
Specification for safety requirements for children's travel cots of internal base length not less than 900 mm

To be used in conjunction with BS EN 716

ICS 97.190

Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee CW/52, Children's cots, bunk beds and mattresses, upon which the following bodies were represented:

Association of Consulting Scientists
BSI Testing Services
Baby Equipment Hirers' Association
Baby Products Association
British Association of Nursery and Pram Retailers
British Furniture Manufacturers' Federation
British Retail Consortium
British Toy and Hobby Association
Chemical Industries Association
Child Accident Prevention Trust
Consumer Policy Committee of BSI
Department of Health, Health Care Division (Specialist Clinical Services)
Department of Trade and Industry (Consumer Safety Unit)
Foundation for the Study of Infants Deaths
Furniture Industry Research Association
Institute of Trading Standards Administration
Laboratory of the Government Chemist
National Bed Federation
Youth Hostels Association (England and Wales)

This British Standard, having been prepared under the direction of the Consumer Products and Services Sector Committee, was published under the authority of the Standards Committee and comes into effect on 15 June 1999

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Foreword

This British Standard has been prepared by Technical Committee CW/52. It differs from the 1991 edition of BS 7423 in that those clauses in conflict with BS EN 716-1 *Furniture — Children's cots and folding cots for domestic use — Part 1: Safety requirements* and BS EN 716-2 *Furniture — Children's cots and folding cots for domestic use — Part 2: Test methods*, have been deleted. This edition also includes revised requirements for locking mechanisms; these were amended following information received about accidents with travel cots in the USA.

This edition supersedes BS 7423:1991 which is withdrawn.

It is imperative that BS 7423 is used in conjunction with BS EN 716-1 and BS EN 716-2.

This standard will be withdrawn when EN 716-3 *Furniture — Children's cots and folding cots for domestic use — Part 3: Additional safety requirements and test methods for folding cots* (at present at the stage of Enquiry draft) is published.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

In particular, attention is drawn to the following Statutory Instruments.

Statutory Instrument No. 1324, 1988, *The Furniture and Furnishings (Fire) (Safety) Regulation 1988* [1].

Statutory Instrument No. 2358, 1989, *The Furniture and Furnishing (Fire) (Safety) (Amendment) Regulations* [2].

Statutory Instrument No. 207, 1933, *The Furniture and Furnishings (Fire) (Safety) (Amendment) Regulations* [3].

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 5 and a back cover

1 Scope

This British Standard specifies safety requirements for children's travel cots which are additional to those specified in BS EN 716-1 *Furniture — Children's cots and folding cots for domestic use — Part 1: Safety requirements*. It is applicable to travel cots with internal base length of not less than 900 mm.

NOTE Travel cots should also conform to the applicable requirements of BS EN 716-1

2 Normative references

The following normative documents contain provisions which, through reference in this text constitute provisions of this British Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. For undated references, the latest edition of the publication referred to applies.

BS 1006:1990, *Methods of test for colour fastness of textiles and leather*.

BS 5239:1988, *Specification for babies dummies*.

BS 5438, *Methods of test for flammability of vertically oriented textile fabrics and fabric assemblies subjected to a small igniting flame*.

BS 5651:1989, *Cleansing and wetting procedures for use in the assessment of the effect of cleansing and wetting on the flammability of textile fabrics and fabric assemblies*.

3 Definition

For the purposes of this standard the following definition applies.

3.1

travel cot

a cot intended for occasional use that can be folded or readily dismantled for the purpose of transportation

4 Materials

4.1 Dyed textiles

Dyed textiles used in any part of the travel cot, when tested in accordance with section EO4 of BS 1006:1990, shall give a numerical rating for change in colour of not less than 4 and a fastness grade for staining of not less than 3.

4.2 Fabrics and fabric assemblies

When tested in accordance with annex A, any textile fabric forming an integral part of the travel cot, excluding the mattress, shall conform to the following flammability performance requirements:

- a) none of the six specimens shall sever the 300 mm trip thread in less than 10 s;
- b) none of the six specimens shall sever the 600 mm trip thread in less than 20 s.

If any one of the six specimens tested fails to conform to either performance requirement, then a further six specimens shall be tested.

None of the second group of specimens shall fail to conform to either of the performance requirements.

5 Dimensions

5.1 The minimum distance between the mattress base and the top edge of the sides and ends of travel cots sold without a mattress shall be not less than 600 mm.

5.2 If a mattress is sold as part of the travel cot, the mattress shall be not more than 40 mm shorter or narrower than the mattress base, and the depth of the mattress shall not reduce the internal height of the cot above the mattress to less than 500 mm.

These measurements shall be calculated by subtracting the length or width of the mattress from the length or width of the mattress base or the depth of the mattress from the depth from the mattress base to the top edge of the sides or ends of the cot.

NOTE Any mattress sold as part of the travel cot should conform to the applicable requirements of BS 1877-10:1997.

5.3 If a mattress is not to be sold as part of the travel cot the manufacturer shall specify the size of the mattress to be used with the cot as not less than X mm in length and Y mm in width nor more than $X + 40$ mm in length or more than $Y + 40$ mm in width [see 7.2a)]. The size of the mattress as specified shall not allow a horizontal gap greater than 40 mm at any point between the mattress and the inside of the cot.

6 Construction

6.1 Tests shall be carried out in the order in which they are specified in this clause and shall all be carried out on the same travel cot.

6.2 All locking devices except for those covered in 6.6 shall either not operate at a force of less than 40 N or more than 60 N or shall require at least two operations. This requirement shall not apply where the folding mechanism is initiated by lifting the centre of the base.

6.3 Any toy that is designed to be a permanent fixture to the travel cot shall not become detached when a force of 150 N is applied to the toy.

6.4 Any screws or fastenings located inside the travel cot shall not be capable of being adjusted except by the use of a tool.

6.5 The travel cot shall be designed and constructed in such a way as to prevent injury from any scissoring, shearing or pinching when the product has been erected for use. When tested in accordance with annex C, relative movement of parts of the travel cot shall not result in a gap closing to less than 12 mm unless it is at all times less than 5 mm. The movement and spacing of thin flexible components such as textiles shall not be tested.

6.6 When tested in accordance with annex D the folding cot shall not fold and the locking mechanism shall either:

- a) require at least two consecutive actions to release the mechanisms, the first requiring a release of not less than 50 N and the second being dependent on the first having been carried out and maintained; or
- b) require at least two separate but simultaneous actions to release the mechanisms, one of which requiring an operating force of not less than 50 N, and both operating on different principles; or
- c) have two locking mechanisms separated by a distance of at least 850 mm to be operated simultaneously.

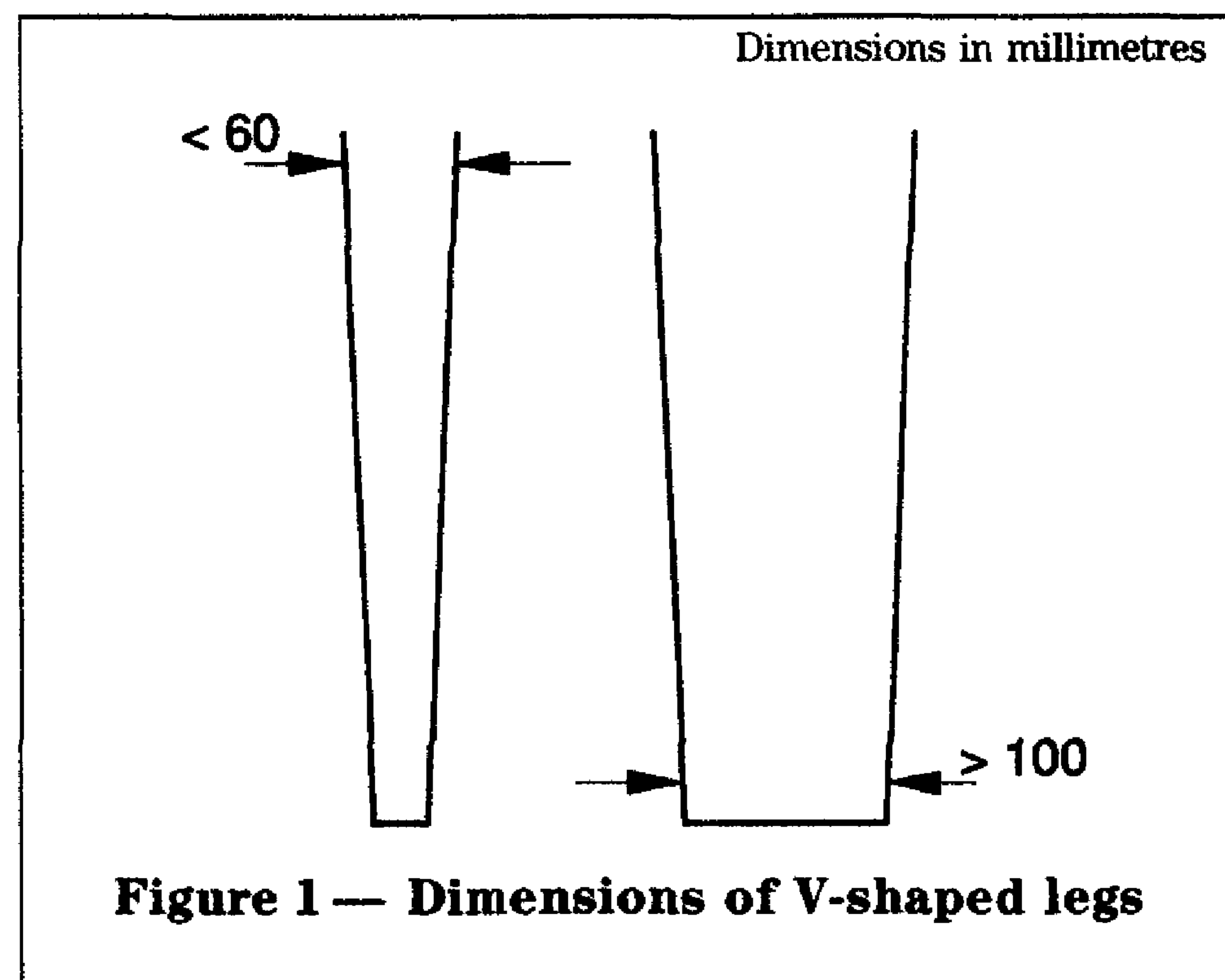
Folding cots that fold toward the inside shall be equipped with at least two locking mechanisms which conform to one of the above. Where the weight of the child on the travel cot base has a positive effect on the locking, this shall not be considered as one of the locking mechanisms.

6.7 There shall be no part of the structure inside the cot that presents an entrapment hazard.

6.8 Any flexible plastics sheet material shall not contain bubbles or blisters and shall be free from creases of a permanent nature, streaks, pinholes and specks of foreign matter.

6.9 If the travel cot has a padded rim, when tested in accordance with annex E, the material covering the rim shall not be cut or punctured. Marking of the surface shall not constitute a failure.

6.10 Where V-shaped legs are used to support the travel cot the two tapering legs shall always be less than 60 mm or always more than 100 mm apart (see Figure 1).



6.11 Framework that joins to a V formation where both members extend above a horizontal line taken along the point of juncture shall meet at an angle of at least 70° when the travel cot is in an upright position. Examples are shown in Figure 2.

6.12 All staples shall be loaded in sheer and shall be fully driven home.

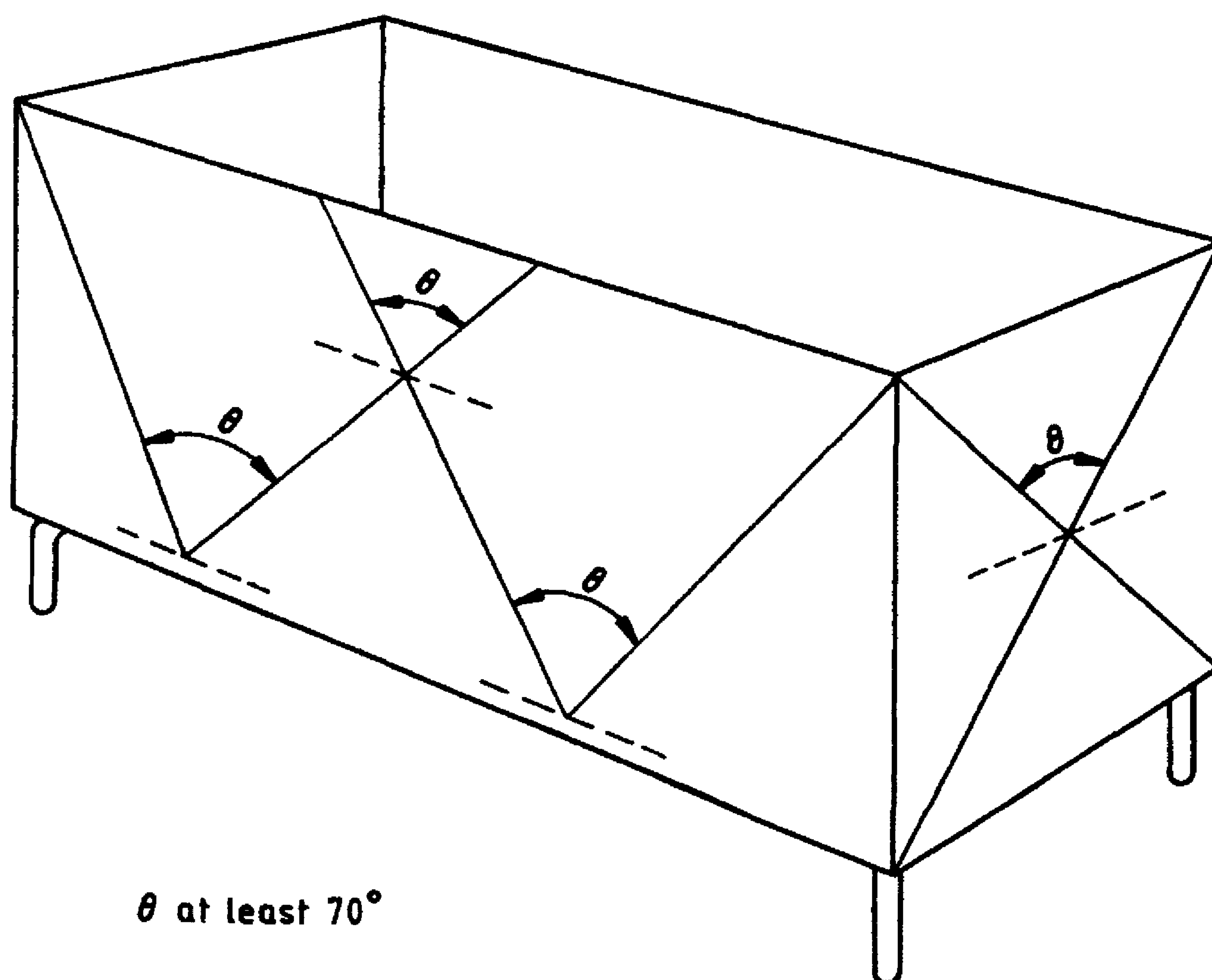


Figure 2 — Joining members

7 Marking

7.1 Travel cots shall be permanently marked with the following:

- a) the name, trade mark or other means of identification of either the UK manufacturer, UK distributor or UK retailer;
- b) the number and date of this British Standard, i.e. BS 7423:1999¹⁾.

7.2 All travel cots shall bear a permanent label in a conspicuous location and attached along all its edges giving the following information:

- a) the warning "For correct and safe fitting, the mattress to be used with this cot should be not less than X mm in length and Y mm in width nor more than $X + 40$ mm in length or more than $Y + 40$ mm in width";
- b) the warning "When folded, store away from children";
- c) the warning "Do not use if any part is broken, torn or missing".

7.3 On any fabric sided travel cot that has drop sides, the following warning shall be given on a label permanently attached at or near the top of the travel cot:

"WARNING. Never leave travel cot with sides down".

8 Instructions for use

Instructions concerning correct and safe assembly and use of the travel cot shall be provided. The instructions shall be precise, unambiguous and shall be headed "IMPORTANT — READ INSTRUCTIONS CAREFULLY AND KEEP FOR FUTURE REFERENCE". The instructions shall be in the English language, but this shall not exclude the additional use of other languages. The instructions shall include the following:

- a) an assembly drawing, a list and description of all parts and tools required for assembly and a diagram of the bolts and other fastenings required. Where necessary, attention shall be drawn to the need to carry out the operations needed to assemble the cot in the correct order in the interests of safety and to the fact that these operations should be completed before use. Attention shall be drawn to the need for secure tightening and maintenance of bolts and other fastenings;
- b) a warning that the travel cot should be kept away from trailing cords and flexes.

9 Packaging

Plastics used as packaging shall be not less than 38 μ m thick unless the packaging comes in one or more of the following categories:

- a) bags with an opening perimeter of less than 380 mm;
- b) shrunk-on film packaging, that is normally destroyed when the packaging is opened by the user;
- c) bags made of perforated film, that makes it possible for the child to breathe through the film, and that is unable to form a vacuum, and stick to the face of the child.

To conform to item c) any area of maximum dimensions 30 mm \times 30 mm shall have a minimum hole area of 1 %.

¹⁾ Marking BS 7423:1999 on or in relation to a product represents a manufacturer's declaration of conformity, i.e. a claim by or on behalf of the manufacturer that the product meets the requirements of the standard. The accuracy of the claim is therefore solely the responsibility of the person making the claim. Such a declaration is not to be confused with third party certification of conformity, which may also be desirable.

Annex A (normative)

Flammability test

Test three specimens in the machine-direction and three in the cross-direction in accordance with test 3A of BS 5438 using a 10 s flame application time, except that vertical trip threads shall not be used. Test only the face of the fabric, if this is apparent. If it is not apparent, test only the face which is shown by pre-testing to spread flame or spread flame faster.

Prior to testing to test 3A of BS 5438, submit single layer fabrics and fabric assemblies to the appropriate cleansing procedure described in BS 5651 depending on the information given on the care label of the fabric. Any fabric or fabric assembly which has been treated with chemicals to make it safer from fire shall, before being tested, be washed using the procedure specified in 6.5.2 of BS 5651:1989. For multilayer fabrics or for fabrics composed entirely of pure finish polyamide, polyester or modacrylic fibre, i.e. with no added finish, submit the specimen to one cycle only of the appropriate cleansing procedure described in BS 5651, depending on the information given on the care label of the fabric.

Annex B (normative)

Details of test dummy

The dummy shall be a solid cylinder (200 ± 5) mm in diameter and (300 ± 5) mm in length, having a mass of 15 kg and with its centre of gravity in the centre of the cylinder. All edges shall have a radius of (5 ± 1) mm.

Annex C (normative)

Test for finger trapping

C.1 Assemble the travel cot in accordance with the manufacturer's instructions.

C.2 Place the test dummy described in annex B in any position on the mattress base of the travel cot that gives the most unfavourable test condition.

C.3 Apply a load of 50 N in any direction to any component of the travel cot. Reverse the direction of the applied load.

Annex D (normative)

Test for folding travel cots

D.1 Assemble the travel cot in accordance with the manufacturer's instructions.

D.2 Secure the travel cot so as not to impede the normal folding action. Apply a force of 200 N at any position on the travel cot frame and in any direction.

D.3 Repeat the procedure described in D.2 but with the dummy described in annex B in any position on the mattress base of the travel cot that gives the most unfavourable test condition.

NOTE The tests in this annex should not be applied to the underside of the base where the folding mechanism is initiated by lifting the centre of the base.

Annex E (normative)

Bite test

Using the indenter specified in B.5 of BS 5239:1988, gradually apply a load of (60 ± 2) N over a period of 5 s and maintain for a period of 10 s. Carry out the test at 10 locations around the rim, which, in the opinion of the test laboratory, are likely to give the poorest performance during the test.

NOTE Any labels attached to the rim of the travel cot should not be subjected to the test in this annex.

Bibliography

Standards publications

BS 1877-10:1997, *Domestic bedding — Specification for mattresses and bumpers for children's cots perambulators and similar domestic articles.*

BS EN 716-1:1996, *Furniture — Children's cots and folding cots for domestic use — Part 1: Safety requirements.*

BS EN 716-2:1996, *Furniture — Children's cots and folding cots for domestic use — Part 2: Test methods.*

Other publications

- [1] Statutory Instrument No. 1324, 1988, *The Furniture and Furnishings (Fire) (Safety) Regulation 1988.*
- [2] Statutory Instrument No. 2358, 1989, *The Furniture and Furnishing (Fire)(Safety) (Amendment) Regulations.*
- [3] Statutory Instrument No. 207, 1933, *The Furniture and Furnishings (Fire) (Safety) (Amendment) Regulations.*

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