

Sent: Tuesday, April 17, 2012 3:49 AM

Subject: Message from American Scientists and Physicians to forward to the TC108 voting committee members

Dear Mr Nobuki Kawamura

We are scientists and physicians writing to express our opposition to the proposed revisions to International Electrotechnical Commission (IEC) Standards 60065 and 62368, which include a requirement for candle resistance of television enclosures.

We respectfully request that you please forward to the TC108 National Committees our suggestion that they consider voting NO on 108/478A/CDV and also 108/479/CDV, both of which contain clauses that would lead to the use of toxic flame retardants in televisions without reducing fire hazard.

The 2012 updated paper, *The Case against Candle Resistant TVs* (available [here](#)), provides a summary of the many adverse impacts of these standards and the flame retardants used to meet them. First, **these proposed requirements do nothing to improve fire safety**. The U.S., which has historically used flame retardants in TV enclosures, does not have a lower rate of TV fires compared to the European Union (E.U.), where these chemicals have only recently been introduced.

In addition, current flat panel and plasma screen TVs have much lower voltages and power levels than older models, making them much less likely to catch fire from internal ignition. They are too thin to allow consumers to put candles on top of the TVs and are more likely to be hung on the wall, away from any open flames.

Halogen-based flame retardants **actually make fires more dangerous**. Recent studies of fire toxicity suggest that the use of halogenated flame retardants in plastic TV enclosures increases the yield of toxic gases during combustion, making these fires more dangerous. These toxic gases, rather than flames, are the major cause of fire deaths

There are major human and environmental health threats associated with the use of toxic and/or untested flame retardants. The adverse health and environmental impacts of the flame retardant chemicals likely to be used to meet such a requirement are documented in "[The Case against Candle Resistant Electronics](#)," a white paper available at Green Science Policy Institute's website.

The [San Antonio Statement](#) on Brominated and Chlorinated Flame Retardants, signed by more than 200 scientists, documents health hazards and lack of proven fire safety benefit from the use of retardants in some consumer products. This includes endocrine disruption, damage to the reproductive system (such as decreased fertility and reduced sperm count), thyroid and metabolic function problems, and impaired neurological, behavioral, and cognitive development. These toxic flame retardants cross the placenta, meaning babies are born with these chemicals in their bodies and are further exposed because the chemicals

accumulate in breast milk. Since the retardants are found in household dust, toddlers and children's hand-to-mouth activities lead to significantly higher levels of flame retardants compared to their parents

The "new" halogenated flame retardants replacing banned retardants like PBDEs are from the same chemical family as their toxic predecessors and are also persistent, bioaccumulative, and/or toxic. Once these compounds go out into the world, we cannot bring them back.

An additional health concern revolves around incineration of flame retardant-containing electronics. Informal burning of plastic waste is common in the developing world, a practice that generates extremely toxic dioxins and furans. The recycling of TVs would become more expensive and difficult, if not impossible, with the added retardants.

Finally, **the proposed requirements would only benefit chemical manufacturers and testing companies' profits.** The current proposal to require TV housings to resist a candle flame offers **no** added fire safety benefits and instead poses an **unnecessary and unacceptable risk** to human health and the environment.

Several proposals to include a candle flame requirement have been considered by the IEC. These proposals were voted down in 2008 by a majority of delegates from 31 countries based on a lack of proven fire safety benefits, as well as significant health, environmental, and other concerns. Several other similar proposed candle flammability requirements from the Underwriters Laboratory (UL) and Canadian Standards Association (CSA) were also voted down in 2008.

The unnecessary use of potentially toxic flame retardant chemicals benefits only the chemical manufacturers and test companies involved while increasing costs to manufacturers and creating unacceptable risks for consumer health and the environment. **For these reasons, we urge the TC108 National Committees to vote NO on both 108/478A/CDV and 108/479/CDV.**

Sincerely,

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