
**Furniture — Children's high chairs —
Part 1:
Safety requirements**

*Ameublement — Chaises hautes pour enfants —
Partie 1: Prescriptions de sécurité*

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ISO 9221-1:2015

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 136, *Furniture*.

This second edition cancels and replaces the first edition (ISO 9221-1:1992), which has been technically revised.

ISO 9221 consists of the following parts, under the general title *Furniture — Children's high chairs*:

- *Part 1: Safety requirements*
- *Part 2: Test methods*

Introduction

This part of ISO 9221 is intended to minimize accidents to children resulting from normal use and reasonably foreseeable misuse of children's high chairs.

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Furniture — Children's high chairs —

Part 1: Safety requirements

1 Scope

This part of ISO 9221 specifies safety requirements for children's high chairs intended for children from 6 months to 36 months of age.

If the product can be converted into a product for which an ISO safety standard exists, it is intended that the product also fulfil the requirements of that International Standard.

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.

ISO 9221-2:—¹⁾, *Furniture — Children's high chairs — Part 2: Test methods*

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

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

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3 Terms and definitions

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

3.1

children's high chair

free standing chair that elevates the child to approximately dining table height, intended for holding the child from 6 months to 36 months of age who is capable of remaining in a sitting position due to his or her own coordination

3.2

crotch restraint

strap or bar passing between the legs of the child which prevents the child from slipping forward out of the high chair

3.3

integral harness

assembly intended to retain the child in the high chair comprising either a crotch restraint, waist strap and shoulder straps or comprising straps that pass over the child's shoulders and between the child's legs

3.4

waist belt

strap, which when fastened, "fully" surrounds the child's waist

3.5

waist strap

strap, which when fastened, goes from one side of the child to the other passing in front of the child's waist

1) To be published. (Revision of ISO 9221-2:1992)

**3.6
opening**

space between structural members or components

**3.7
shear and squeeze points**

gaps which can cause harm to parts of the body and which occur when two parts close together or open during relative movements

**3.8
locking device**

device which is mounted on a frame and which will maintain parts of the frame in position of use

**3.9
locking mechanism**

mechanism composed by a locking device and one or more operating devices

Note 1 to entry: An action deactivates the locking devices, e.g. pushing a button, pressing a lever or turning a knob.

**3.10
junction line**

intersection of the seat and the backrest

Note 1 to entry: See [Figure 1](#).



Key

- LL junction line
- 1 backrest
- 2 seat

Figure 1 — Junction line

4 Materials

4.1 Materials and surfaces

Materials shall be visually clean and free of infestation.

The manufacturer/importer/retailer shall provide verification that accessible materials and surfaces meet the relevant requirements of EN 71-3.

5 Construction

5.1 General

The requirements apply to a high chair assembled and erected in accordance with the manufacturer's instructions. If parts of the high chair are designed to be removable (e.g. a tray or a footrest), the requirements apply to the high chair with and without this part(s).

Connecting screws for direct fastening, e.g. self tapping screws, shall not be used for the assembly of any component that is designed to be removed or loosened when dismantling the high chair for the purpose of transportation or storage.

Exposed edges and protruding parts shall be rounded or chamfered and free from burrs and sharp edges.

5.2 Holes, gaps and openings

With the exception of all parts of the high chair below the under-surface of the seat, the integral harness and the waist belt, there shall be no holes, gaps or openings between 7 mm and 12 mm accessible when the child is seated, which are deeper than 10 mm, when tested in accordance with ISO 9221-2:—, 6.6.2.

With the exception of the entrance to the seat unit and the two openings for the child's legs to pass through, there shall be no holes, gaps or openings above the seat surface which allow the small torso probe to pass through when tested according to ISO 9221-2:—, 6.6.2.

5.3 Moving parts **iTeh STANDARD PREVIEW**

The requirements of this subclause do not apply to locking mechanisms.

To avoid the risk of shearing and crushing, shear and compression points shall be avoided. If shear and compression points cannot be eliminated for functional reasons, then the conditions for individual cases in 5.3.1, 5.3.2 and 5.3.3 shall be applied.

5.3.1 Shear and squeeze points when setting up and folding away

Shear and squeeze points that are accessible only when the product is being set up or folded away are permitted if they are not under the influence of a powered mechanism.

5.3.2 Shear and squeeze points under the influence of powered mechanism

If shear and squeeze points are created by parts operated by spring force or other sources of energy, the distance between moving parts shall not be less than 18 mm unless the distance is always less than 5 mm when tested according to ISO 9221-2:—, 6.6.1.

5.3.3 Shear and squeeze points under the influence of body weight or other external forces

When tested in accordance with ISO 9221-2:—, 6.6.1, any part of the product which can fold or be detached shall be locked to avoid release by the child using the product, by another child or by unintentional action by an adult.

Unintentional movement is ruled out in any of the following:

- a) locking mechanism is automatically engaged and the load has a closing effect on the locking mechanism;
- b) at least two independent locking mechanisms are provided for the movable part or system;
- c) locking mechanisms under load cannot be released unintentionally.