



# Standard Consumer Safety Specification for High Chairs<sup>1</sup>

This standard is issued under the fixed designation F 404; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

## INTRODUCTION

This consumer safety specification addresses high chair incidents that were identified by the U.S. Consumer Product Safety Commission (CPSC).

CPSC identified injuries to children associated with tray disengagement, falls resulting when children stood up on the seat of a high chair, entrapment between the tray and the seat, and tipover. By far the most common injury resulted from children falling when they were able to stand up on the seat of the high chair because they were not secured by the restraining system. In response to the incident data developed by the Commission, this consumer safety performance specification attempts to minimize the above listed problems.

This consumer safety performance specification does not cover high chairs that are either blatantly misused or are used in a careless manner that disregards the warnings and safety instructions that are provided with each high chair.

This consumer safety performance specification is written within the current state-of-the-art of high chair technology. It is intended that this specification will be updated whenever substantive information becomes available that necessitates additional requirements or justifies the revision of existing requirements.

## 1. Scope

1.1 This consumer safety specification covers the performance requirements and methods of test to ensure the satisfactory performance of the high chair.

1.2 This consumer safety specification is intended to minimize injuries to children resulting from normal usage and reasonably foreseeable misuse or abuse of high chairs.

NOTE 1—This consumer safety specification is not intended to address accidents and injuries resulting from the interaction of older children with children in the high chair or the accidents resulting from abuse and misuse by persons over three years of age.

1.3 For purposes of this consumer safety specification, a high chair is a free standing chair that elevates a child to standard dining table height. The high chair is made for the purpose of holding a child, up to 3 years of age, who can remain in a sitting position due to the child's own coordination, and normally for the purposes of feeding or eating. A high chair may be height adjustable and include a reclined position for infants not able to remain in a sitting position due to the child's own coordination.

1.4 No high chair produced after the approval date of this consumer safety specification shall, either by label or other means, indicate compliance with this specification unless it conforms to all requirements contained herein.

1.5 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.6 The following precautionary caveat pertains only to the test methods portion, Section 7, of this specification: *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

## 2. Referenced Documents

2.1 *ASTM Standards*:<sup>2</sup>

[D 3359 Test Methods for Measuring Adhesion by Tape Test](#)  
[F 833 Consumer Safety Performance Specification for Carriages and Strollers](#)

[F 963 Consumer Safety Specification for Toy Safety](#)

<sup>1</sup> This consumer safety specification is under the jurisdiction of ASTM Committee F15 on Consumer Products and is the direct responsibility of Subcommittee F15.16 on Highchairs, Hook-On Chairs and Expandable Gates.

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<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

## 2.2 Federal Regulations:<sup>3</sup>

**16 CFR 1303** Ban of Lead-Containing Paint and Certain Consumer Products Bearing Lead-Containing Paint

16 CFR 1500 Hazardous Substances Act Regulations Including Sections:

**16 CFR 1500.48** Technical Requirements for Determining a Sharp Point in Toys or Other Articles Intended for Use by Children Under Eight Years of Age

**16 CFR 1500.49** Technical Requirements for Determining a Sharp Metal or Glass Edge in Toys or Other Articles Intended for Use by Children Under Eight Years of Age

**16 CFR 1501** Method for Identifying Toys and Other Articles Intended for Use by Children Under Three Years of Age Which Present Choking, Aspiration, or Ingestion Hazards Because of Small Parts

## 3. Terminology

### 3.1 Definitions of Terms Specific to This Standard:

3.1.1 *conspicuous, adj*—label that is visible, when the high chair is in a manufacturer's recommended use position, to a person standing near the high chair at any one position around the high chair but not necessarily visible from all positions.

3.1.2 *double action release mechanism, n*—mechanism requiring either two consecutive actions, the first of which must be maintained while the second is carried out or two separate and independent single action locking mechanisms that must be activated simultaneously to fully release the tray.

3.1.3 *fabric, n*—any woven, knit, coated, laminated, extruded, or calendared flexible material which is intended to be sewn, welded, heat sealed, or glued together as an assembly.

3.1.4 *latch release surface, n*—any surface on the tray latch release mechanism that results in the tray releasing from its adjustment position when a force is applied perpendicular to that surface.

3.1.5 *manufacturer's recommended use position, n*—any position that is presented as a normal, allowable, or acceptable configuration for the use of the product by the manufacturer in any descriptive or instructional literature. This specifically excludes positions which the manufacturer shows in a like manner in its literature to be unacceptable, unsafe, or not recommended.

3.1.6 *nonpaper label, n*—any label material (such as plastic or metal) that either will not tear without the aid of tools or tears leaving a sharply defined edge or labels made from fabric.

3.1.7 *occupant, n*—that individual who is in a product in one of the manufacturer's recommended use positions.

3.1.8 *paper label, n*—any label material (except fabric) that tears without the aid of tools and leaves a fibrous edge.

3.1.9 *permanent (label/warning attachment), n:*

3.1.9.1 *labels not attached by a seam*—(1) a nonpaper label or decal shall be considered permanent if, during an attempt to manually remove it without the aid of tools or solvents, it cannot be removed or such action damages the surface to which it is attached; (2) a paper label shall be considered permanent if, during an attempt to remove it without the aid of

tools or solvents, it cannot be removed, it tears upon removal or such action damages the surface to which it is attached.

3.1.9.2 *labels attached by a seam*—label attached by a seam shall be considered permanent if it complies with the requirements of 7.9 and does not tear, yielding a separate part, during the test.

3.1.9.3 *warning statements*—warning statements applied directly onto the surface of the product by hot stamping, heat transfer, printing or wood burning, etc., will be considered permanent if the printing in the area tested is still legible and attached after being subjected to the test prescribed in 7.10. If warning statements are on labels, refer to 3.1.9.1 or 3.1.9.2.

3.1.10 *seam, n*—means of joining fabric components such as sewing, welding, heat sealing or gluing.

3.1.11 *seating surface, n*—seat support surface for the occupant that exists between the side surfaces, seat back surface, and the INNER SURFACE of the passive crotch restraint.

3.1.11.1 *Discussion*—For seats with open sides, the seat side surfaces are defined by a vertical plane tangent to the inside surface of the high chair armrest.

3.1.12 *static load, n*—vertically downward force applied by a calibrated force gauge or by dead weights.

3.1.13 *tray latch release mechanism, n*—mechanism for releasing the latch that secures a tray onto a high chair or into an adjustment position, or both.

## 4. Calibration and Standardization

4.1 All testing shall be conducted on a concrete floor that may be covered with 1/8-in. (3-mm) thick vinyl flooring cover, unless test instructs differently.

4.2 The high chair shall be completely assembled, unless otherwise noted, in accordance with the manufacturer's instructions.

4.3 No testing shall be conducted within 48 h of manufacturing.

4.4 The product to be tested shall be in a room with an ambient temperature of 73 ± 9°F (23 ± 5°C) for at least 1 h prior to testing. Testing shall then be conducted within this temperature range.

## 5. General Requirements

5.1 There shall be no hazardous sharp edges or points as defined by 16 CFR 1500.48 and 16 CFR 1500.49 before or after testing in accordance with this consumer safety specification.

5.2 There shall be no small parts, as defined by 16 CFR 1501, before testing or liberated as a result of testing to this specification.

5.3 Before the application of any test methods, any exposed wood parts shall be smooth and free of splinters.

5.4 *Latching or Locking Mechanisms*—Any unit that folds shall have a latching or locking device or other provision in a design that will prevent the unit from unintentionally folding when properly placed in the manufacturer's recommended use position. During and upon completion of the testing in accordance with 7.1, the unit shall remain in its manufacturer's recommended use position. If a unit is designed with a latching

<sup>3</sup> Available from U.S. Government Printing Office Superintendent of Documents, 732 N. Capitol St., NW, Mail Stop: SDE, Washington, DC 20401.

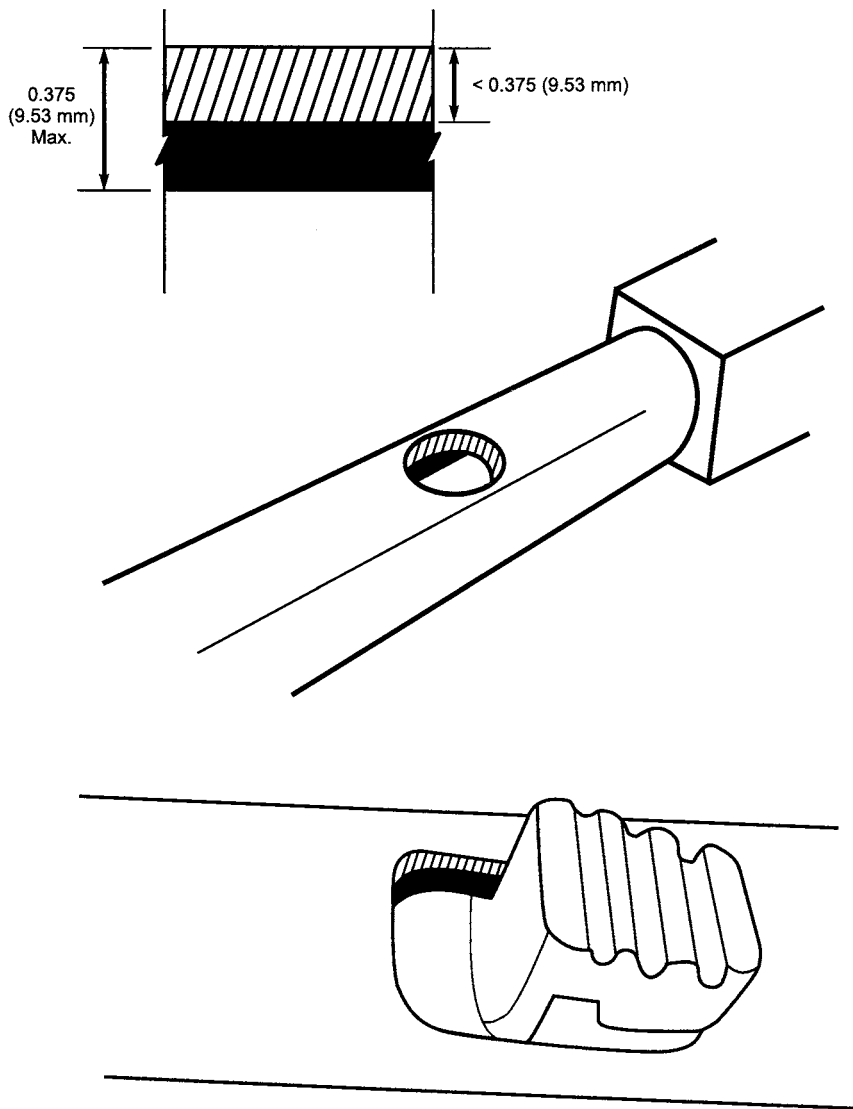


FIG. 1 Opening Example

or locking device, that device shall remain engaged and operative after testing.

5.5 *Nonpaper Labels:*

5.5.1 Nonpaper labels or decals (such as warning labels, brand name labels, decorative labels, or pin-striping) that may present a choking hazard if removed must be permanent.

NOTE 2—Paper labels are exempt from the small parts requirements of 16 CFR 1501 because paper cannot be meaningfully tested.

5.5.1.1 Nonpaper labels that may present a choking hazard are those which upon removal fit entirely within the small parts cylinder as defined in 16 CFR 1501. Nonpaper labels that tear when tested in accordance with 3.1.9.1 (1) are considered labels which may pose a choking hazard.

5.5.1.2 Nonpaper labels attached by a seam, except warning labels, that tear along a seam only and do not yield a part which fits entirely within the small parts cylinder, defined in 16 CFR 1501, are not considered labels that pose a choking hazard and thus are not required to be permanent.

5.6 *Openings*—Holes or slots that extend entirely through a wall section of any rigid material less than 0.375 in. (9.53 mm) thick and admit a 0.210-in. (5.33-mm) diameter rod shall also admit a 0.375-in. (9.53-mm) diameter rod. Holes or slots that are between 0.210 in. (5.33 mm) and 0.375 in. (9.53 mm) and have a wall thickness less than 0.375 in. (9.53 mm), but are limited in depth to 0.375 in. (9.53 mm) maximum by another rigid surface shall be permissible (see Fig. 1). The product shall be evaluated in all manufacturer’s recommended use positions.

5.7 Toy components provided with or attached to the high chair shall comply with the requirements of Consumer Safety Specification F 963.

5.8 All paints and surface coatings on the product shall comply with 16 CFR 1303.

6. Performance Requirements

NOTE 3—The loading in this section may be simplified by the use of a simple test frame that will permit the loads to be applied by dead weights