

October 9, 2017

Re: The San Francisco Proposed Ordinance on Flame Retardant Chemicals in Upholstered Furniture and Juvenile Products

Dear San Francisco Board of Supervisors,

We, the undersigned academics, scientists, and clinicians are writing to provide scientific information relevant to the City's proposed ordinance on flame retardant chemicals in upholstered furniture and juvenile products. We declare collectively that we have no direct or indirect financial or fiduciary interest in any chemical or product related to this ordinance. The co-signers' institutional affiliations are included for identification purposes only and do not necessarily imply any institutional endorsement or support of these comments, unless indicated otherwise.

San Francisco is proposing an ordinance to amend the city's Environment Code to ban the sale of upholstered furniture and juvenile products made with or containing added flame retardant chemicals. This ordinance would reduce the exposure of San Francisco communities to potentially harmful flame retardant chemicals in the places where people live, work, learn and play. This is especially true for sensitive populations such as pregnant women, young children, low-income and communities of color who are most vulnerable to adverse health effects from harmful chemical exposures, such as flame retardant chemicals.

Researchers have consistently found that furniture and children's products are significant contributors to families' flame retardant exposures.^{1,2} Studies also found that removing products containing flame retardant chemicals from indoor environments significantly reduces the levels of flame retardants in indoor air or dust.^{3,4} Flame retardant chemicals enter people's bodies primarily via contaminated air and dust,⁵⁻⁷ so reducing the concentrations of chemicals in air and dust would subsequently reduce human exposure.

Studies at the University of California, San Francisco documented that low-income, diverse pregnant women seeking care in San Francisco had some of the highest levels of flame retardant chemicals in their bodies compared to pregnant women worldwide.⁸ Other research has found that people of color and/ or lower socio-economic status have significantly higher levels of flame retardants in their indoor dust and bodies.⁹ Flame retardant chemicals have been associated with lower IQ, hormone disruption, reduced fertility and cancer.¹⁰⁻¹³ Based on IQ loss and intellectual disability alone, the health impacts from flame retardant chemicals are estimated to cost the U.S. \$266-500 billion annually.¹⁴

Some harmful flame retardants have already been banned or phased out; however studies find an alarming array of replacement chemicals whose use in products has subsequently grown, with concurrent increases in levels of these new chemicals in indoor dust and in people's bodies.¹⁵⁻¹⁷ Substituting one banned chemical for another similar one, likely resulting in comparable if not more serious health effects, is an inadequate and inefficient approach to protecting the public's health.

Prenatal and early-life exposures to flame retardants are especially of concern because the developing brain and body are more vulnerable to chemical toxicity.¹⁸ Additionally, young children's hand-to-mouth and mouthing behaviors result in greater contact with flame retardant containing dust and products, leading to higher flame retardant exposures. Toddlers have 3-15 times higher levels of flame retardant

chemicals in their bodies compared to their moms, and California children have significantly higher levels of some flame retardants compared to children in New Jersey or Ohio.¹⁹⁻²¹

Studies at the Consumer Product Safety Commission found no significant difference in the fire performance of furniture made with or without flame retardants, meaning that adding flame retardant chemicals does not reduce flammability sufficiently to meaningfully affect fire safety.²² Further, because California has updated its flammability standards, flame retardants are not needed to meet current standards for furniture or children's products covered by the ordinance. Removing flame retardants from these products could reduce human exposure to these chemicals.

We are appreciative of the opportunity to provide public input on this proposed ordinance. Please do not hesitate to contact us with any questions regarding these comments.

Sincerely,

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