SLOVENSKI STANDARD
SIST EN 716-2:2017

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Nadomešča:
SIST EN 716-2:2008+A1:2013

Pohištvo - Otroške postelje in zložljive posteljice za domačo uporabo - 2. del: Preskusne metode

Furniture - Children's cots and folding cots for domestic use - Part 2: Test methods

Möbel - Kinderbetten und Reisekinderbetten für den Wohnbereich - Teil 2: Prüfverfahren

Mobilier - Lits à nacelle fixes et pliants à usage domestique pour enfants - Partie 2: Méthodes d'essai

Ta slovenski standard je istoveten z: EN 716-2:2017

ICS:

97.140	Pohištvo	Furniture
97.190	Otroška oprema	Equipment for children

SIST EN 716-2:2017 **en,fr,de**

EUROPEAN STANDARD

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EUROPÄISCHE NORM

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Supersedes EN 716-2:2008+A1:2013

English Version

Furniture - Children's cots and folding cots for domestic use - Part 2: Test methods

Möbel - Kinderbetten und Reisekinderbetten für den Wohnbereich - Teil 2: Prüfverfahren

This European Standard was approved by CEN on 21 February 2016.

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COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (EN 716-2:2017) has been prepared by Technical Committee CEN/TC 207 “Furniture”, the secretariat of which is held by UNI.

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of an identical text or by endorsement, at the latest by December 2017, and conflicting national standards shall be withdrawn at the latest by December 2017.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 716-2:2008+A1:2013.

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

Compared to EN 716-2:2008+A1:2013, the following modifications have been made:

— introduction of the elements of the amendment;

— modification of the wrong references to clauses;

— clarification of 4.3, “Test mattress”;

— modification of 5.7.1, “Folding test of the mattress base and cot base”.

EN 716, *Furniture — Children's cots and folding cots for domestic use*, is composed with the following parts:

— *Part 1: Safety requirements*;

— *Part 2: Test methods*.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard specifies test methods for assessing the safety of children's cots and folding cots for domestic use.

It applies to children’s cots and folding cots with an internal length greater than 900 mm but not more than 1 400 mm.

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 ISO 2439:2008, *Flexible cellular polymeric materials — Determination of hardness (indentation technique) (ISO 2439:2008)*

ISO 7619-2, *Rubber, vulcanized or thermoplastic — Determination of indentation hardness — Part 2: IRHD pocket meter method*

3 General test conditions

3.1 Preliminary preparation

The tests are designed to be applied to a cot that is fully assembled and ready for use.

The test unit shall be stored in indoor ambient conditions for at least one week immediately prior to testing. Any deviation from this procedure shall be stated in the test report.

Before testing, any fabrics intended to be removable shall be cleaned or washed twice in accordance with the manufacturer's instructions. If no instructions are supplied, the manner of washing/cleaning shall be stated in the test report.

The tests shall be carried out under indoor ambient conditions, but if during a test the atmospheric temperature is outside the range 15 °C to 25 °C, the maximum and/or minimum temperature shall be recorded in the test report.

The cot shall be tested as delivered. If the cot is a knock down type, it shall be assembled according to the manufacturer's instructions supplied with the cot. If the cot can be assembled, combined or adjusted in different ways, the most adverse combination shall be used for each test.

Knock-down fittings shall be tightened before testing. Further re-tightening shall not take place unless this is specifically required by the manufacturer.

In the case of designs not catered for in the test procedures, the tests shall be carried out as far as possible as described, and a list made of the deviations from the test procedures.

3.2 Test equipment

Unless otherwise specified, the tests may be applied by any suitable device because results are dependent only upon correctly applied forces and loads and not upon the apparatus.

The equipment shall not inhibit the deformation of the cot during testing. It shall be able to move so that it can follow the deformation of the cot during testing, so that the loads are always applied at the specified point and in the specified direction.

All loading pads shall be capable of pivoting in relation to the direction of the applied force. The pivot point shall be as close as practically possible to the load surface.

3.3 Application of forces

The forces in the static load tests shall be applied sufficiently slowly enough to ensure that negligible dynamic force is applied.

The forces in durability tests shall be applied at a rate to ensure that excessive heating does not occur.

3.4 Tolerances

Unless otherwise stated, the following tolerances apply:

— Forces:	±5 % of the nominal force;
— Masses:	±0,5 % of the nominal mass;
— Dimensions:	±1,0 mm of the nominal dimension;
— Angles:	±2° of the nominal angle;
— Positioning of loading pads:	±5 mm;
— Duration of forces:	(2 ± 1) s for durability tests
	(10 ± 2) s for static load tests, including tension, torque and bite tests.

The tests are described in terms of the application of forces. Masses can, however, be used. The relationship 10 *N* = 1 kg shall be used for this purpose.

3.5 Test sequence

The tests shall be carried out in the order laid down in this standard and on the same cot.

3.6 Prevention of movement during test

If the cot tends to slide or roll during the tests specified in Clause 5, it shall be restrained by stops (4.6).

4 Test apparatus

4.1 Measuring probes

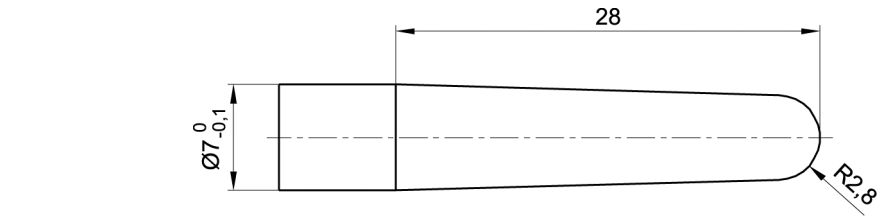
Probes made of plastics or other hard, smooth material mounted on a force-measuring device.

There shall be one probe with a diameter of 7 mm (−0,1/+0 mm), see Figure 1 a).

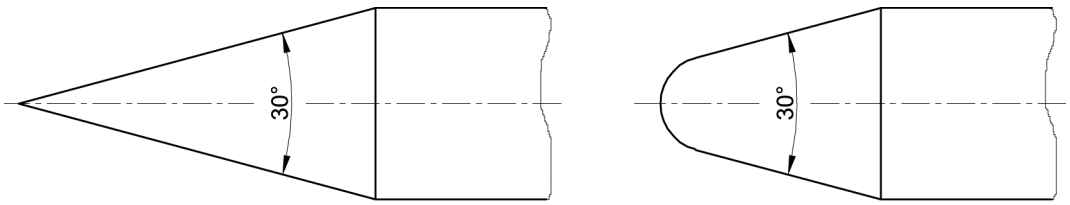
There shall be five probes with an angle of 30° ± 0,5° with diameters of 25 mm (0/+0,1 mm), 45 mm (0/+0,1 mm), 60 mm (0/+0,1 mm), 65 mm (0/+0,1 mm) and 85 mm (0/+0,1 mm) with conical ends, see Figure 1 b).

There shall be four cylindrical probes with diameters of 5 mm (−0,1/+0 mm), 7 mm (−0,1/+0 mm), 12 mm (0/+0,1 mm) and 18 mm (0/+0,1 mm) with hemispherical ends, see Figure 1 c).

Dimensions in millimetres



a) 7 mm probe



b) Conical probes

c) Cylindrical probes

Key

1 Ø 5 mm (−0,1/+0 mm), Ø 7 mm (−0,1/+0 mm), Ø 12 mm (0/+0,1 mm), Ø 18 mm (0/+0,1 mm)

Figure 1 — Measuring probes

4.2 Bottom impactor

An impactor with a total mass of 10 kg of hardwood or equivalent material with a hemispherical end and with dimensions in accordance with Figure 2.

The impactor shall be guided so that it is kept vertical and always falls on the impact point.

Dimensions in millimetres

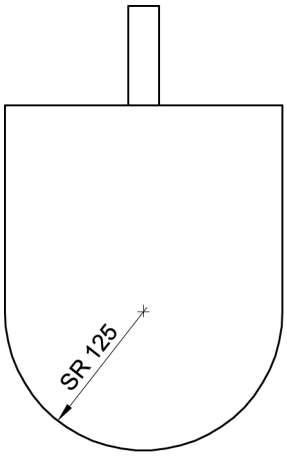


Figure 2 — Bottom impactor

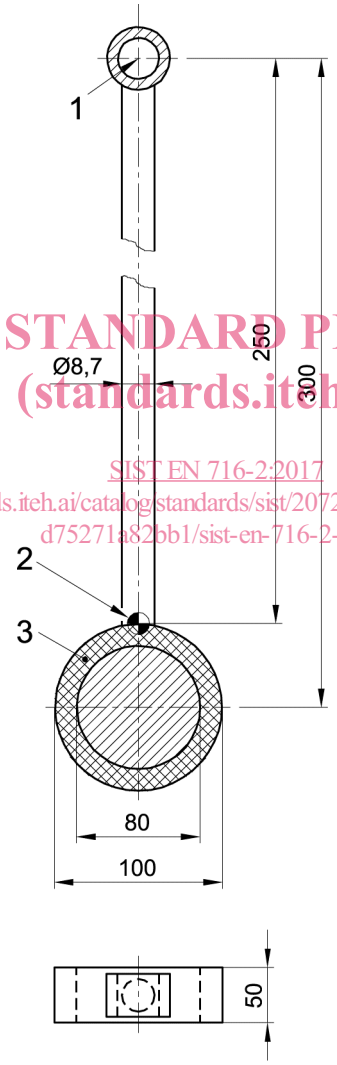
4.3 Test mattress

A polyurethane foam sheet with a thickness of 60 mm, a bulk density of 35 kg/m³ ± 10 % or an indentation hardness index of (170 ± 40) N in accordance with EN ISO 2439:2008, A.40 and being at least 400 mm × 800 mm in area but not larger than the mattress base of the cot under test. The test mattress shall have a light soft cotton cover with a mass not greater than 120 g/m².

4.4 Side impactor

A pendulum with a cylindrical head made of steel (Figure 3). The head of the pendulum shall be surrounded by a 10 mm thick layer of rubber of hardness 76 IRHD to 78 IRHD in accordance with ISO 7619-2. The total mass shall be 2 kg.

Dimensions in millimetres



Key

1 pivot point

2 centre of gravity

3 rubber 76 to 78 IRHD

Figure 3 — Side impactor

4.5 Loading pad

A rigid cylindrical object, 100 mm in diameter, having a smooth hard surface and rounded edge with radius of 12 mm.

4.6 Stops

Stops which prevent the article from sliding but not tilting, not higher than 12 mm except in cases where the design of the item necessitates the use of higher stops, in which case the lowest that will prevent the item from sliding shall be used.

4.7 Floor surface

Rigid, horizontal and flat surface.

4.8 Test chain and mass

Ball chain with a ball diameter of (3,2 ± 0,2) mm and a distance between ball centres of (4,0 ± 0,2) mm (Figure 4), fixed to a 2,5 kg spherical weight with a diameter of 115 mm forming a loop in accordance with Figure 5.

Dimensions in millimetres

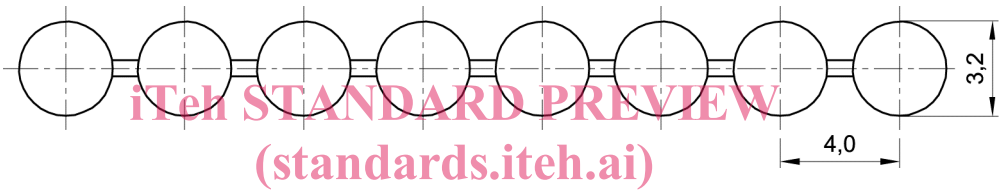
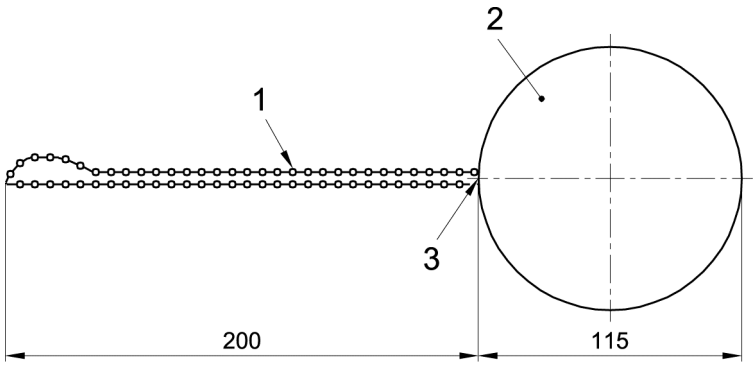


Figure 4 — Ball chain

Dimensions in millimetres



Key

1 ball chain

2 weight, mass 2,5 kg

3 fixing point

Figure 5 — Test chain and mass

4.9 Small parts cylinder

For assessment of small components, having dimensions in accordance with Figure 6.

NOTE The cylinder is identical to the one specified in EN 71–1 [1].

Dimensions in millimetres

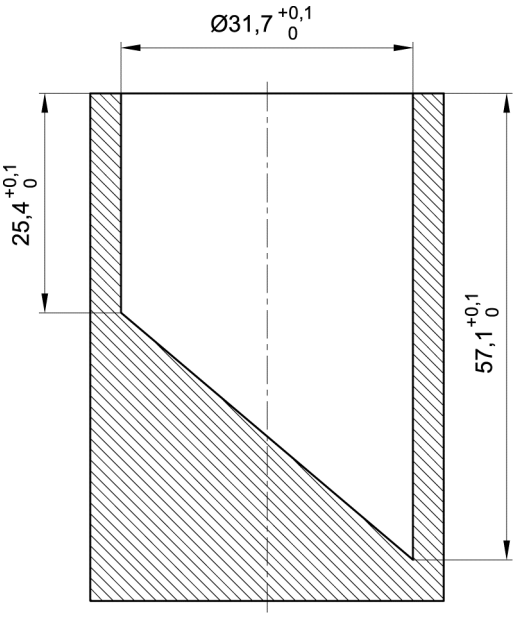


Figure 6 — Small parts cylinder

4.10 Test mass

A weight having a mass of 10 kg and a cross-section of 100 mm × 30 mm.

4.11 Bite tester

An apparatus (Figure 8), consisting of two sets of teeth (Figure 7), made from H13 high chrome tool steel or equivalent and hardened to 45 Rockwell C to 50 Rockwell C. There shall be two teeth at the top and two at the bottom of the bite tester, positioned so that the vertical centre line of one pair of teeth is (1 ± 0,1) mm in front of the centre line of the other set of teeth. In the fully closed position the teeth shall overlap each other by (1 ± 0,1) mm. The outer most corners of the teeth shall have a radius of (0,3 ± 0,1) mm.

The teeth shall be mounted so as to pivot about a point (50 ± 1) mm from the rear most pair of teeth and positioned so that when closed the centre lines of the two pairs of teeth are parallel to each other. The bite tester shall be equipped with a stop to prevent the distance between the teeth from exceeding (28 ± 1) mm when fully opened. The closing force of the teeth shall be set at (50 ± 5) N.

The bite tester shall be provided with a guide to prevent items entering further into the fully opened jaws by more than (17 ± 1) mm. The bite tester shall be equipped with a means whereby a force of (50 ± 5) N can be applied along its centre line in a direction tending to pull the teeth off the sample.