



**Green Science
Policy Institute**



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Toxic Chemicals Under Carpets

New study reveals dangerous chemicals in carpet padding

Obsolete California regulation to blame

Carpet pads commonly sold to consumers in the USA and other developed countries contain dangerous chemicals that can cause nervous system damage, particularly in infants and toddlers.

(New York) In the first publicly available study of its kind, a type of foam carpet padding commonly sold in the USA was demonstrated to contain flame retardant chemicals linked to diseases and disorders. The substances, PentaBDE and OctaBDE, resemble PCBs in structure and toxic effects and are already banned in 12 states and through a global treaty agreement with 170 countries. Levels of PentaBDE and OctaBDE were found in U.S. samples from Alaska, Washington State, Michigan and New York. They were submitted as part of a global study of polybrominated diphenyl ethers (PBDEs) in foam carpet pads. IPEN, an international organization working on toxic chemical issues, conducted the study.

Either one or both chemicals were found in 23 of 26 (88%) samples of foam padding from Canada, Hungary, and USA. The types of pads most likely to contain these chemicals are multi-colored. Half the samples contained components of PentaBDE at levels that exceeded the indicative hazardous waste limit of 50 parts per million under European Union regulation. For OctaBDE components, 46% of the samples exceeded the limit.

According to the Stockholm Convention expert committee, PentaBDE is linked to reproductive toxicity, neurodevelopmental toxicity and negative effects on thyroid hormones. OctaBDE hazards include delayed neurotoxicity and immunotoxicity.

PentaBDE and OctaBDE are released into dust and pose significant hazards for infants and toddlers. People who recycle foam and lay carpet also have been found to have 10 times the amount of these chemicals in their bodies as other people. California children were recently shown to have levels 7 times higher than children their age in Mexico. California Technical Bulletin 117, an obsolete flame retardancy standard, is blamed for causing manufacturers nationwide to add toxic flame retardants to a myriad of products, many of which are thrown away and contaminate water supplies while in disposal.

Governments of the Stockholm Convention granted an exemption that permits the recycling of foam and plastics containing PentaBDE and OctaBDE. In the United States, the voluntary agreement with manufacturers to stop producing PentaBDE and OctaBDE also contains a loophole that permits recycling of materials containing these substances into new consumer products.

"We're fighting for a ban in New York because we don't want these chemical in our homes--not in new products and not in recycled goods," says **Kathleen Curtis** of **Clean New York**. "New York banned penta and OctaBDE in 2004, and the switch to equally hazardous chemicals contravenes the intent of the New York State Legislature," Curtis added.

"An obsolete California regulation that, de facto, forces manufacturers to use dangerous chemicals in foam products made for sale in California, is actually polluting people nationwide" explains **Ana Mascareñas** from **Physicians for Social Responsibility – Los Angeles**. "A committee in the California State Legislature is deciding on a bill that would release manufacturers and stop this dangerous pattern for business and environmental health. We urge them to support a revision to TB 117."

Arlene Blum, PhD, from the **Green Science Policy Institute in California** said, "There are increasing numbers of studies associating the flame retardants in carpet foam and furniture with serious negative health effects in humans, while there is not data to show they increase fire safety. Every effort should be made to stop their use and to reduce exposure." Dr. Blum's research contributed to removing a toxic flame retardant called tris from children's pajamas in the 1970s, but the same tris is back at high levels in couches, baby products and furniture foam today.

"During our campaign to support flame retardant restrictions in Alaska, an outside chemical industry front group, 'Citizens for Fire Safety,' presented an 'expert' who went on to misrepresent himself and his true employers during legislative testimony," adds **Pamela Miller** with **Alaska Community Action on Toxics**. "With these chemicals concentrating in the Northern areas, we are doubly concerned about the lengths chemical makers will go to try to confuse the science and protect their profits."

"Our peoples are suffering from health effects linked to these POPs chemicals, says **Vi Waghiyi**, a **Yupik** woman from St Lawrence Island, Alaska and also with **Alaska Community Action on Toxics**. "We need to prevent production of these hazardous chemicals and the "recycling" into our homes. Women of the Yukon-Kuskokwim delta region of Alaska have the highest levels of brominated flame retardants in the circumpolar Arctic. We must prevent exposures and protect the health of our children and future generations.," she said.

"Allowing the recycling of toxic chemicals such as PentaBDE and OctaBDE into our consumer products is dangerous and threatens the integrity of the Stockholm Convention," said **Dr. Olga Speranskaya**, **IPEN** co-chair. "Our living rooms should not be a hazardous waste dump."

Governments around the world will decide whether to continue allowing the recycling of materials containing these chemicals at the 5th Conference of the Parties of the Stockholm Convention, 25 – 29 April.

The study is available here: <http://ipen.org/cop5/brominated-flame-retardants/>

Available for Interviews

Kathleen A. Curtis, **Clean New York** Policy Director 518-708-3922. Clean New York contributed foam samples for testing. Kathleen can address policy in various U.S. states on protecting environmental health from flame retardant chemicals.

Joseph DiGangi, PhD, **IPEN** Sr. Science and Technical Advisor, study co-author +1 510-710-0655

Pamela K Miller, Executive Director, **Alaska Community Action on Toxics**. 907-222-7714, cell 907-242-9991, pkmiller@akaction.net. Alaska Community Action on Toxics contributed foam samples for testing. Pam can address flame retardant legislation in Alaska, the Stockholm Convention international treaty to ban the most dangerous chemicals in the world (Persistent Organic Pollutants – POPs), and contamination in Alaska.

Vi Waghiyi, Yupik—St. Lawrence Island, Alaska, **Alaska Community Action on Toxics**; 907-222-7714; 907-444-9194 vi@akaction.net. Vi can address the contamination of the Yupik and other Indigenous peoples from POPs chemicals, including halogenated flame retardants.

Jeff Gearhart, Research Director, **Ecology Center of Michigan**; [734-761-3186](tel:734-761-3186) ext 117. The Ecology Center contributed foam samples for testing. Jeff can address product testing for flame retardants more broadly.

Arlene Blum PhD, Executive Director and Founder, **Green Science Policy Institute** 510.644.3164, Arlene@GreenSciencePolicy.org. Arlene can address the chemistry and health effects of flame retardants, the California regulations and other flammability standards, and the efforts toward Green Chemistry solutions.

Ana Mascareñas, Policy & Communications Coordinator **Physicians for Social Responsibility - Los Angeles (PSR-LA)**, 213-689-9170 cell 323-743-3241, amascarenas@psr-la.org. Ana can address concerns from health care professionals as well as efforts in California to modernize the California regulation to prevent halogenated flame retardant chemical exposure.

Laurie Valeriano, Washington Toxics Coalition, (206) 632-1545 x 114 or (206) 200-2824 lvaleriano@watoxics.org. Washington Toxics Coalition contributed foam samples for testing.

Mariann Lloyd-Smith, PhD, IPEN co-chair +614-136-21557

Olga Speranskaya, PhD, IPEN co-chair +1-647- 866-9224

Resources

Environmental Health Perspectives, April 13, 2011 [Study Documents PBDE Flame Retardants Levels in Children](#)

Scientific American April 18, 2011 [Foam Alone: Do Furniture Flame Retardants Save Enough Lives to Justify Their Environmental Damage: An obscure California law effectively sets flammability standards for foam in the nation's furniture, but proposed new legislation claims flame retardants don't prevent fires and could have negative health impactse](#)

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