Ki Nam Kim, Vice Chairman & CEO
Hyun Suk Kim, President & CEO
Dong Jin Koh, President & CEO
Young Hoon (YH) Eom, President and CEO of Samsung Electronics North America
Samsung
85 Challenger Road
Ridgefield Park, NJ 07660

April 1, 2020

RE: Toxic flame retardants in televisions

Dear Mr. Kim, Mr. Koh, and Mr. Hoon Eom:

We appreciate Samsung's commitment to sustainability and are writing today to urge Samsung to expand on it by phasing out and banning toxic flame retardants, especially organohalogen flame retardants (OFRs), in the plastic casings of televisions and other electronics your company sells.

A report we released in October, *Toxic TV Binge*, found that six leading Best Buy (Insignia) and Amazon (Toshiba Fire TV) brand televisions contained significant concentrations of OFRs in the plastic casings. It revealed television manufacturers and retailers are using outdated, hazardous chemicals to meet fire safety standards that can be met with safer alternatives or material changes. We specifically found:

Summary of Test Results

			Halogenated Flame Retardants				Phosphorus Flame Retardants	
Retailer	Brand	Model	TTBP-TAZ (%)	2,4,6-TBP (%)	DBDPE (%)	Deca-BDE (%)	BAPP (%)	TPhP (%)
Best Buy	Insignia	Roku LED TV 24" 720P	7.4	0.15	0.95	0.06	0.03	ND
Best Buy	Insignia	Roku LED TV 43" 4KUltra HD	9.6	0.45	0.69	0.01	0.17	ND
Best Buy	Insignia	Roku LED TV 50" 4KUltra HD	12	0.28	0.56	0.13	0.49	0.004
Amazon	Toshiba (Hisense)	Firetv Edition 43" 4KUltra HD	3.7	0.12	0.93	ND	ND	ND
Amazon	Toshiba (Hisense)	Firetv Edition 50" 4KUltra HD	3.9	0.14	1.1	ND	ND	ND
Amazon	Toshiba (Hisense)	Firetv Edition 55" 4KUltra HD	3.5	0.14	1.0	ND	ND	ND

ND = not detected
Concentrations given as percent by weight.

Credit: Safer Chemicals, Healthy Families and Toxic Free Future

These results build upon and are generally consistent with the findings of our 2017 report, *TV Reality*, for which we tested casings from twelve different manufacturers. In that investigation, we found that two-thirds of the TVs tested also contained OFRs, at a high percentage of the weight of the plastic enclosure.

There are numerous reasons for Samsung and its customers to be concerned about toxic flame retardants

in televisions:

- OFRs are persistent chemicals linked to a variety of health concerns, including thyroid disruption, cancer, and learning deficits.
- The televisions in both reports contained OFRs at percentage levels by weight in the plastic, meaning the chemicals make up a significant portion of the product.
- These flame retardants are not chemically bound in the plastic and can readily leach out to contaminate the indoor and outdoor environment. Adults and children are then exposed to the chemicals when they ingest the contaminated house dust through hand-to-mouth activity and from the indoor and outdoor air.
- OFRs have been found in fish and wildlife, house dust, breast milk, newborn babies, cats, and dogs.
- Elevated levels of OFRs have also been found in workers in electronics recycling facilities, and a recent study found OFRs in dust in such a facility at levels nearly 100 times higher than in residential dust.
- Firefighters are also highly exposed to flame retardants and their toxic byproducts, with elevated flame retardant levels found in smoke and fire station dust.
- When the televisions are recycled, the flame retardants can end up back in other plastic consumer products for which they were never intended, such as kitchen utensils and children's toys.

Samsung has an opportunity to innovate to sell televisions that are safer for your customers, who are clamoring for products free of dangerous chemicals. There are solutions in reach to replace these toxic chemicals with non-halogenated flame retardants. Suppliers can also change the design of televisions and meet fire safety standards without the use of toxic flame retardant chemicals. The state of Washington identified safer alternatives as far back as 2007.

OFRs in electronics are facing growing regulatory scrutiny in the U.S. Under its new Safer Products for Washington law, the Department of Ecology has recently proposed that toxic flame retardants, including OFRs in electronics, be considered for regulatory bans. The U.S. Consumer Product Safety Commission (CPSC) voted in 2017 to begin the rulemaking process banning products containing OFRs due to the serious risks these chemicals pose to human health, such as harm to the immune system, hormone disruption, children's brain development, and cancer. The CPSC also issued a warning to manufacturers and retailers to eliminate the use of OFRs in their products. It states: *"the Commission requests that manufacturers of children's products, furniture, mattresses, and electronics casings eliminate the use of such chemicals in these products."* As far as we can tell, many manufacturers and retailers of these TVs are currently ignoring this CPSC safety warning, issued along with a CPSC vote to ban OFRs, which has not yet been fully implemented.

Additional regulation on OFRs is moving forward around the world. TVs like these will soon be unavailable in the European Union (EU), which on October 1, 2019 passed an EU-wide ban on all OFRs in electronics casings that will take effect in 2021. In May 2019, the Government of Canada proposed a ban on the manufacture, import, use, sale, and marketing of decabromodiphenyl ethane (DBDPE) as well as products containing it. There is an opportunity for Samsung to get out in front of this regulatory curve.

Major retailers of electronics such as Amazon, Best Buy, Target, and Walmart have adopted safer chemicals policies over the last few years and a number have targeted toxic flame retardants for elimination in other product categories. Samsung should act now before these retailers expand their policies to address toxic flame retardants in televisions and other electronics.

We specifically recommend that Samsung take the following actions:

• Develop or expand its Restricted Substance List (RSL) and Manufacturing Restricted Substance List (MRSL)

for all televisions by the end of 2020;

• The RSL and MRSL should include toxic flame retardants, including OFRs, and other flame retardants that are GreenScreen Benchmark 1 chemicals;

• Establish an aggressive yet realistic timeline for phasing out toxic flame retardants globally in advance of the EU ban. The company should also continuously update the RSL based on new scientific data;

• While the phase-out is happening, warn your customers as requested by the CPSC if televisions contain OFRs;

• Require suppliers to fully disclose any flame retardant chemicals used and challenge suppliers to use the safest, most sustainable materials that do not require flame retardants (e.g. non-flammable materials instead of plastic enclosures); and

• Publicly report on progress annually.

Flame retardants in TVs constitute a large and growing source of unregulated toxic pollution in our homes, workplaces, and environment and pose serious health threats that are entirely preventable. Samsung has the market power and the responsibility to help drive the adoption of solutions to this problem and help meet the rising consumer demand for safer, healthier, and more sustainable products.

We are interested in learning more about how your company is addressing this critical issue and would appreciate your response to our concerns and recommendations by May 1st. Thank you.

Sincerely,

Mike Schade, Mind the Store Campaign Director
Safer Chemicals, Healthy Families

Laurie Valeriano, Executive Director
Toxic-Free Future

Deanna White, Minnesota State Director
Clean Water Action

CC: Soo Jin Kim, Vice President of Global Public Affairs
Mark Newtown, Head of North America Corporate Sustainability