of long sleeves (see 3.7.1)



Key
A length of cord

Figure F.16 — Example of short sleeves (see 3.7.3 and 3.7.4)

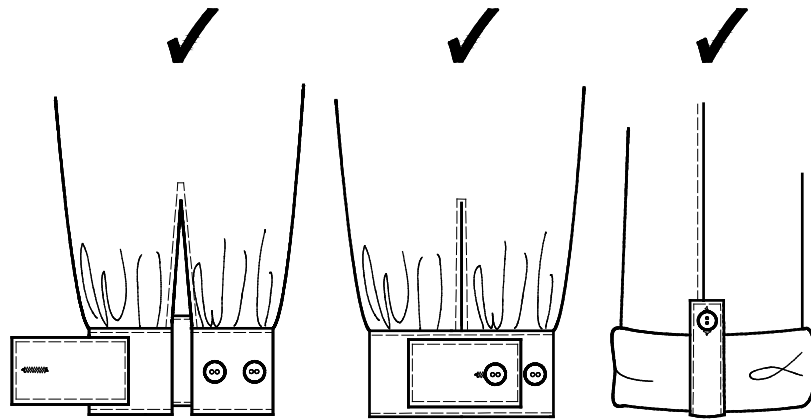


Figure F.17 — Example of adjusting tabs (see 3.7.5)

Bibliography

- [1] ASTM F 1816-97, *Standard Safety Specification for Drawstrings on Children's Upper Outerwear*
- [2] BS 7907:1997, *Code of practice for the design and manufacture of children's clothing to promote mechanical safety*
- [3] BUDAVARI E., EIBEN O. Evaluation of school furniture with regard to students body measurements. *Ergonomia*. 1982, **15** (2) pp. 70–77
- [4] CEN/BTWG/117 N11, Draft for comment Child safety – Guidelines for its Inclusion In standards
- [5] CEN/TR 13387:2004, *Child use and care articles - Safety guidelines*
- [6] CEN guidelines M/293
- [7] *CHILDATA published by the DTI*. UK, 1995
- [8] DIN 33402, *Body dimensions of people; values, June 1981*
- [9] XP G30-105 (2002), Sécurité des vêtements d'enfants – Cordons ou Liens de serrage
- [10] EN 71-1:2011+A3:2014, *Safety of toys - Part 1: Mechanical and physical properties*
- [11] Home Accident Surveillance System Annual Report. Accident Data and Safety Research: Home, Garden and Leisure UK Department of Trade and Industry Consumer Affairs and Policy Directorate
- [12] Home Accident Deaths Database; UK Department of Trade and Industry Consumer Affairs and Policy Directorate
- [13] ISO/IEC Guide 50:2002, *Safety aspects – Guidelines for child safety*
- [14] Joubert D, 1982, Le salon international de la mode enfantine, *Filière Maille*, Sept-Oct, 20
- [15] OSTYN M., SIMONS J., BEUNEN G., RENSON R., VAN GERVEN D. *Somatic and Motor Development of Belgian Secondary Schoolboys – Norms and Standards*. Leuven University Press, Belgium, 1980
- [16] PHEASANT S.T. *Bodyspace: Anthropometric ergonomics and design*. Taylor and Francis, London, UK, 1986
- [17] Sihvola Seija (2000) *A Health Dialogue in the School Entrance Health Examination*, Acta Universitatis Tamperensis 751: Tampere
- [18] Stakes (1998) Lasten ja nuorten hyvinvointi ja terveystilanne Suomessa, Statistical report 13/1998, 129
- [19] STEENBEKKERS L.P.A. *Child development, design implications & accident prevention. No 1 in Physical Ergonomics Series, TU Delft*. Delft University of Technology, Netherlands, 1993
- [20] UK legislation: Children's clothing (Hood Cords) Regulations 1976 (repealed 2012)
- [21] WAALER P.E. Anthropometric Studies in Norwegian children. *Acta Paediatr. Scand. Suppl.* 1983, **308** pp. 2–38

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