

Specification for

Safety requirements for pushchairs

UDC 629.111.4:614.821

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The preparation of this British Standard was entrusted by the Furniture and Household Equipment Standards Committee (FHM/-) to Technical Committee FHM/39 upon which the following bodies were represented:

- British Association of Nursery and Pram Retailers
- British Association of Pram and Nursery Goods Importers
- British Baby Products Association
- British Retailers' Association
- Co-operative Wholesale Society Ltd.
- Consumer Standards Advisory Committee of BSI
- Consumers' Association
- Department of Health and Social Security
- Department of Trade and Industry (Consumer Safety Unit, CCS Division)
- Institute of Trading Standards Administration
- Royal College of Nursing and National Council for Nurses of the UK
- Royal Society for the Prevention of Accidents

This British Standard, having been prepared under the direction of the Furniture and Household Equipment Standards Committee, was published under the authority of the Board of BSI on 31 May 1984 and comes into effect on a date to be announced (see foreword)

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First published May 1972
First revision May 1984

The following BSI references relate to the work on this standard:
Committee reference FHM/39
Draft for comment 80/64206 DC

ISBN 0 580 13858 5

Amendments issued since publication

Amd. No.	Date of issue	Comments
5481	March 1987	
6303	February 1990	Indicated by a sideline in the margin

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Foreword

This British Standard has been prepared under the direction of the Furniture and Household Equipment Standards Committee. It is a revision of BS 4792:1972, which is withdrawn.

NOTE BS 4792:1984 did not come into effect until June 1st 1986, when the Pushchairs (Safety) Regulations 1985 (made under the Consumer Safety Act 1978) came into operation. Previously the 1972 edition still applied.

This revision has been undertaken to include endurance and additional strength tests that experience has shown to be desirable in the interests of safety. It also introduces the option of incorporating an integral harness.

Experience has shown that many designs of parking device do not engage immediately on operation of the device and some degree of forward or backward movement may be necessary before the device becomes fully engaged. It has been agreed that the amount of movement permitted should be limited and the limits agreed upon are given in clause 5 of this standard. Two figures have been given, one that is applicable until 30 September 1984 and one that is applicable from 1 October 1984. The requirement is to be introduced in two stages in order to enable manufacturers to modify designs and retailers to sell existing stocks.

Certification. Attention is drawn to the certification facilities described on the inside back cover of this standard.

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.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 16, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

1 Scope

This British Standard specifies safety requirements for pushchairs of the types designed for the conveyance of one or of two young children. It includes requirements for instructions on use and maintenance that are to be supplied by the manufacturer.

NOTE The titles of the publications referred to in this standard are listed on the inside back cover.

2 Definitions

For the purposes of this British Standard the following definitions apply.

2.1 applied

a parking device is considered to be applied when the user has fully and correctly operated any lever or other device that he is intended to use in order to change the condition of the parking device from one in which it is not preventing and will not prevent movement of the pushchair or rotation of the wheel or wheels on which it operates. The parking device is considered to be applied as soon as the operation by the user of that lever or other device has been completed and no account is taken of whether or not the completion of that operation causes the parking device to become immediately effective in preventing movement of the pushchair or rotation of the wheel or wheels on which it operates. The word “apply” is construed accordingly

2.2 pushchair

a wheeled vehicle designed for the transport in a seated or reclining position of one or two infants or young children, distinguished from a perambulator by the absence of a body of boat or box-like shape, but not including pushchairs designed for use by invalid children. The end of the pushchair at which the handle or handles are positioned is the back of the pushchair

2.3 wheel

either a single wheel or a set of adjacent wheels attached to the same mounting point, unless otherwise stated

3 Materials

3.1 General. Materials shall comply with **3.2** and **3.3**.

3.2 Plastics. Plastics on all parts of the pushchair, whether exposed or accessible to a child, shall not contain any soluble antimony, arsenic, barium, cadmium, chromium, lead or mercury or any soluble compound of any of those elements, such that the proportion (by mass) of the element calculated as such exceeds the following amounts.

Antimony	250 mg/kg
Arsenic	100 mg/kg
Barium	500 mg/kg
Cadmium	100 mg/kg
Chromium	100 mg/kg
Lead	250 mg/kg
Mercury	100 mg/kg

NOTE The term “soluble” in relation to an element or compound means capable of being dissolved by the method described in Appendix A.

3.3 Coatings and finishes. Any coating of paint, varnish, lacquer or similar substance on any parts of the pushchair, whether exposed or accessible to a child, shall not contain any soluble antimony, arsenic, barium, cadmium, chromium, lead or mercury, or any soluble compound of any of those elements, such that the proportion (by mass) of the element calculated as such exceeds the following amounts.

Antimony	250 mg/kg
Arsenic	100 mg/kg
Barium	500 mg/kg
Cadmium	100 mg/kg
Chromium	100 mg/kg
Lead	250 mg/kg
Mercury	100 mg/kg

NOTE The term “soluble” in relation to an element or compound means capable of being dissolved by the method described in Appendix B.

4 Construction

4.1 Pushchairs shall not contain any open-ended tubes, nor shall there be projections, holes, loose washers, speed fixings, nuts, crevices or closing mechanisms in which a child’s finger(s) or flesh could be trapped when the pushchair is assembled for use.

4.2 Pushchairs shall not contain either of the following exposed or accessible to a child:

- a) any edges or points sharp enough to inflict a wound or abrasion; *or*
- b) any burrs.

4.3 Any permanent fixture that can be gripped by a child's fingers or teeth shall be attached to the pushchair in such a manner that it cannot be removed or broken by applying a force of 90 N in any direction to the fixture. Any part of the pushchair that is essential for its safe operation shall be attached in such a manner that it cannot be displaced or broken when a force of 90 N is applied in any direction to that part.

4.4 Any detachable seat shall be attached to the pushchair in such a manner that the means of attachment shall be either:

- a) inaccessible to the child while seated and properly restrained in the pushchair; *or*
- b) incapable of being operated by the child.

5 Parking devices

5.1 For the purposes of this clause and of Appendix C each reference to a wheel shall be taken to mean a single wheel.

Pushchairs shall have a parking device that limits movement of the pushchair as specified in **5.2** to **5.6**.

5.2 There shall be no visible damage to the mechanism of the parking device when tested in accordance with **C.2**.

5.3 This subclause shall apply to those parking devices that, when applied, make use of the engagement of a pin, rod, clip or other such device in a series of holes, notches or other indentations in, or protrusions on, a wheel or attachment to a wheel in order to prevent rotation of that wheel.

For the purpose of determining the maximum amount of movement permitted by such parking devices when they are applied, these parking devices shall be divided into two categories, type A and type B, as follows.

- a) *Type A parking devices.* A parking device shall be of type A if, when the parking device is applied, the pin, rod, clip or other device always immediately enters one of the series of holes, notches or other indentations in, or is always immediately inserted between protrusions on, a wheel or attachment to a wheel in order to prevent rotation of that wheel.

- b) *Type B parking devices.* A parking device shall be of type B if, after the parking device has been applied, it may still be necessary to rotate the wheel or wheels on which it operates before the pin, rod, clip or other device enters one of the series of holes, notches or other indentations in, or is inserted between protrusions on, a wheel or attachment to a wheel in order to prevent rotation of that wheel.

5.3.1 The following requirement shall be applicable up to and including 30 September 1984. The distance between the two points marking the position of each wheel of the pushchair, determined in accordance with the relevant method described in **C.3**, shall not be greater than 45 mm.

5.3.2 The following requirement shall be applicable on and after 1 October 1984. The distance between the two points marking the position of each wheel of the pushchair, determined in accordance with the relevant method described in **C.3**, shall not be greater than 20 mm.

5.4 This subclause shall apply to all parking devices. When the parking device is applied it shall comply with the following requirement without further movement of the device on the part of the user.

The parking device shall maintain the pushchair in a static condition on the slope specified in **C.4** when the pushchair is placed on that slope and released under the conditions specified in that subclause.

5.5 This subclause shall apply to all parking devices on pushchairs from 1 October 1984.

The distance between the two points marking the position of each wheel of the pushchair, determined in accordance with **C.5**, shall not exceed 20 mm, provided that, in the case of a parking device to which **5.3** applies, for any given wheel the sum of the distance between the two marked points, determined in accordance with the relevant method described in **C.3**, and the distance determined in accordance with **C.5**, when the pushchair is in a corresponding position, shall not exceed 20 mm.

5.6 If the pushchair has two or more independently operated parking devices, each device shall be tested separately and shall comply with this clause. The parking device shall be self-adjusting or be capable of simple adjustment if normal wear of any component within the system is likely to prevent the pushchair from meeting these requirements.

6 Folding pushchairs

6.1 Locking devices. Each folding pushchair shall have at least one main locking device and at least one additional safety device all of which shall act directly on the folding mechanism.

When the pushchair is assembled for use, in cases where it is possible to fold, reverse or pivot the handle or parts of the handle independently of other parts of the pushchair the handle or parts of the handle shall have at least one main locking device and an additional safety device in each design location that shall comply with **6.2** and **6.3**. Handles that are adjustable, e.g. that have a telescopic action to adjust the length, but do not fold, reverse or pivot shall comply with **6.4**.

6.2 Main locking device. The main locking device shall lock the folding mechanism in the normal operating position of the pushchair; the device may be manual in operation.

It shall require positive action on the part of the user to release the device.

6.3 Safety device. The safety device shall be different in design and/or operation from and shall be separate from and act independently of the main locking device. It shall lock automatically when the pushchair is erected for use. It shall require positive action on the part of the user to release the device. Release of the safety device shall not release or impair the efficiency of the main locking device. In cases where the chassis and body or chassis and seat can be separated the safety device shall act on the chassis.

When the main locking device is released, the safety device on the main folding mechanism of the pushchair shall not permit the folding mechanism to move more than one-third of its total movement between the normal operating and fully folded position when tested in accordance with **E.2**. In the case of safety devices on handles, when the main handle locking device is released the additional handle safety device shall prevent the presentation of finger entrapment hazards as described in **4.1** when tested in accordance with **E.2**.

6.4 Any handle that is adjustable, e.g. such as those that have a telescopic action to adjust the length, shall not present a finger entrapment hazard, as described in **4.1**, throughout its total range of movement.

7 Safety harness

Arrangements for the restraint of the child shall be provided:

- a) by incorporating in the pushchair fittings suitable for the attachment of a child's safety harness that complies with BS 3785; and

- b) by incorporating in the pushchair either:

- 1) a crotch strap with a minimum width of 20 mm;

or

- 2) an integral, permanently attached harness assembly (waist straps and crotch strap with a minimum width of 20 mm and shoulder straps with a minimum width of 15 mm).

In the case of a pushchair designed for two children, provision shall be made for the independent attachment of two harnesses. All components of the restraint system shall show no visible signs of damage and strap adjusters shall not move when tested in accordance with Appendix F.

8 Stability

The pushchair shall stand firm and shall not tip over when tested in accordance with Appendix G.

9 Rigidity

The pushchair shall show no structural failure when tested in accordance with Appendix H.

10 Wheel security

The pushchair wheels shall remain secure and shall show no signs of damage when tested in accordance with Appendix J.

11 Security of locking devices

When the pushchair is tested in accordance with **E.3** at least one of the locking devices shall remain functional throughout the tests.

12 Performance

All tests specified in this clause shall be carried out with the pushchair in the most onerous condition, including the carrying of goods or accessories if permitted in the manufacturer's instructions.

The pushchair shall be checked for compliance with clauses **3** to **10**. Having complied with clauses **3** to **10**, the pushchair shall then be tested in accordance with Appendix K, at the end of which the amount of wheel rock of each wheel shall not have increased by more than 0.1 radians (5.7°) and the pushchair shall show no signs of structural failure.

Having complied with the foregoing requirements, the pushchair shall be tested in accordance with **E.2** and Appendix L and Appendix M, at the end of which it shall show no sign of structural failure and shall still comply with clauses **5**, **6**, **7**, **8**, **9**, **10** and **11**, in that order.