



April 17, 2023

TRANSMITTED VIA EMAIL

Jessica Doyle and Barbara Himes
Subcommittee Co-Chairs for ASTM Infant Feeding Supports
ASTM International
100 Barr Harbor Dr.
West Conshohocken, PA 19428-2959

RE: ASTM Ballot F15.16 (23-01), Item No. 1, WK82241—New Standard Consumer Safety Specification for Infant Feeding Supports

Dear Ms. Doyle and Ms. Himes:

Staff of the U.S. Consumer Product Safety Commission (CPSC) appreciates the ASTM Infant Feeding Supports subcommittee's efforts to develop a new voluntary standard for infant feeding supports, including nursing pillows, and the opportunity to provide comments on the associated ballot F15.16 (23-01), Item No. 1.

Staff supports the requirements included in the balloted draft voluntary standard to address known suffocation hazards associated with nursing pillows. Specifically, staff agrees that the draft standard's inclusion of the following requirements improves safety:

- Firmness requirements, applied in various locations on the top infant support surface and the inner wall of the product, to address infant suffocations by reducing the potential for the product to conform to an infant's face.
- An occupant containment requirement, using the 9-inch head probe, to address potential head entrapments in the openings of these products, while simultaneously reducing the extent to which these products provide lateral support to infants to help discourage consumers' use of nursing pillows for infant propping and lounging.
- Marking, labeling, and instructional requirements, that include a strongly worded on-product warning that places particular focus on the deadly suffocation hazard associated with consumers using nursing pillows for sleep.

Staff offers the following additional feedback on the draft voluntary standard for infant feeding supports included in ballot F15.16 (23-01), Item No. 1:

Terminology

- Section 3.1.2, which defines the term “conspicuous,” does not provide enough clarity on the circumstances under which the proposed warning must be visible. The definition also describes conspicuous as a “label,” with certain characteristics, even though the term is identified as an adjective. Staff recommends that the subcommittee consider the following alternative definition: “visible, when the nursing pillow is in each manufacturer’s recommended use position, to a person while placing an infant into or onto the nursing pillow.”

Warning Permanence

- Staff believes that it is important to include a warning-permanency requirement in addition to the requirements in the draft voluntary standard that would address so-called “free-hanging” labels on infant feeding supports; that is, labels that attach to the product at only one end of the label. Warning labels that are attached in this way are more likely to be torn or ripped off, or otherwise altered by the consumer, which would eliminate the potential safety benefit of the warning for future use of the product. Specifically, staff recommends adding the following additional requirement: “5.8.4 Warning labels that are attached to the fabric of infant feeding supports with seams shall remain in contact with the fabric around the entire perimeter of the label, when the product is in all manufacturer-recommended use positions, when tested in accordance with 7.1.3.”

Firmness

- Section 6.3, which is the proposed performance requirement for firmness, describes an allowable limit on the amount of deflection, in inches. However, the associated test method in section 7.4 (not 7.5, as misidentified in the proposed requirement) requires the person performing the test to take both deflection and force measurements over certain durations. For simplicity, staff suggests that the subcommittee consider revising the requirement to specify the required force (*i.e.*, greater than 10 N) when the product has deflected 1.0 inches or less. For example: “6.3.1.1 When the 3 in. (76.2 mm) diameter hemisphere is applied per 7.4, the final force measurement at any test location shall not be less than or equal to 10 N.” Alternatively, the standard could be worded to allow for either test approach.
- Section 7.4.1 specifies that the product be positioned with the intended side facing up and 7.4.3 specifies that the firmness test be performed such that the test device travels only vertically. However, firmness testing is to be performed on the inner wall of the product as well (see 7.4.4), and such testing cannot be performed with a vertically guided firmness fixture without repositioning the product. Staff recommends that the test method be revised either to specify that the product be repositioned prior to testing the inner wall of the product, or to allow for the use of a firmness test fixture whose probe is not limited to vertical-only travel.
- Section 7.4.4 is worded in a way that suggests only three locations in total are being tested for firmness on the intended use side and on the inner wall of the product. Staff recommends that the standard clarify that at least three locations are tested on each intended use side, to account for products that have more than one infant support

surface (e.g., products that can be flipped over and allow for both sides to be used to support an infant), and that at least three locations are tested on the inner wall of the product. Staff also suggests that the subcommittee consider replacing the “minimum thickness” test location with an additional “onerous” location, because areas with minimal thickness are less likely to conform to the infant’s face, and therefore, less likely to pose a suffocation hazard.

- Section 7.4.6 directs the person carrying out the firmness test to set the zero point for displacement where “the probe first touches the surface” of the product. A subjective visual-contact determination is likely to lead to inconsistencies in measurements. Staff recommends that the standard instead use an objective measure by setting the zero point for displacement when the probe achieves a force measurement of 0.1 N. This is consistent with the approach taken by Boise State University when developing their firmness test method and requirement.¹
- Section 7.4.8 appears to be missing text or to include unnecessary additional text (e.g., “until [sic] the applied force measures 10 N for at least 10 seconds.”). In addition, sections 7.4.7 and 7.4.8 require the person carrying out the test to repeatedly wait to allow the measured forces to stabilize while advancing the probe at predetermined increments along the 1-inch displacement, even if the measured force has not yet exceeded 10 N. Staff recommends that the subcommittee consider, instead, specifying a rate of approach for the probe (e.g., not to exceed 0.1 inches per 5 seconds), and to pause only when the deflection has reached 1.0 inches or the force has exceeded 10 N. If, after 10 seconds, the measured force drops to 10 N or less and the displacement has not reached a total of 1.0 inches, the probe can be advanced further in a similar manner.

Occupant Containment

- Section 7.5.3 describes applying the 9-inch head probe into the “inner arc void.” Staff suggests that the subcommittee consider replacing this phrase with “concave opening.” Staff also suggests adding a figure or diagram to clarify where the probe is to be applied.
- Section 7.5.4 says to apply 25 lbf parallel to the base of the probe. Staff is unclear in what direction the force is to be applied and why such a high force is used. Staff also is unclear how this test differs from what is specified in 7.5.3, which appears to perform a similar assessment, just in the opposite direction.

Staff looks forward to continuing to work with you and the rest of the subcommittee to ensure that the infant feeding supports voluntary standard effectively addresses the known hazards with nursing pillows.

¹ See p. 53 of Mannen, E. M., Davis, W., Goldrod, S., Lujan, T., Siddicky, S. F., Whitaker, B., & Carroll, J. (2022). *Pillows Product Characterization and Testing*. Prepared for the U.S. Consumer Product Safety Commission under contract no. 61320620D0002, task order no. 61320621F1015. Available: <https://www.cpsc.gov/content/Pillows-Product-Characterization-and-Testing>.

Sincerely,

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