



AMERICAN PUBLIC HEALTH ASSOCIATION

For science. For action. For health.

January 13, 2016

Consumer Product Safety Commission
4330 East West Highway
Bethesda, MD 20814

Re: Docket No. CPSC-2015-0022

Dear Chairman Kaye and Commissioners Adler, Buerkle, Mohorovic, and Robinson:

The American Public Health Association is a diverse community of public health professionals who champion the health of all people and communities. APHA urges the Consumer Product Safety Commission to protect public health by granting the petition to ban nonpolymeric, additive halogenated flame retardants from mattresses, children's products, furniture and electronic casings.

Organohalogen flame retardants are highly problematic, especially those not chemically bound to foam or plastic components of consumer products as they pose long- and short-term risk through both inhalation and ingestion. These flame retardant chemicals are currently added to multiple consumer items, where they migrate out of items into indoor air. Thus they are widely detected in household dust and, consequently, the human bloodstream. This class of chemicals has persistent properties as well as potential for bioaccumulation.

According to biomonitoring conducted by the Centers for Disease Control and Prevention, over 95 percent of Americans bear detectable amounts of flame retardant chemicals or their metabolites in blood samples. APHA is especially concerned with the environmental justice implications of products containing organohalogens, as the highest levels of the flame retardants have historically been found among the most vulnerable populations – children, communities of color, and populations of low socioeconomic status. Due to teratogenic properties, additional vulnerable populations include pregnant women and infants. Flame retardants are commonly detected in breast milk and umbilical cord blood, suggesting exposure during key periods of fetal and infant development. Most commonly detected are polybrominated diphenyl ethers, which were withdrawn from U.S. production beginning in 2005, based on mounting evidence they were harming human health and the environment. Use of organohalogens as flame retardants in furniture and plastics have replaced PBDEs in the years following the phase-outs, but organohalogens bear many of the same toxic properties including their semi-volatile nature and capacity to migrate into the environment.

After decades of investigation a large body of evidence suggests that PBDEs have potent effects on neurological and reproductive development in laboratory animals and in humans. As an example, epidemiological studies now suggest about a 5 point IQ deficit for every 10-fold increase in maternal PBDE exposure. Organohalogens are also linked with reduced IQ. For

communities of color and/or low socioeconomic status, this has potential to exacerbate health, educational and economic disparities both now and in the future.

As PBDEs were phased out, other bromine- and chlorine-containing chemicals became more prominent, and scientists began to report similar evidence of exposure and health concerns. This includes chlorinated Tris, listed as known to cause cancer by the State of California, and Firemaster 550, a mixture of halogenated and phosphate-based flame retardant chemicals that has been associated with obesity, early onset of puberty and cardiovascular effects in laboratory animals. When Deca PBDE was phased-out of electronics it was replaced in part by decabromodiphenyl ethane, a structurally similar compound that has proven to pose similar risks of environmental persistence and bioaccumulation.

When involved in a fire, bromine and chlorine-containing chemicals contribute to dioxins and furan formation. These compounds are even more toxic and persistent in the environment. This poses added risk to all exposed, including firefighters.

Our request to grant this petition comes in the context of a broader need to evaluate the use of any chemical flame retardant in consumer products. In CPSC's own tests on furniture, chemically-treated foam did not provide additional fire protection. Thus, in addition to granting this petition, we ask CPSC to ensure that mandatory and voluntary fire safety standards applicable to consumer products "do no harm" by first evaluating whether chemical flame retardants are needed in consumer products, and, if so, to verify that chemicals used to replace additive organohalogens pose no human exposure and toxicity concerns. For example, as stated in the petition, we are concerned about the hazards posed by replacement chemicals such as phosphate flame retardants.

In closing, we urge the Commission to grant this petition as a ban on additive organohalogen flame retardant chemicals in consumer products would be an important first step toward addressing the crisis of widespread use of unacceptably risky chemicals and protecting vulnerable populations. Addressing halogenated flame retardants as a class would avert the "regrettable substitutions" currently seen as manufacturers shift from one toxic organohalogen flame retardant to another less studied halogenated alternative.

Sincerely,

A handwritten signature in black ink, appearing to read "Georges C. Benjamin". The signature is fluid and cursive, with the first name being the most prominent.

Georges C. Benjamin, MD
Executive Director