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DRAFT MANDATE TO CEN IN THE AREA OF STANDARDIZATION
RELATED TO THE SAFETY OF CONSUMERS: DRAWSTRINGS OR CORDS
ON CHILDREN'S CLOTHING

1. INTRODUCTION

This mandate is given under the framework for standardisation mandates in the field of consumer safety.

Cords or drawstrings on children's clothing have been implicated in a number of child fatalities in Europe and elsewhere. Cords or drawstrings have been used to fasten hoods, pull in waists or simply as decoration on many items of clothing worn by children or adults. Cords typically ending in a knot or toggle may catch in fixed or moving equipment resulting in injury or death of the wearer, for example by strangulation. Some countries have statutory requirements or advisory codes on the use of such cords or drawstrings. These have been demonstrated, through accident statistics, to reduce the number of injuries or fatalities.

Thus, the relevant European organisation responsible for standardisation, being CEN in this field, is now requested to accept a mandate to introduce a standard, which sets out technical solutions in order to address the problem of cords and drawstrings on children's clothing.

2. IDENTIFICATION OF HAZARDS AND RISKS

Drawstrings and cords on children's clothing provide a hazard that can lead to injury or death if the cord or drawstring catches on items such as playground equipment, escalators, automatic doors, car or bus doors or in the spokes of bicycle wheels¹. The specific hazard relates to the type of entrapment. The following are typical scenarios. All have occurred in at least one Member State:

- a child descends a slide, the toggle or knot at the end of a hood drawstring is caught in a small space or gap at the top of a slide. As the child descends, the cord pulls taut, strangling the child.
- a child alights from a bus, the waist drawstring toggle is caught in the doors unobserved by the driver. The bus pulls off and the child is dragged along and under the wheels.
- a child is riding a bike, a drawstring on a trouser leg becomes entangled in the spokes of the bicycle wheel. The child is pulled to the ground sustaining head injuries.

Other potential hazards include choking, if all or part of a toggle becomes detached.

A Nordic study of accidents² indicated that the majority of incidents involved children aged between one and six years.

The following is a sample of incidents from different countries. Full information and statistics have been difficult to obtain and it should be noted that much of this data is drawn from newspaper and other reports of specific incidents.

Belgium

In 1998, a playground accident involving cords on clothing resulted in the death of a three-year-old child. A few weeks later, a similar near-fatal incident occurred. The child concerned, already showing signs of asphyxiation, was rescued by two passing policemen³.

¹ Petruk J, Shields E, Cumming G E and Francescutti L H, Fatal asphyxiations in children involving drawstrings on clothing, Canadian Medical Association Journal 1996, 155: 1417-1419, Canada and Flobecker P, Ottosson J, Johansson L, Accidental death from asphyxia: a ten year retrospective study from Sweden, American Journal of Forensic Medicine Pathology 1993, 14:74-79, USA

² Nordic Council of Ministers, *Testing mechanical requirements of products used for and by children*, TernaNord 1997:578

³ Gazet van Antwerpen, 25 August 1998, Belgium

Denmark

There has been at least one fatal accident in Denmark involving cords on children's clothes.

Finland

There are several reports of near fatalities in recent years. In June 1999 a two-and-a-half-year-old boy suffered a near-fatal accident when the cord from the hood of his anorak caught in a playground ladder. He became unconscious but was rescued in time. There was adequate supervision of the children and the playground equipment complied with appropriate standards. A similar incident involving a two-year-old child and a playground slide occurred in summer 1998. Again the child was rescued in time. Other similar incidents were reported in 1997, involving neck cords and climbing equipment and, in May 2000, a three-year-old boy was near to strangling when his neck cord caught on a playground slide.

Germany

In January 1999 a cord on the clothing of a four-year-old girl caught in a train door, she survived due to the help of a passer-by. In 1997 a two-year-old child again survived an accident when an anorak cord caught in a playground slide. Also in 1997, another young child was left unsupervised for fifteen minutes in the play area of a fast food restaurant. His parents suddenly noticed that he was hanging lifeless from the slide due to his clothing.

Iceland

There have been several incidents in Iceland of children caught by the drawstrings of their clothing. There have also been concerns about the design of two-part toggles on the ends of cords, which may break apart easily, resulting in a potential choking hazard; no associated accidents have been reported.

Ireland

There have been fatalities in Ireland in 1998 and, recently, in 2000 where the waist drawstrings on children's outer garments got caught in the doors or rails of buses⁴. This resulted in the children being dragged along when the bus restarted with fatal results, in both cases to eight-year-old children.

⁴ information from NSAI, Ireland

The Netherlands

From 1990 to 1999 there were two cases, recorded in accident data obtained from a sample of hospital accident and emergency departments ⁵, in which injuries to children were related to cords in clothing, this is too few to make national estimates. A five-month-old girl got the cord of a coat wrapped around her finger and, in 1999, an eight-year-old boy fell because the cord of his trousers got caught in the spokes of his bike.

In the same period, 1990-1999, there were four accidents recorded in newspaper cuttings. All involved a slide and in all cases, victims were four years or younger. An eighteen-month-old boy died because his coat hood cord got caught between the planks of a slide in the backyard of his home. A two-year-old boy was trapped on a playground slide by his coat cord. He was unconscious when found. A three-year-old girl died on a broken slide, hanged by a cord around her neck (but not a coat cord). A four-year-old girl was saved, from hanging by a neck cord from a slide, by her teacher.

Sweden

Data from the Swedish Child Ombudsman's archives⁶ reveal four deaths related to clothing and hood cords between 1990 and 1999. In April 1990, an eight-year-old girl fell from the roof of a playground installation, the hood cord of her jacket got caught and she was strangled. In April 1997, a two-year-old girl died from fatal brain damage caused when a hood cord on her clothing caught in a playground slide a few weeks earlier⁷. Her nanny was close by and had initially assumed the child was holding on to the slide sides to stop herself sliding lower. Four earlier similar cases involving three-year-old girls who survived have been referred to in television programmes⁸ and press cuttings. In January 1998 a seven-year-old boy died after falling from the benches of a viewing platform, hitting his head and being left hanging from his own clothes, whilst classmates were skiing. In April 1999, a twelve-year-old boy was strangled by the arm of his pullover when climbing.

Two further fatalities have been reported in the press. In February 1998 a ten-year-old boy died under the wheels of a bus after his jacket cord got stuck in a bus door and the driver pulled off without noticing⁹. Again, in April 2000, a two-year-old girl was found dead on a play school slide¹⁰. She appeared to have come down head first, got the cord of

⁵ Information from the Dutch Injury Surveillance System 1990-1999, The Netherlands

⁶ Information from the Swedish Child Ombudsman Archives, search 9 September 1999, Sweden

⁷ Information from Umeå University, Department of Surgery, Sweden

⁸ Information from *Striptease* and *På Liv och Död*, television programs Sweden

⁹ Information from Metro, 27 February 1999, Sweden

¹⁰ Information from Göteborgs-Posten, 28 April 2000, Sweden

her jacket stuck in the upper part of the slide and suffocated. Although there were two adults supervising the twelve children playing, her body was apparently hidden by the sides of the slide.

Some near accidents have involved cords getting caught in ski lifts: In August 1998 a three-year-old girl was left hanging upside down from a ski lift after her jacket cord got stuck in the lift door, the guard managed to save her. In January 1995, a ten-year-old boy was dragged by a ski lift for 8 - 10 metres when the cord of his jacket hood got stuck in the handle of the ski lift wire. Luckily somebody pushed the stop button in time.

Other incidents where children survived cords and clothing related accidents have been reported in press cuttings. In November 1995, a seven-year-old girl was saved from strangulation by her school friends after her hood cord got caught when she jumped down from a tree in the school playground. In January 1996, an eight-year-old boy got caught by the hood of his anorak in school playground equipment and was saved by his friends. In March 1998, a ten-year-old boy required treatment in intensive care after being nearly hanged in his jacket whilst climbing. In March 1999 a thirteen-year-old boy was nearly strangled when his scarf got caught in the motor of a go cart and tightened around his neck.

United Kingdom

From a report on fatal accidents involving children¹¹, 84 deaths from accidental strangulation occurred between 1981 and 1992. Items of clothing or accessories forming a noose accounted for 15 of the cases and in a further 20 fatal accidental strangulation cases, precise details were not specified.

Several fatalities have been recorded in recent press reports. In 1997 an eleven-year old boy died after a cord was caught in the door of an underground train¹², In October 1999, a fourteen-year-old girl died when a cord on her clothing caught in a bus door¹³ and, in December 1999, a ten-year-old boy was hanged by a dressing gown cord¹⁴. A fatality in December 1990 in which a girl died as a result of her anorak cord becoming entangled in

¹¹Fatal trappings by Jouglah Rita and Clifford Sarah, Consumer Safety Research, Department of Trade and Industry, July 1996, UK

¹² Evening Standard, 22 October 1997, UK

¹³ Daily Telegraph, 2 October 1999, UK

¹⁴ Daily Telegraph, 24 December 1999, UK

a bus door was instrumental in the commencement of work on British Standard guidance on the design and manufacture of children's clothing¹⁵, see later.

The Royal Society for the Prevention of Accidents (RoSPA), a UK consumer safety organisation, has received anecdotal reports, from a School Crossing Officer, of cords on children's clothing becoming caught in car doors when children were being dropped off at school¹⁶.

Only a few accidents involving children and clothing cords were recorded in the national sample of accidents from Hospital Accident and Emergency departments¹⁷. Five accidents, to children aged from less than one year to thirteen years old, involved tripping over shoelaces with a variety of consequent injuries. A further incident, involving a girl under the age of one, resulted in a dislocated elbow when the young child's glove cord became caught in the wheels of her buggy.

A recent incident, reported in a London local paper¹⁸, resulted in an eye injury to a six year old when the toggle of her elasticated hood cord sprang back into her eye after she was caught by a friend during a playground chase.

3. EUROPEAN AND NATIONAL REGULATIONS

The Directive 95/59/EEC on General Product Safety provides that consumer products must be safe. In determining safety, national and European standards are taken into account.

The United Kingdom and Ireland have had national regulations since 1976 limiting some forms of cords or drawstrings on certain children's clothing (outer garments).

¹⁵ British Standards Institution, *Code of practice for The design and manufacture of children's clothing to promote mechanical safety*, BS 7907:1997, UK

¹⁶ Information from RoSPA, 1998, UK

¹⁷ Department of Trade and Industry, Home Accident Surveillance System including leisure activities, case listings and 22nd Annual Report 1998 data, March 2000, UK

¹⁸ *The Voice*, 1999, UK

These regulations were introduced to prevent the deaths of children due to the hood drawstrings becoming entangled in children's slides or fences etc. They are basically the same but some differences are found in the way the wording is laid out.

The definition of 'children's outer garments' in these regulations is based on garment dimensions, which would cover children up to about the age four. The two regulations ban hood cords and the incidence of deaths from drawstring strangulation fell significantly following their introduction.

However, a recent study in Ireland¹⁹ found that almost one half of 77 different designs of children's outerwear on sale in local retail outlets incorporated neck or hood cords in apparent contravention of the Irish Regulation. This was largely because present styles are so bulky that the products fell outside the dimensional requirements of the regulation.

4. EXISTING STANDARDS AND ON-GOING STANDARDIZATION WORK

4.1 – International standards.

There are no international standards covering this aspect. However strangulation by cords was one of the hazards considered in ISO/IEC Guide 50, guidelines for standards to protect the safety of children²⁰, published in 1987. The frequency of accidents resulting in suffocation or strangulation due to clothing/neck cords is in the Guide described as infrequent but with severe and potentially fatal consequences for the most vulnerable age group of 6 months to five years. Elimination of neck cords in children's clothing was identified as a possible preventive measure. A new Guide 50 is due to be published late 2000.

4.2 – European standards.

There are no European standards covering this aspect.

¹⁹ O'Sullivan J and Ryan A C, *No strings attached: preventing deaths from children's clothing*, University College Cork, Department of Paediatrics & Child Health, 1999, Ireland

²⁰ International Standards Organisation (ISO) and International Electrotechnical Commission (IEC) Child safety and standards - General guidelines ISO/IEC Guide 50: 1987

CEN Guidelines on safety for child use and care articles²¹ have recently been published. No age definition is given for children, this is determined by the product in use. These include a clause (3.3.2.2), which proposes that cords, straps and ribbons which:

‘Have a free length of more than 220 mm when stretched by a force of 25 N, must separate to parts of 220 mm or less ... when a force of 50 N is applied’.

This is to avoid the cord being able to go around a child’s neck. The restriction does not apply to the free ends of belts or harnesses. There is also a requirement that loops should not be longer than 360mm, again to prevent the loop going over a child’s head. Any parts, which become detached, must not be a choking hazard. This would cover, for example toggles, which separated into pieces.

Following representation by the National Standards Authority of Ireland (NSAI) and supported by AFNOR, SFS and ANEC²², the CEN Technical Board²³ has endorsed the concerns relating to the danger of hood and waist drawstrings and stressed the importance and urgency to deal with this issue.

Possible options under consideration were to prepare a specification or guidelines on waist and hood cords, prepare a specification or guidelines on the general safety of children’s clothing such as those described in the British Code of practice described below, or do nothing on the basis of insufficient evidence to justify imposing restrictions on manufacturers. The preferred option by the majority of members of CEN/TC 248 replying was to prepare a specification or guidelines on the general safety of children’s clothing.

4.3 – National standards, code of practice on cords on children’s clothing and voluntary measures.

4.3.1 - United Kingdom

Recently cords at the waists of garments or simply provided for decorative effect have become more common. To combat this and other potential hazards from children’s

²¹ European Committee for Standardisation, *Child use and care articles - General and common safety guidelines*, CR 13387, October 1999

²² CEN/BT meeting held 4/5 April 2000

²³ CEN Technical Board BT N6102

clothing, identified from an analysis of accidents²⁴ guidance to manufacturers was introduced in 1997 through a Code of practice²⁵. This goes further than the United Kingdom legislation described in section 3. This also followed difficulties associated with reaching agreement on a revised standard for children's anoraks²⁶, which was consequently withdrawn.

The Code of practice covers 'children of all ages' although it recognises that the majority of accidents involve younger children. Clause 6.2 of the Code relates directly to cords, ribbons, bows and neckties and Clause 6.2.1 states that:

'When designing garments with cords, bows or ribbons, care should be taken to avoid potential hazards, for example strangulation, entrapment and induced vomiting in infants.'

Hoods should not be secured by means of a cord drawn through the fabric in the neck or head area of any child's garment.'

There is no age guidance given for this clause, although reference is also made to the Hood Cord Regulations²⁷, described previously.

Detailed guidance is also given about the lengths of cord or tape, which are acceptable, their location and the method used to terminate the cord. Cords must not emerge from the back of a garment, neither end of a waist cord should protrude by more than 14 cm with the garment fully extended and neither end of a hem cord should extend for more than 8 cm. The method of terminating ties and cords:

'...should be such that the risk of entrapment is not increased: for examples, knots or a rigidly attached toggle should not be used...'

²⁴ Levene S, unpublished research, Child Accident Prevention Trust, UK

²⁵ British Standards Institution, *Code of practice for The design and manufacture of children's clothing to promote mechanical safety*, BS 7907:1997, UK

²⁶ British Standards Institution, *Children's anoraks*, BS 5919: 1991, withdrawn, UK

²⁷ Children's Clothing (Hood Cords) Regulations 1976, Statutory Instrument No. 2, UK

Garments for children aged three and under must not have cords or ribbons longer than 14 cm and these mustn't be near the mouth. For this age group, plastic sleeving used to terminate cords must withstand at least 100 N, to avoid a choking hazard. Neck ties for children under five years of age must be easily detachable, for example using touch and close fasteners or clip-on fastenings, rather than being tied conventionally as in an adult tie.

Work is under consideration on the extent to which the design of children's clothes now follows this guidance document²⁸.

4.3.2 – Germany.

The German clothing industry gathering German manufacturers, wholesalers, retailers and importers has taken voluntary measures in order to eliminate the use of straps and strings in the neck-area of children clothing. The German federal administration has given its full support to this approach.

The involved parties are part of an agreement by which they commit themselves not to manufacture, distribute, import and sell children clothing (size 0 to 146) with straps and strings in the neck-area. The agreement encourages the use of alternative safe fixing material such as Velcro or pressure buttons. It provides also for an information campaign towards consumers with the support of the consumer protection federations and the federal administration.

The agreement is to be implemented in 2001.

5. AMERICAN APPROACH.

5.1 – Information for USA

5.1.1 - Identification of hazards and risks.

Between 1985 and 1995 there were 17 deaths and 42 non-fatal accidents involving the entanglement of drawstrings on children's outerwear reported in the United States²⁹. The

²⁸ Information from the Consumer Safety Unit, Department of Trade and Industry, UK

majority of these involved hood/neck drawstrings and playground slides with children from the age of two to eight. At least twelve of the incidents involved the entanglement of waist or bottom-edge-of-garment drawstrings in the doors of school buses. Victims ranged in age between seven and fourteen. Other incidents included two strangulations in cots, when cords on sweatshirts became entangled in the cot posts.

A study³⁰ of 47 incidents from 1987 to 1997, taken from newspaper cuttings, law firms, state consumer protection agencies, death certificates and federal agencies, revealed that 31 of these involved drawstring entrapment in slides. This sample overlaps those reported in the previous paragraph. The second most common injury involving drawstrings, reported in 12 incidents, was where the cord became entrapped in school bus handrails or doors. There was also one strangulation of a child, involving a tricycle, and three incidents where waist drawstrings caught in a ski lift chair, playground ramp or a slide. The most frequent cause was a drawstring on a child's jacket or sweater, typically at the neck or to tie the hood. Usually the toggle or knot of a loose drawstring got caught in a gap. More of the injuries involved girls than boys, leading researchers to suggest that some drawstrings were for decoration rather than functional and 'usually supplemental to other closures'.

5.1.2 - Regulations.

There is guidance but no regulation banning cords on children's clothing, although one state, Wisconsin, considered introducing a total ban in 1999. There was strong opposition to this from the American Apparel Manufacturers Association (AAMA)³¹.

5.1.3 - National standards or code of practice.

The US Consumer Product Safety Commission (CPSC) issued guidelines³² in 1996 to assist consumers and manufacturers to avoid the hazards created by drawstrings on children's clothing. The CPSC guidelines recommend that the following criteria be applied to the design of children's upper outerwear, such as jackets and sweatshirts.

²⁹ Begala K, *Child's death spurs effort to release guidelines for drawstrings on children's jackets and sweatshirts*, <www.parentsplace.com>, 1994, USA

³⁰ Drago D et al., *Archives of Pediatric and Adolescent Medicine* 1997; 151:72-77, USA

³¹ American Apparel Manufacturers Association (AAMA), letter to Wisconsin Bureau of Consumer Protection, <www.americanapparel.org/News_FTR_Draw.html>, USA

³² US Consumer Product Safety Commission *Guidelines for Drawstrings on Children's Upper Outerwear*, February 1996, Washington, USA

for clothes sized 2T to 12 (approximate age: toddler to age 10)

- all hood/neck drawstrings should be removed as, even if short, they presented a strangulation risk; manufacturers and consumers were recommended to consider alternative fastenings such as snaps (press studs), buttons, *Velcro* and elastic

for clothes sized 2T to 16 (approximate age: toddler to age 14)

- waist/bottom (hem) drawstrings should measure no more than 3 inches (7.6 cm) when the garment is expanded to its fullest width
- drawstring should be sewn to the garment at its midpoint so that it could not be pulled to one side, making it long enough to catch on something
- toggles and knots at the ends of drawstrings should be eliminated because they increase the risk of entanglement.

The guidelines take into account the fact that drawstrings implicated in deaths and injuries are largely confined to those on upper outer garments. Sizes specified related to the age-related incidence of accidents.

The guidelines are supported by the American Apparel Manufacturers Association (AAMA) and have been embraced by the American Society for Testing and Materials (ASTM) as the standard for use of drawstrings in the manufacture and sale of children's upper outerwear garments³³.

5.2 – Information on Canada.

There is voluntary guidance to manufacturers and consumers, issued by Health Canada, which has resulted in a reduction of fatalities. Many retailers no longer use drawstrings. A market survey is being undertaken to determine if further action, such as regulation, is necessary³⁴.

³³ American Society for Testing and Materials *Standard Safety Specification for Drawstrings on Children's Upper Outerwear*, ASTM F1816-97, 1997, USA

³⁴ Injury Prevention, No 4, December 1998, Canada

6 – GENERAL INFORMATION ON THE MARKET SITUATION.

Children's clothes are increasingly being decorated with cords and loops. Despite there being specific hood cord regulations in Ireland and the UK, studies have indicated clothes, which escape legislation and are on sale in the shops.

A recent study in Ireland³⁵ found that almost one half of 77 different designs of children's outerwear on sale in local retail outlets incorporated neck or hood cords in apparent contravention of the Irish Regulation. This was largely because present styles are so bulky that the products fell outside the dimensional requirements of the regulation. When assessed against the United States Consumer Product Safety Commission (CPSC) guidance over three quarters of the garments failed. Of these, seventy per cent had excessively long waist drawstrings; two thirds were not sewn down at their midpoint and three quarters had toggles or knots on the end.

From the same study, over 60 per cent of clothing worn by children under the age of 14 in two Cork primary schools failed against the CPSC guidance.

A small study has also recently been undertaken in the United Kingdom³⁶ in which children's clothing in sportswear shops, department stores and children's wear retailers was examined for the use of drawstrings. Of fifteen garments inspected, ten, including well-known international sports brands, had cords with free ends longer than 14 cm. Two hooded upper outer garments for children aged 7-8, had unsecured neck cords of 23 and 28 cm length, respectively, ending in knots and toggles. One garment sized 98-104 cm (equivalent to age 4) had a hood cord with free ends of 15 cm when tied.

Similarly, some samples had exceptionally long hem cords. A hooded garment intended for an eleven-year-old child had a hem cord with free ends, measuring 33 cm when tied and ending in toggles. Another with a toggle and shoelace end to the cords was not stitched in any way so could be pulled such that the free end was 42 cm in length. Trousers were found with a waist cord of 27 cm and cords in the trouser legs hem of 13 cm; the cord ends were knotted.

³⁵ O'Sullivan J and Ryan A C, *No strings attached: preventing deaths from children's clothing*, University College Cork, Department of Paediatrics & Child Health, 1999, Ireland

³⁶ Williams W, *Are current UK safety legislation effective in children's wear?*, dissertation for B.A. Hons, London School of Fashion, 1999, UK

Although the reported incidence of accidents involving drawstrings and cords on children's clothing is relatively low compared to other product hazards, there is sufficient evidence of risk and severity of consequent injury, including fatalities, to justify a standard.

7 – POSSIBLE CONTENT OF A STANDARD

7.1. - Garment Characteristics

Generally speaking, the standard should cover all type of clothing intended for children.

Technical specifications should be adapted according to the various type of garment intended for children and their characteristics.

For instance, American guidelines relate to upper outer garments which featured in accidents: smaller sizes for hood cords, because children wearing larger sizes were considered able to extricate themselves from the choking source, for example, on a slide in a playground, but larger sizes for waist and bottom drawstrings, where the risk was getting caught in a bus door.

Therefore European standards could provide for different technical specifications for neck and hood cords on small size upper outer garments than those for waist and hem cords on large upper outer garments. Also, one could make a difference between outer garments and all other garments.

Decorative cords or cords around the knees could present a hazard, if caught in the doors of a moving vehicle and should be considered, as well as similarly cords at the bottom of trousers which could be caught in the spokes of a bicycle or present a tripping hazard. Cords on swimming trunks should also be considered

Shoelaces, when left untied, pose a similar problem to trouser hem cords and do feature in accident reports. However there appears to be no evidence of frequent serious injury to children. It is unlikely that shoes could be included in clothing related standards; they are typically covered by separate standards and involve a different manufacturing base.

Cords and loops are also a feature of bags and backpacks used by children but this has been considered outside the scope of this draft mandate.

As far as garment size is concerned, given the variation in clothing sizing in different member States and the variation in garment dimensions associated with different sizes, for example in relation to fashion, it is necessary to specify garment dimensions based on body dimensions rather than clothing sizes. The Irish and UK regulations provide these as the breadth of the chest measurement with the clothing lying on a flat surface.

However as clothing has become increasingly bulky, a maximum figure for chest measurement will restrict fewer clothes. If the dimension is set too high, it may result in unintended restrictions on small adult sizes. Alternative dimensions which may be considered, are total sleeve length (shoulder plus arm length), which is likely to remain more constant even when garments are bulkier. The figure would be fixed from anthropometric data. This is an area in which discussion is required by garment manufacturers and child safety experts.

7.2. - Age Range

Existing legislation relating to hood cords in Ireland and the United Kingdom restricts the ban to clothing intended for children up to age four. Accident data suggests that whilst this may cover the majority of incidents in which clothing cords have been caught on play equipment, both American data and some European incidents have involved children up to the age of eight in such accidents, see the tabulation of incidents reported in this document in Table 1.

Table 1: incidents involving playground etc. equipment and hood cords

| Country | Time span | Total incidents identified | Age range of victims | Fatalities | Non-fatal incidents |
|---------|-----------|----------------------------|----------------------|------------|---------------------|
| Belgium | 1998 | 2 | 3 | 1 | 1 |
| Denmark | | | | | |
| Finland | 1997-2000 | 4 | 2-3 | - | 4+ |
| Germany | 1997 | 2 | 2+ | 1 | 1 |
| Iceland | | ‘several’ | | | |

| | | | | | |
|-------------|-----------|----|-------|---|----|
| Netherlands | 1990-1999 | 4 | 1.5-4 | 2 | 2? |
| Sweden | 1990-1999 | 10 | 2-8 | 4 | 6 |
| USA | 1987-1997 | 31 | 2-8 | | |

Accidents involving moving vehicles typically relate to an older age group. American data refers to an age group of 7 to 14, where the principal vehicle has been a school bus. This is borne out by European data involving bus, train and ski lift doors where incidents involving children aged 10 and 14 have been reported in Sweden and the United Kingdom, see Table 2. Cords implicated in these accidents are typically at the waist or hem of the upper outer garment.

Table 2: incidents involving doors of moving vehicles (e.g. bus, train, ski lift) and cords

| Country | Time span | Total incidents identified | Age range of victims | Fatalities | Non-fatal incidents |
|----------------|-----------|----------------------------|----------------------|------------|---------------------|
| Germany | 1999 | 1 | 4 | - | 1 |
| Ireland | 1998-2000 | 2 | 8 | 2 | - |
| Sweden | 1995-1998 | 3 | 3-10 | 1 | 2 |
| United Kingdom | 1990-1999 | 4 | 10-14 | 4 | Anecdotal reports |
| USA | 1987-1997 | 12 | 7-14 | | |

Therefore, the standard should address clothing intended for children up to the age of fourteen.

7.3. - Possible Technical Solutions

Having determined the type of garment and age range to be covered, there are a number of specific possible measures. For example, eliminating the use of cords at the neck or hood of upper outerwear or restricting the free length of cords or drawstrings used in any

location on clothing. Eliminating toggles and knots at the end of the drawstring could be envisaged to reduce the risk of the cord becoming trapped and sewing drawstrings at their midpoint would prevent them being pulled through and thus being long enough to get caught. Cutting and stitching the cord as two parts is another way of reducing the possible length of free ends and would provide a break point (at the stitching) if caught. This would require an associated break force (Work undertaken by RoSPA³⁷ on a garment similar to an anorak implicated in the death of a young girl, whose anorak cord caught in the doors of a bus, established that the toggle came away when a force of 90N was exerted but when a toggle and knot were used, a force of 300N was insufficient to release the cord). Alternative fastening methods, such as press studs, buttons, elastic and *Velcro*, are also available.

These technical solutions are given only as example. CEN technical experts remain free to propose the technical solutions they deem appropriate to eliminate risks due to cords and drawstrings on children's clothing.

8 - MANDATE

Given that:

- there is evidence of serious injuries, including fatalities, associated with the entrapment of drawstrings and cords on children's clothing in playground equipment and the doors of moving vehicles, such as buses,

- CEN is already considering possible work in this field, the mandate will provide support for taking up such a work as well as guidelines for aspects of importance for consumer safety to be covered in a standard.

Pursuant to the framework mandate for standardisation mandates in the field of consumer safety, the European organisation responsible for standardisation in this field, being CEN, is requested to accept a mandate to introduce a standard which set out technical specifications to eliminate risks of entrapment and strangulation due to cords and drawstrings on clothing intended for children up to the age of fourteen.

³⁷ Information from Jenkins D, Royal Society for the Prevention of Accidents, 1993

Following the execution of this mandate and depending upon its result, a possible further mandate to the production of guidance on the design and manufacture of children's clothing could be envisaged.

9 - EXECUTION OF THE MANDATE

CEN shall inform the Commission of the arrangements to be adopted for the execution of the work within three months of acceptance of this mandate.

CEN shall present target dates for the presentation and adoption of the draft standards to the Commission within six months of the acceptance of this mandate. CEN shall present the draft standards listed therein by the target dates specified.

The European Standards (EN) shall be adopted by the target dates specified. At these dates, the three linguistic versions (German, English and French) shall be available, as well as the correct titles in the other European Union languages.

CEN shall notify the Commission of the addition or removal of standards projects, with their target dates in the case of additions, which it approves for addition to its work programme that may be necessary.

Relevant interested parties, such as representatives of consumers and industry, shall have the possibility to participate in the process. The developments on the international level shall be taken into account.

The European standards accepted shall be transposed into national standards and differing national standards shall be withdrawn from the catalogues of the national standards organisations in the Member States within six months of their adoption.

Acceptance by CEN of this mandate starts the standstill period referred to in Article 7 of the Council Directive 98/34/EEC of 22 June 1998 (Of N° L 204/37 of 21 July 1998)

