United States
Consumer Product Safety Commission

MEETING LOG

SUBJECT: ASTM F15.12 CO_2 Rebreathing Task Group

FY 26 OP PLAN ENTRY: Not on the FY 26 OP PLAN

DATE OF MEETING: 6/16/2026

LOCATION OF MEETING: Virtual

CPSC STAFF FILING MEETING LOG: Ashley Johnson (HSPP)

FILING DATE: 6/24/2026

CPSC ATTENDEE(S): Ashley Johnson, Ph.D. (HSPP), Daniel Taxier (ESMC), Suad Wanna-Nakamura, Ph.D. (HSPP), Tim Smith (ESHF)

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

Summary of Meeting:

This meeting of the ASTM F15.12 CO_2 Rebreathing Task Group (TG) was led by the chair of the TG, Mike Leshner (TG chair). The purpose of this TG is to develop a test method measuring CO_2 rebreathing in infant products.

The TG chair opened the meeting by discussing a journal article[1] sent to the TG to review. The review examined the available literature investigating potential mechanisms through which bedding characteristics may influence infant breathing, identified possible relevant bedding properties as potentially hazardous, and evaluated the testing methods proposed to assess these properties and risk.

The TG next discussed a recently published Australian standard addressing CO_2 rebreathing. The TG chair explained that this standard, AS 5407.3:2026[2], published on May 5, 2026, specifies a method for assessing the risk of carbon dioxide rebreathing by an infant sleeping on or against a product. The standard also references AS 5407.1:2025[3] and AS 5407.2:2025[4], standards that address firmness in infant products.

One TG member asked if laboratories are prepared to do the necessary testing in AS 5407.3:2026. The TG chair explained that there is at least one laboratory that has the necessary test equipment, and he expects

[1] Veneroni, C., Mentasti, M., Barzanti, E. *et al.* Infant Breathing and Bedding Characteristics: Objective Tests for Evaluating Their Relationship. *Ann Biomed Eng* (2026). https://doi.org/10.1007/s10439-026-04095-9
[2] AS 5407.3:2026 | Standards Australia Store
[3] AS 5407.1:2025 | Standards Australia Store
[4] AS 5407.2:2025 | Standards Australia Store

more laboratories will be able to test in the future. CPSC staff asked if any manufacturers or laboratories in attendance plan to test to the standard, or have tested to the standard, but no feedback was immediately available.

The TG chair next outlined the test method procedure in AS 5407.3:2026 for measuring CO_2 rebreathing in infant products and explained material qualities that contribute to CO_2 rebreathing and airflow resistance. Another TG member asked what constitutes a passing test in this test method. The TG chair responded that the CO_2 limit was 9%. Following a discussion on data, the TG chair acknowledged that there is no clinical data to support pass/fail criteria, and there is not an ethical way to obtain data. The TG chair also stated he would have preferred if the standard did not have pass/fail criteria.

The TG chair closed the meeting by explaining that he would like to do an interlaboratory study measuring CO_2 rebreathing in infant products when more laboratories are equipped to test equipment.

Next Steps:

The TG chair will continue to update the TG on Australian standards development. The next meeting of the ASTM F15.12 CO_2 Rebreathing Task Group is not yet scheduled.