



April 9, 2012

Dear TC 108 National Committee Member:

We, the undersigned, are writing to express our strong opposition to the proposed revisions to International Electrotechnical Commission (IEC) Standards 60065 and 62368 that would add the requirement of candle resistance of television enclosures. We urge TC108 National Committees to vote "NO" on both 108/478A/CDV and 108/479/CDV, which include clauses that would require televisions with plastic enclosures to withstand external candle ignition.

We oppose this proposed requirement for a variety of reasons including:

1. **There is no fire safety benefit from such a requirement.**

The proposed revisions offer no fire safety benefits. There is no data to show that the U.S., which has historically used flame retardants, has an improved fire safety benefit when compared to the EU where these chemicals were not used. This lack of fire safety benefit is especially true for current flat panel and plasma screen TVs which have much lower voltages and power levels than past TVs and are also more likely to be hung on the wall, away from any candles.

2. **The use of halogen based flame retardants may actually decrease the survivability of fires.**

Worse than simply offering no fire safety benefit, recent studies have confirmed that the use of halogenated flame retardants may actually make fires **more** deadly. Just two weeks ago (3/27/12) Anna Stec, Ph.D (University of Central Lancashire, Centre for Fire and Hazards Science, Lancashire, U.K.) presented the findings of her study at the American Chemical Society's 243rd National Meeting & Exposition, the world's largest scientific society, and showed that halogen based flame retardants actually make the fires **more** deadly. She commented that halogenated "flame retardants have the undesirable effect of increasing the amounts of carbon monoxide and hydrogen cyanide released during combustion. These gases, not the thermal effects of burns on the body, are the No. 1 cause of fire deaths." This study confirms other previous studies that show that most fire deaths and injuries result from the inhalation of carbon monoxide, smoke, soot, and other irritant gases. The incorporation of halogenated flame retardants into plastic TV enclosures increases the yield of such toxic gases during combustion, making these fires more toxic and dangerous.

3. **This proposal would lead to the unnecessary use of toxic and/or untested chemicals that pose unacceptable human health and environmental risks.**

We are extremely concerned about the adverse health and environmental impacts of the flame retardant chemicals that are likely to be used to meet such a requirement.

These adverse impacts have been well documented in “The Case against Candle Resistant Electronics” (see attached and also available at <http://greensciencepolicy.org/sites/default/files/MASTERWhitepaper.pdf>.) And since this paper’s publication in 2008, many dozens more studies have been published showing human health and environmental concerns related to halogenated flame retardants, including interfering with hormones, reproductive systems (decreased fertility, reduced sperm count), thyroid and metabolic function, and impaired neurological, behavioral and cognitive development in infants and children.

It is extremely concerning that scientific studies have shown that these toxic flame retardants cross the placenta and babies are born “pre-polluted” with these chemicals. In addition, due to the frequent hand to mouth activities of toddlers, children studied had 3-4 times higher levels of these flame retardants than their parents.

It is also concerning that recent studies have shown that the “new” halogenated flame retardants, which have replaced the now-regulated flame retardants, have similar chemical compositions and structures and are also being found to be persistent, bioaccumulative and/or toxic.

An additional health concern is the ability of halogenated organics to act as pre-cursors for generating dioxin, a potent known human carcinogen that is toxic in very low amounts. Exposing flame retardants in electronics to high heat by incineration or the burning practices commonly used in informal recycling in the developing world can generate dioxins. Airborne dioxins can travel the globe, and once they land, the dioxins can enter both terrestrial and aquatic food chains. Dr. Linda Birnbaum, Director of the US National Institute of Environmental Health Sciences and a leading science expert on BFRs and dioxins, led the U.S. EPA’s 1994 dioxin assessment process, which concluded that there was **no** safe level of dioxin exposure for humans.

4. The use of flame retardants in TVs would make the recycling and reuse more difficult and costly with the added flame retardants.

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

We have attached a copy of the July 2010 letter from the European Environmental Citizens Organisation for Standardization (ECOS) which clarifies that ECOS (a European environmental NGO) did look further into the need for a candle ignition and found the chemical companies’ “evidence” for the need for flame retardants to be inaccurate, misleading, and entirely irrelevant. Michael Kirschner, the representative for ECOS, **never** agreed to the need for a candle ignition standard as may have been portrayed. In fact, after Mr. Kirschner talked with several TV manufacturers it became evident that Philips appeared to be alone – or nearly so - in their assessment that this requirement is necessary.

In closing, the current proposal to require TV housings to meet a candle flame test offers **no** added fire safety benefits and instead poses an **unnecessary and unacceptable risk** to human health and to the environment. It seems clear that the only groups that would benefit from this requirement are the chemical companies who manufacture these chemicals and the test companies who would profit from inclusion of this requirement. This is an unacceptable proposition and its promotion by the chemical industry should be looked at for what it is, a way to create market demand for their product without adequate regard to human health or the environment.

For these reasons, we request that the TC108 National Committees vote NO on both 108/478A/CDV and 108/479/CDV.

Sincerely,

Michael Green, Executive Director, Center for Environmental Health

Gary Cohen, President and Founder, Health Care Without Harm and Practice Greenhealth

David Azoulay, Managing Attorney, Center for International Environmental Law (CIEL)

Dr. Sarah Janssen, MD, PhD, MPH, Senior Scientist, Natural Resources Defense Council

Judith Robinson, Executive Director, Environmental Health Fund

Lin Kaatz Chary, PhD, MPH, Indiana Toxics Action

Patti Wood, Executive Director, Grassroots Environmental Education

Russell Long, Board of Directors, Friends of the Earth, U.S.