



April 29, 2024

TRANSMITTED VIA EMAIL

Rachael Shagott
Subcommittee Chair for ASTM Infant Loungers
ASTM International
100 Barr Harbor Dr.
West Conshohocken, PA 19428-2959

RE: ASTM Ballot F15.21 (24-01)

Dear Ms. Shagott:

U.S. Consumer Product Safety Commission (CPSC) staff¹ appreciates the ASTM Infant Loungers subcommittee's efforts to quickly develop a new voluntary standard for infant loungers. Staff supports the primary performance requirements included in the draft standard that are intended to address known hazards.

Specifically, staff agrees that infant support cushions, including loungers, should meet specific firmness requirements, applied in various locations on the surface and intersection of surfaces on the product, to address infant suffocations by reducing the potential for the product to conform to an infant's face². Staff further agrees that these products should meet requirements that limit the side height of the product to reduce fall and suffocation hazards, and to not give the impression that the product is intended to contain the infant. Staff additionally supports a sidewall angle measurement to address the suffocation hazards from the angle between the sidewall and occupant support surface, that are not fully addressed by the firmness requirements alone. Staff also supports the proposed marking, labeling, and instructional requirements, which include a strongly worded on-product warning that places particular focus on the deadly suffocation hazard associated with the use of infant loungers for sleep.

Staff offers the following additional comments on the draft voluntary standard included in ballot F15.21 (24-01):

1. Scope

¹ The views expressed in this letter are those of CPSC staff, and they have not been reviewed or approved by, and may not reflect the views of, the Commission.

² <https://www.federalregister.gov/d/2023-27324>

For section 1.1.1. staff recommends the following revision to reflect incident data and discourage misleading remarketing to attempt to be out of scope: change “approximately 0 to 6 months of age” to “infants up to 12 months of age (i.e. 365 days).”

4. Calibration and Standardization

For clarity, section 4.1 should indicate that covers provided with the product are part of the assembled product for testing purposes. This reflects recent task group discussion.

For section 4.2, staff recommends the product be conditioned for 48 hours at 23 °C +/- 2 °C (73.4 °F +/- 3.6 °F) and a relative humidity of 50 % +/- 5% and those conditions be maintained throughout testing. The time duration is reasonable for the typically thick infant cushion products to acclimate prior to firmness testing.

6. Performance Requirements

For section 6.9.1 and 6.9.2 requirements, staff recommends that in both side angle measurements, the angle “shall be greater than 90°.” Section 6.9.2 Exterior states “shall not be less than 90°.”

For section 6.3 Occupant Support Surface Angle, staff recommends measuring the incline angle at the manufacturer’s recommended use location(s), at feasible locations such as perpendicular to the recommended use location(s), and at least one location likely to fail in which the newborn gauge seat is supported on the test surface.

7. Test Methods

For section 7.6, revise Hinged Weight Gauge- Infant to Hinged Weight Gauge- Newborn.

In 7.6.4, staff notes that there is no reference given for the ASTM Hinged Weight Gauge to align the gauge on the product in the head-to-toe direction.

Section 7.9.1, Occupant Support Surface Firmness test, staff recommends that the firmness test method include a rate of approach for the probe of 1 in. per 10 s.

For section 7.9.1.3, staff recommends the red text below that describes where to test be deleted because it appears in 7.9.1.6:

“Apply a 3in (7.62cm) diameter head probe (Fig. 14), perpendicular to the occupant support surface, aligned with a force gauge, and parallel to a distance measurement device ~~along the head-to-toe axis of the occupant support surface in both directions.~~”

For section 7.9.1.5, staff recommends changing section 7.9.1.5 to the following, in order to clarify the timing and the need to record the force. The drafted requirement does not state when the 30 s period begins or have an instruction to record the force.

“Continue to advance the head probe into the product until the displacement equals 1.00 in. (2.54 cm) or, if unable to reach 1.00 in (2.54 cm), the force exceeds 4.5 lbf (20 N). Wait 30 s and record the force.”

For section 7.9.1.6, staff recommends that testing should include at least one location most likely to fail (most onerous position).

For section 7.9.2, Sidewall Firmness test, staff recommends that the firmness test method include a rate of approach for the probe of 1 in. per 10 s.

For 7.9.2.5, staff recommends the following wording, similarly as recommended for 7.9.1.5: "Continue to advance the head probe into the product until the displacement equals 1.00 in. (2.54 cm) or, if unable to reach 1.00 in (2.54 cm), the force exceeds 4.5 lbf (20 N). Wait 30 s and record the force."

For section 7.9.2.6, staff recommends that testing should include at least one location most likely to fail (most onerous position) and that a minimum of 4 locations should be tested.

For section 7.10 Side Angle Measurement, staff agrees that the ASTM's 90-degree requirement for sidewall angle will address a suffocation hazard. However, staff recommends modifying the test method, so that (1) consistency of measurement is less affected by the typically irregular surfaces of the products, (2) angles are measured while the OSS has force applied to it that represents the infant's head weight, and (3) the 90-degree angular assessment is accomplished using the 90-degree side of the 3-in head probe, such that sidewalls that lean away from the infant's head that is resting on the OSS are safer than sidewalls that lean in and over the infant's head. Staff's recommended test method is depicted in Figure 10 of CPSC's Infant Support Cushions Notice of Proposed Rulemaking Staff Briefing Package³, in which the 90-degree angle requirement for the sidewall is assessed using the 90-degree cylindrical side of the 3-in probe, applied with a 10 N (2.2 lb) normal force and placed with the probe side tangent to the intersection of sidewall and OSS. Contact with the probe side by the product sidewall will constitute an angle equal to or less than 90 degrees and no contact will signify an angle greater than 90 degrees.

For section 7.10.1, the requirement is stated in the test method, as in "then none of the angles shall be less than 90°". Because this is the test method and not the requirement section, staff suggests instead: "then measure all of the angles."

For section 7.11, staff recommends that the test method include a rate of approach for the probe of 1 in. per 10 s.

For section 7.11.3, staff recommends deriving the angle as bisecting the angle between the OSS and sidewall, which gives a more representative angle to assess firmness between sidewall and OSS, especially for large obtuse angles.

For section 7.11.3.1, this section is not clear because it is not clear what arcs are being measured or what angle is used. Are the "multiple measurements" referring to the deflection tests?

For section 7.11.5, staff recommends the following wording: "Continue to advance the head probe into the product until the displacement equals 1.00 in. (2.54 cm) or, if unable to reach 1.00 in (2.54 cm), the force exceeds 4.5 lbf (20 N). Wait 30 s and record the force."

For section 7.11.6, staff recommends a minimum of four tests be conducted, starting at a test location of maximum sidewall height, and that the test locations include at least one location most likely to fail (most onerous position).

For section 7.12, to address hazards for the broad scope of products included in CPSC's Infant Support Cushion NPR as presenting a potential suffocation hazard, staff proposed a maximum incline angle test which limits the product to 10 degrees or less and, based on the geometry of the newborn hinged weight gauge, limits the side height of the product to approximately 1.9 inches for very firm products.

³ [Federal Register :: Safety Standard for Infant Support Cushions](#)

Staff acknowledges a different scope for this voluntary standard effort and agrees with the requirement in section 5.11 for a side height of less than 2 in.

Staff looks forward to continuing to work with you and the rest of the subcommittee to ensure that the infant loungers voluntary standard effectively addresses the known hazards with infant loungers for infants up to 12 months of age.

Sincerely,

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Physiologist
Directorate for Health Sciences

cc: Molly Lynyak, ASTM F15 Staff Manager
Don Mays, ASTM F15 Chair
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