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Standard Consumer Safety Performance Specification for Infant Bedding and Related Accessories¹

This standard is issued under the fixed designation F1917; 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 addresses incidents associated with infant bedding and related accessories that were reported to the U.S. Consumer Product Safety Commission (CPSC). These incident reports involved entanglement or strangulation on decorative ribbons, bumper guard ties, wall hangings, fitted sheets, and threads resulting from unraveled seams. It also addresses potential suffocation on decorative pillows placed in cribs.

In response to the incident data developed by the CPSC, this consumer safety performance specification attempts to minimize the problems listed above. This effort is accomplished through the establishment of performance requirements and warning labels for infant bedding and accessories. This specification cannot prevent incidents that occur as the result of unforeseeable abuse and misuse.

NOTE—This consumer safety performance specification is not intended to address incidents and injuries resulting from the interaction of other persons with children using these products or the incidents resulting from unforeseeable abuse and misuse.

This consumer safety performance specification has been written based on current state-of-the-art softgoods technology. This consumer safety performance specification will be updated whenever substantive information becomes available.

1. Scope

1.1 This consumer safety performance specification establishes safety performance requirements, test methods, and requirements for labeling to minimize the identified hazards to children presented by infant bedding and related accessories as identified in the introduction.

1.2 No infant bedding or related accessory produced after the approval date of the consumer safety performance specification shall indicate, either by label or other means, compliance with this specification unless it conforms to all applicable requirements contained herein.

1.3 ~~The inspection and test procedures contained herein shall be used to determine the conformance of products to the requirements of this consumer safety performance specification. The relevant tests for an infant bedding product or related accessory can be done in any order, except where specified. Each test may be conducted on a different sample, unless otherwise specified. The tests can be considered as qualification tests and not necessarily as quality control tests. These tests shall also be conducted when there is a design or material change in the infant bedding or related accessory item. Each producer or distributor who represents any products as conforming to this specification may utilize statistically based sampling plans that are appropriate and shall keep such essential records as are necessary to document that all of the requirements of this specification have been met. Any test methods that are made mandatory by the CPSC, or any applicable governmental agencies, shall supersede any applicable test methods in this specification.~~

1.4 ~~These tests are intended to simulate normal use conditions, so as to ensure that hazards are not generated through normal use. The tests shall be carried out in a normal use environment. For example, bumper guards should be secured in a crib as a customer would in actual end-use situations. Ties should be tied and untied. While no specific requirements are defined here, the evaluator shall perform enough testing to simulate normal use during the estimated lifetime of the product. The infant bedding product or related accessory shall be inspected after such tests and shall be evaluated according to the relevant requirements listed within this specification.~~

1.5 ~~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 This consumer safety performance specification is under the jurisdiction of ASTM Committee F15 on Consumer Products and is the direct responsibility of Subcommittee F15.19 on Infant Bedding.

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4.6

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 method portion, Section 7.8, of this consumer safety performance specification: *This standard does not purport to address 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 *ANSI Standard:*²

ANSI Z535.4 Product Safety Signs and Labels

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 *bumper ties* attachment means, *n*—flexible ribbons, strings, and ties attached to a bumper for the purpose of attaching to a crib.

3.1.2 *flexible ribbons, strings, hook and loop straps, ties, and similar devices attached to a bumper for the purpose of attaching to a crib.*

3.1.2 *decorative components, n*—ornamental components attached to a crib bumper for the exclusive use of being a decorative component.

3.1.2.1 *Discussion*—Decorative components include, but are not limited to ribbons, strings, buttons, appliqués, embellishments, etc.

3.1.3 *fabric, n*—any woven, knit, flexible material that is intended to be sewn together as an assembly.

3.1.4 *infant bedding and related accessories, n*—includes the following items intended for use in a nursery: fitted sheets, blankets, dust ruffles, covers and drapes for canopies, pillows, mattress covers, diaper stackers, fabric wall hangings, bumper guards, headboard bumper guards, and comforters.

3.1.5 *supported vinyl, n*—calandered sheet vinyl that has been laminated or bonded to a supporting material such as nylon scrim, a polyester non-woven, or other fabric material on the back or has a supporting material integrated inside the vinyl sheet such that the material is not 100 % vinyl.

3.1.6 *unsupported vinyl, n*—a flat sheet material calandered from 100 % vinyl plastic.

4. Calibration and Standardization

4.1 The relevant tests for an infant bedding product or related accessory can be done in any order, except where specified.

4.2 Each test may be conducted on a different sample, unless otherwise specified.

4.3 If during the course of conducting tests in accordance with this specification, a test sample sustains any permanent deformation or damage, an additional test sample shall be used for the remainder of the tests unless otherwise specified.

5. General Requirements

~~4.1~~ *Ribbons, Strings, and Ties*—Ribbons, strings, and ties shall comply with the length requirements in 6.1

5.1 Attachment means on bumper guards and headboard bumper guards shall not exceed 9.0 in. (230 mm) when measured in accordance with 7.1.

4.2

5.2 Decorative components as defined in 3.1.2 shall not exceed 7 in. (180 mm) when measured in accordance with 7.1. If any decorative components can tangle to form a loop, then the perimeter of the loop shall not exceed 14 in. (360 mm) when measured in accordance with 7.1.

5.3 *Threads*—Use of monofilament thread in the construction of infant bedding and related accessories is prohibited.

~~4.3~~ ~~Bumper~~ 5.4 *Bumper guards* shall be capable of being secured at or near all corners and at the midpoints of the long sides of the crib. Bumper guards intended for circular cribs shall be capable of being secured at intervals not exceeding 26 in. (660 mm).

5.6. Performance Requirements

~~5.1~~ *Normal Use Testing*—Simulation of normal use conditions are described in 1.4.

5.2

6.1 *Unsupported Vinyls*—Unsupported vinyl shall be 0.012-in. (0.30-mm) nominal thickness or thicker gage. No minimum thickness is specified for supported vinyl. Any infant bedding or related accessory item composed entirely or in part of unsupported vinyl shall be tested in accordance with 6.3:

² Available from American National Standards Institute, 11 W. 42nd St., 13th Floor, New York, NY 10036.

6.1.1 Unsupported vinyl that is accessible to the infant when the product is installed in the manufacturer’s recommended use position shall be 0.012-in. (0.30-mm) nominal thickness or thicker gauge. No minimum thickness is specified for supported vinyl. Any infant bedding or related accessory item composed entirely or in part of unsupported vinyl shall be tested in accordance with 7.2.

5.3If during the course of conducting tests in accordance with this specification, a test sample sustains any permanent deformation or damage, an additional test sample shall be used for the remainder of the tests.

6. 6.1.2 Unsupported vinyl materials that are not accessible to the infant when the product is installed in the manufacturer’s recommended use position, such as unsupported vinyl used as a liquid barrier in a mattress cover and sandwiched between two layers of fabric are not required to be tested accordance with 7.2.

6.2 *Maximum Bumper Thickness*—For crib bumpers manufactured of fabric and filled with a natural or manmade fibrous material, each bumper section shall slide through the bumper thickness test fixture (see Fig. 1) over its entire length when tested in accordance with 7.3. The bumper shall be tested in its pre-washed state and also after three wash/dry cycles performed according to the manufacturer’s care instructions.

6.3 *Bumper Pad Tie Strength*—Following the testing specified in 7.4, a bumper pad tie shall not fully detach from the bumper pad. Partial detachment or tearing is allowed.

7. Test Methods

6.1*Ribbons, Strings, and Ties*—Flexible ribbons, strings, or ties attached to any infant bedding or related accessory item, with the exception of ties on bumper guards and headboard bumper guards, shall not exceed 7 in. (180 mm) when measured to the maximum length under a force of 5 lbf (22 N). Ribbons, strings, and ties on bumper guards and headboard bumper guards, shall not exceed 9.0 in. (230 mm). If ribbons, strings, or ties can tangle to form a loop, then the perimeter of the loop shall not exceed 14 in. (360 mm) under a force of 5 lbf (22 N).

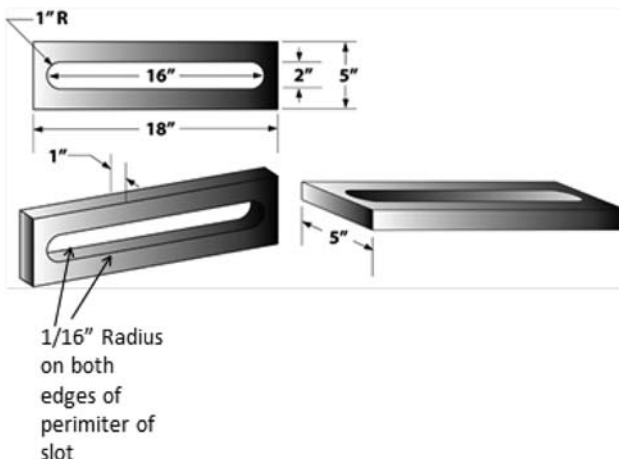
6.2*Rationale*—The neck circumference of a 5th percentile 0-3 month old infant is 7.2 in. (183 mm), as stated in the University of Michigan final report to the CPSC dated January 1986. Based on this measurement, the Infant Bedding and Related Accessories Subcommittee has mandated the maximum allowable length of flexible ribbons, strings, or ties attached to any infant bedding or related accessory item, with the exception of bumper guards and headboard bumper guards, to be 7.0 in. (180 mm). The maximum allowable length of flexible ribbons, strings, or ties, or a combination thereof, attached to bumper guards and headboard bumper guards for the purpose of securing it to a crib rail is 9 in. (230 mm). Flexible ribbons, strings, or ties of 9 in. on bumper guards and headboard bumper guards will allow the product to be sufficiently secured to the crib rails by the parent or care provider. On some cribs, shorter ribbons, strings, or ties may not allow the parent or care provider to be able to sufficiently secure the bumper guard or headboard bumper guard, or both, to the crib rail.

6.3

7.1 *Attachment Means and Decorative Components*—Measure each attachment means or decorative component when it is extended to its maximum length under a force of 5 lbf (22 N).

7.2 *Vinyl Thickness Measurement* —Using a paper micrometer, measure the thickness at four locations, one at each end and two in a location near the middle.

7. 7.3 *Bumper Thickness Test*—Align the bumper thickness test fixture so that the surface of the fixture with the opening is



Note: Test fixture shall be fabricated from aluminum and have a smooth finish

FIG. 1 Bumper Thickness Test Fixture