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The European Commission's Proposal to Exempt Deca-BDE Ignores Sound Science and the Availability of Alternatives

The Commission Exceeds its Legal Mandate

In 2003, the European Union passed into law the Restriction of Hazardous Substances (RoHS) Directive, which eliminates the use of certain toxic chemicals in electronics, including deca-BDE (bromodiphenyl ether), beginning in July 2006. Under the RoHS Directive, the European Commission has the authority to issue an exemption for four years if elimination is "technically or scientifically impracticable" or if the environmental health impacts of alternatives outweigh the impacts of deca-BDE. Yet the Commission has proven neither of these facts. In fact, research by the Danish and German governments, the IFP Research group in Sweden, and the University of Massachusetts Lowell in the U.S., have all shown that alternatives are widely available to deca-BDE. Many electronics' firms have already eliminated or committed to eliminating deca-BDE, including Philips, Electrolux, Sony, Dell, Intel, Apple and Hewlett Packard.

"Dell, along with Apple Computer Inc. and others stopped using PBDE's in 2002"
Associated Press, 2004

"The exemptions in the RoHS Directive has to be strictly limited to cases where there are no feasible alternatives. According to recent market surveys alternatives to deca-BDE are in general available and more pressure should be put on substitution."
Comment by Norway to proposal to admend the RoHS Directive

The Commission's justification for its decision rests on the controversial conclusion proposed in the draft environmental risk assessment by the UK of deca-BDE, which states that further risk reduction measures for deca-BDE are unnecessary at this time. This conclusion has been contested by the Commission's own scientific review committee, the SCHER. **The SCHER disagrees with the draft risk assessment conclusion and "strongly recommends further risk reduction" measures.**

"The proposed exemption of Deca-BDE in electronics goes beyond the implementing powers of the Commission, provided for in Directive 2002/95/EC. Sweden therefore urges the Commission to withdraw the proposal."
Swedish Ministry of Sustainable Development. 7 April 2005

Using a risk assessment for justifying the exemption, however, exceeds the Commission's legal mandate since the risk assessment does not show that alternatives to deca-BDE have greater impacts. The European Parliament passed one resolution in March 2005 condemning earlier decisions by the Commission for failing to follow proper procedures in implementing the RoHS Directive. This was recently followed by a resounding vote of support from the European Parliament's environment committee for a resolution asking the Commission to withdraw their porposal to exampt deca-BDE. Given the strong cross party support within the environment committee, it is expected that the full Parliament will support the resolution.

New Scientific Evidence Against Deca-BDE Continues to Mount

"Deca-BDE is more of a problem than perhaps realized and we do have a number of arguments now to ban it. We know it is accumulating in birds of prey and seeing it in mother's milk is a bad observation."
Dr. Ake Bergman, Stockholm University chemist who conducted the first studies on BFR uptake in the human body, quoted in the Los Angeles Times August 24, 2003.

For the past decade, governments, businesses and independent organizations have documented the growing presence of PBDEs (polybrominated diphenyl ethers) as global contaminants in humans and the environment. All the early warning signs that were in place for PCBs, dioxins and lead, are in place for PBDEs, now known as the 'PCBs of the 21st century." While human body burdens of PCBs, lead and dioxins have declined with greater regulation, our levels of PBDEs continue to rise, with Americans representing the world's most contaminated population.

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Recent studies are confirming the hazards posed by Deca-BDE, including:

- The widespread presence of Deca-BDE in human blood and breast milk, food, household dust and wildlife. Deca, which was supposed to be non-dispersive, is now being found from our homes to remote regions of the world.

"We were thinking that [Deca-BDE] will not enter the biological system and it will not be bioavailable, but this has been proven wrong."
Mehran Alaee, research scientist, Canada's National Water Research Institute, 2003

- Deca-BDE is breaking down—"debromination"—into other PBDE compounds that bioaccumulate up the food chain, including octa-BDE which has been banned in Maine, California, and the European Union. New research shows Deca-BDE debromination in the abiotic environment, particularly sewage sludge where, it is transforming into forms of PBDEs well known for their ability to bio-accumulate up the food chain. As researchers have noted: "*This is an important finding because the inventory of BDE-209 (deca) in soil and sediment is expected to increase over the next few decades, given the continuous use and emission of BDE-209.*"

- Toxicity: initial animal studies are showing evidence of adverse effects on thyroid function and neurological development. The thyroid hormone regulates growth and general development in the newborn child. It has long been known that a small decrease in thyroid hormone levels can produce cognitive impairment in children, including lowered IQ. Thyroid effects and neurotoxicity are common to other PBDEs that have been banned, including penta-and octa-BDE.

"People love to think that we're different from other animals. But at the cellular level, we are fundamentally the same."
Dr L Guillette, University of Florida wildlife endocrinologist

Deca-BDE Restriction Catalyzes Innovation

When the EU passed the RoHS Directive in 2003, it created new business opportunities for safer materials and chemicals and catalyzed new product development. NEC, for example, announced that they now have a biobased plastic that meets the highest flame resistance standards without the use of any potentially toxic chemicals that persist in our bodies or the environment. Dell, Sony, and Hewlett Packard have all committed resources towards adopting substitute materials that are now gaining market traction. The recent about-face by the European Commission to 'de-list' deca from the RoHS Directive will stifle such innovation into safer materials.

Historically, 80% of Deca-BDE use in the US is in electronic products, with the majority of Deca used in black cased television enclosures. As illustrated by the table below, most television and computer manufacturers however are substituting Deca-BDE with safer alternatives.

Industry Trends: Electronic Companies Investing in Safer Alternatives to Deca
NEC
Hewlett Packard
Apple
Dell
IBM
Motorola
Intel
Sony
Hitachi
Panasonic/Matsushita
Sharp
Philips
JVC
Toshiba
Samsung

Clarifying misconceptions about alternatives:

- **Myth:** Alternatives do not meet the highest flame retardancy standards.

  Fact: Alternatives meet the highest fire retardancy standards for electronics (V-O and 5V).

- **Myth:** The alternatives will greatly increase consumer costs.

  Fact: The costs of substitute chemicals will add $4-7 onto the average television set sold for $300.*

The US and Canada have the opportunity to reverse the economic impact of the proposed Commission's proposal to weaken its own RoHS Directive by implementing laws that help businesses substitute Deca-BDE with safer materials and flame retardants, many of which are made by US based manufacturers.

Limit Deca Exemptions to Uses where Substitutes Do Not Exist

The aerospace industry and the bromine industry have lobbied heavily for the Deca-BDE exemption within RoHS. However, rather than give a temporary exemption for Deca-BDE use in this one industry sector, the EU Commission proposed to exempt the use of Deca-BDE for ALL electronic uses. This flies in the face of the wide availability of substitute materials for all other uses. For example, Norway's proposed Deca ban will temporarily exempt transportation uses. In the U.S., state restriction proposals have also included exemptions for transportation.

* See LCSP (2005) Decabromodiphenylether: An Investigation of Non-Halogen Substitutes in Electronic Enclosure and Textile Appications. University Massachusetts. Accessible at *http://www.sustainableproduction.org/proj.clea.publ.shtml*