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Standard Consumer Safety Performance Specification for Diaper Changing Tables for Commercial Use[1]

This standard is issued under the fixed designation F2285; 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.

~~ε^1 NOTE—Editorial changes made throughout in August 2016.~~

INTRODUCTION

This safety performance specification addresses diaper changing tables for use in commercial environments.

The CPSC identified the following injuries to children associated with the use of diaper changing tables in the residential environment: falls, stability, restraint systems, latches and folding mechanisms, structural integrity, and deaths due to entrapment in openings. In response to the incidents data developed by the CPSC, this safety performance specification attempts to minimize the previously listed problems. This specification does not cover tables that are blatantly misused, although warnings and safety instructions are required to be prominently displayed on or with each table.

This consumer safety performance specification is not intended to address incidents and injuries resulting from the interaction of other persons with children on tables or incidents resulting from unforeseeable abuse or misuse.

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

1. Scope

1.1 This consumer safety specification establishes safety performance requirements, test methods, and labeling requirements to minimize the hazards to children presented by diaper changing tables as identified in the introduction.

1.2 This specification is intended to apply to diaper changing tables for commercial use. It is intended for use with children up to 3.5 years of age and weighing less than 50 lbs.

1.3 No diaper changing table produced after the approval date of this consumer safety performance specification shall, either by label or other means, indicate compliance with this specification unless it conforms to all requirements herein.

1.4 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.

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[1] This specification is under the jurisdiction of ASTM Committee F15 on Consumer Products and is the direct responsibility of Subcommittee F15.50 on Baby Changing Tables - Commercial.

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1.5 The following precautionary caveat pertains only to the test method portion, Section 7, of this consumer safety 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~~ safety, health, and ~~health~~environmental practices and determine the applicability of regulatory limitations prior to use.*

1.6 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*[2]

D3359 Test Methods for Rating Adhesion by Tape Test

2.2 *Federal Standards:*[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 Tests 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

2.3 *ANSI Standard:*

ANSI Z535.4 American National Standard for Safety Signs and Labels[4]

2.4 *Other Documents:*

CAMI Infant Dummy, Mark II (see Fig. 1)[5]

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

FIG. 1 CAMI Dummy, Mark II

[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. Government Printing Office Superintendent of Documents, 732 N. Capitol St., NW, Mail Stop: SDE, Washington, DC 20401, http://www.access.gpo.gov.

[4] Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, http://www.ansi.org.

[5] Available from Department of Transportation Memorandum Report AAC-119- 74-14, Revision II, Drawing No. SA-1001 by Richard Chandler, July 2, 1974. Federal Aviation Administration, Civil Aeromedical Institute, Protection and Survival Laboratory, Aeromedical Center, Oklahoma City, OK 73125.

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

3.1.2 *manufacturer's recommended use position, n*—any position, which is presented as a normal, allowable, or acceptable configuration for use of the product 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.

3.1.3 *static load, n*—a vertically downward load applied by a dead weight or other means.

4. General Testing Requirements

4.1 All testing shall be conducted on a concrete floor that may be covered with ⅛-in. (3-mm) thick vinyl floor covering, unless test instructs differently.

4.2 The unit 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.

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

5. General Requirements

5.1 The unit shall conform to the federal regulations specified in section 2.2 of this specification both before and after all testing.

5.2 Before and after testing, any exposed parts shall be smooth and free of splinters.

5.3 *Latching Mechanisms*—Any unit that folds, and will not remain in the open position without force being applied to it, shall have a latching device or other provision in the design that will prevent the unit from unintentional folding when properly placed in the manufacturer's recommended use position. Products with latching devices for prevention of unintentional folding shall be tested in accordance with 7.1. During and upon completion of this test, the unit shall remain latched in its manufacturer's recommended use position.

5.4 *Openings*—Any shaped holes, slots, or cracks that exist in or around the table that is in its manufacturer's recommended use position and that are accessible to the toes or fingers of the occupant, through or recessed, or both, into the surface of any rigid material that admit a 0.210-in. (5.33-mm) diameter rod, also shall admit a 0.375-in. (9.53-mm) diameter rod. Openings that have a minimum dimension between ~~0.210 in.~~ 0.210 in. and 0.375 in. shall be permissible, providing the depth is no greater than the minimum dimension of the opening.

5.5 *Scissoring, Shearing, Pinching, Crushing*—The table, when in the manufacturer's recommended use position, and parts that are accessible to the toes or fingers of the occupant in the table, shall be designed and constructed to prevent injury from any scissoring, shearing, or pinching when members or components rotate about a common axis or fastening point, slide, pivot, fold, or otherwise move relative to one another. Scissoring, shearing, or pinching exists when the edges of the rigid parts admit a probe greater than 0.210-in. (5.33-mm) diameter and less than 0.375-in. (9.53-mm) diameter at any accessible point throughout the range of motion of such parts.

5.6 *Labeling*—Decorative labels, warning labels, or warnings applied directly onto the surface of the product by hot stamping, heat transfer, printing, or wood burning, etc., shall be permanent when tested in accordance with 7.4.

5.7 The forces that are to be applied to the sample in the test methods of this specification are applied readily by means of a calibrated force gage, or in the case of static load and dynamic load test methods, by calibrated weights.

6. Performance Requirements

6.1 *Static Load:*

6.1.1 A table shall support a static load of 100 lb (45.5 kg) when placed in the approximate center of the area intended to support the infant occupant.

6.1.2 Test methods shall be performed in accordance with 7.2. At the conclusion of the test method, there shall be no unacceptable conditions as identified within this specification (see Note 1).

NOTE 1—For the purpose of this specification, the unacceptable conditions that might be identified by the static load test methods shall be tip over, collapse of the product or a component of the product, sharp edges or points, and small parts.

6.2 *Restraining System*—All products covered by this specification must have a child restraint system. The manufacturer shall attach the restraint system in such a manner that it will not become detached through normal usage. The restraint system shall include a waist restraint.

6.2.1 *Restraining System*—Test methods for all restraining systems shall be in accordance with 7.3. The closing mechanisms shall not part or slip more than 1 in. (25 mm). The anchorages shall not separate from their attachment points. At the end of the tests, the CAMI dummy shall not be released fully.

6.3 *Protective Components*—If a child can grasp 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 component and its adjacent parent component, such component shall not be removed when tested in accordance with 7.5.

6.4 *Edges*—All products covered by this specification must have either a contoured surface or barriers designed to assist in occupant retention.

7. Test Methods

7.1 *Latching Mechanisms for Prevention of Unintentional Folding:*

7.1.1 Erect the product in accordance with the manufacturer's instructions, and gradually place a 5-lb (2.3-kg) weight (similar to a 5-lb bag of sugar) in the center of the supporting surface.

7.1.2 Place the product in the manufacturer's recommended use position so that the normal folding motion is not impeded.

7.1.3 Apply a force of 45 lbf (200 N) at the location normally associated with the folding action and in the direction normally associated with folding the product in accordance with the manufacturer's instructions. Gradually apply the force within 5 s and maintain for an additional 10 s.

NOTE 2—Do not apply this force on latching or unlatching means itself.

7.1.4 Repeat 7.1.3 for a total of five times within 2 min.

7.1.5 Fold the unit in accordance with the manufacturer's instructions and repeat 7.1.1 – 7.1.3 one additional time.

7.2 *Static Load Test Method:*

7.2.1 Place the product in the manufacturer's recommended use position.

7.2.2 Place the specified weight from 6.1 upon a 6 by 6-in. (150 by 150-mm) wood block ¾ in. (19 mm) thick in the unit at the location called for in 6.1. Gradually apply the weight within 5 s and maintain for an additional 60 s.

7.3 *Restraining System Integrity and Occupant Retention Test Methods:*

7.3.1 *Restraining System Integrity Test Method:*

7.3.1.1 Secure the test model so that it cannot move horizontally.

7.3.1.2 Apply a force of 45 lbf (200 N) to a single attachment point of the restraint system in the normal use direction(s) that stress would be applied to that attachment. Gradually apply the force within 5 s and maintain for an additional 10 s.

7.3.1.3 Repeat 7.3.1.2 for a total of five times with a maximum interval of 5 s between tests.

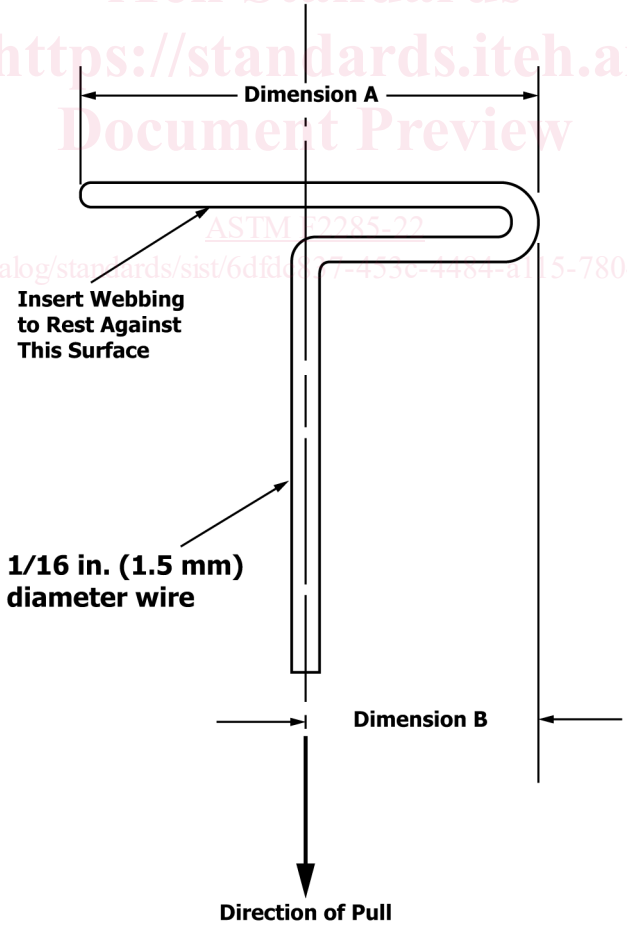
7.3.1.4 Repeat ~~7.3.1.2 and 7.3.1.3~~7.3.1.2 and 7.3.1.3 for each attachment point of the restraint system and fastening device.

7.3.2 *Restraining System Occupant Retention Test Method:*

7.3.2.1 Place a CAMI Infant Dummy, Mark II (see Fig. 1) in the test unit with the restraining system fastened in accordance with the manufacturer's instructions. Tighten the restraining system in such a manner that a force of 2 lbf (9 N) or less will provide at least a ¼-in. (6-mm) space between the restraint system and the dummy. The webbing tension pull device shown (Fig. 2) is required to determine proper restraint system fit. Perform the following tests without readjusting the restraint system.

7.3.2.2 Apply a pull force of 45 lbf (200 N) horizontally on the approximate centerline of either leg of the dummy (at the ankle). Gradually apply the force within 5 s and maintain for an additional 10 s.

7.3.2.3 Repeat 7.3.2.2 for a total of five times with a maximum interval of 5 s between tests.



Note 1—Dimension A: Width of webbing plus ⅛ in. (3 mm).
Note 2—Dimension B: One half of Dimension A.

FIG. 2 Webbing Tension Pull Device