



MEETING LOG

SUBJECT: Helmets & Headgear – ASTM F08 May 2024 Committee Week

FY 24 OP PLAN ENTRY: Sports/Recreational Head Gear/Helmets and Sensors

DATE OF MEETING: 5/8/2024

LOCATION OF MEETING: Philadelphia Marriott Downtown (Philadelphia, Pennsylvania)

CPSC STAFF FILING MEETING LOG: Vineed Dayal (LSM)

FILING DATE: 6/5/2024

CPSC ATTENDEE(S): Vineed Dayal (in-person), Greg Ota (in-person)

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

Staff attended the ASTM F08.53, Subcommittee for Headgear and Helmets, to monitor relevant headgear voluntary standards. Summaries of the meetings attended are listed below in chronological order. For additional information contact ASTM.

F08.53 Task Group on Rotational Methodology with Head/Neck System.

This task group (TG) meeting updated members about the ongoing research efforts on developing a rotational impact test method with a head/neck system. Topics included a draft standard based on ASTM F3555-22, *Standard Test Method for Measuring Impact Attenuation Characteristics of Helmets Under Induced Rotational Loading Using an Inclined Anvil*; An update on the development of the neck bio-fidelity response corridor; and An update on the development and validation of finite element human modeling for impacts.

F08.53 Task Group on Equestrian Headgear.

This TG meeting reviewed negatives of current ballots for ASTM F1163, *Standard Specification for Protective Headgear Used in Horse Sports and Horseback Riding*. Balloted items included lowering the peak acceleration limit from 300g to 275g; adopting a chin bar rigidity test; and new requirements for visor/brim breakage. After discussing the ballots and negatives received, the TG determined that the ballots would require revision and additional review before moving forward to the main committee.

New requirements proposed by Federal Equestrian International (FEI), which include an oblique impact with linear and rotational acceleration limits, were also discussed. FEI mandates riders to wear headgear that meets its requirements at all FEI events. Members indicated that many manufacturers that comply with other international standards may already meet these requirements. However, members did express concerns that the frequency of changes to the applicable standards may be leading to market wide losses. Members also



discussed the potential of having two separate standards for competitive and recreational equestrian helmets. Members cited consumer's reluctance to wear helmets and that some prefer a cowboy hat.

The TG Chair (Chair) asked staff if there was a way to filter NEISS data for information specifically related to helmet use. Staff explained that NEISS does not specifically identify if incidents involve helmets, and that the data available is based on what is reported which may or may not include helmet related information. However, staff also notified the TG that details related to helmets can be found if reviewed on an incident-by-incident basis.

F08.53 Task Group on F1447 Helmets Used for Bicycling and Skating.

This TG meeting was held to review negatives of current ballots for ASTM F1447, *Standard Specification for Helmets Used in Recreational Bicycling or Roller Skating*, CPSC staff's suggested additions to F1447, and to assign new leadership for the TG.

One of the balloted items discussed was to adopt a low-impact test. The Chair notified the TG that based on the concerns brought up in the negatives received additional development of the test methodology would be needed before this ballot could move forward. The other ballot discussed was to lower the peak acceleration limit from 300g to 250g initially, but after receiving negatives and additional feedback it was changed to 275g as recommended by TG members. The Chair presented the three remaining negatives on this ballot to the TG. One negative presented the general concern that modifications to peak linear acceleration performance thresholds may affect rotational acceleration performance; another negative presented concerns that lowering the peak acceleration threshold would increase the thickness of helmets. The last negative indicated that a decrease to 275g was insignificant and cited other standards that have established more strenuous requirements such as 200g and 1000 HIC.

TG members discussed several topics related to the ballot's negatives during the meeting, and agreed to present the ballot at the subcommittee meeting. One of the major concerns brought up was the lack of epidemiological data to support the change. In response, the Chair explained that the desired epidemiological helmet data was not used to develop established thresholds and that desired the data does not currently exist. In order to establish the current 300g limit, SMEs at the time reviewed the available data related to the threshold of permanent brain damage (~400g) and included a "best guess" margin of safety.

The next discussion was about CPSC staff's 03/14/2024 letter, recommending the subcommittee consider including an organized test schedule and improving the warning label requirements in ASTM F1447. After the Chair explained the suggested changes, the TG members generally agreed that organizing the test schedule



into a table and harmonizing the wording of the labeling requirements would be beneficial for the standard. There was some discussion about staff's recommendation to include size and fitting instruction on the helmet. Staff clarified that the suggestion is not a requirement of the helmet regulation, and the intent is to increase the likelihood that helmets will be worn properly. The TG decided additional discussion will be needed to address concerns such as limited labeling space and consider alternatives like links or QR codes to instructional material.

The Chair announced their replacement as Chair along with their new co-Chair at the end of the meeting.

F08.53 Shirt Sleeves Meeting for Headgear.

This meeting was held to present ongoing research, data, and other topics related to headgear standards. Topics included instrumented mouthguards, rotational & helmet standard updates in Europe, mountain bike helmet impacts on compliant surfaces, biofidelic test headforms and necks, and helmet related equestrian incident data.

F08.53 Headgear and Helmets Subcommittee Meeting.

This subcommittee meeting was held to vote on the proposed ballot from the Task Group on F1447. The Subcommittee voted to find the negatives non-persuasive, and the ballot will move on to the main committee.

Next Steps:

The Committee and Subcommittees each plan to meet at the next F08 conference planned for November 12 – 14th in Orlando, FL.