



SLOVENSKI STANDARD
SIST EN 12790:2003

01-maj-2003

Izdelki za otroke - Sklopne zibelke

Child care articles - Reclined cradles

Artikel für Säuglinge und Kleinkinder - Kinderliegesitze

Articles de puériculture - Transats

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ICS:

97.190

Otroška oprema

Equipment for children

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en

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ICS 97.190

English version

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN 12790:2002) has been prepared by Technical Committee CEN/TC 252 “Child and use care articles”, the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2003, and conflicting national standards shall be withdrawn at the latest by April 2003.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

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EN 12790:2002 (E)**1 Scope**

This standard specifies safety requirements and the corresponding test methods for fixed or folding reclined cradles intended for children up to 6 months and or up to a weight of 9 kg.

2 Normative references

This standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

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

EN 71-2, *Safety of toys - Part 2 : Flammability.*

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

EN 438-1, *Decorative high-pressure laminates (HPL) - Sheets based on thermosetting resins - Part 1 : Specifications (ISO 4586-1:1987, modified).*

ISO 48, *Rubber, vulcanised or thermoplastic - Determination of hardness (Hardness between 10 IRHD and 100 IRHD)*

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3 Terms and definitions

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

3.1**reclined cradle**

device intended for accommodate a child in a reclined position. It can be either a static, rocker or bouncer type or any combination of these. These may have adjustable backs

3.1.1**static**

article that does not bounce or rock

3.1.2**rocker****3.1.3****bouncer**

article that allows the child to bounce due to the elasticity of the frame or other mechanical action, if spring

3.2**restraint system**

system used for maintaining the child in the reclined cradle

3.3**crotch strap**

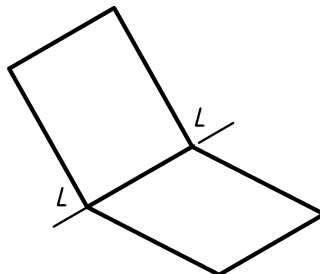
component part of restraint system intended for positioning between the child's legs in order to prevent it from sliding out of the reclined cradle

3.4**carrying handle**

component parts allowing the reclined cradle to be carried by hand

3.5 junction line

- a) the intersection of the seat and the back, (see Figure 1a)

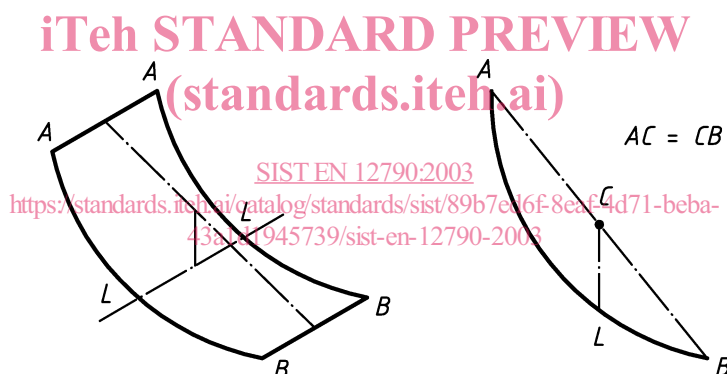


Key

- L) Junction line

Figure 1a – Determination of the junction line

- b) when the seat is in the form of hammock, then a theoretical junction line, "L", is determined as shown in figure 1b).



Key

- L) Junction line

Figure 1b - Determination of the junction line for reclined cradles in form of hammock

3.6 folding mechanism

mechanism intended to fold the reclined cradle

3.7 locking mechanism

mechanism intended to prevent inadvertent folding

3.8 reclining mechanism

mechanism intended to modify the inclination of the back or of the cradle

3.9 protected volume

The protected volume is that volume as defined by the following procedure :

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- place the test mass C device, see annex C, in the centre of the reclined cradle, its lower edge on the junction line with the ball chain at the top and to the right side. If the reclined cradle is adjustable it shall be adjusted to the most reclined position, as shown in figure 2 ;
- the test device shall be restrained in position by the restraint system ;
- the outer limit of the protected volume is defined by the outside of the ball at the end of the chain when moved in all directions while keeping the chain taught. All that volume between this outer limit and the reclined cradle is the protected volume ;
- the measurement shall be repeated first with the test device positioned to the left side. Then repeat the measurement on both sides with the reclined cradle adjusted to the most up right position.

4 Properties of materials**4.1 Chemical properties**

The surface of any parts, plastic coatings or finishes shall comply with EN 71-3.

4.2 Surface flash

There shall be no parts of the reclined cradle that can give rise to surface flash (as e.g. plush surfaces), when tested in accordance with EN 71-2.

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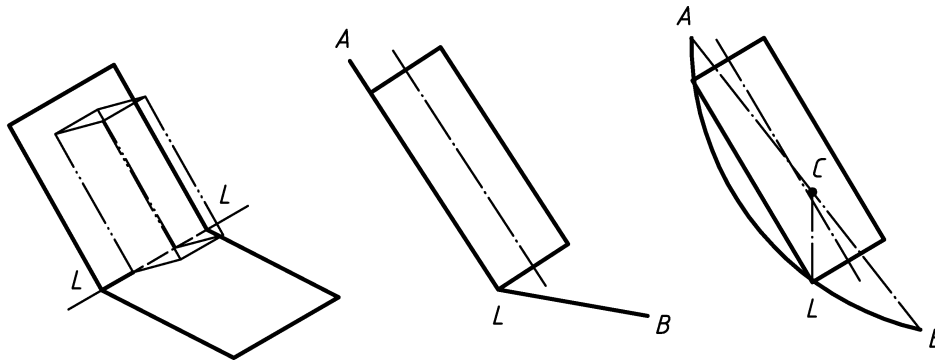
5 Construction**5.1 General**

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If not otherwise stated, all forces shall have an accuracy of $\pm 5\%$, all masses an accuracy of $\pm 0,5\%$, all dimensions an accuracy of $\pm 0,5$ mm and all angles $\pm 0,5^\circ$.

Where the test masses in annex A are used, they shall be positioned in the reclined cradle as shown in figure 2 and retained by the restraint system.

The following requirements shall be fulfilled both before and after washing or cleaning and drying the fabrics twice in accordance with the manufacturers instructions. Any resulting shrinkage in the fabric covering materials shall not prevent them from being refitted, if removable, and shall not show any damage to the seams or fabrics that may impair the reclined cradles performance during testing.



Key

L) Junction line

Figure 2 - Positioning of the test mass

5.2 Openings within the protected volume

The reclined cradles shall have no open ended tubes in which a child's finger can be trapped.

There shall be no holes, openings or gaps with a width greater than 5 mm and less than 12 mm unless the depth of penetration is less than 10 mm on the support surface for the child.

Holes, openings and gaps shall be measured using the cone applying a force of up to 30 N to the 5 mm cone and up to 5 N to the 12 mm cone.

Test mass C given in annex C shall be placed in the product so that its base is flush with the junction line and in the middle of the width before the holes, openings and gaps are measured.

The assessment shall be undertaken with the product in a fixed position of use.

Fastenings or restraint systems should be in the closed position when the product is assessed.

5.3 Edges, points and corners

All accessible edges, corners and protruding parts shall be designed so as to reduce the risk of inflicting wounds.

Accessible edges and corners shall either comply with the examples given in figures 3a), 3b) or 3c), or if arising from a wall thickness smaller than 4 mm, with one of the following requirements :

- be chamfered or rounded ;
- be folded, rolled or spiralled as shown in figure 3d) ;
- be protected with a plastic coating or other adequate means as shown in figure 3e).

All surfaces shall be smooth and free from burrs.

Dimensions are in millimetres

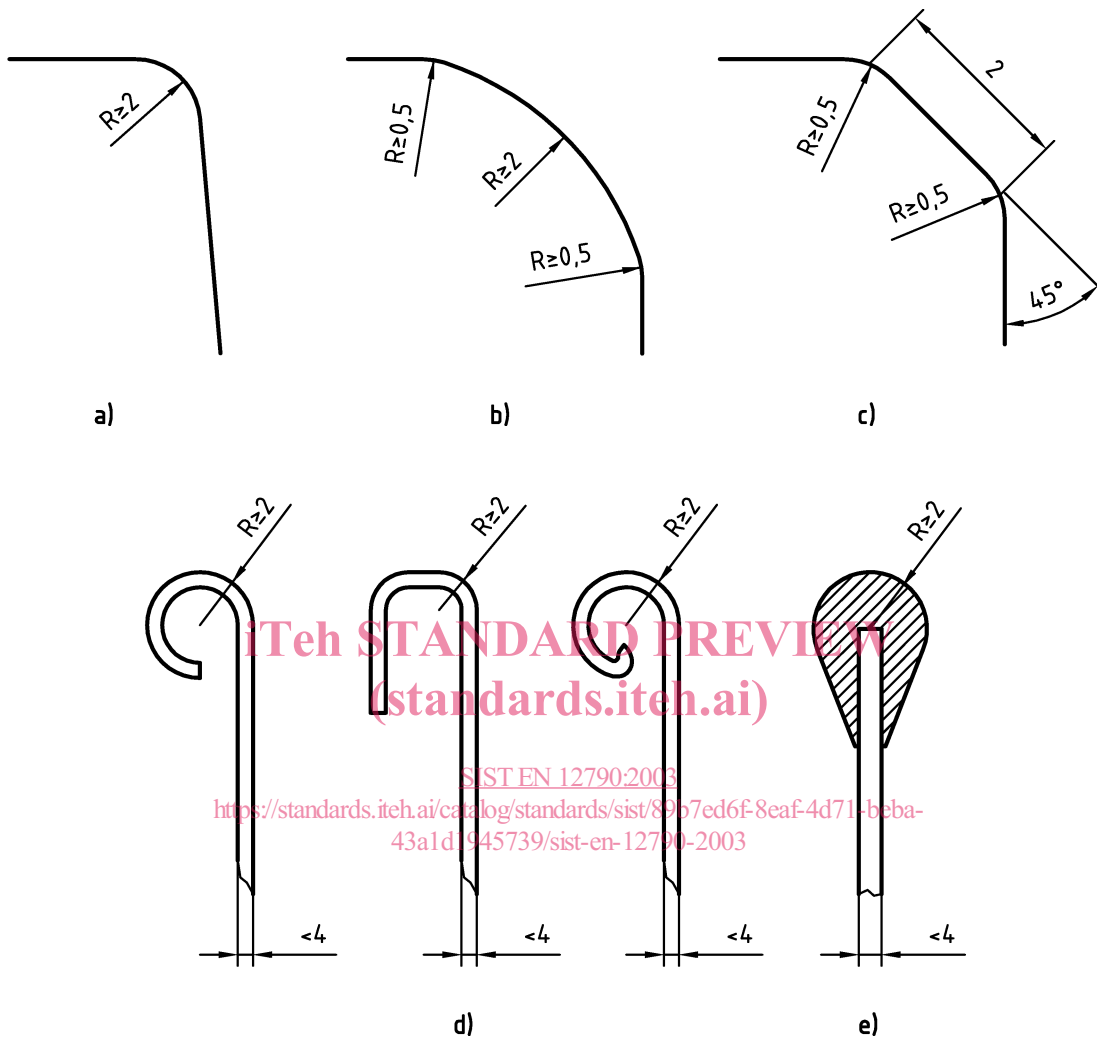


Figure 3 - Examples for minimum radii of edges and corners

The minimum radii shown in figure 3 do not apply to small components such as hinges, brackets and catches.

5.4 Small parts

In order to avoid ingestion or inhalation of small objects, components intended to be removed by the child shall not, whatever their position, fit wholly within the small parts cylinder specified in EN 71-1 (see Figure 4).

Non-detachable components, parts which are not intended to be removed, shall comply with one of the following :

- the components shall be so embedded that the child cannot grip them with its teeth or fingers (feeler gauge test in EN 71-1 needs to be included to assess grippability) ;
- the components shall be so fixed to the product that they cannot become detached when tested in accordance with the torque test and tension test from EN 71-1 ;
- any components which become detached when tested to b) above shall not fit wholly within the above specified cylinder in any orientation (see Figure 4).

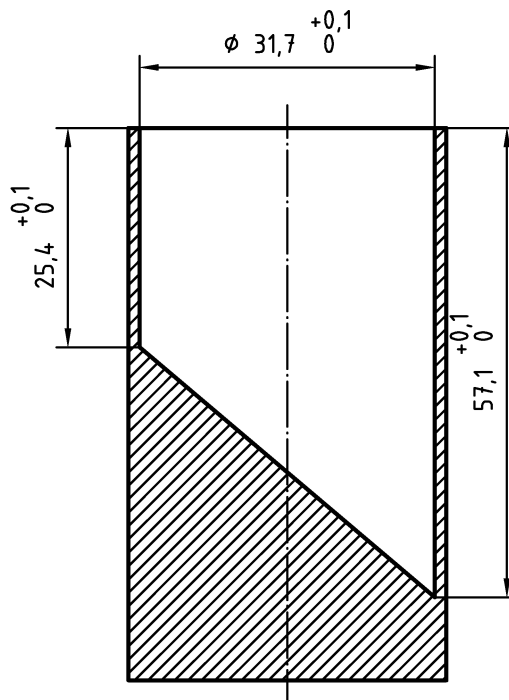


Figure 4 - Small parts cylinder

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5.5 Cords, strings and other narrow fabrics

Cords, strings and other narrow fabrics excluding restraint system shall have a free length equal to or less than 220 mm when stretched by a force of 25 N.

5.6 Moving parts within the protected volume

To avoid risk of shearing and crushing, shear and compression points shall be avoided. Shear and compression points exist if the distance between accessible moving parts is less than 12 mm.

If shear or compression points cannot be avoided for functional reasons, then the distance between accessible moving parts, when unloaded or loaded with the test masses given in annex A, shall either be greater than 12 mm in the minimum opened position or less than 5 mm in the maximum opened position.

5.7 Springs

If the reclined cradle is fitted with springs, a protection is required when the space between two helical coils can become equal to or greater than 3 mm and smaller than 12 mm, when tested in accordance with 6.1.

5.8 Locking and reclining mechanism(s)

Locking and reclining mechanism(s) shall fulfil their function after the test 6.2.3.

5.8.1 If the reclined cradle can stand erected when its locking and reclining mechanism(s) are not fully engaged, it shall not collapse or tip over when tested in accordance with 6.2.1.

5.8.2 When the reclined cradle is assembled ready for use in accordance with manufacturer instructions, with its locking and reclining mechanism(s) engaged, the locking and reclining mechanism(s) shall either :

- require a minimum force of 50 N to release the mechanism before and after testing according to 6.2.2 ; or
- require at least two consecutive actions to release the mechanism, the second operation dependent on the first having been carried out and being maintained ; or