



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

FY 24 OP PLAN ENTRY: Infant Bedding

DATE OF MEETING: 4/23/2024

LOCATION OF MEETING: Virtual

CPSC STAFF FILING MEETING LOG: Ashley Johnson (HSPP)

FILING DATE: 5/3/2024

CPSC ATTENDEE(S): Ashley Johnson (HSPP), Daniel Taxier (ESME), Frederick DeGrano (ESME), Zachary Foster (ESHF), Tim Smith (ESHF)

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 (CO₂) re-breathing for infant products.

The TG chair began the meeting by explaining that new data has been submitted to the ASTM Interlaboratory Study (ILS) department for a single-user repeatability study on nursing pillows and loungers. The TG then discussed the ILS has been initiated for the Firmness Test Method (ILS 1887, Work item 84613). Based on the previous TG discussion of the ILS study timeline regarding the publication of the Firmness Test Method, the ILS will proceed as a dual ILS study. One study will run as a faster pilot using oversimplified materials (simultaneously, using flat specimens). A full ILS (sequential, using nursing pillows and loungers) would then follow. The TG chair then stated that 50 people are on the roster for the Ad Hoc Juvenile Product Firmness and Breathability Task Group. The TG chair explained this Ad Hoc TG is designed to bring in interested parties working on various products that may want to use the Firmness Test or may soon be regulated by the Firmness Test.

The TG then discussed the advantages and disadvantages, the different specifications, and the similarities and differences when comparing a handheld firmness device (type 2) and the test stand firmness method (type 1). The TG chair asked whether type 2 testing should be added to the draft Standard Test Method for Firmness of Infant Products document (draft document). One TG member answered that she would like to see them as separate test methods because the draft document has had several rounds of ballots and data gathered from testing. The TG chair responded that the test methods, if published, could potentially be combined later.

The TG next reviewed the most recent draft document, which included revisions marked in red. Revisions included:

- The Scope section will not include specific products. Product types will go in the precision and bias section because it only applies to those product types.
- A note was added to clarify section 7.7, which now states to stop the test and record the force and displacement if the force reaches 20N and the target displacement has not been reached.
- In section 8.0 Report, the test method now states to report the average of each group of three repeat measurements at each location.
- The Rationale section now aligns with the nursing pillow rationale, citing the rationale for the 3.0 in. diameter hemisphere probe and the rationale for the firmness test from the Boise State University's 2022 Pillows Product Characterization and Testing Report.
- The TG chair additionally made small editorial changes to section numberings.



Finally, the TG briefly reviewed draft 12.2 of the Airflow Test Method. The TG chair explained that this draft Test Method has been balloted once, and one negative remains. The TG chair encouraged the TG to send in comments, especially to revisions marked in red, because he would like to send this out for ballot again soon.

Next Steps:

The TG will continue discussing draft firmness, airflow, and CO₂ re-breathing test methodologies at the next meeting. The next TG meeting is expected to take place on May 7, 2024.