

## **MEETING LOG**

SUBJECT: UL 8400 Technical Committee Meeting on Virtual Reality (VR), Augmented Reality (AR) and Mixed Reality (MR) Technology Equipment
FY 24 OP PLAN ENTRY: Wearables
DATE OF MEETING: 2/1/2024
LOCATION OF MEETING: Virtual
CPSC STAFF FILING MEETING LOG: Stephen Harsanyi (ESHF)
FILING DATE: 2/6/2024
CPSC ATTENDEE(S): Stephen Harsanyi (ESHF) and Treye Thomas (EXHR)
NON-CPSC ATTENDEE(S): Contact ULSE for attendee list.

## **Summary of Meeting:**

The Technical Committee (TC) for UL 8400, *Standard for Safety, Virtual Reality, Augmented Reality, and Mixed Reality Technology Equipment*, reviewed TC member comments on the draft ballot for the second iteration of the standard. The comments pertained to numerous clauses of the standard, such as related to risk assessments, biomechanical stress, and thermal energy. Among other concerns, CPSC staff opined that the required risk assessments to determine safe user ages are very vague, and additionally, CPSC staff explained that it is clear from the incident data that young children are using immersive technologies marketed to older ages, and that the requirements in the standard do not adequately address such use. CPSC staff recommended that, in addition to updating the various clauses to account for use by younger ages, the TC should add parental or access controls to give caregivers the capability to set passwords/passcodes, durations of use, and limit online communication and purchases. Other members opined that the required risk assessment adequately addresses use by various user ages, and they did not comment on CPSC staff's request for parental or access controls.

Regarding the proposed biomechanical stress requirements, CPSC staff voiced concern that the requirements are based on helicopter pilot performance data rather than neck strain and pain, and that the data does not adequately capture the active use of head-mounted immersive technologies, such as when used for boxing games, particularly by children. CPSC staff explained that the incident data demonstrate that children have suffered neck strains and pains from using immersive technologies. The TC chair explained that the TC is using the best data they have available at this time, and that it would be developed further over time.

Regarding thermal energy, CPSC staff opined that the proposed language vaguely allows products with any manner of air flow to reach limitless temperatures measured at the user's corneal apex. The TC members in

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attendance agreed to remove the exemption such that all products subject to the standard will be required to not reach harmful temperatures measured at the corneal apex.

The TC also discussed implications of products that have multiple modes of use that vary the level of optical occlusion. CPSC staff opined that products with more than one mode of operation need to be tested in each of their modes.

## **Next Steps:**

The TC will continue to improve the draft second iteration of UL 8400 before initiating a formal ballot. The task group on skin compatibility will continue to work on the requirements for skin compatibility, and potentially, address hazards involving chemical migration and other forms of biocompatibility, per CPSC staff's request. A new task group will be formed to discuss how to address products with multiple modes of use that vary in the level of optical occlusion. The only follow-up meeting scheduled at this time is the next skin compatibility task group meeting, which is planned for February 14, 2024.

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