

POLICY SHAPING FLAME RETARDANT USE AND REGULATION: THE ROLE OF STATES AND FUTURE UNDER TSCA REFORM

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Introduction

Until the Frank Lautenberg Chemical Safety for the 21st Century Act (also known as the new TSCA) was passed in June 2016, the U.S. Environmental Protection Agency (USEPA) had limited authority to restrict chemicals. The new law updates the Toxic Substances Control Act (TSCA) of 1976 and gives the USEPA authority to restrict chemicals after a prioritization and risk evaluation process.

In the past decade, to fill the void in regulation of flame retardants, states have taken the lead in the United States in identifying and acting to restrict flame retardants that pose a hazard to human and environmental health. While the new TSCA constrains the actions states can take to restrict use of toxic chemicals, including flame retardants, states still have an important role in restricting chemicals, requiring disclosure, and avoiding regrettable substitution.

Materials and methods

The Frank Lautenberg Chemical Safety for the 21st Century Act and associated guidance from the USEPA were reviewed in addition to state actions since 2003.

Results and discussion

State Actions

States have passed legislation restricting use of polybrominated diphenyl ethers (PBDEs), chlorinated organophosphate flame retardants (CIOPFRs), and most recently, tetrabromobisphenol A (TBBPA) and hexabromocyclododecane (HBCD).

Twelve states have laws restricting PBDEs. Of these, four banned the three major formulations, including penta-, octa-, and deca-BDE; the others banned the only penta and octa formulations. After states passed broad bans on deca-BDE, the U.S. manufacturers came to an agreement with the USEPA to stop producing and importing the compound for all uses by 2013.

Product testing after the PBDE bans revealed that common replacements for penta-BDE in polyurethane foam included chlorinated organophosphates, such as the compound TDCPP, removed from children's pajamas in the 1970s due to safety concerns. Three states have now passed restrictions on chlorinated organophosphates, starting with a ban on TCEP in New York in 2011. Notably, Vermont's ban on TDCPP and TCEP in children's products and furniture prohibits replacement with compounds designated as

causing cancer, birth defects, hormone disruption, neurotoxicity, or harm to reproduction or development[2].

Most recently, in 2016, Washington state banned additional flame retardants in children's products and furniture, including HBCD, TBBPA, TCEP, and TDCPP; the legislation also established a process to consider bans on six additional flame retardants.

Impacts of New TSCA

Under the new law, the USEPA is directed to prioritize chemicals for risk evaluation, designating them as high or low priority. Once USEPA has designated a chemical as high priority, a deadline is triggered to complete a risk evaluation within 3.5 years. The risk evaluation methodology is currently under development and will be established by rule, but must evaluate each chemical to determine whether it poses an unreasonable risk, considering risks to susceptible and highly exposed populations.

If USEPA does not believe it has sufficient information to conduct a risk evaluation, it now has the authority to order manufacturers to conduct testing.

The law also has an expedited pathway for persistent bioaccumulative toxic chemicals, or PBTs. In October 2016, USEPA announced the first five PBTs for expedited action, including deca-BDE and iPTPP. These chemicals do not undergo a risk evaluation but proceed directly to action to reduce exposure “to the extent practicable.”

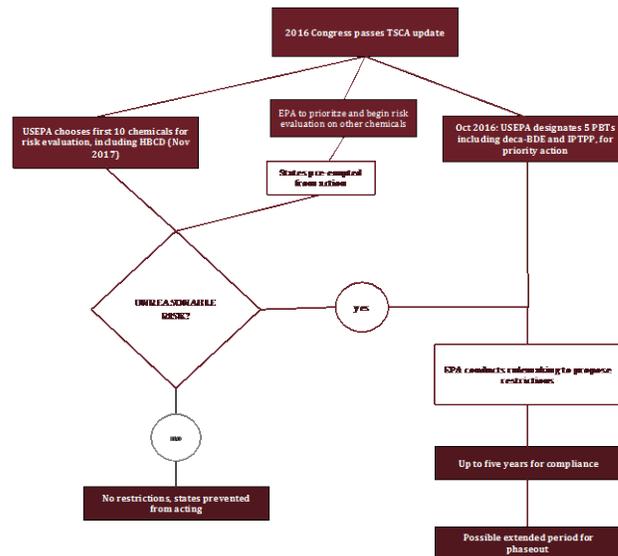
Because of preemption provisions in the new TSCA, states will need to ensure their activities compliment those of the USEPA. The law does not preempt action on the first ten chemicals USEPA addresses until it takes final action. But on all other chemicals, states are preempted from taking action as soon as USEPA begins risk evaluation, except on already-proposed restrictions.

Many opportunities for delay are built into the law, including the 3.5 years for risk evaluation, 3.5 years for rulemaking, 5 years for compliance, and an undetermined amount of time for phaseout.

Implementation to Date

In November 2016, USEPA announced the first ten chemicals it will address under the law. They include the "Cyclic aliphatic bromide cluster," which includes HBCD. USEPA has also proposed procedures for risk evaluation, which will determine the agency's approach to conducting its assessments under the new law. Finally, USEPA is working to create a better inventory of current-use chemicals; it proposed a rule in January 2017 to require notification from companies manufacturing or processing a chemical within the last 10 years.

Figure 1: TSCA Update, Impact on Flame Retardant Regulation



1. Mother's Milk: Toxic Fire Retardants (PBDEs) in Human Breast Milk; <http://www.ewg.org/reports/mothersmilk>.
2. Vermont, Flame Retardants.09.080. 2013. <http://legislature.vermont.gov/statutes/section/09/080/02972>.

3. Children's Safe Products Act;

<http://www.ecy.wa.gov/programs/swfa/cspa/search.html>.

4. An Act To Protect Pregnant Women and Children from Toxic Chemicals Released into the Home. Chapter 296 LD 1658, item 1. 2007.