SLOVENSKI STANDARD
oSIST prEN 12221:2022

01-april-2022

Izdelki za otroke - Previjalne mize in blazine za domačo uporabo - Varnostne zahteve in preskusne metode

Child care articles - Changing units and changing pads for domestic use - Safety requirements and test methods

Artikel für Säuglinge und Kleinkinder - Wickeleinheiten und Wickelauflagen für den Hausgebrauch - Sicherheitstechnische Anforderungen und Prüfverfahren

Ta slovenski standard je istoveten z: **prEN 12221**

ICS:

97.190	Otroška oprema	Equipment for children

oSIST prEN 12221:2022 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

DRAFT
prEN 12221

February 2022

ICS 97.190

Will supersede EN 12221-1:2008+A1:2013, EN 12221-2:2008+A1:2013

English Version

Child care articles - Changing units and changing pads for domestic use - Safety requirements and test methods

Articles de puériculture - Dispositifs à langer et matelas à langer à usage domestique - Exigences de sécurité et méthodes d'essai

Artikel für Säuglinge und Kleinkinder - Wickeleinheiten und Wickelauflagen für den Hausgebrauch - Sicherheitstechnische Anforderungen und Prüfverfahren

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

If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

This draft European Standard was established by CEN in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (prEN 12221:2022) 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 12221-1:2013 and EN 12221-2:2013.

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

For relationship with EU Directive(s) / Regulation(s), see informative Annex ZA, which is an integral part of this document.

In comparison with EN 12221-1:2013 and EN 12221-2:2013, the significant technical changes relate to the following topics:

a) Adoption of the hazard based format;

b) Unification of the two parts in one single document;

c) Inclusion of changing pads and changing unit accessories;

d) Update of terms and definitions;

e) Update of chemical hazards;

f) Update of thermal hazards;

g) General update of the mechanical requirements to the state of the art;

h) Addition of requirements for accessibility filling materials;

i) Addition of durability requirements;

j) Modification of product information and addition of specific symbols;

k) Addition of rationales.

1 Scope

This document specifies safety requirements for changing units, changing pads and changing unit accessories for domestic use for children with a body weight of no more than 15 kg.

This document only covers the function of the item as a changing unit. If the changing unit can be converted or used for another function (e.g. cots, storage furniture, bath tubs and stands, etc.), other relevant European Standards apply.

The changing unit can be foldable and can be fitted with a child bathtub or other additional items.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 71-2:2020, *Safety of toys - Part 2: Flammability*

EN 71-3:2019+A1:2021, *Safety of toys - Part 3: Migration of certain elements*

EN 622-1:2003, *Fibreboards - Specifications - Part 1: General requirements*

EN 717-1:2004, *Wood-based panels - Determination of formaldehyde release - Part 1: Formaldehyde emission by the chamber method*

EN ISO 14184-1:2011, *Textiles - Determination of formaldehyde - Part 1: Free and hydrolysed formaldehyde (water extraction method) (ISO 14184-1:2011)*

ISO 48-5:2018, *Rubber, vulcanized or thermoplastic - Determination of hardness - Part 5: Indentation hardness by IRHD pocket meter method*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at https://www.electropedia.org/
- ISO Online browsing platform: available at https://www.iso.org/obp

3.1
changing unit
elevated structure designed to support a child in a lying position for the purpose of allowing a caregiver to clean and/or change the child

3.2
type 1 changing unit
changing unit intended for use for children from birth up to an age of 12 months, up to 11 kg

3.3
type 2 changing unit
changing unit intended for use for children from birth up to 15 kg

3.4
wall mounted changing unit
changing unit designed to be attached to a wall, with or without support legs

3.5
changing board flap
changing surface movable or removable for storage purposes or to provide access to another function, e.g. a bathtub

3.6
changing pad
pad including side barriers specifically designed for the purpose of changing the child

Note 1 to entry: Mats and similar items without barriers intended only to offer a hygienic protection during changing are not included in the definition.

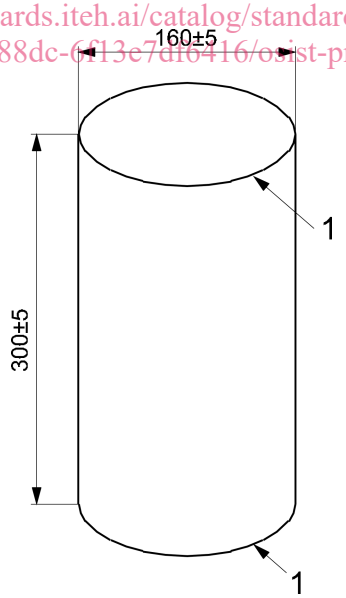
3.7
changing unit accessory
accessory that attaches to another product (e.g. cot, etc.) designed to enable the product to be used as a changing unit

4 Test equipment

4.1 Test mass A

Test mass A is a rigid cylinder (200 ± 5) mm in diameter and (300 ± 5) mm in height, having a mass of $15^{+0,01}_{0}$ kg and with its centre of gravity in the centre of the cylinder. All edges shall have a radius of (5 ± 1) mm (see Figure 1).

Dimensions in millimetres



Key
1 radius: (5 ± 1) mm

Figure 1 — Test mass A

4.2 Test mass B

A cylinder made of steel with a mass of 5 kg and a diameter of 100 mm.

4.3 Small parts cylinder

Small parts cylinder for the assessment of small components, having dimensions in accordance with Figure 2.

Dimension in millimetres

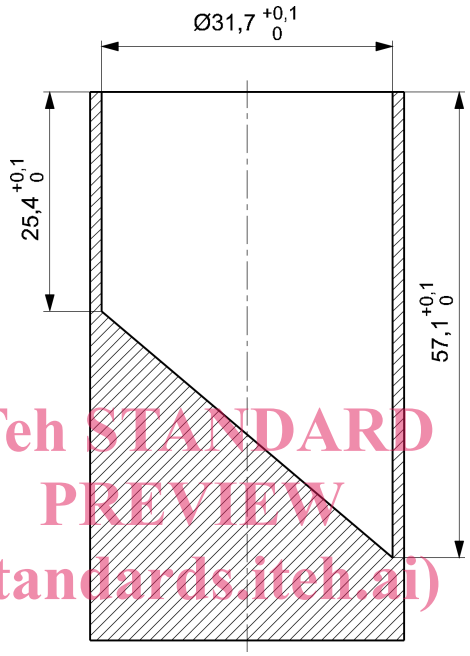


Figure 2 — Small parts cylinder

4.4 Feeler gauge

Gauge with a thickness of (0,4 ± 0,02) mm and an insertion edge radius of (3 ± 0,5) mm (see Figure 3).

Dimensions in millimetres

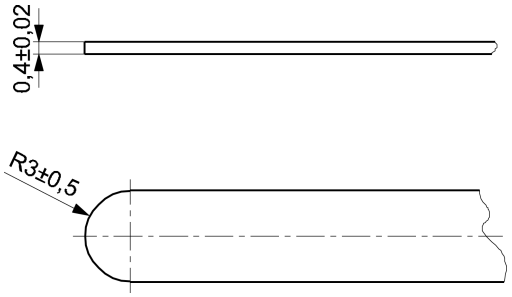


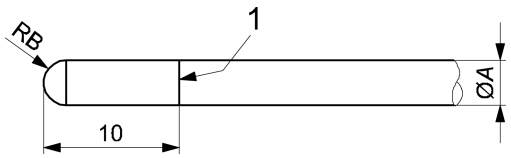
Figure 3 — Feeler gauge

4.5 Test probes for finger entrapment

4.5.1 Test probes with hemispherical end

Probes made from plastic or other hard, smooth material of diameters $7^{0}_{-0,1}$ mm and $12^{+0,1}_{0}$ mm with a full hemispherical end that can be mounted on a force-measuring device, see Figure 4.

Dimensions in millimetres



Key

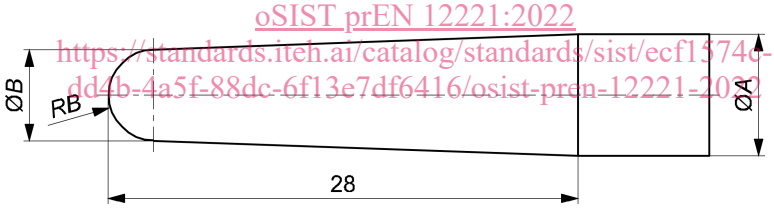
Probe type	7 mm probe	12 mm probe
Diameter A	$7^{0}_{-0,1}$	$12^{+0,1}_{0}$
Radius RB	Half of diameter A	Half of diameter A
1	Line ascribed around circumference showing depth of penetration	

Figure 4 — Test probes with hemispherical end

4.5.2 Test probe for mesh

Mesh probe made from plastic or other hard, smooth material as shown in Figure 5.

Dimensions in millimetres



Key

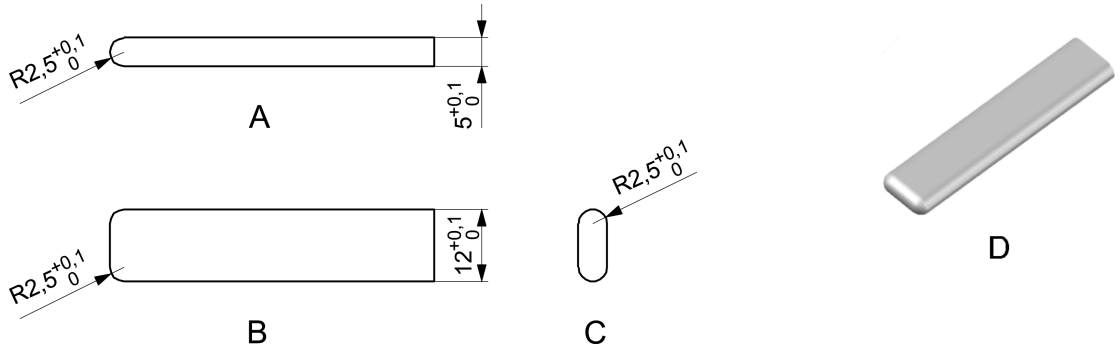
Probe type	mesh probe
Diameter A	$7^{0}_{-0,1}$ mm
Diameter B	$5,6^{0}_{-0,1}$ mm
Radius RB	half of diameter B

Figure 5 — Test probe for mesh

4.5.3 Shape assessment probe

Probe made from plastic or other hard, smooth material with the dimensions shown in Figure 6.

Dimensions in millimetres



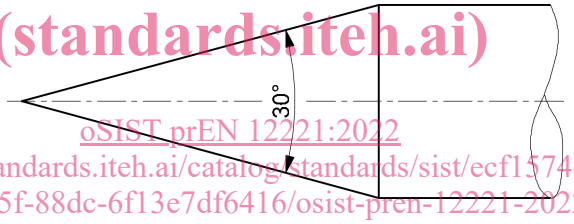
Key

A front view
B top view
C side view
D 3D view

Figure 6 — Shape assessment probe

4.6 Test probes for limb entrapment

Probes made from plastic or other hard, smooth material of diameters $25^{0}_{-0,1}$ mm, $45^{+0,1}_{0}$ mm and $65^{0}_{-0,1}$ mm with a conical end that can be mounted on a force-measuring device, see Figure 7.



Key

Probe type	25 mm probe	45 mm probe	65 mm probe
Diameter A	$25^{0}_{-0,1}$ mm	$45^{+0,1}_{0}$ mm	$65^{0}_{-0,1}$ mm

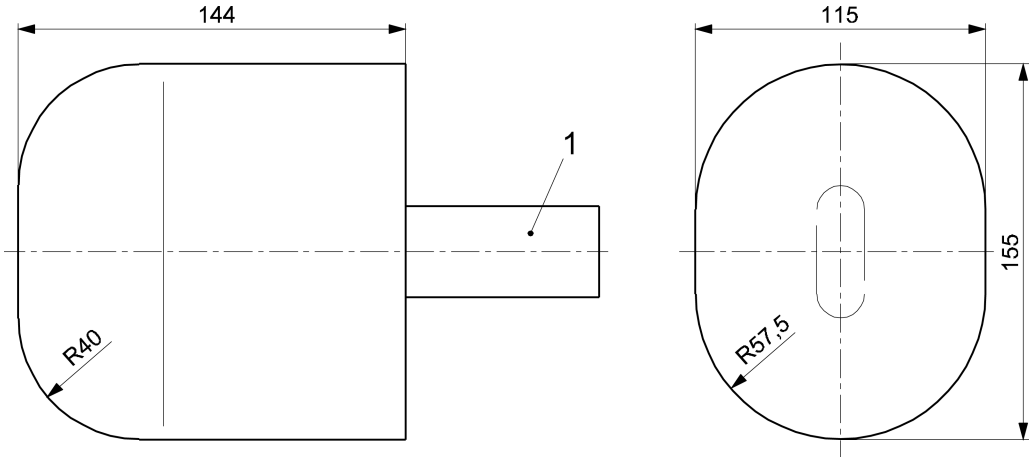
Figure 7 — Test probes with conical end

4.7 Test probes for head entrapment

4.7.1 Small head probe

Probe made of hard and smooth material with dimensions as shown in Figure 8.

Dimensions in millimetres



Key

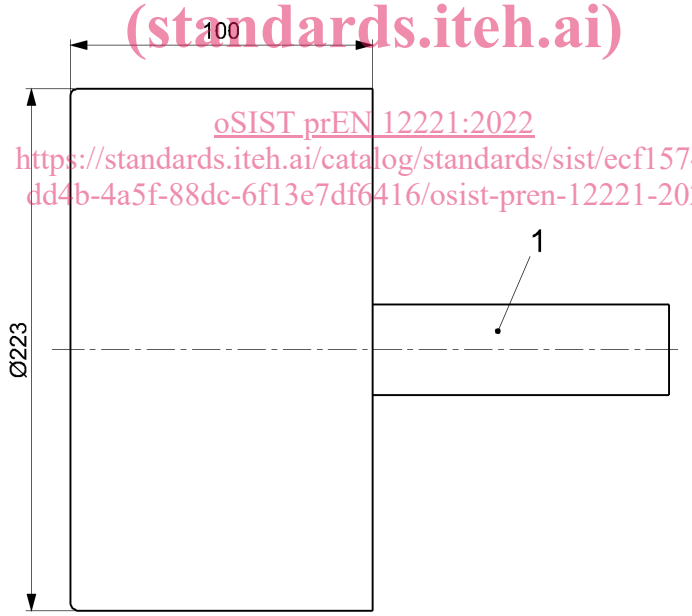
1 handle

Figure 8 — Small head probe

4.7.2 Large head probe

Probe made of hard and smooth material with dimensions as shown in Figure 9.

Dimensions in millimetres



Key

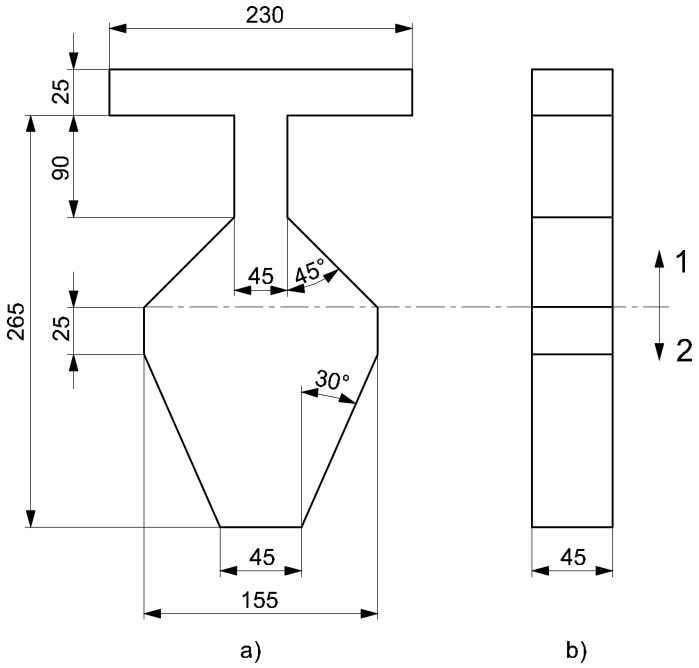
1 handle

Figure 9 — Large head probe

4.7.3 Template for partially bound and V shaped openings

Probe made of hard and smooth material with dimensions as shown in Figure 10.

Dimensions in millimetres



a) Front view **b) Side view**

Key

1 B Portion

2 A Portion

Figure 10 — Template for partially bound and V shaped openings

4.8 Test floor for floor standing units

The test floor shall be horizontal, rigid, flat and smooth.

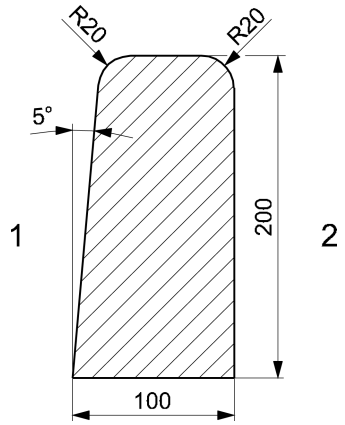
4.9 Test wall for wall mounted changing units

The test wall shall be vertical, rigid, flat and smooth.

4.10 Test base for bath mounted units

Test base for bath mounted units represents the upper bath wall section made of hard and smooth material with dimensions in accordance with Figure 11. The profiles shall be fixed parallel to the distance equal to the minimum bath dimension recommended by the manufacturer.

Dimensions in millimetres



Key

1 inside

2 outside

Figure 11 — Cross section; bath test base, right side

4.11 Stops

Stops to 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 moving shall be used.

4.12 Test beam

Test beam with a width of 80 mm, a length of 1 100 mm and a mass of 1,75 kg ± 0,01 kg. The test beam shall have holes with a diameter of 8 (+0,2/0) mm, drilled through its 80 mm wide face and symmetrically placed about its centre point.

There shall be pairs of holes with distances between the centre points of the two holes equal to: 372 mm, 542 mm, 642 mm, 742 mm. An additional hole is required at the centre point of the test beam.

NOTE The distances between the centre points of the pair of holes are equal to the minimum length and width specified in 8.2.1, minus 8 mm, in such a way that the distance between the furthest points of two holes is equal to the minimum length and width specified in 8.2.1.

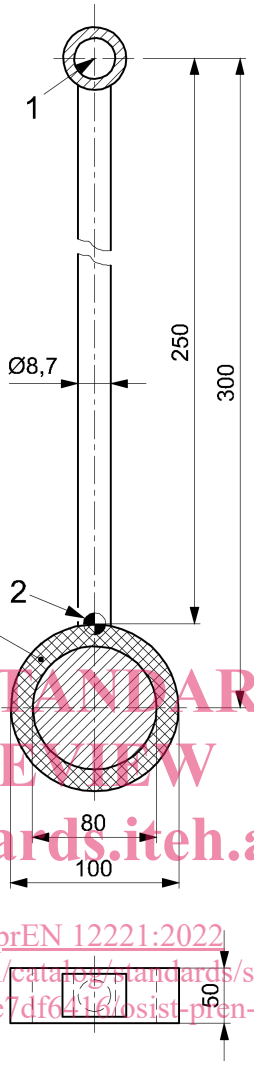
4.13 Measuring rods for test beam

Measuring rod of 8 (-0,2/0) mm diameter with an adjustable collar and its lower end hemispherical. The total mass of one measuring rod and collar shall be 0,12 ± 0,01 kg.

4.14 Side impactor

A pendulum with a cylindrical head made of steel (Figure 12). The head of the pendulum shall be surrounded by a 10 mm thick layer of rubber of hardness (77 ± 5) IRHD in accordance with ISO 48-5:2018. The total mass shall be 2 kg.

Dimensions in millimetres



Key

1 pivot point
2 centre of gravity
3 rubber (77 ± 5) IRHD

Figure 12 — Side impactor

4.15 Loading pad

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

4.16 Aluminium oxide abrasive paper

Aluminium oxide abrasive paper, 80 grit (P80).