



SLOVENSKI STANDARD
SIST EN 12790-1:2024

01-junij-2024

Nadomešča:
SIST EN 12790:2009

Izdelki za otroke - Sklopne zibelke - 1. del: Sklopne zibelke za otroke, ki še ne poskušajo sedeti

Child care articles - Reclined cradles - Part 1: Reclined cradles for children up to when they try to sit up

Artikel für Säuglinge und Kleinkinder - Kinderliegesitze - Teil 1: Kinderliegesitze für Kinder, bis sie versuchen sich aufzusetzen

Articles de puériculture - Transats - Partie 1: Transats pour enfants jusqu'à ce qu'ils essayent de s'asseoir

Ta slovenski standard je istoveten z: EN 12790-1:2023

<https://standards.iteh.ai/catalog/standards/sist/c9d55033-fb93-450f-a8db-6371c818ad32/sist-en-12790-1-2024>

ICS:

97.190 Otroška oprema Equipment for children

SIST EN 12790-1:2024 **en,fr,de**

English Version

Child care articles - Reclined cradles - Part 1: Reclined cradles for children up to when they start to try to sit up

Articles de puériculture - Transats - Partie 1 : Transats pour enfants jusqu'à ce qu'ils commencent à essayer de s'asseoir

Artikel für Säuglinge und Kleinkinder - Kinderliegesitze - Teil 1: Kinderliegesitze für Kinder bis sie versuchen, sich aufzusetzen

This European Standard was approved by CEN on 22 August 2022.

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. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists 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.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and United Kingdom.

Document Preview

[SIST EN 12790-1:2024](https://standards.iteh.ai/catalog/standards/sist/c9d55033-fb93-450f-a8db-6371c818ad32/sist-en-12790-1-2024)

<https://standards.iteh.ai/catalog/standards/sist/c9d55033-fb93-450f-a8db-6371c818ad32/sist-en-12790-1-2024>



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

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

Contents

	Page
European foreword.....	5
1 Scope	7
2 Normative references	7
3 Terms and definitions	8
4 Test equipment	9
4.1 Test mass A.....	9
4.2 Test mass B.....	10
4.3 Small parts cylinder	10
4.4 Feeler gauge	11
4.5 Test equipment for handle strength test.....	11
4.6 Test probes for finger entrapment	14
4.6.1 Test probes with hemispherical end.....	14
4.6.2 Test probe for mesh	15
4.6.3 Shape assessment probe	15
4.7 Test equipment for handle locking mechanism strength test.....	15
4.8 Test surface for the stability test.....	16
4.9 Test mass C.....	16
4.10 Impactor	17
4.11 Test equipment for sound level measurement	18
5 General requirements and test conditions.....	18
5.1 Product conditioning.....	18
5.2 Test conditions.....	18
5.3 Application of forces	19
5.4 Tolerances	19
5.5 Order of tests	19
6 Chemical hazards	19
6.1 General.....	19
6.2 Migration of certain elements (see A.2).....	19
6.3 Formaldehyde (see A.2).....	20
6.4 Colourants (see A.2).....	20
6.5 Aniline (see A.2).....	21
7 Thermal hazards	21
7.1 Requirements	21
7.2 Test method	21
8 Mechanical hazards	22
8.1 General.....	22
8.1.1 Determination of the junction line	22
8.1.2 Positioning of the test mass.....	23
8.1.3 Determination of protected volume.....	23
8.2 Hazards due to sound level.....	24
8.2.1 Requirements	24
8.2.2 Test method	24
8.3 Entrapment hazards.....	25
8.3.1 Requirements	25

8.3.2	Test methods.....	25
8.4	Hazards due to moving parts.....	25
8.4.1	Requirements for compression points	25
8.4.2	Requirements for shear points.....	25
8.5	Hazards due to falling of the child	26
8.5.1	Angle of seat unit	26
8.5.2	Restraint system	27
8.5.3	Locking mechanism(s) for carrying handle(s)	28
8.6	Hazards due to folding of the product.....	31
8.6.1	Requirements.....	31
8.6.2	Test methods.....	32
8.7	Hazards from entanglement in cords, ribbons and similar parts.....	32
8.7.1	Requirements.....	32
8.7.2	Test method	33
8.8	Choking and ingestion hazard.....	33
8.8.1	Requirements.....	33
8.8.2	Test methods.....	34
8.9	Suffocation hazards from plastic packaging.....	35
8.10	Hazards from edges, corners and protruding parts.....	35
8.11	Hazards from inadequate structural integrity.....	35
8.11.1	Static strength	35
8.11.2	Dynamic strength	36
8.11.3	Reclining system	36
8.11.4	Durability of powered mechanisms.....	37
8.11.5	Durability of reclined cradles with carrying handle(s)	37
8.11.6	Strength of carrying handle(s) locking mechanism(s)	38
8.11.7	Toy bar attachment integrity	40
8.12	Hazards from inadequate stability.....	41
8.12.1	Requirements.....	41
8.12.2	Test method	41
8.13	Hazards from possible slippage of the reclined cradle.....	42
8.13.1	Requirement.....	42
8.13.2	Test method.....	42
8.14	Electrical hazards	42
8.14.1	General	42
8.14.2	Leakage prevention	43
8.14.3	Test methods.....	43
9	Product information.....	43
9.1	General	43
9.2	Marking of the product.....	43
9.2.1	General requirements.....	43
9.2.2	Requirements for reclined cradles with electrical components.....	44
9.3	Purchase information	45
9.4	Instructions for use.....	46
9.4.1	General requirements.....	46
9.4.2	Requirements for reclined cradles with electrical components.....	47
Annex A	(informative) Rationales	48
A.1	Introduction.....	48
A.1.1	General	48
A.1.2	Static reclined cradle.....	48

EN 12790-1:2023 (E)

A.1.3	Rocking reclined cradle	48
A.1.4	Bouncing reclined cradle	48
A.2	Chemical hazards (see Clause 6)	48
A.3	Thermal hazards (see Clause 7).....	48
A.4	Mechanical hazards (see Clause 8)	49
A.4.1	Protected volume (see 8.1.3)	49
A.4.2	Hazards due to sound level (see 8.2)	49
A.4.3	Entrapment hazards (see 8.3)	49
A.4.4	Hazards due to moving parts (see 8.4).....	49
A.4.5	Hazards due to falling of the child (see 8.5)	49
A.4.6	Entanglement hazards (see 8.7)	49
A.4.7	Choking and ingestion hazards (see 8.8).....	50
A.4.8	Suffocation hazards (see 8.9).....	50
A.4.9	Hazardous edges, corners and protruding parts (see 8.10)	50
A.4.10	Hazards from inadequate structural integrity (see 8.11)	50
A.4.11	Hazards due to the reclining system (see 8.11.3).....	50
A.4.12	Hazards due to release of toy bar (see 8.11.7)	50
A.4.13	Hazards from slippage of the reclined cradle (see 8.13)	50
Annex B	(normative) Warnings	51
Annex C	(informative) A-deviations	72
Annex ZA	(informative) Relationship between this European Standard and the safety requirements of Directive 2001/95/EC aimed to be covered	73
Bibliography	73

<https://standards.iteh.ai/catalog/standards/sist/c9d55033-fb93-450f-a8db-6371c818ad32/sist-en-12790-1-2024>

European foreword

This document (EN 12790-1:2023) has been prepared by Technical Committee CEN/TC 252 “Child 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 September 2023, and conflicting national standards shall be withdrawn at the latest by March 2024.

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

This document supersedes EN 12790:2009.

In comparison with EN 12790:2009, the significant technical changes relate to the following topics:

- a) chemical hazards;
- b) thermal hazards;
- c) hazards due to sound level;
- d) entrapment hazards;
- e) entanglement hazards;
- f) suffocation hazards from plastic packaging;
- g) requirements for powered mechanisms;
- h) requirements for toy bar attachment;
- i) electrical hazards;
- j) general update of product information clause with the introduction of symbols following CEN/TR 13387-5;
- k) introduction of an Annex giving relevant translations for warning sentences.

EN 12790 has been divided into the following two different parts to widen the scope of the standard:

- EN 12790-1, that covers reclined cradles intended for children up to when they start to try to sit up (same as EN 12790:2009); and
- EN 12790-2, that covers reclined cradles intended for children up to when they start to stand up, not covered in EN 12790:2009.

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.

EN 12790-1:2023 (E)

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

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

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

[SIST EN 12790-1:2024](https://standards.iteh.ai/catalog/standards/sist/c9d55033-fb93-450f-a8db-6371c818ad32/sist-en-12790-1-2024)

<https://standards.iteh.ai/catalog/standards/sist/c9d55033-fb93-450f-a8db-6371c818ad32/sist-en-12790-1-2024>

1 Scope

This document specifies safety requirements and the corresponding test methods for fixed or folding reclined cradles intended for children up to when they start to try to sit up.

This document applies also to car seats complying with UN ECE R44 or UN ECE R129 that can be used as reclined cradles according to manufacturer's instructions. If usage as reclined cradle is not included in the product information or marketing material, car seats are excluded from the scope of this document.

If a reclined cradle has several functions or can be converted into another function the relevant European standards apply to it.

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 12790-2:2023, *Child care articles — Reclined cradles — Part 2: Reclined cradles for children up to when they start to stand up*

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

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

NOTE The latest edition of EN 71-3 cited in the OJEU applies.

EN 71-10:2005, *Safety of toys — Part 10: Organic chemical compounds — Sample preparation and extraction*

EN 71-11:2005, *Safety of toys — Part 11: Organic chemical compounds — Methods of analysis*

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 105-A03:2019, *Textiles — Tests for colour fastness — Part A03: Grey scale for assessing staining (ISO 105-A03:2019)*

EN 61558-2-7:2007, *Safety of power transformers, power supplies, reactors and similar products — Part 2-7: Particular requirements and tests for transformers and power supplies for toys (IEC 61558-2-7:2007)*

EN 61558-2-16:2009¹, *Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1 100 V — Part 2-16: Particular requirements and tests for switch mode power supply units and transformers for switch mode power supply units (IEC 61558-2-16:2009)*

EN IEC 62115:2020², *Electric toys — Safety (IEC 62115:2017, modified)*

¹ As impacted by EN 61558-2-16:2009/A1:2013.

² As impacted by EN IEC 62115:2020/A11:2020.

EN 12790-1:2023 (E)

EN ISO 3746:2010, *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Survey method using an enveloping measurement surface over a reflecting plane (ISO 3746:2010)*

EN 61672-1:2013, *Electroacoustics — Sound level meters — Part 1: Specifications (IEC 61672-1:2013)*

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

EN ISO 14362-1:2017, *Textiles — Methods for determination of certain aromatic amines derived from azo colorants — Part 1: Detection of the use of certain azo colorants accessible with and without extracting the fibres (ISO 14362-1:2017)*

EN ISO 17234-1:2020, *Leather — Chemical tests for the determination of certain azo colourants in dyed leathers — Part 1: Determination of certain aromatic amines derived from azo colorants (ISO 17234-1:2020)*

ISO 48-4:2018, *Rubber, vulcanized or thermoplastic — Determination of hardness — Part 4: Indentation hardness by durometer method (Shore hardness)*

3 Terms and definitions

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

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

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

3.1

reclined cradle

article intended to accommodate a child in a reclined position

Note 1 to entry: Reclined cradles may be static, rocking or bouncing and may have an adjustable backrest and/or seat, see A.1.

3.2

seat unit

part of the reclined cradle that supports the child, either in the form of a hammock or composed by a seat and a backrest

3.3

restraint system

system to restrain the child within the reclined cradle

3.4

crotch restraint

device designed to pass between the child's legs to prevent the child from sliding forward

3.5

carrying handle

component to enable the reclined cradle, with the child in it, to be carried by hand

3.6**junction line**

intersection of the seat and the backrest

3.7**toy bar**

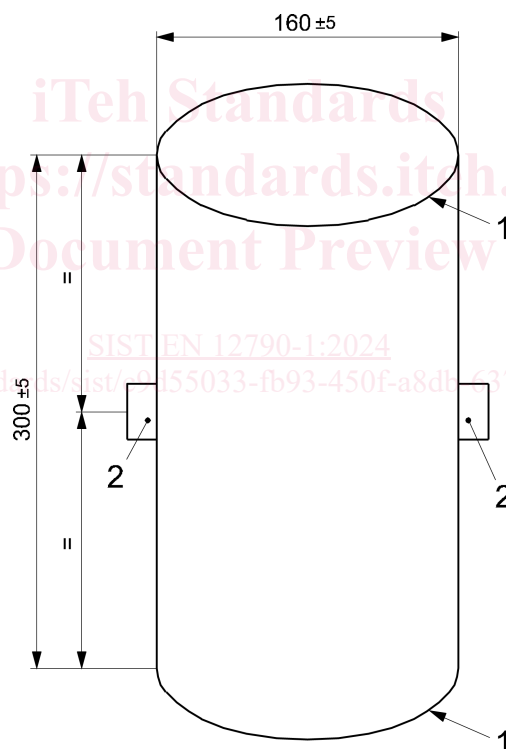
any bar or mobile connected to the frame of the product in any location with one or more attachment points typically used to suspend toys over the occupant

Note 1 to entry: Canopies and carrying handles, fixed and rotating, are not considered a toy bar regardless of whether they allow for the attachment of toys.

4 Test equipment**4.1 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 $9_0^{+0,01}$ 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. These shall be positioned ($150 \pm 2,5$) mm from the base and at 180° to each other around the circumference (see Figure 1).

Dimensions in millimetres

**Key**

- 1 radius: (5 ± 1) mm
- 2 two anchorage points

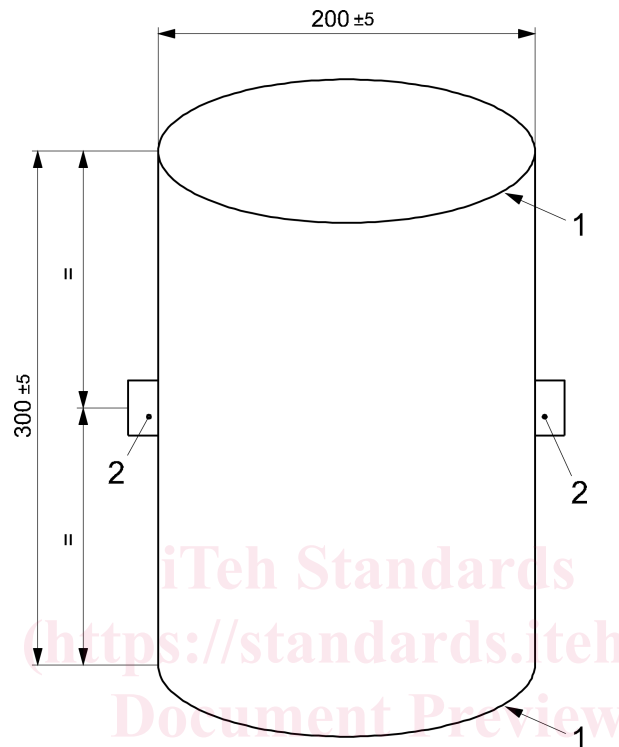
Figure 1 — Test mass A

EN 12790-1:2023 (E)

4.2 Test mass B

Test mass B is a rigid cylinder (200 ± 5) mm in diameter and (300 ± 5) mm in height, having a mass of $15_0^{+0,01}$ 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. These shall be positioned ($150 \pm 2,5$) mm from the base and at 180° to each other around the circumference (see Figure 2).

Dimensions in millimetres



Key

- 1 radius: (5 ± 1) mm
- 2 two anchorage points

Figure 2 — Test mass B

4.3 Small parts cylinder

Small parts cylinder for the assessment of small components, having dimensions in accordance with Figure 3.

Dimension in millimetres

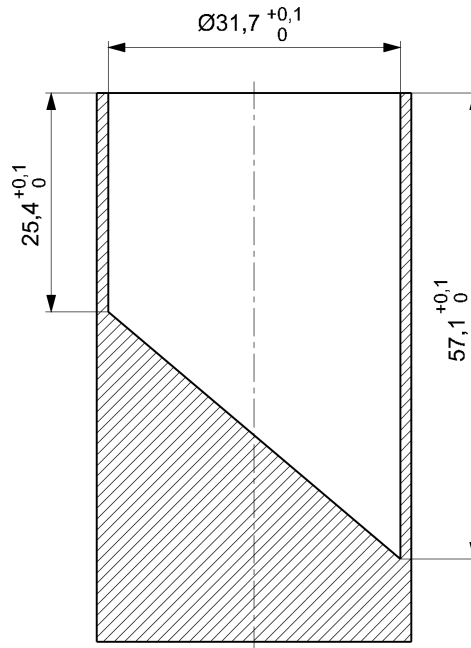


Figure 3 — Small parts cylinder

4.4 Feeler gauge

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

Dimensions in millimetres

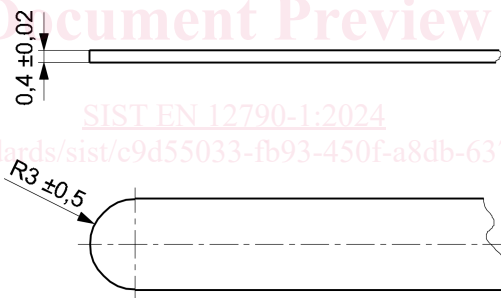


Figure 4 — Feeler gauge

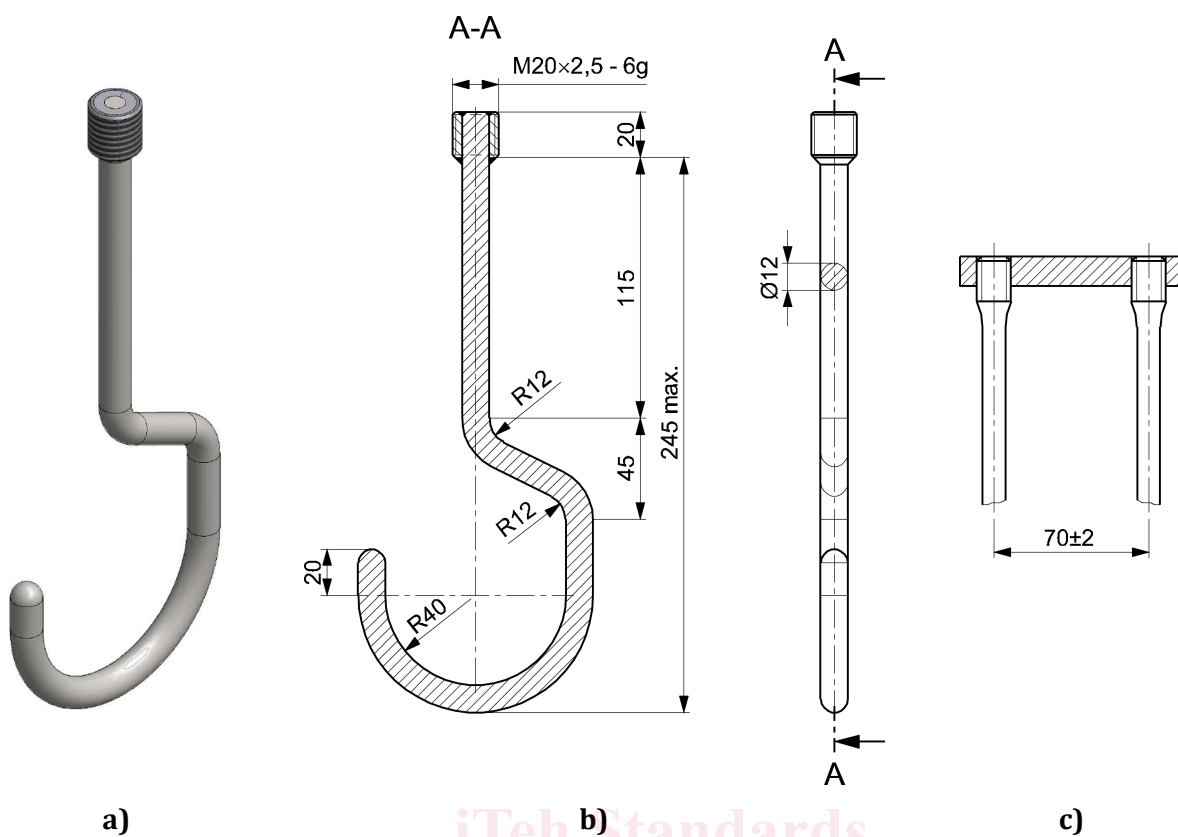
4.5 Test equipment for handle strength test

Hooks rigidly connected to a metal plate (see Figure 5).

The distance between the central axis of two hooks shall be (70 ± 2) mm (see Figure 5).

EN 12790-1:2023 (E)

Dimensions in millimetres



Key

- a) 3D view
- b) 2D view
- c) Distance detail between the central axis of two hooks
tolerance of dimension: ± 2 except for the 12 mm diameter

Figure 5 — Metal hooks

Rubber adaptor with a Hardness of (70 ± 5) Shore A and a thickness: $10 \text{ mm} \pm 1 \text{ mm}$ as in Figure 6.