

Protect Our Children from Toxic Flame Retardants

Support AB 706: The California Furniture Safety and Fire Prevention Act

IN BRIEF

California has some of the most stringent fire retardancy standards in the world for furniture, yet the chemicals commonly used to achieve these standards have been found to be highly toxic and cancer-causing. This class of chemicals, brominated and chlorinated fire retardants, are structurally very similar to PCBs, which have been banned in the U.S. because of their links to cancer and other neurological and reproductive disorders.

In response to this public health threat, Friends of the Earth and MOMS (Making Our Milk Safe) co-sponsoring a bill, the California Furniture Safety and Fire Prevention Act, AB706, which would create an improved fire-safety standard for upholstered furniture, mattresses and other bedding products, without the use of toxic brominated and chlorinated chemicals currently used.

Fire safety standards for furniture must be updated to ensure we are not using chemical fire retardants that cause cancer, birth defects, neurological and reproductive problems and other adverse long-term health and environmental impacts.

THE PROBLEM: Toxic flame retardants in furniture threaten the health of humans, the environment, and wildlife

- **Exposure to brominated and chlorinated flame retardants pose a risk to children's health**

In 1977, brominated Tris, which had been used to make children's sleepwear fire resistant, was banned after it was found to be carcinogenic in animal tests and to leach into children's bodies¹. Its replacement, chlorinated Tris, was also later banned after it was found to be a mutagen, meaning *it changed DNA*. Today, chlorinated Tris is the second most-used fire retardant in furniture, and was recently deemed by the Consumer Product Safety Commission to be "a probable human carcinogen based on sufficient evidence in animals."¹¹

- **Brominated fire retardants bioaccumulate in people and animals**

PBDEs have increased 40-fold in human breast milk since the 1970s. Women in North America on average have ten times the levels of women⁶ in Europe or Asia. PBDEs have the potential to disrupt thyroid hormone balance and contribute to a variety of neurological and developmental deficits, including low intelligence and learning disabilities.^{4,5} Recent studies found that pet cats in the U.S. have very high levels of PBDEs in their blood. Researchers identified an association between the PBDEs in cats and hyperthyroidism. This is a new disease in cats that emerged around 1980 soon after PBDE's began to be used in significant quantities, and is now the second most common disease in cats.²

- **Firefighters have higher risk for some cancers**

When toxic fire retardants burn cancer-causing dioxins are formed. In November 2006, the Journal of Occupational and Environmental Medicine published an analysis of 32 studies⁷ that found that fire fighters have significantly elevated rates of four types of cancer: multiple myeloma, non-Hodgkin's lymphoma, prostate, and testicular cancer, likely resulting from chemicals exposures at burn sites.

ALTERNATIVES: *Fire-safety without toxics*

- **Equally fire-safe fire retardants are available now and already widely used**
Affordable, less toxic flame retardants are available and already widely used by institutional furniture companies and mattress manufacturers. The furniture we sit on in our schools, libraries and hospitals are already BFR and CFR-free, yet abide by strict CA fire safety standards. These less toxic fire retardants include inherently flame resistant metals and woods, naturally flame resistant barriers, and additives including silicon, melamine, boric acid, and phosphates.

- **More fire-retardant chemicals doesn't mean fewer fire deaths**
An analysis of fire data from 1980 to 2002 shows that, among the eight most populated states in the U.S., the rate of reduction of fire deaths in California, the only such state that has regulations leading to the use of fire retardant chemicals, is nonetheless similar¹⁰ to seven other states that do not regulate the flammability of furniture.

- **Fire fighters**
Due to elevated levels of cancer among fire fighters, the California Professional Fire Fighters supports AB 706. In addition, the International Association of Fire Fighters as well as many state fire associations support new laws in Washington, Maine, Minnesota, Illinois and other states that would ban the use of certain brominated or chlorinated fire retardants.⁹

V041107

THE SOLUTION: Smarter Regulation = More Safety

AB 706 - The California Furniture Safety and Fire Prevention Act will:

- Provide the furniture industry more options for creating affordable and even safer products;
- Create opportunities for green chemistry innovation;
- Reduce workplace exposure to toxic chemicals for furniture industry workers and fire fighters;
- Protect the health of future generations by banning toxic brominated and chlorinated chemicals from products that come in direct contact with our families.

SUPPORTERS

- Bluewater Network/Friends of the Earth (co-sponsor)
- MOMS - Making Our Milk Safe (co-sponsor)
- AFL-CIO
- Alicia Ann Ruch Burn Foundation
- As You Sow Foundation
- Breast Cancer Fund
- Breast Cancer Action
- California Furniture Manufacturers Association
- California Professional Fire Fighters
- California State Firefighters
- Center for Environmental Health
- Coalition For A Safe Environment
- Consumer Attorneys of California
- Commonweal
- Consumer Federation of California
- Environmental Working Group
- Episcopal Diocese of California
- Firefighters Burn Institute
- Firefighters Cancer Support Network
- GreenSage Media
- GreenSage Organic Home
- Healthy Children Organizing Project
- MomsRising.org
- Natural Resources Defense Council
- The Ocean Conservancy
- Oceana
- Physicians for Social Responsibility
- Planning and Conservation League
- Sacramento Area Fire Fighters Local 522
- San Francisco Fire Fighters Local 798
- San Francisco Fire Marshal
- Sierra Club
- Silicon Valley Toxics Coalition
- The Trauma Foundation

NOTES & REFERENCES

- 1 **Tris as mutagen:** A. Blum and B.N. Ames (1977), Flame Retardant Additives as Possible Cancer Hazards: The main flame retardant in children's pajamas is a mutagen and should not be used. *Science* 195, 17.
- 2 **Flame retardants in animals:** PET CATS IN THE U.S. HAVE HIGH POLYBROMINATED DIPHENYL ETHER (PBDE) SERUM LEVELS. J.A. Dye, M. Venier, C.R. Ward, L.Y. Zhu, R.A. Hites, L.S. Birnbaum Society of Toxicology 2007 Annual meeting Abstract number 853
- 3 **Bioaccumulation:** Tomy, G. T.; Palace, V. P.; Halldorson, T.; Braekevelt, E.; Danell, R.; Wautier, K.; Evans, B.; Brinkworth, L.; Fisk, A. T., Bioaccumulation, biotransformation, and biochemical effects of brominated diphenyl ethers in juvenile lake trout (*Salvelinus namaycush*). *Environmental Science & Technology* 2004, 38, (5), 1496-1504.
- 4 **Health effects of PBDEs:** Viberg, H.; Fredriksson, A.; Jakobsson, E.; Orn, U.; Eriksson, P., Neurobehavioral derangements in adult mice receiving decabrominated diphenyl ether (PBDE 209) during a defined period of neonatal brain development. *Toxicological Sciences* 2003, 76, (1), 112-120.
- 5 **Risks to children's health:** P. Grandjean, P.J. Landrigan, *Developmental Neurotoxicity of Industrial Chemicals*. The Lancet, 368. (16 December 2006); Susan L. Schantz, John J. Widholm, Deborah C. Rice, *Effects of PCB Exposure on Neuropsychological Function in Children*. Environmental Health Perspectives. 111(3) pp357-576 (March 2003)
- 6 **Flame retardants in mother's milk:** Lunder S, Sharp R. 2003. Mothers' Milk: Record levels of toxic fire retardants found in American mothers' breast milk. Environmental Working Group. www.ewg.org/reports/mothersmilk/
- 7 **Cancer risk among fire fighters:** LeMasters GK, et al, December 2006, Cancer risk among firefighters: a review and meta-analysis of 32 studies, *J. Occup. Environ. Med.* 2006 Nov; 48(11): 1189-202.
- 9 **Firefighters support PBDE phase-out:** Duffy, Richard, assistant to the general president, International Association of Firefighters, in a letter on behalf of the association to Kelly Fox, president, Washington State Council of Fire Fighters, January 26, 2007: "IAFF believes that the passage of legislation banning brominated flame retardants . . . is a step in the right direction from improving the health and safety of our fire fighters . . ."
- 10 **California fire deaths compared to other states:** National Fire Protection Association, Fire Death Rates By State, <http://www.nfpa.org/assets/files/pdf/statebystatechart.pdf>.
- 11 Babich M, Dec 21, 2006, Peer Reviewed CPSC Staff Research Reports on Upholstered Furniture Flammability, page 12