RoHS and Brominated Flame Retardants

EBFRIP Asks How ‘Green’ Will the New European Parliament Be?

Litmus Test - One of the first big items on the agenda of the new European Parliament Environment Committee is the revision of the Restriction of Hazardous Substances Directive (RoHS), which will give an early insight into whether this new parliament will take decisions based more on science or on the precautionary approach. The rapporteur MEP Jill Evans proposes to ban entire families of substances including brominated flame retardants and PVC. However, a final text is not expected before early 2011 as both Parliament and Council will need to agree.

The European Commission published a proposal at the end of 2008 to review the RoHS Directive, a piece of European legislation which restricts chemicals in electrical and electronic (E&E) equipment. This proposal is currently being considered by the European Parliament and the Council of the European Union. In place since 2003, the current Directive prohibits the use of lead, mercury, cadmium, polybrominated diphenyl ethers (PBDEs) and polybrominated biphenyls (PBBs) in this kind of equipment. However, the new version could result in the phasing out of entire families of chemical substances, should the proposal made by Evans be supported by a majority of her fellow MEPs and by the EU member states. Under the spotlight is PVC and brominated and chlorinated flame retardants, which are used to increase fire safety in a wide range of consumer products. The European Brominated Flame Retardant Industry Panel (EBFRIP) claims that proposal is not supported by scientific evidence and threatens to expose EU industry to legal uncertainty. Several of the targeted chemicals have been through in-depth risk assessments without any requirements for restriction being identified, but rapporteur Jill Evans seems to ignore this and instead advocates widespread use of unnamed alternative chemicals.

Other MEPs in the Environment Committee, when discussing this draft report, have questioned whether the proposed bans could lead to the use of substances that have not yet been sufficiently assessed, thereby undermining the protection of human health and the environment. EBFRIP is advocating a science- and risk-based
approach under RoHS.

To this end it is supporting a transparent and workable methodology for the identification of substances that would in future be considered for prohibition under RoHS.

Another stumbling block is the scope of the Directive, which was until now restricted to applications expressly listed in the legislative text. Some national capitals advocate making the scope of the text open, which would result in the inclusion of all electrical and electronic applications unless exclusion is specifically granted. This means that sectors such as transport, alternative energy, refrigeration and air-conditioning systems, which have so far not been included under RoHS, would in future need to make sure their appliances are compliant with the various requirements included in the Directive.

**Timeline**

The proposed revision of the RoHS Directive is provisionally scheduled for a plenary vote in the European Parliament in June. As the Parliament and the Council are most likely to have divergent views on some major issues, a final agreement on the text is not likely to be found before early 2011. The brominated flame retardants industry is communicating to European legislators on the important role they play in protection against fire.

**The Main Brominated Flame Retardants**

TBBPA, Deca-BDE and HBCD are the three main commercial brominated flame retardants.

TBBPA is used in about 90% of all printed circuit boards and is the most researched flame retardant for this application. TBBPA offers several advantages to the designer and fabricator in terms of its reliable mechanical and thermal performance, loading rates and cost. Its use in E&E products is not restricted in the EU.

Deca-BDE is used in plastics for E&E equipment housings, such as in televisions. However, as a result of the existing RoHS Directive, since July 2008 Deca-BDE can no longer be used in E&E applications for the EU market. Nevertheless, industry users can still apply for temporarily exemptions.

HBCD is used to a relatively small extent in high impact polystyrene housings for E&E equipment and appliances. It is currently being reviewed under Reach and has been identified as a substance of very high concern (SVHC), a conclusion which EBFRIP fully accepts. It is also targeted in the Commission's RoHS review proposal.
as a substance to be reviewed as a priority.

**Advantages of Brominated Flame Retardants**

Every year, in spite of society's best efforts, fire is likely to kill over 4,000 people in Europe alone and to result in burns for thousands. Brominated flame retardants protect people, property and the natural environment efficiently from fires. Many public buildings, such as offices or cinemas, need a high degree of fire safety, which can be achieved most effectively by using brominated flame retardants. These chemicals are present in the plastics used in every day products (televisions, computers, etc.), which are synthetic and flammable. These products can accidentally catch fire, caused for example by overheating batteries, or by contact with a lit cigarette. They can also provide significant fuel for a fire started elsewhere in the room. Brominated flame retardants used in these products can save lives by giving people 15 times more time to escape from fires.

**Voluntary Action by the Industry to Reduce Emissions**

In response to regulatory concerns about some brominated flame retardants, the bromine industry has set in place a voluntary emissions reduction program, which aims to quantify and reduce the emission of brominated flame retardants into the environment. The Voluntary Emissions Control Action Program (VECAP) has created a framework for sustainable management of chemicals by better understanding the industrial processes along the entire supply chain. It demonstrates the commitment of the industries involved to act in a manner which supports the interests of society and the environment.

The latest report has been recently published and indicates very significant emission reductions between 2009 and 2008 from 3,432 kg to 1,220 kg for Deca-BDE, from 815 kg to 189 kg for TBBPA and from 2,017 kg to 309 kg for HBCD. A significant part of these reductions were the results of the implementation of best practices at users. In this way, the brominated flame retardant industry is seeking to offer its partners in industry sustainable solutions which meet the demands for ever greater control of chemicals through their lifecycle.

*See also the the Phosphorus, Inorganic and Nitrogen Flame Retardants Association's article Alternative Flame Retardants Association Established: Pinfa Represents Makers of Substitutes for Brominated Flame Retardants.*

**Autor(en)**
Kontaktieren

**CEFIC**
Ave. van Nieuwenhuysen 4
1160 Bruxelles
Belgium
Telefon: +32 26 7672394
Telefax: +32 26 767331