United States
Consumer Product Safety Commission

MEETING LOG

SUBJECT: UL 8400 Biocompatibility Task Group Meeting on Virtual Reality (VR), Augmented Reality (AR), and Mixed Reality (MR) Technology Equipment

OP PLAN ENTRY: Wearable Technology

DATE OF MEETING: 7/23/2025

LOCATION OF MEETING: Virtual

CPSC STAFF FILING MEETING LOG: Stephen Harsanyi (ESHF)

FILING DATE: 7/25/2025

CPSC ATTENDEE(S): Brad Gordon (ESMC), John Gordon (HSTR), Stephen Harsanyi (ESHF), and Suad Wanna-Nakamura (HSPP)

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

Summary of Meeting:
The Biocompatibility Task Group (TG) for ULSE Technical Committee (TC) 8400 on Virtual Reality (VR), Augmented Reality (AR), and Mixed Reality (MR) Technology Equipment ("immersive technologies"), convened to improve the biocompatibility requirements specified in the standard. The TG primarily discussed requirements pertaining to disinfection and chemical migration.

CPSC staff and another attendee strongly advised that UL 8400 should (1) require instructional literature for how to disinfect immersive technology products, and (2) require that immersive technologies be tested with both the manufacturer-recommended cleaning method(s) and reasonably foreseeable cleaning methods to confirm that toxic chemicals do not migrate from the products to consumers as a result of these cleaning methods. CPSC staff and this attendee explained the risks of communicable agents, such as bacteria and viruses, given that immersive technology products are commonly shared between users and worn on the body. They explained that head-mounted displays (HMDs) are particularly concerning because of the following factors, among others: HMDs are likely to have prolonged contact with the user's face, generate heat, and come into contact with sweat and skin oils from users. CPSC staff and this attendee also explained that it is reasonably foreseeable that consumers will not always follow the manufacturer's recommendations for cleaning the products, favoring common household cleaning methods such as disinfection wipes regardless of whether they are supported by the manufacturer. CPSC staff stated that it is dangerous and irresponsible to allow harmful chemicals to migrate to consumers in the event that reasonably foreseeable usage and cleaning methods degrade the materials.

Other attendees advised against these requirements. Some argued that not all products warrant disinfection between uses; that such instructions should only be required for products intended for shared use. Some claimed that disinfecting agents will necessarily degrade the materials such that harmful chemicals migrate from the products. Some opined that it can be difficult to demonstrate whether harmful chemicals will migrate from the products as a result of cleaning methods. Instead, these attendees requested that UL 8400 simply recommends that manufacturers provide cleaning instructions for their products.

The attendees did not come to an agreement by the end of the meeting.

Next Steps:
The Biocompatibility TG plans to reconvene virtually on August 20, 2025, at 1 PM ET, to continue developing the biocompatibility requirements.