



Contact:

Stephenie Hendricks: (415) 258-9151

Kathy Curtis, Alliance for Toxic Free Fire Safety: (518) 708-3922

Elizabeth Crowe, Kentucky Environmental Foundation: (859) 986-0868

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KY Moms Appalled at Toxic Chemicals Pervasive in Their Baby Products

New Study Finds Hazardous and Untested Flame Retardants

in Products Made for Infants and Childr

Kentucky Group, Moms Call on Product Makers to Reject Unnecessary Chemicals

A study of products designed for newborns, babies, and toddlers – including car seats, breast feeding pillows, changing pads, crib wedges, bassinet mattresses and other items made with polyurethane foam – were found to contain multiple chemical flame retardants that are considered toxic, according to a peer-reviewed study published in *Environmental Science & Technology Journal*. Other retardants discovered had so little health and safety data available it is impossible to know their effects. These flame retardants are also found in children’s bodies and are widely dispersed throughout the environment and food supply.

The study analyzed 102 products for the presence of halogenated flame retardants. Interior foam samples were tested from nursing pillows, baby carriers, car seats, changing table pads, high chairs, strollers, bassinets, portable cribs, walkers, changing pads, baby carriers, sleeping wedges, baby tub insert, bath slings, glider rockers, and other essential child care items. Samples were submitted from purchase locations around the United States. The results shows a wide range of products contain flame retardants known to be linked to serious health impacts.

Kentucky women expressed shock at the study results. “I had heard about [flame retardants] being in pillows but had not realized that they were in so many different types, rather the majority, of baby products,” said **Emily Russell of Berea**, mother of 19 month-old Lucy. “As a mother I bought baby products to help my new born thrive, I was unaware of the harmful chemical exposure that I was giving to her.”

Study results:

- Four products contained penta-BDE, a substance so toxic it is banned in 172 countries and 12 U.S. states, and subject to a national phaseout.
- 29 products contained TDCPP or chlorinated Tris, a possible human carcinogen that was removed from children's pajamas over health concerns in the late 1970s. In animal studies chlorinated Tris has been associated with cancer of the liver, kidney, brain and testis, among other harmful effects.
- 14 products contained TCEP, a carcinogenic flame retardant on California's Proposition 65 list of cancer-causing chemicals. Laboratory animal studies show TCEP causes tumors in the kidney and thyroid glands. In other laboratory animal studies, TCEP has been shown to cause reductions in fertility and poor sperm quality and to interfere with brain signaling, causing hyperactivity. TCEP is no longer produced in Europe and has been identified by Canada as posing a risk to human health.
- 16 products contained Firemaster 550/600 flame retardants. EPA has predicted toxicity and required additional testing.
- 14 products contained TCPP, which is similar in chemical structure to Chlorinated Tris and TCEP and has limited health information.

Consumer Advocates and Environmental Health Groups single out an antiquated California regulation, Technical Bulletin 117 (TB 117), as the reason for widespread use of flame retardants in baby products. Many product manufacturers make their products so that they can also be sold in California. Those that use polyurethane foam in their goods must meet TB 117. This results in population-wide exposure to dangerous, unnecessary flame retardants.

The Alliance for Toxic-Free Fire Safety, of which the Kentucky Environmental Foundation is a participant, is a new national network of health, consumer, and environmental groups, is calling for a modernization of California TB 117 in light of new scientific, health, environmental, and fire toxicity information about chemical flame retardants. They are calling for urgent action on this public health issue.

“The sensible way to prevent fires is not to subject the entire population to an indoor air experiment with carcinogens and other toxics,” said Kathy Curtis, campaign coordinator for the Alliance for Toxic-Free Fire Safety. “Companies should make products without flame retardants for all of the other states that haven't adopted California's costly and outdated TB 117 rule. Research shows the addition of flame retardants to meet this standard doesn't prevent fires. Moreover, when products with these chemicals do burn, they make the smoke far more toxic.”

Elizabeth Crowe, Executive Director of the **Kentucky Environmental Foundation** added, “Product makers should switch to inherently flame-resistant materials, make design changes or use less toxic chemical ingredients so fire fighters and victims of fire are better protected when these materials burn.”

“Toxic or untested flame retardants like the ones found in this study can migrate out of products and end up in our homes and our bodies. These chemicals are associated with adverse human health effects including reduced IQ, increased time to pregnancy, endocrine and thyroid disruption, and impaired child development,” says Arlene Blum, PhD, a co-author of the study and executive director of the Green Science Policy Institute. Blum’s early research contributed to the removal of Tris flame retardants from children’s pajamas in the 1970’s. Blum says, “I was surprised to find Tris back in high levels in the foam in baby products.”

According to Environmental Health News, researchers have found that U.S. adults have 20 times more of the flame retardant chemicals in their bodies than Europeans. Household dust tested in two areas of California had 200 times more brominated flame retardants than European homes. A recent study found that low income Mexican-American school children in California are apt to have 7 times more PBDE flame retardant chemicals in their bodies than Mexican children of the same age. The 7-year old Californians tested had more of the chemicals in their bodies than almost all people tested worldwide. Only Nicaraguan children living or working on hazardous waste sites have higher levels. Meanwhile, the Centers for Disease Control & Prevention report that over 90% of the U.S. population carries PBDE flame retardants in their bodies.

Danielle Kitchen, from Bowling Green is trying with her husband Nicholas to conceive their first child. “In preparation for my pregnancy I have been meticulous with life style choices pertaining to my health, but now with after learning this information I am terribly disheartened and even angered. My body is already poisoned with these chemicals and I am sure to pass them along to my child. It makes me wonder what other things the government is ignoring and in turn making our children suffer,” she said.

Crowe said, “Some of these flame retardants were ‘grandfathered’ in to the federal Toxic Substances Control Act when it passed in 1976. The fact that these highly toxic chemicals are so ubiquitous despite their link to chronic illnesses is clear indication of the need for chemical policy reforms at the federal level.”

*More information can be found at the
Alliance for Toxic Free Fire Safety. <http://toxicfreefiresafety.org>.*

*Additional quotes and photos from Kentucky moms are available via the KEF website at
<http://www.kyenvironmentalfoundation.org>.*

Background Information

Three corporations produce halogenated flame retardant chemicals: Albemarle, Chemtura, and Israeli Chemicals, Ltd. Chemtura's product, Firemaster 550, exemplifies how new chemicals enter the American market. Chemtura Corporation first marketed Firemaster 550 in 2004 as an environmentally friendly replacement for pentaBDE, which was subject to a national phase-out that same year due to health concerns and, notably, which had been grandfathered in as 'safe' - without supporting data - when the Toxic Substances Control Act was passed in 1976. When the notice of manufacture was filed with the Environmental Protection Agency for Firemaster 550, EPA did not require pre-market testing of the chemical. Instead, EPA relied on the manufacturers own determination of safety. They also approved Chemtura's confidentiality request for the two main ingredients in Firemaster 550, even though company test data showed the ingredients were a "high hazard concern" for both short-term and long-term ecotoxicity, meaning they could cause damage to fish, invertebrates or algae if they got into the water. Since then, Firemaster 550 has been found in house dust in Boston and in sewage sludge and wastewater plants in California, as well as baby products sold across America.

Halogenated flame retardants added to fabric, to foam used in furniture and other products, to carpet padding, and to electronic equipment, also create more smoke and soot when these materials smolder or burn than do materials without these chemicals. And the smoke is deadly. First, inhalation can be deeply damaging to lungs. Fire fighters wear protective gear, but gear may not always function as intended. Second, intense smoke can be disorienting and disabling, making it impossible for fire fighters and building occupants to reach safety when surrounded by dense smoke and soot.

Smoke can also carry toxic chemicals, including carbon monoxide, a deadly gas, and dioxins and furans, produced when chlorinated or brominated flame retardants burn. Dioxins and furans are some of the most toxic substances known, and have been associated with certain cancers, including soft tissue sarcoma, non-Hodgkin's lymphoma, adult-onset leukemia, multiple myeloma, breast cancer, bladder cancer and stomach cancer. These chemicals are also associated with chloracne, cardiovascular disease, diabetes II, thyroid dysfunction and immune suppression.

Firefighters have a higher incidence of heart disease, lung disease, and cancer compared to other workers. Getting chlorinated and brominated flame retardants out of their working environment could help reduce their chances of becoming ill.

The fire safety benefits of adding flame retardants to meet the TB117 flammability standard are questionable. According to Vyto Babrauskas, the author of *Fire Behavior of Upholstered Furniture and Mattresses*, (William Andrew Publishing, Norwich NY 2001), the only textbook ever written on furniture flammability, TB117 is "so weak that it does not achieve any useful fire

safety purpose." TB117 tests bare foam's resistance to a small flame. But the foam in furniture lies beneath a layer of fabric. The fabric will ignite first and by the time the flame reaches the foam, it is too large for the chemicals that meet TB117 to have an effect.

Alternatives to organohalogen flame retardant chemicals include using less flammable materials, design changes, and safer chemicals. Stronger electrical codes and modernized building and fire codes, as well as increased use of smoke detectors, sprinkler systems, and self-extinguishing cigarettes, will all continue to help prevent fires without using toxic chemicals. These measures plus an overall decrease in cigarette smoking in the U.S. have helped reduce fire deaths by 60% since 1980, making increasing use of chemical flame retardants unwise and unnecessary.