

**SUBJECT:** ASTM F15.19 Methods for Measuring Re-Breathing Task Group

**FY 23 OP PLAN ENTRY:** Infant Bedding

**DATE OF MEETING:** 3/26/2024

**LOCATION OF MEETING:** Virtual

**CPSC STAFF FILING MEETING LOG:** Ashley Johnson (HSPP)

**FILING DATE:** 4/9/2024

**CPSC ATTENDEE(S):** Ashley Johnson (HSPP), Suad Wanna-Nakamura (HSPP), Daniel Taxier (ESME), Frederick DeGrano (ESME)

**NON-CPSC ATTENDEE(S):** Contact ASTM for the full attendee list

**Summary of Meeting:**

The subject Task Group (TG) is developing test methods to measure firmness, airflow, and carbon dioxide (CO<sub>2</sub>) re-breathing for infant products.

The TG chair began the meeting by explaining that the most recent Standard Test Method for Firmness of Infant Products ballot closed on January 18, 2024. The TG then reviewed a negative comment, which also included a proposal to re-write the test method. TG discussion centered around whether to exempt products 1 inch or less in thickness. The TG chair explained that groups working on various product safety standards can choose to include or not include an exemption. The TG chair of the Infant Loungers Performance Requirements Task Group added that their TG decided not to include a proposed exemption from firmness testing for products less than 1 inch in thickness. The rationale was that a separate test method would be required to determine thickness of a product and know whether such an exemption would apply, because a product could either vary in thickness within the product or be so close to 1 inch in thickness that it would be difficult to determine thickness without testing. The Loungers TG first discussed using a portion of the Occupant Support Surface Firmness Test. Eventually, the Loungers TG concluded that performing the entire Firmness test would be more efficient than including an exemption that required an additional test method.

The TG then discussed the ASTM Interlaboratory Study (ILS) has been initiated for the Firmness Test Method (ILS 1887, Work item 84613). The TG chair suggested that the ILS move forward before publication of the test method. Participating labs will record and analyze data from three different flat foam samples, each with a different expected level of firmness, while the group works through the voting consensus process, knowing that the test method will change if the ILS necessitates revision to the test method. Discussion centered around which products to test, and CPSC staff voiced support to begin with these samples, then move on to a more complex ILS with other products. A TG member asked for more information on ILS data reporting and test results, and the TG decided to review the data reporting form created by ILS department at a future TG meeting.

The TG next reviewed draft 23.2 of the Firmness Test Method, with a repeatability and reproducibility statement drafted by ASTM ILS Department added to the precision and bias section and images of how products with different shapes may be positioned and secured for testing added to the appendix. The TG chair requested that the TG send in comments because he would like to send out a new ballot soon.

Lastly, the TG discussed different types of handheld firmness devices, including the device used in Boise State University's 2023 "Seated Products Characterization and Testing" report. The TG discussed its utility as a screening tool for firmness of curved seating products, the advantages and disadvantages of various types of handheld firmness devices, the specifications of different types, and the similarities and differences between a handheld firmness device (type two) and the test stand firmness method (type 1).

**Next Steps:**

The TG will continue discussing draft firmness, airflow, and CO<sub>2</sub> re-breathing test methodologies at the next meeting. The next TG meeting is expected to take place on April 9, 2024.