



Designation: F 2388 – 04

Standard Consumer Safety Specification for Baby Changing Tables for Domestic Use¹

This standard is issued under the fixed designation F 2388; 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 (ϵ) indicates an editorial change since the last revision or reapproval.

INTRODUCTION

This consumer safety specification addresses incidents associated with baby changing tables identified by the U.S. Consumer Product Safety Commission (CPSC). Incidents involved collapse, falls from the table, and entrapment in structural members.

In response to incident data collected by CPSC, this consumer safety specification attempts to minimize the risk of injury and death due to: (1) falls from changing tables, (2) failure of structural or mechanical components, (3) instability and entrapment in openings in the table structure. This specification also contains requirements for warnings and instructional materials directed to parents or caregivers.

1. Scope

1.1 This consumer safety specification covers performance requirements, test methods, and labeling requirements to promote the safe use of baby changing tables by caregivers.

1.2 This specification covers products sold for domestic use for children up to a weight of 30 lb (13.6 kg).

1.3 Changing pads are only covered by this specification if they are sold as part of the changing table.

1.4 Changing tables intended to be attached to a non-full-size crib/play yard shall conform to the requirements of this specification and Specification F 406.

1.5 No changing table produced after the approval date of this specification shall, either by label or other means, indicate compliance with this specification unless it conforms to all applicable requirements contained herein, before and after all testing.

1.6 The following precautionary caveat pertains only to the test method portion in 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 requirements prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*²

D 3359 Test Method for Measuring Adhesion by Tape Test
F 406 Consumer Safety Specification for Non-Full-Size Baby Cribs/Play Yards

2.2 *Federal Regulations:*³

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 1500.50-.52 Test Methods for Simulating Use and Abuse of Toys and Other Articles Intended for Use by Children

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:*

¹ This specification is under the jurisdiction of ASTM Committee F15 on Consumer Products and is the direct responsibility of Subcommittee F15.18 on Cribs, Toddler Beds, Play Yards, Bassinets, Cradles and Changing Tables.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ Available from U.S. Consumer Product Safety Commission (CPSC), Washington, D.C. 20207, website: www.cpsc.gov.

3.1.1 *changing table, n*—an elevated, freestanding structure generally designed to support and retain a child with a body weight of up to 30 lb (13.6 kg) in a horizontal position for the purpose of allowing a caregiver to change the child’s diaper. Changing tables may convert from or to other items of furniture, such as, but not limited to, a dresser, desk, hutch, bookshelf, or play yard, may have pull out or drop down changing surfaces and may provide storage for diapers and diaper products.

3.1.2 *conspicuous, adj*—label that, when the changing table is in a manufacturer’s recommended use position, is visible to a person standing in front of the table in a position normally associated with the task of changing a child’s diaper.

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

3.1.4 *non-paper label, n*—any label (material such as plastic or metal) which either will not tear without the aid of tools, or tears leaving a sharp defined edge.

3.1.5 *paper label, n*—any label material that tears without the aid of tools and leaves a fibrous edge.

4. Calibration and Standardization

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

4.2 Unless otherwise noted, the product shall be completely assembled in accordance with the manufacturer’s instructions, including any pad supplied by the manufacturer.

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

4.4 The product to be tested shall be placed in a room with ambient temperature of $73 \pm 9^\circ\text{F}$ ($23 \pm 5^\circ\text{C}$) for at least 1 h prior to testing. Testing shall then be conducted within this temperature range.

4.5 All testing required by this specification shall be conducted on the same unit.

5. General Requirements

5.1 *Sharp Points and Edges*—There shall be no hazardous sharp points or sharp edges as defined by 16 CFR 1500.48 and 16 CFR 1500.49 before and after testing to this specification.

5.2 *Small Parts*—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 *Surface Coatings*—The paint or surface coating on the product shall comply with 16 CFR 1303.

5.4 *Wood Parts*—Prior to testing, any exposed wood parts shall be smooth and free from splinters.

5.5 *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 use positions.

6. Performance Requirements

6.1 *Protective Components*—If a child can grasp protective components between the thumb and forefinger, or teeth, such as caps, sleeves, or plugs used for protection from sharp edges, points, or entrapment of fingers or toes, or if there is at least a 0.040-in. (1.00-mm) gap between the protective component and its adjacent parent component, such protective component shall not be removed when tested in accordance with 7.1.

6.2 *Structural Integrity*—When tested in accordance with 7.2, there shall be no breakage of the unit, nor shall it fail to conform with any other requirements in this specification before and after all testing.

6.3 *Stability*—When tested in accordance with 7.3, the unit shall not tip over.

6.4 *Barriers*:

6.4.1 Barriers shall be provided as an integral part of the changing table or by means of an additional item, for example, changing pad that shall be affixed to the changing table.

6.4.2 For changing tables with a flat changing surface, barriers shall be provided on all sides of the changing surface.

6.4.3 Changing tables with a contoured changing surface shall have barriers on two opposing sides.

6.4.4 When tested in accordance with 7.4, barriers shall prevent the test cylinder from falling from the table and shall not break or fail to conform with the requirements of Section 5.

6.5 *Entrapment in Enclosed Openings*—When tested in accordance with 7.5, there shall be no completely bounded openings (openings surrounded by a boundary on all sides) anywhere in the structure of a changing table that permit the free passage of the torso probe shown in Fig. 5 unless they also permit the free passage of the 9.0-in. (229-mm) diameter probe shown in Fig. 6.

6.6 *Entrapment by Shelves*—When tested in accordance with the procedure in 7.6, any shelf above 4.3 in. (109 mm) from the floor that, because its movement may expose an opening that could entrap a child’s head, shall not permit the entire passage of the small head probe shown in Fig. 7 through the exposed opening. Excluded from this requirement are pullout drawers and shelves enclosed within a cabinet equipped with a door(s).

7. Test Methods

7.1 *Removal of Protective Components*—Protective components shall be tested in accordance with each of the following methods in the sequence listed.

7.1.1 *Torque Test*:

7.1.1.1 Gradually apply a torque of 3 lbf-in. (0.3 N-m) within a period of 5 s in a clockwise direction until either the component rotates 180° from the original position or a torque of 3 lbf-in (0.3 N-m) is attained. The torque or maximum rotation shall be maintained for an additional 10 s. The torque shall then be removed and the protective component permitted to return to a relaxed condition. This procedure shall then be repeated in a counterclockwise direction.

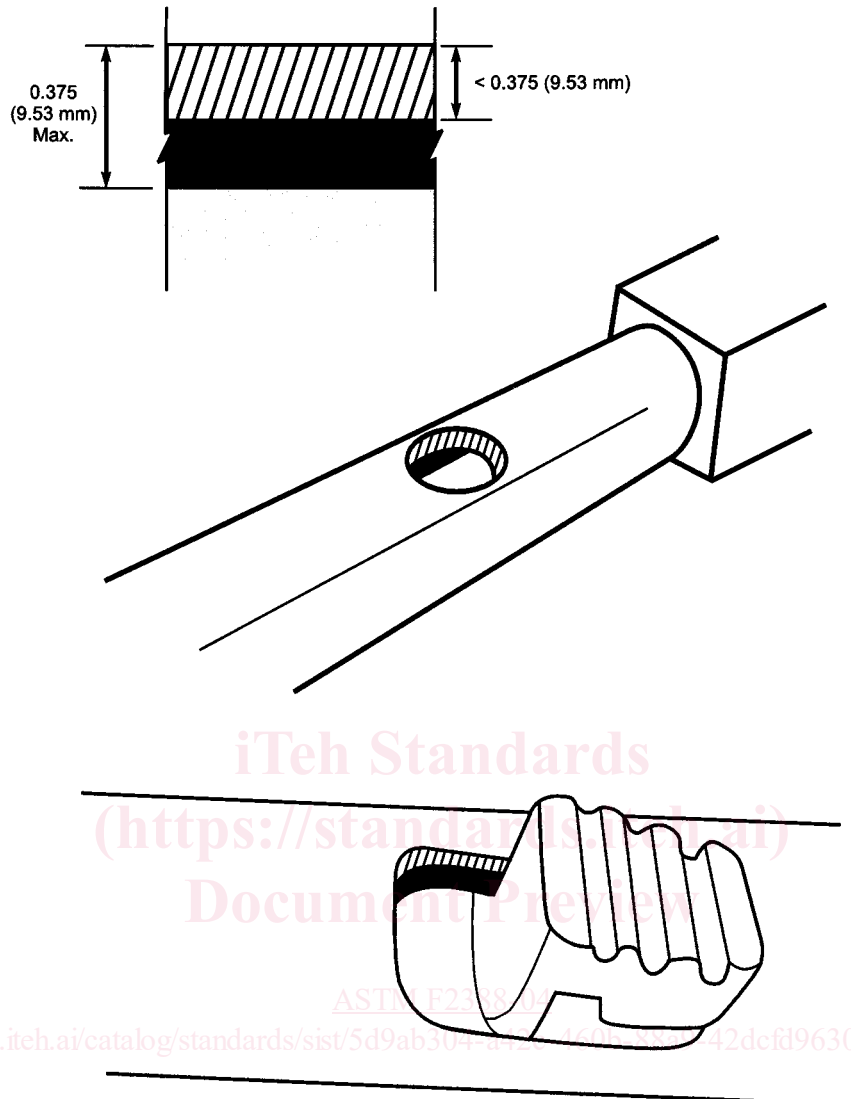


FIG. 1 Opening Examples

7.1.2 *Tension Test:*

7.1.2.1 Attach a force gage to the cap, sleeve or plug by means of any suitable device. For protective components that cannot reasonably be expected to be grasped between thumb and forefinger or teeth on their outer diameter but have a gap of at least 0.040 in. (1.00 mm) between the rear surface of the protective component and the structural member of the changing table to which they are attached, a clamp such as the one shown in Fig. 2 may be a suitable device.

7.1.2.2 Assure that the attachment device does not compress or expand the protective component so that it hinders any possible removal.

7.1.2.3 Gradually apply a 15-lbf (67-N) force in the direction that would normally be associated with the removal of the protective component over a 5-s period and hold for an additional 10 s.

7.2 *Structural Integrity*—Assemble the unit in accordance with the manufacturer’s assembly instructions. Place the unit

on the test floor, center a 6 by 6 in. (150 by 150 mm) wood block on the changing surface and gradually apply a 100 lb (45.4 kg) weight on the wood block within a period of 5 s. Maintain the weight for an additional period of 60 s.

7.3 *Stability*—Remove the changing pad if it is detachable. Gradually apply a 45-lbf (200-N) vertically downward force to the edge of the changing surface that is deemed most likely to cause tipping. The force shall be applied to the center of a load distribution block (see Fig. 3) fabricated from a rigid material 3/4-in. (19-mm) wide by 3/4-in. (19-mm) thick by 3-in. (80-mm) long. The force shall be applied with the 3-in. (80-mm) dimension of the block aligned with the edge of the changing surface (see Fig. 3). The force shall be applied gradually within a period of 5 s and maintained for an additional 10 s.

7.4 *Barriers:*

7.4.1 *Test Equipment:*

7.4.1.1 Rigid cylinder with a diameter of 8 in. (200 mm), a length of 12 in. (300 mm), and a mass of 33 lb (15 kg).