Designation: F1169 – 19

Standard Consumer Safety Specification for Full-Size Baby Cribs[1]

This standard is issued under the fixed designation F1169; 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 crib incidents that were identified by the U.S. Consumer Product Safety Commission (CPSC).

CPSC received reports of strangulations incidents associated with crib corner post extensions and incidents concerning failure of crib hardware and other structural components of cribs that also resulted in fatalities.

In response to the incident data collected by the CPSC, this consumer safety specification attempts to minimize the risk of injury or death due to: failure of mattress support hardware, failure of glued or bolted connections, side latch failure, and dislodgment of teething rails. This safety specification also addresses incidents associated with poor maintenance or assembly by means of requirements for the contents of instructional literature that must accompany a crib.

1. Scope

1.1 This consumer safety specification establishes performance requirements and test procedures to determine the structural integrity of full-size cribs. It also contains design requirements addressing entanglement on crib corner post extensions, and requirements for warning labels and instructional material. It also covers bassinet, changing table, or similar accessories to a crib that when in the manufacturer's recommended use position are in the occupant retention area. These accessories shall also comply with the applicable requirements of the ASTM International standards addressing those accessories. For example, a changing table that attaches to a crib shall also comply with the applicable requirements in Consumer Safety Specification F2388. This specification does not cover inflatable products.

1.2 No crib 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.

1.3 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.

1.4 The following safety hazards 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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.5 *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

F963 Consumer Safety Specification for Toy Safety

F2388 Consumer Safety Specification for Baby Changing Products for Domestic Use

2.2 *Federal Standards:*[3]

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

16 CFR 1500.3 Definitions

[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 the Consumer Product Safety Commission, Washington, DC 20207.

16 CFR 1500.44 Method for Determining Extremely Flammable & Flammable Solids

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

2.3 *European Standard:*[4]

EN 716 Furniture - Children's cots and folding cots for domestic use

3. Terminology

3.1 *accessory, n*—component with a rigid frame such as a bassinet or changing table that attaches to or rests on a crib in the occupant retention area only and that because of its structure, location, or movement, may expose crib occupant to an opening presenting an entrapment hazard.

3.1.1 *Discussion*—It does not include (*1*) items that hang outside the occupant retention areas, such as organizers and storage bags; (*2*) canopies that have no rigid frame members running alongside any top rail; (*3*) components that attach only to another accessory and not directly to the crib; (*4*) dressing tables and bassinets that are attached to the crib and outside the occupant retention area; or (*5*) toy accessories covered under 5.11.

3.2 *cord, n*—length of slender flexible material including monofilaments, rope, woven and twisted cord, plastic and textile tapes, ribbon, and those materials commonly called string.

3.3 *dynamic load, n*—application of an impulsive force by a free falling mass.

3.4 *folding side, n*—a side, or a part thereof, that is intended to fold or pivot with respect to the frame when the product is in the manufacturer's recommended use position to provide easier access to the occupant.

3.5 *full-size crib, n*—a bed that is designed to provide sleeping accommodations for an infant that is intended for use in the home and is within a range of ±2 in. (±5.1 cm) of the interior length or width dimensions specified for full-size baby cribs in 5.7.

3.5.1 *Discussion*—Cribs having an interior length dimension either greater than 55 in. (139.7 cm) or smaller than 49 ¾ in. (126.3 cm), or an interior width dimension greater than 30 ⅝ in. (77.7 cm) or smaller than 25 ⅜ in. (64.3 cm), or both, are considered non-full-size cribs and do not fall within the scope of this specification.

[4] Available from European Committee for Standardization (CEN), 36 rue de Stassart, B-1050, Brussels, Belgium, http://www.cenorm.be.

3.6 *key structural elements, n*—side assemblies, end assemblies, mattress supports, or stabilizing bars which create the occupant retention area.

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

3.8 *mattress support system, n*—those components of a bed structure that are intended for a mattress to rest upon.

3.9 *moveable side, n*—top portion of an otherwise stationary side that is intended to move with respect to the frame (other than a folding side) when the product is in the manufacturer's recommended use position to provide easier access to the occupant.

3.10 *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.

3.11 *occupant, n*—that individual who is in the product when it is setup in one of the manufacturer's use positions.

3.12 *occupant retention area, n*—any area designated by the manufacturer as being the recommended sleeping area for the occupant of the product.

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

3.14 *stationary side, n*—a side or end panel that is not intended to fold, slide or move with respect to the frame when the product is in the manufacturer's recommended use position.

3.15 *strap, n*—piece of flexible material of which the width is significantly greater than the thickness.

3.16 *structural failure, n*—damage to a component(s) or assembly resulting in partial separation (greater than 0.040 in. (1.00 mm) over original configuration), or complete separation of the component(s) or assembly.

4. Calibration and Standardization

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

4.2 The crib 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 item to be tested shall be in a room with ambient temperature of 73.4 ± 9°F (23 ± 5°C) for at least 24 h prior to testing. Testing shall then be conducted within this temperature range.

5. General Requirements

5.1 Before performing any of the tests in this specification all wood parts shall be smooth and free of splinters.

5.1.1 All wood parts shall be free from splits, cracks, or other defects that might lead to structural failure.

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

5.3 *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.

5.4 *Corner Posts:*

5.4.1 No corner post assembly shall extend more than 0.06 in. (1.50 mm) above the upper edge of an end or side panel, whichever is higher, when measured from the lowest point on the upper edge of the end or side panel within 3 in. (76 mm) from the outermost contour of the post or elbow (see Fig. 1).

5.4.1.1 This requirement applies when any moveable side/folding side is in either the raised or lowered position.

5.4.2 The limitations in 5.4.1 do not apply to a corner post assembly that extends at least 16 in. (400 mm) above the uppermost surface of the side rail in its highest position.

5.4.3 Corner posts intended to accept removable vertical extensions made up of two or more segments (such as canopy post extensions) shall not permit the attachment of individual segments such that the resultant vertical extension would be in violation of the dimensional requirements of 5.4.

5.5 *Slat Construction*—Slats shall not contain any lateral/transverse joints such as finger-joints, and other means of joining pieces of lumber end-to-end are not permitted.

5.6 *Crib Side Configurations:*

5.6.1 Cribs with side(s) having movable components intended to aid in access to the occupant shall have those sides rigidly attached to the crib ends and contain no movable section less than 20 in. (51 cm) above the top of the mattress support in its lowest adjustable position.

5.6.2 Cribs with only stationary sides shall meet the following criteria: The height of the uppermost surface of any top horizontal rail shall be at least 15 in. (38 cm) above the top surface of the mattress support in its highest adjustable position.

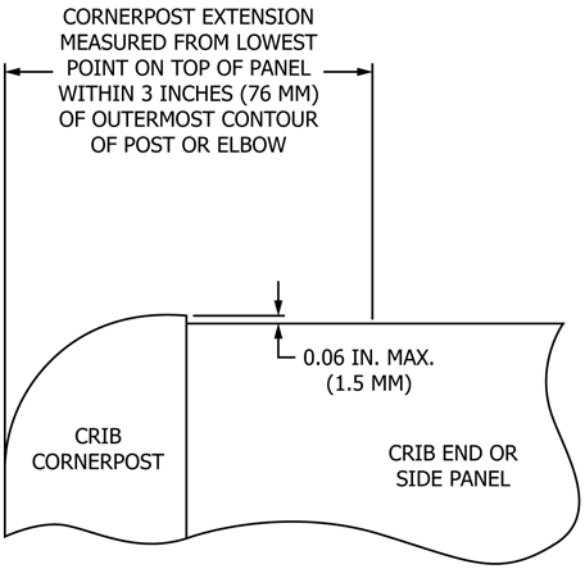

FIG. 1 Illustration of Requirements for Crib Corner Post Extensions

5.6.3 Should any adjacent sides of a crib that have slats or spindles have a height difference between their top rails of more than 6 in. and either of their top rails are less than 40 in. (102 cm) high as measured from the top of the mattress support in its lowest position to the top of the sides, then the higher of the two sides may not have a toe hold (as defined in 5.9) that is located more than 6 in. (15 cm) below the top of the side. The height difference shall be measured within 6 in. (15 cm) of the intersection of the two sides. This provision does not apply to folding or moveable sides. The top horizontal rail of an adjacent side shall not be considered a toe hold. This provision does not apply to toe holds located less than 3 in. (7.6 cm) from the top of the mattress support in its lowest position as allowed in 5.9.

5.7 *Full-Size Baby Cribs—Dimensions:*

5.7.1 The interior dimensions shall be 28 ± ⅝ in. (71 ± 1.6 cm) wide as measured between the innermost surfaces of the crib sides and 52 ⅜ ± ⅝ in. (133 ± 1.6 cm) long as measured between the innermost surfaces of the crib end panels, slats, rods, or spindles. Both measurements are to be made at the level of the mattress support in each of its adjustable positions and no more than 2 in. (5 cm) from the crib corner posts or from the first spindle to the corresponding point of the first spindle at the other end of the crib. If a crib has contoured or decorative spindles, in either or both of the sides or ends, the measurement shall be determined from the largest diameter of the first turned spindle within a range of 4 in. (10 cm) above the mattress support in each of its adjustable positions, to a corresponding point on the first spindle or innermost surface of the opposite side of the crib.

5.7.2 *Rail Height*—The rail height dimensions shall be as follows:

5.7.2.1 The height of the rail and end panel as measured from the top of the rail or panel in its lowest position to the top of the mattress support in its highest position shall be at least 9 in. (22.8 cm).

5.7.2.2 The height of the rail and end panel as measured from the top of the rail or panel in its highest position to the top of the mattress support in its lowest position shall be at least 26 in. (66 cm).

5.8 *Spacing of Crib Components:*

5.8.1 The distance between components (such as slats, spindles, crib rods, and corner posts) shall not be greater than 2 ⅜ in. (6 cm) at any point. Measurement of distance between contoured or irregular slats or spindles shall be done by a 2 ⅜-in. wide by 4-in. high by 4-in. long (6-cm wide by 10-cm high by 10-cm long) rectangular block that shall not pass through the space.

5.8.2 The distance between such components shall not exceed 2 ½ in. (6.3 cm) when a 20-lb (9-kg) direct force is applied in accordance with the test method in 7.8. For contoured or irregular slats or spindles, the spacing shall not permit passage of a 2 ½-in. wide by 3 ¼-in. high by 3 ¼-in. long (6.3-cm wide by 8.2-cm high by 8.2-cm long) rectangular block above and below the loading wedge when a 20-lb (9-kg) direct force is applied in accordance with said test method.

5.9 *Toe Holds*—Crib end panels and sides or any attachment thereto shall have no horizontal bar, ledge, projection, or other