Designation: F 2012 – 00a

Standard Consumer Safety Performance Specification for Stationary Activity Centers[1]

This standard is issued under the fixed designation F 2012; 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 performance specification is intended to mitigate potential safety hazards associated with a child's use of a stationary activity center and thereby minimize the risk of injury or death. The specific hazards addressed by this specification are seat strength to support the occupant, product tip over, openings for finger entrapment and small parts.

1. Scope

1.1 This consumer safety performance specification covers performance requirements, test methods and marking requirements to promote safe use of a stationary activity center by an occupant.

1.2 This consumer safety performance specification is intended to minimize the risk of incidents to an occupant resulting from normal use and reasonably foreseeable misuse or abuse of a stationary activity center.

1.3 No stationary activity center 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 contained herein.

1.4 This consumer safety performance specification is not intended to address incidents and injuries resulting from the interaction of other persons with the child occupant in the stationary activity center or the incidents resulting from abuse and misuse by children able to walk.

1.5 The test values in inch-pound units stated in this Consumer Safety Specification are to be regarded as the standard. The metric values in parentheses are given for information only.

1.6 The following precautionary caveat pertains only to the test method portion, Section 7, of this consumer safety performance 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:*

D 3359 Test Methods for Measuring Adhesion by Tape Test[2]

F 963 Consumer Safety Specification on Toy Safety[3]

2.2 *Federal Regulations:*

16 CFR 1303 Ban of Lead-Containing Paint and Certain Consumer Products Bearing Lead-Containing Paint[4]

16 CFR 1500 Hazardous Substances Act Regulations including sections:[4]

1500.18(a)(6) Banned Toys and Other Banned Articles Intended for Use by Children

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

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

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

15.00.86(a)(4) Exemptions from Classification as a Banned Article 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[4]

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 *dynamic load, n*—application of an impulsive force through free fall of a weight.

[1] This consumer safety performance specification is under the jurisdiction of ASTM Committee F15 on Consumer Products and is the direct responsibility of Subcommittee F15.17 on Carriages, Strollers, Walkers, and Stationary Activity Centers.

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[2] *Annual Book of ASTM Standards*, Vol 06.01.

[3] *Annual Book of ASTM Standards*, Vol 15.07.

[4] Available from Superintendent of Documents, US Government Printing Office, Washington, DC 20402.

NOTE 1—CAMI Infant Dummy, Mark II, 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, Aeronautical Center, Oklahoma City, OK 73125. (Note: Drawing is available from Rowley Scher Reprographics, 1216 K Street, NW, Washington, DC 20005.)

FIG. 1 CAMI Infant Dummy—Mark II

3.1.2 *manufacturer's recommended use position(s), n*—any position which 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 its literature to be unacceptable, unsafe or not recommended.

3.1.3 *nonpaper label, n*—any label material (such as plastic or metal) which either will not tear without the aid of tools or tears leaving a sharply defined edge.

3.1.4 *occupant, n*—that individual who is the intended user and is in or interacting with a stationary activity center which is set up in the manufacturer's recommended use position(s).

3.1.5 *open base stationary activity center, n*—a stationary activity center that allows the occupant's feet to contact the floor.

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

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

3.1.8 *stationary activity center, n*—a freestanding product intended to remain stationary that enables a sitting or standing occupant whose torso is completely surrounded by the product to walk, rock, play, spin or bounce, or all of these, within a limited range of motion.

4. General Testing Requirements

4.1 All testing shall be conducted on a concrete floor which may be covered with ⅛ in. (3 mm) thick vinyl floor covering, unless testing instructions specify differently.

4.2 The stationary activity center 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 stationary activity center shall conform to the regulations specified in 2.1 before and after all testing.

5.2 Any exposed wood parts shall be smooth and free of splinters before and after all testing.

5.3 *Latching or Locking Mechanisms*—Any product that folds shall have a latching or locking device or other provision in the design that will prevent the product from unintentionally folding when properly placed in the manufacturer's recommended use position(s). During and upon completion of test in accordance with 7.2, the product shall remain in its manufacturer's recommended use position(s), and the latching or locking mechanism shall remain engaged and operative after testing. For all single action locking/latching mechanisms, the mechanism shall not release with a minimum force of 10 lbf (45 N) when tested in accordance with 7.2. For all double action locking/latching mechanisms, there is no force requirement when tested in accordance with 7.2.

5.4 *Openings*—Any shaped holes, slots or cracks that exist in the product that is in its manufacturer's recommended use position(s) that are accessible through or recessed into the surface of any rigid material that admit a 0.210 in. (5.30 mm) diameter rod shall also admit a 0.375 in. (9.50 mm) diameter rod. Openings that have a minor dimension between 0.210 in. (5.30 mm) and 0.375 in. (9.50 mm) shall be permissible, providing the depth is no greater than the minor dimension of the opening.

5.5 *Scissoring, Shearing, Pinching*—The stationary activity center, when in the manufacturer's recommended use position(s), 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. (5.30 mm) diameter and less than 0.375 in. (9.50 mm) diameter at any accessible point throughout the range of motion of such parts which may cause injury.

5.6 *Exposed Coil Springs*—Any exposed coil spring which is accessible having or generating a space between coils of 0.210 in. (5.30 mm) or greater during static load testing in accordance with 7.1.2 shall be covered or otherwise designed to prevent injury from entrapment.

5.7 *Labeling*:

5.7.1 Warning labels (whether paper or non-paper) shall be permanent when tested in accordance with 7.5.1-7.5.3.

5.7.2 Warning statements applied directly onto the surface of the product by hot stamping, heat transfer, printing, wood burning, etc. shall be permanent when tested per 7.5.4.

5.7.3 Nonpaper labels shall not liberate small parts when tested in accordance with 7.5.5.

5.8 *Toys*—Toy accessories attached to, removable from, or sold with a stationary activity center, as well as their means of attachment, must meet applicable requirements of Specification F 963.

6. Performance Requirements

NOTE 1—The forces which are to be applied to the sample in the tests described in Section 7 of this standard are readily applied by means of a calibrated force gage, or in the case of static load and dynamic load tests, by dead weights.

6.1 *Structural Integrity*—All tests that cover static and dynamic loading, and occupant retention, are to be performed on the same product, sequentially and without refurbishing or repositioning of adjustment, if any. At test conclusion, there shall be no failure of seams, breakage of materials or changes of adjustments that could cause the product not to fully support the child or create a hazardous condition as defined in Section 5. Maximum slippage of adjustable features, if any, is 1 in. (25 mm).

6.1.1 *Dynamic Load*—Test in accordance with 7.1.1.

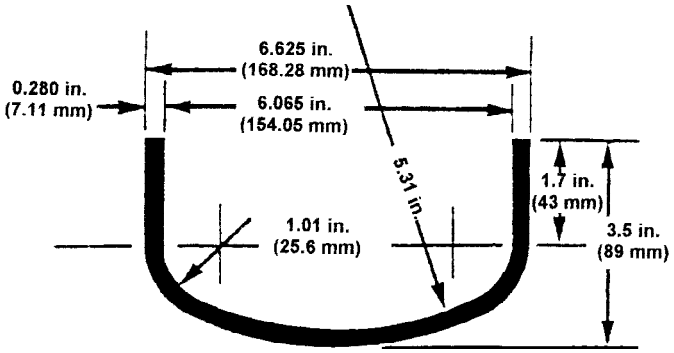
6.1.2 *Static Load*—Test in accordance with 7.1.2.

6.2 *Occupant Retention*—The seat of the stationary activity center shall be designed so that the leg openings will not permit the passage of a 6 in. (150 mm) weld cap as shown in Fig. 2 when tested in accordance with 7.1.3.

6.3 *Stability*:

6.3.1 *Occupant Leaning Over Edge*—A stationary activity center shall remain upright i.e. not tip over, when weights are applied to the front, side and rear in accordance with 7.3.

6.4 *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 7.4.



NOTE 1—Caps furnished to ANSI standards unless otherwise specified. Welding caps are formed from steel plate and are ellipsoidal in shape. The minor axis being equal to one half the major axis radii "R" and "r" closely approximate the actual semi-ellipsoidal shape. All dimensions in inches and are in accordance with ANSI B16.9.

FIG. 2 Nominal 6-in. Weld Cap Weight (Approximately) 6.4 lb (2.90 kg)

6.5 *Motion Resistance for Open Base Stationary Activity Center*—The open base stationary activity center shall not move more than 1.0 in. (24.4 mm) in the direction of the applied force from its original position when tested in accordance with 7.6.

7. Test Methods

NOTE 2—Except for the Structural Integrity tests in 7.1, which shall be performed first, the tests can be performed in any sequence.

7.1 *Structural Integrity*:

7.1.1 *Dynamic Load*:

7.1.1.1 Position the stationary activity center in the manufacturer's recommended use position. If adjustable, adjust to the highest and most upright position.

7.1.1.2 Affix to the stationary activity center seat a 6 by 6 in. (150 by 150 mm) wood block ¾ in. (19 mm) thick. If the unit has a hammock type seat, use a standard 6 in. (150 mm) weld cap, convex surface down, as identified in Fig. 2, attached to the bottom of the test weight.

7.1.1.3 Drop a test weight of 33 lb (15 kg), with the mass of the weld cap shown in Fig. 2 included, onto the seat at least a distance of 1 in. (25 mm) one hundred times.

7.1.1.4 When testing a spring supported adjustable stationary activity center, test with the product in the highest adjustment position and support the frame so that the dropping of the 33 lb (15 kg) weight does not cause the seat to bottom out.

7.1.2 *Static Load*:

7.1.2.1 Position the stationary activity center as in 7.1.1.1.

7.1.2.2 Center a weight of 90 lb (41 kg) for a period of 1 min on a 6 by 6 in. (150 by 150 mm) wood block ¾ in. (19 mm) thick affixed to the stationary activity center seat. If the unit has a hammock type seat, use a standard 6 in. (150 mm) weld cap, convex surface down, as identified in Fig. 2 instead of the specified wood block. Make weight allowance for the weld cap. If the natural action of a bouncer type stationary activity center allows the seat to contact the floor and will not allow the full application of the 90 lb (41 kg) static load, then restrict the bouncer mechanism by any means possible so that the full static load can be applied to the seat or section of the stationary activity center occupied by the child. Inspect the action of all supporting, locking and adjusting components to assure that they do not create a hazardous condition as defined in Section 5.

7.1.2.3 Position the stationary activity center in the manufacturer's recommended use position. If adjustable, adjust to the lowest position.

7.1.2.4 Center a weight of 50 lb (22.7 kg) for a period of 1 min on a 6 by 6 in. (150 by 150 mm) wood block ¾ in. (19 mm) thick affixed to the stationary activity center seat. If the unit has a hammock type seat, use a standard 6 in. (150 mm) weld cap, convex surface down, as identified in Fig. 2 instead of the specified wood block. Make weight allowance for the weld cap. In this test, DO NOT restrict the bouncer mechanism from folding or bottoming out. Inspect the action of all