

Australian/New Zealand Standard™

Shopping trolleys

Part 1: For general use



Standards Australia



AS/NZS 3847.1:1999

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee CS-016, Shopping Trolleys. It was approved on behalf of the Council of Standards Australia on 30 October 1998 and on behalf of the Council of Standards New Zealand on 19 October 1998. It was published on 5 January 1999.

The following interests are represented on Committee CS-016:

Accident Rehabilitation & Compensation Insurance Corporation, New Zealand
Australian Industry Group
Australian Supermarket Institute
Employers & Manufacturers Association, New Zealand
Kidsafe, Australia
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AS/NZS 3847.1:1999
(Incorporating Amendment No. 1)

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PREFACE

This Standard was prepared by Joint Standards Australia/Standards New Zealand Committee CS-016, Shopping Trolleys. In its preparation, cognizance was given to BS 7646:1993, *General purpose self-service trolleys* and prEN 1929:1995, *Basket trolleys with or without a child carrying facility*.

This Standard incorporates Amendment No.1 (March 2002). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.

This Standard was developed on the basis that children up to 18 kg (around 3 years of age) are the intended users of child carrying facilities in shopping trolleys and also those most at risk of injury. If child carrying facilities are to be used by heavier children, then adjustment should be made to the minimum dimensions of the child carrying facility, its carrying capacity, the information supplied on the trolley, and the child seat test loads.

The term ‘normative’ has been used in this Standard to define the application of the appendix to which it applies. A ‘normative’ appendix is an integral part of a Standard.

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STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard**Shopping trolleys****Part 1: For general use****1 SCOPE**

This Standard specifies materials, construction, performance and testing requirements for shopping trolleys which are designed with or without a child carrying facility, for use by customers of self-service stores to carry goods.

NOTES:

- 1 The Standard covers seating in trolleys for children up to 18 kg (see Preface).
- 2 Requirements for trolleys for use on moving walks are not included.

2 OBJECTIVE

The objective of this Standard is to provide manufacturers, retailers and others with minimum safety requirements for shopping trolleys.

3 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

- | | |
|--------|---|
| 1192 | Electroplated coatings—Nickel and chromium |
| 1647 | Childrens toys (safety requirements) |
| 1647.3 | Part 3: Toxicological requirements |
| 1789 | Electroplated coatings—Zinc on iron or steel |
| 1956 | Anodic oxidation coatings on aluminium for decorative and automotive applications |

AS/NZS

- | | |
|------|---|
| 2088 | Prams and strollers—Safety requirements |
|------|---|

4 DEFINITIONS

For the purpose of this Standard, the definitions below apply.

4.1 Base

The part of the trolley which is fitted with castors and which supports the basket (see Figure 1).

4.2 Castor

A housing which supports a wheel or wheels mounted in a tread or other element. The housing can be fixed or free to swivel about its vertical axis.

4.3 Gate

The rear wall of the trolley which is movable to permit nesting of trolleys (see Figure 1).

4.4 Handle

The part used to manoeuvre the trolley (see Figure 1).

4.5 May

Indicates an option.

4.6 Nesting flap

A moving panel within the basket for the retention of goods. The nesting flap may include a seat and a backrest functioning as a child carrying facility (see Figure 1).

4.7 Parking device

A device operating on one or more castors to limit the movement of the stationary trolley. The device has only two modes of operation: on or off.

4.8 Shall

Indicates that a statement is mandatory.

4.9 Should

Indicates a recommendation.

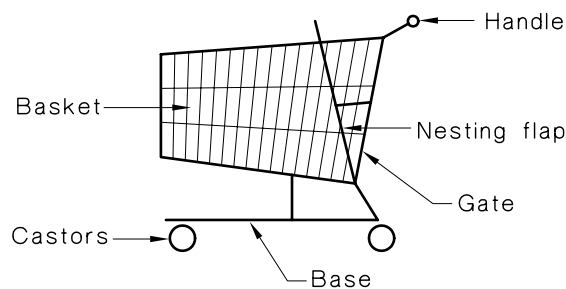


FIGURE 1 SIDE VIEW

5 TYPE DESIGNATION

For the purpose of this Standard, trolleys shall be designated in accordance with the following:

(a) *Type A trolley*

Trolley composed of a basket to carry goods, a base equipped with castors, and a handle.

(b) *Type B trolley*

Trolley composed of a basket to carry goods, a child carrying facility, a base equipped with castors, and a handle.

6 ACCESSORIES

When accessories are mounted on the trolley, the trolley and accessory assembly shall comply with this Standard.

7 MATERIALS

7.1 Finish

Materials and coatings shall have a smooth and impervious surface and shall not compromise the recommended hygiene requirements for the carried food.

7.2 Corrosion

All metal parts shall either be made of corrosion-resistant material or be protected against corrosion.

7.3 Electroplated coatings of nickel, chromium and zinc

Nickel and chromium electroplating shall comply with the requirements for Service Condition No. 2 as specified in AS 1192. Zinc coatings shall comply with the requirements for service condition No. 3 as specified in AS 1789.

7.4 Anodic oxidation coatings

Anodized aluminium frames shall be anodized in accordance with the requirements for Grade 4 (minimum average thickness 10 µm) specified in AS 1956.

7.5 Toxicity

Type B trolleys, all materials and coatings shall comply with the requirements for coating materials and plastics materials in AS 1647.3.

7.6 Plastic materials

It is expected that the shopping trolley will be subjected to conditions of severe UV exposure, and therefore grades of plastic materials should be used with specially stabilized formulations to cover these climatic conditions.

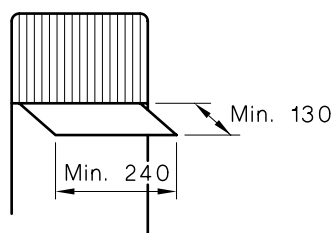
8 DIMENSIONS

8.1 Type B trolleys—seat (see Figure 2)

With the seat in the position of use, the dimensions shall be as follows:

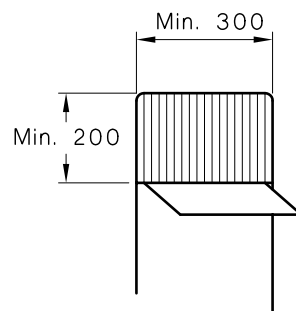
- (a) The seat depth shall be not less than 130 mm.
NOTE: The minimum width of the seat should be not less than 240 mm.
- (b) The angle between the seat and the backrest shall be between 90° and 120°.
- (c) The support face dimensions of the backrest shall have a height of not less than 200 mm and a width of not less than 300 mm (see Figure 3).
- (d) Leg passage apertures in the gate shall have a height of not less than 110 mm and a width of not less than 100 mm (see Figure 4).
- (e) A pair of leg passages shall be separated by structure providing a width between the leg passages of 20 mm to 40 mm.
- (f) Any gap in the gate, nesting flap or seat structure shall conform to the criteria given in the following table:

Size of gap mm	Whether acceptable
Up to and including 5	Acceptable
Greater than 5 and up to and including 12	Not acceptable (potential finger trap)
Greater than 12 and up to and including 25	Acceptable
Greater than 25 and up to and including 50	Not acceptable (potential limb trap)
Greater than 50	Acceptable



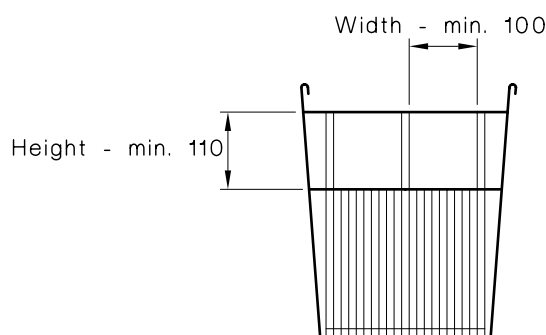
DIMENSIONS IN MILLIMETRES

FIGURE 2 SEAT



DIMENSIONS IN MILLIMETRES

FIGURE 3 BACKREST



DIMENSIONS IN MILLIMETRES

FIGURE 4 GATE WITH LEG PASSAGE APERTURES

8.2 General dimensional recommendations

8.2.1 Handle height

The grip area of the handle should be located at a height of between 850 mm and 1150 mm from the ground.

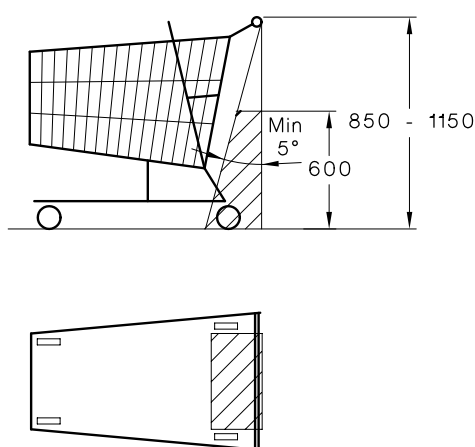
8.2.2 Base

- A1 | The free space between the lowest point of the base and the floor should be not more than 100 mm.

8.2.3 Leg room (see Figure 5)

There should be no fixed or mobile element placed under the handle between the rear wheels and delineated by—

- (a) the floor;
- (b) a vertical plane tangential to the handle;
- (c) a plane inclined at minimum 5° towards the inside of the trolley and tangential to the handle; or
- (d) a horizontal plane 600 mm above the floor.



DIMENSIONS IN MILLIMETRES

FIGURE 5 LEG ROOM