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# Flame Retardants Go Under the Microscope

By Erin Weaver

[Flame retardants](#) will be the focus of risk assessments carried out in 2013 by the U.S. Environmental Protection Agency (EPA), constituting 20 of the [23 chemicals to be examined](#). Under the Toxic Substances Control Act (TSCA), EPA identifies commonly used chemicals on which to carry out assessments of potential health or environmental risks. In 2012, the agency identified 83 chemicals as candidates for review, from which 23 were chosen for this year's assessments.

Full risk assessments will be conducted on four common flame retardants, with the results shedding light on the [potential effects of structurally related chemicals](#) for which there is not yet sufficient data to carry out individual risk assessments:

- [HBCD](#)—Hexabromocyclododecane is used in virtually all polystyrene insulation manufactured in the U.S. The chemical is being phased out in Europe.
- TCEP—Tris (2-chloroethyl) phosphate is found in furniture foam, textiles, and other interior products.
- TBB—2-Ethylhexyl tetrabromobenzoate may be an additive in PVC, wire insulation, furniture foam, and various adhesives.
- TBPH—Bis(2-ethylhexyl) tetrabromophthalate is used in the same products in which TBB is found.

The agency hopes that evaluating groups of related chemicals (in this case, cyclic aliphatic bromides, chlorinated [halogenated](#) phosphate esters, and [brominated](#) phthalates) will avoid the replacement of known hazards with [similar, unevaluated chemicals](#). Additional flame retardants will be analyzed for environmental persistence and [bioaccumulation potential](#) as well as to determine the mechanisms by which they break down and the behavior of their degradation products.

If the risk assessments, which will be available to the public, indicate significant risk, EPA will pursue risk reduction. EPA has [expressed frustration](#) at the agency's limited abilities under TSCA, saying the legislation does not provide sufficient authority—or funds—to "take risk management actions when chemicals do not meet the safety standard."

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April 5, 2013

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