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Child care articles - Wheeled child conveyances - Part 1: Pushchairs and pram body

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 252.

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European foreword

This document (prEN 1888-1:2015) has been prepared by Technical Committee CEN/TC 252 “Child use and care articles”, the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 1888:2012.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Regulation(s).

In November 2014 the European Working Group decided to split EN 1888 standard into different parts to clearly treat in a different way, new products or new functions of wheeled child conveyances.

prEN 1888 is currently composed with the following parts:

- prEN 1888-1, *Child care articles — Wheeled child conveyances— Part 1: Pushchairs and pram body*;
- prEN 1888-2, *Child use and care articles— Wheeled child conveyances— Part 2: Stroller for heavier children*;
- prEN 1888-3, *Child use and care articles— Wheeled child conveyances— Part 3: Pushchairs intended for sport activities*; and
- prEN 1888-4, *Child use and care articles— Wheeled child conveyances— Part 4: Platforms, seats, benches and other similar items attached to pushchairs*.

EN 1888 therefore becomes EN 1888-1 and is only applicable to pushchairs and prams.

In comparison with this EN 1888:2012, the significant technical changes relate to the following issues:

- a) chemical hazards;
- b) hazards from moving parts;
- c) entanglement hazards;
- d) stability of the vehicle;
- e) introduction of an informative annex giving relevant translations for warning sentences;
- f) ...

1 Scope

This draft European Standard specifies the safety requirements and test methods for *wheeled child conveyances*, designed for the carriage of one or more children, up to 15 kg each and additional 20 kg on any integrated platform on which a child can stand.

This draft European Standard does not cover toys, shopping trolleys; baby carriers fitted with wheels; *wheeled child conveyances* propelled by a motor and *wheeled child conveyances* designed for children with special needs.

Where additional products are designed to be attached to a *wheeled child conveyance*, a hazard and risk analysis should be undertaken to identify any potential hazards.

Where a *wheeled child conveyance* or any part of the *wheeled child conveyance* has several functions or can be converted into another function it shall comply with the relevant standard(s).

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 71-1, *Safety of toys — Part 1: Mechanical and physical properties*

EN 71-3, *Safety of toys — Part 3: Migration of certain elements*

EN 1103, *Textiles — Fabrics for apparel — Detailed procedure to determine the burning behaviour*

ECE 44 regulation, United Nations – Agreement concerning the adoption of uniform technical prescriptions for wheeled vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicles and the conditions for reciprocal recognition of approvals granted on the basis of these prescriptions. Addendum 43: Regulation no. 44 — Uniform provisions concerning the approval of restraining devices for child occupants of power-driven vehicles (“*child restraint system*”)

3 Terms and definitions

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

3.1 wheeled child conveyance
vehicle designed for the carriage of one or more children consisting of a *chassis* to which a *pram body* (bodies) or *car seat(s)* or *seat unit(s)* or combination of these is (are) attached, which can be manually steered while being pushed or pulled

Note 1 to entry: Referred to as the “vehicle” for the purpose of this standard.

3.2 pram body
structure with essentially vertical and continuous sides and ends with an internal base designed to transport one or more children in a primarily horizontal position

3.3**seat unit**

structure which may or may not be adjustable to achieve a reclining or recumbent position designed to support one or more children

3.4**car seat**

Child Restraint Systems complying with UNECE regulations

3.5**chassis**

wheeled framework with extended handle(s) for pushing, pulling and steering, designed to accommodate and transport a *pram body* (bodies) or *car seat(s)* or *seat unit(s)* or a combination of these items

3.6**pram**

vehicle comprising a *chassis* and one or more *pram bodies*

3.7**pushchair**

vehicle comprising a *chassis* and one or more *seat units* or *car seats*

3.8**parking device**

device to maintain the vehicle in a stationary position

3.9**restraint system**

system to restrain the child within the vehicle

3.10**crotch restraint**

device positioned between the child's legs to prevent the child from sliding forwards

3.11**harness anchorage point**

device suitable for the attachment of an additional child's harness

3.12**braking device**

device to reduce the speed of the vehicle

3.13**platform**

integral part of the vehicle designed to support an additional child in a standing position

3.14**junction line**

intersection of the seat and the backrest

prEN 1888-1:2015 (E)**3.15****folding system**

assembly of moving parts which enables the vehicle to be changed from an erected position to a folded position and vice versa under the control of the carer

3.16**locking device**

mechanical component that maintains part(s) of the vehicle erected in the position of use (e.g. latch(es), hooks, over centre lock...) which could be deactivated or activated by action(s) on the *operating device*

3.17**operating device**

part of the *locking mechanism(s)* designed to be activated by the carer through one or several positive action(s)

3.18**locking mechanism**

assembly of components consisting of one or more *locking device(s)* and *one or more operating device(s)*

3.19**automatic locking device**

device that engages with no additional voluntary action by the carer, when the vehicle is erected to its position of use

3.20**reversible handle**

handle that can be rotated on the chassis to change the direction of pushing

3.21**carry cot (generic term)**

product consisting of a base, sides, ends and carrying handle(s), within which a child can be laid down and transported by hand(s)

3.22**shearing hazard**

hazard due to the movement of components relatively one to another resulting in a scissoring action

3.23**crushing hazard**

hazard due to the movement of components relatively one to another resulting in a compression action

4 General requirements and test conditions

NOTE Words in *italics* are defined in Clause 3 (Terms and definitions). Additional information on the background and rationale for various requirements is given in Annex A.

4.1 Samples

Tests should be carried out in the order of the clauses given in this standard, unless otherwise stated. Each test shall be carried out only using one vehicle, unless otherwise stated.

Vehicles with multiple places for *pram bodies* and/or *seat units* shall comply with all applicable requirements in any possible arrangement in accordance with the manufacturer's instructions. If a

vehicle can be equipped with an additional *seat unit* or *pram body* or group 0/0+ car seat supplied or recommended by the manufacturer, the combination shall comply with this draft European Standard.

4.2 Principle of the most onerous condition

Unless otherwise stated each test shall be conducted with the vehicle in the most onerous condition for that test in terms of:

- the choice and number of *seat units* and/or *pram bodies* and/or *car seats* attached to the *chassis* stated in the manufacturer's instructions;
- the addition of any additional *seat unit(s)* approved by the manufacturer;
- the use of test masses: for vehicles transporting more than one child, at least one place that a child can occupy shall be loaded with a test mass;
- the loading (or not) of any receptacle designed for carrying additional load(s) allowed for in the instructions or otherwise approved by the manufacturer and the placing (or not) of load(s) in any such facility, up to the maximum mass allowed in the manufacturer's instructions, or 2 kg if nothing is indicated; small pockets fitted onto textile parts are not concerned by this condition;
- the addition (or not) of any other accessories supplied or recommended by the manufacturer for use with the vehicle and with accessories loaded according to the manufacturer's instructions;
- the adjustment of *seat units*, *pram bodies*, handles, *car seats*, and any other adjustable features or accessories, or any other optional arrangement of the vehicle allowed in the manufacturer's instructions or otherwise approved by the manufacturer.

NOTE The heaviest loads do not always produce the most onerous conditions.

4.3 Tolerances for test equipment

Unless otherwise stated, the accuracy of the test equipment shall be:

- forces $\pm 5 \%$;
- masses $\pm 0,5 \%$;
- dimensions $\pm 0,5 \text{ mm}$;
- timing $\pm 1 \text{ s}$;
- angles $\pm 0,5^\circ$.

4.4 Test conditions

The vehicle shall be conditioned at a temperature of $(23 \pm 5)^\circ\text{C}$ for at least 2 h prior to tests. All tests shall be carried out at a temperature of $(23 \pm 10)^\circ\text{C}$ unless otherwise specified.

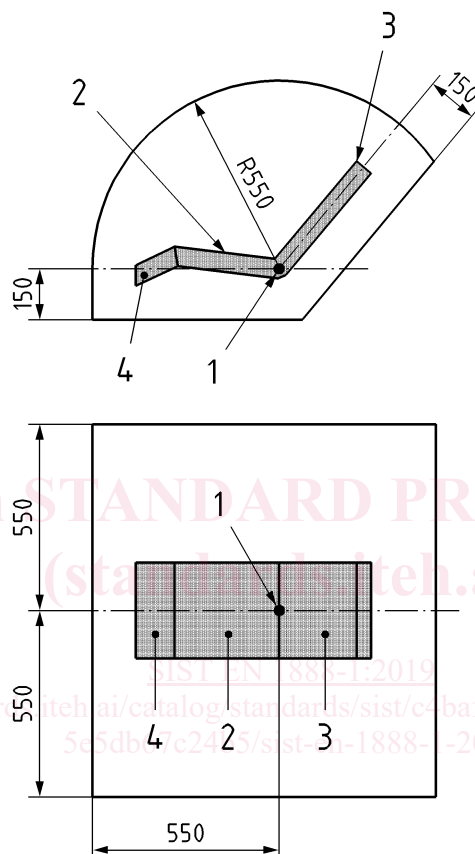
For vehicles fitted with inflatable tyres, the tyre pressure shall be adjusted according to manufacturer's instructions for use before conducting the entire test procedure. If a tyre is punctured during the test procedure, the tyre shall be replaced and the test procedure continued.

4.5 Determination of the protected volume

4.5.1 Protected volume of seat units

The protected volume of seat units shall be determined in accordance with Figure 1 below.

Dimensions in millimetres



Key

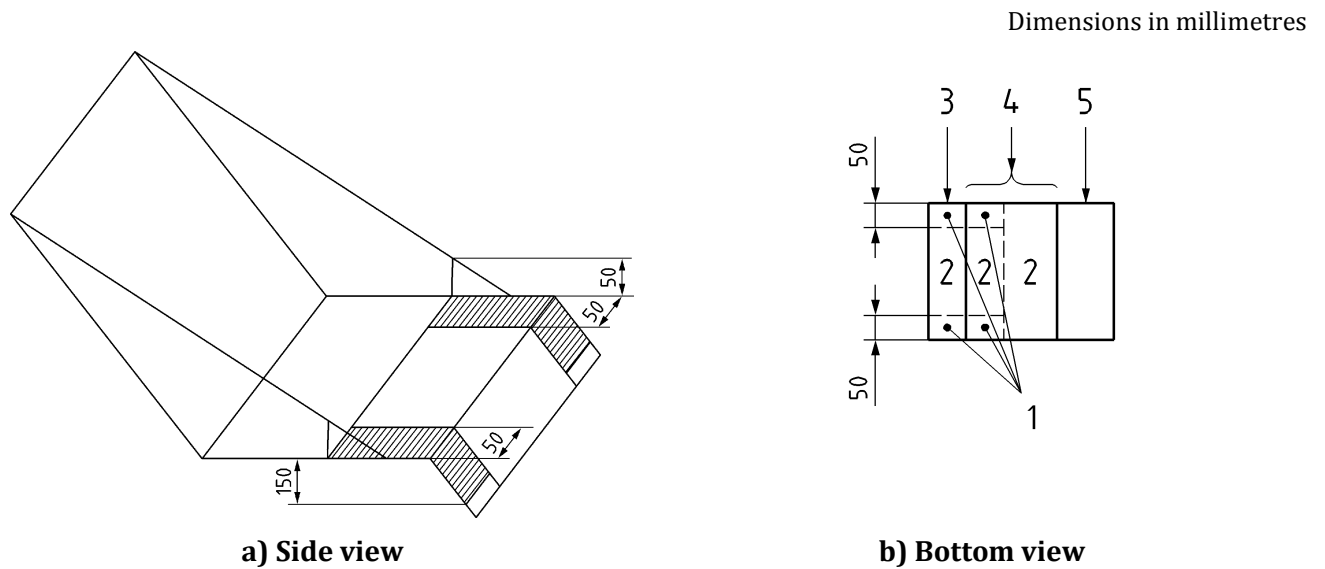
- 1 origin from which the protected volume has been defined (mid-point of the *junction line*, on the uncompressed upper surface of the seat unit)
- 2 seat
- 3 back rest
- 4 leg rest

Figure 1 — Protected volume for *seat units*

The space located behind the backrest is excluded from the protected volume.

Where a vehicle is suitable for two or more children the space located behind the backrest shall be considered if it enters another protected volume.

The space underneath the seat and underneath the leg rest is excluded from the protected volume, except for a 50 mm wide band measured from the outermost edge of the seat/leg rest sides where the seat/leg rest is not fitted with lateral protections of a height greater than 50 mm (textile or any rigid component) (see Figure 2).

**Key**

- 1 space to be checked
- 2 space not to be checked
- 3 leg rest
- 4 seat
- 5 backrest

Figure 2 — Effect of lateral protection on the determination of the protected volume

4.5.2 Protected volume of pram bodies having a length greater than 800 mm

The protected volume of pram bodies having a length greater than 800 mm shall be determined in accordance with Figure 3.

The 550 mm height shall be measured in accordance with 8.1.2.2.

The surface underneath the *pram body* is excluded from the protected volume.

Dimensions in millimetres

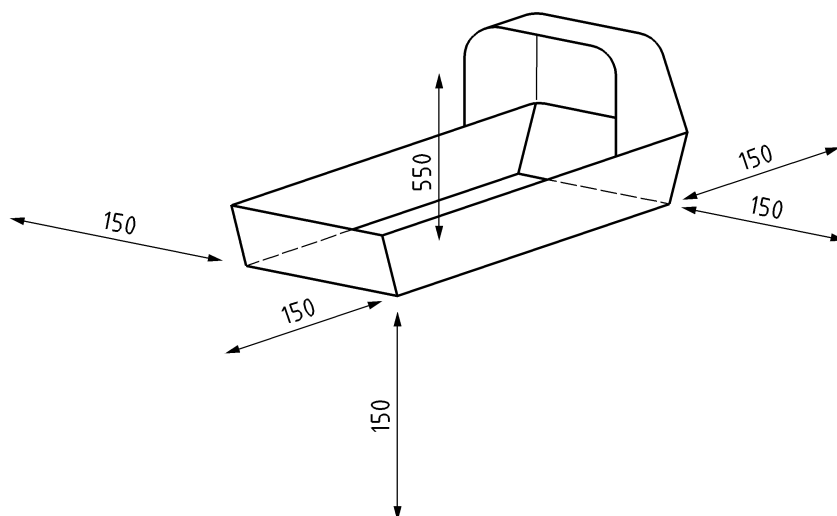


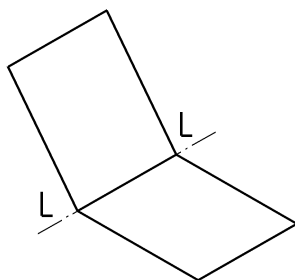
Figure 3 — Protected volume for *pram bodies* having a length greater than 800 mm

4.5.3 Protected volume for *pram bodies* having a maximum internal length of 800 mm and *car seats*

For vehicles designed only for children under 6 months of age, *pram bodies* with a maximum internal length of 800 mm and for *car seats*, the protected volume is considered to be the inner upper surface that supports the child and the inner surface of the sides and ends of the pram body.

4.6 Determination of the junction line

The *junction line* shall be determined as the intersection between the seat and the backrest as shown on Figure 4.

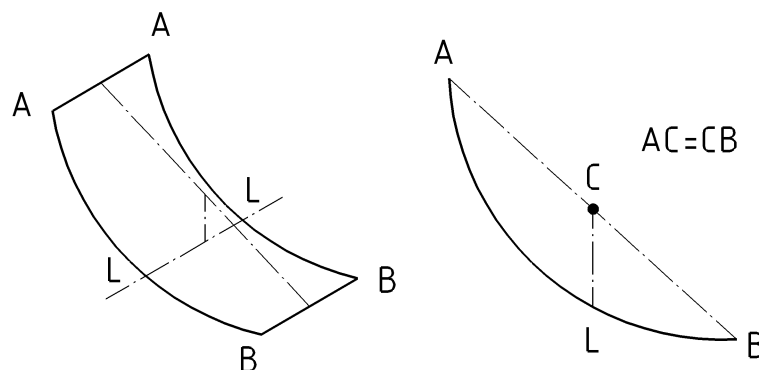


Key

LL *junction line*

Figure 4 — *Junction line*

When the *seat unit* is in the form of a hammock, then a theoretical *junction line*, “LL”, is determined as shown in Figure 5.

**Key**

LL junction line

CL vertical projection of C on the hammock

Figure 5 — Junction line for seat unit in form of a hammock

NOTE The junction line may vary when the backrest is adjusted to different positions.

5 Test equipment**5.1 Test masses****5.1.1 General**

Unless otherwise specified, the test masses shall be those given in 5.1.2 to 5.1.9.

Any damage to fabric which may occur as a result of abrasion by the test masses during tests shall be ignored. Damage can be minimized by using a convenient means of protection of negligible mass. Where damage is not caused by abrasion by the test masses it constitutes a structural failure.

5.1.2 Test mass A

Test mass A is a rigid cylinder (160 ± 5) mm in diameter and (300 ± 5) mm in height, having a mass of ($9 + 0,01/0$) kg and with its centre of gravity in the centre of the cylinder. All edges shall have a radius of (5 ± 1) mm. Two anchorage points shall be provided, positioned ($150 \pm 2,5$) mm from the base and at 180° to each other around the circumference as shown in Figure 6.