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Standard Consumer Safety Specification for Baby Monitors¹

This standard is issued under the fixed designation F2951; 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 corded baby monitors that were identified by the U.S. Consumer Product Safety Commission (CPSC).

Incidents identified by the CPSC and addressed in this consumer safety specification include strangulations as a result of entanglement in cords.

This consumer safety specification is not intended to address corded monitors that are either blatantly misused or abused. This consumer safety specification is written within current state-of-the-art technology and is intended to be updated if substantive information becomes available that necessitates additional requirements or justifies revision of existing requirements.

1. Scope

1.1 This consumer safety specification establishes requirements for corded baby monitors, including audio monitors, video monitors, and motion sensor monitors. It also provides requirements for labeling, instructional material and packaging.

1.1.1 This consumer safety specification is intended to minimize injuries to children resulting from normal usage and reasonably foreseeable misuse or abuse of baby monitors.

1.2 No product 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 applicable requirements contained herein, before and after all testing.

1.3 *Units*—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 *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](#)

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: 1500.3 \(c\) \(6\) \(vi\) Definition of “Flammable Solid”](#)

¹ This specification is under the jurisdiction of ASTM Committee F15 on Consumer Products and is the direct responsibility of Subcommittee F15.68 on Baby Monitors. Current edition approved Aug. 1, 2013; July 1, 2018. Published September 2013; July 2018. Originally approved in 2012. Last previous edition approved in 2012 as F2951 – 12; F2951 – 13. DOI: 10.1520/F2951-13; 10.1520/F2951-18.

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.

1500.48 Technical Requirements for Determining a Sharp Point In Toys and 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

1500.53 Test Methods for Simulating Use and Abuse of Toys and Other Articles Intended for Use by Children Over 36 but Not Over 96 Months of Age

2.3 *ANSI/UL Standard*.⁴

[ANSI/UL 62368-1 Audio/video, information and communication technology equipment – Part 1: Safety requirements](#)

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 *conspicuous, adj*—describes a label that 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 *cord, n*—External Power Supply (AC adapter) or other electrical cords which are connected to the monitor.

3.1.2.1 *Discussion*—

Additionally, any non-electrical cords such as a length of slender, flexible material including monofilaments, woven and twisted cord, rope, plastic textile tapes, ribbon, and those fibrous materials commonly called string.

3.1.3 *corded monitor, n*—monitor that uses a cord or one that has an option to use a cord.

3.1.4 *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.

3.1.4.1 *Discussion*—

This specifically excludes positions that the manufacturer shows in a like manner in its literature to be unacceptable, unsafe, or not recommended.

3.1.5 *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.

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

3.1.7 *paper label, n*—any label material that tears without the aid of tools and leaves a fibrous edge. [8/astm-f2951-18](#)

3.1.8 *protective covering, n*—rigid shielding, rigid encasement, or other means of enclosing a cord.

4. Calibration and Standardization

4.1 The unit shall be completely assembled, unless otherwise noted, in accordance with the manufacturer’s instructions.

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

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

5. General Requirements

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

5.2 Corded monitors shall provide warnings to instruct consumers not to place a baby monitor cord where it is accessible to a child, or, if intended to be attached to a crib or used within 3 ft (0.9 m) of a crib, shall have cords that are encased in a rigid protective covering to prevent access to a cord that could cause a strangulation hazard.

5.2.1 Corded monitors not intended to be attached to a crib shall have warning labels as defined in 7.2.

5.2.2 Corded monitors intended to be attached to a crib or used within 3 ft (0.9 m) of a crib shall have cords that are inaccessible to the occupant by rigid encasement, shielding, or other means. When installed according to the manufacturer’s instructions, cords shall remain inaccessible when tested to 6.1. Cords are considered accessible if, after performing these tests, any portion of the cord is exposed within 36 in. (91 cm) to the occupant retention area and can be contacted by any portion forward of the collar of the accessibility probe as described in 16 CFR 1500.48 and 16 CFR 1500.49. EXCEPTION: For units that are secured to a crib

⁴ Available from Underwriters Laboratories (UL), 2600 N.W. Lake Rd., Camas, WA 98607-8542, <http://www.ul.com>.

and the shield/enclosure extends downward to the floor, the cord is considered accessible if it can be exposed within 20 in. (51 cm) from the top of the mattress in the occupant retention area.

5.2.2.1 A protective covering provided by the manufacturer shall come assembled and attached to the cord or shall be designed such that the monitor cannot be attached to a crib rail or crib slat without the use of the protective covering over the cord. The protective covering shall comply with the requirement of 5.2.2 for accessibility.

5.3 The paint and surface coating on the product shall comply with 16 CFR 1303.

5.4 There shall be no flammable solids as defined in 16 CFR 1500.3 (c) (6) (vi) after testing in accordance with this specification.

5.5 *Warning Labels:*

5.5.1 Warning labels (whether paper or nonpaper) shall be permanent when tested in accordance with 6.2.

5.5.2 Warning statements applied directly onto the surface of the product by hot stamping, heat transfer, printing, wood burning, or other means shall be permanent when tested in accordance with 6.2.

5.6 Toy accessories included with baby monitors shall meet applicable requirements of Consumer Safety Specification F963 and shall not be attached to the baby monitor.

5.7 Battery powered baby monitors shall comply with the requirements in Annex M, Equipment containing batteries and their protection circuits, ANSI/UL 62368-1, Audio/video, information and communication technology equipment – Part 1: Safety requirements.

NOTE 1—Complete baby monitor systems that comply with ANSI/UL 62368-1 are considered to comply with this requirement.

6. Test Methods

6.1 When in the manufacturer's recommended use position, rigid shielding, rigid encasements, or other means of enclosing a cord intended to prevent accessibility to the cord shall be tested per 16 CFR 1500.53 to both a 4 in.-lb (4.6 kg-cm) torque test and a 15-lb (7-kg) tension test to any attachment point in a direction normally associated with detachment.

6.2 *Permanency of Warning Labels:*

6.2.1 A paper label (excluding labels attached by a seam) shall be considered permanent if, during an attempt to remove it without the aid of tools or solvents, it cannot be removed, it tears into pieces upon removal, or such action damages the surface to which it is attached.

6.2.2 A nonpaper label (excluding labels attached by a seam) shall be considered permanent if, during an attempt to remove it without the aid of tools or solvents, it cannot be removed or such action damages the surface to which it is attached.

6.2.3 A warning label affixed to a cord shall be considered permanent if it does not completely detach when subjected to a 10-lbf (45-N) pull force applied in any direction most likely to cause failure using a 3/4-in. (19-mm) diameter clamp surface. Gradually, apply the force over 5 s and maintain for an additional 10 s.

6.3 Adhesion test for warnings applied directly onto the surface of the product.

6.3.1 Apply the tape test defined in Test Methods D3359, Test Method B—Cross-Cut Tape Test eliminating parallel cuts.

6.3.2 Perform this test once in each different location where warnings are applied.

6.3.3 The warning statements shall be considered permanent if the printing in the area tested is still legible and attached after being subjected to this test.

7. Product Marking and Labeling

7.1 *Labeling:*

7.1.1 Each product and its retail package shall be marked or labeled clearly and legibly to indicate the following:

7.1.1.1 The name of the manufacturer, distributor, or seller and either the place of business (city, state, and mailing address, including zip code) or telephone number or both.

7.1.1.2 A code mark or other means that identifies the date (month and year as a minimum) of manufacture.

7.1.2 The markings on the product shall be permanent.

7.1.3 The warning statements on the product and retail package shall be in contrasting color(s), permanent, and san serif style font.

7.1.4 Photographs on the product, retail package, or instructions of monitors that are not intended to be attached to a crib shall support the fact that the transmitter (camera or microphone or both) and cord shall be mounted out of the reach of children. No image shall imply that a corded transmitter (camera or microphone or both) may be mounted on the crib or placed in the crib.

7.2 *Warning Statements*—For products not intended to be attached to a crib, each product's transmitter (camera or microphone or both) and receiver (parent unit) shall have a warning label. The warning label shall be permanently affixed to the cord of each unit and be placed no greater than 4 in. (10.16 cm) from the transmitter and receiver plug/jack as shown in Fig. 1.

7.2.1 The safety alert symbol and the word "WARNING" shall not be less than 0.2 in. (5 mm) high and the remainder of the text shall be in characters whose upper case shall be at least 0.1 in. (2.5 mm) high.