

New European Commission project on Persistent Organic Pollutants (POPs)

KMK

METALS · RECYCLING

The European Commission has launched a project "Study to Support the Review of Waste-related issues in Annexes IV and V of Regulation (EC) 850/2004" (POP Regulation) to ensure coherent and effective implementation of the Union's obligations under the Protocol to the regional UNECE Convention on Long Range Transboundary Air Pollution (CLRTAP) and the Stockholm Convention on Persistent Organic Pollutants (POPs).

POPs are a group of organic compounds that possess toxic properties, persist in the environment, bioaccumulate through the food web and pose a risk to human health and the environment. POPs are transported across international boundaries far from their sources through air, water and migratory species.

The Commission has assigned the execution of this project to BiPRO GmbH (part of Ramboll).

The study aims at providing the Commission with the necessary scientific basis to propose amendments to the POP Regulation, due to the listing of new substances and to the review of limit values for substances already listed. In addition, the study shall provide guidance on how wastes containing the new POPs may be managed.

EERA – the European Electronics Recyclers Association, representing 36 companies that recycle approximately 2.2 million tonnes of WEEE annually in Europe, responded recently to a stakeholder consultation questionnaire prepared for the purposes of the above study.

Of the 3 Million Metric Tons of plastics used in EEE, most (some 90%) do not contain any flame retardant substances.

Of these flame retardant substances found in WEEE by far the majority are substances that are not restricted.

However a small number of the brominated flame retardant substances are classified as POP's.

The warning that EERA companies give following this questionnaire is that **any threshold of BFRs (Brominated Flame Retardants) that are restricted as POP's below 1000 ppm shall result in the plastic recycling industry for WEEE plastics coming to a halt.** EERA are not aware of any laboratories that can measure any of the POP restricted BFR's on an industrial scale at such low concentrations continuously, so that introduction of a maximum limit beneath this would be devastating to the entire industry. If a threshold below **1000 ppm** is accepted, **legally required recycling and recovery rates**, which are given in the WEEE Directive and in National legislation, **cannot be met.** In addition, the **CO2 emissions** due to the incineration of WEEE plastics **will exceed 2.5 million tonnes per year and vast amounts of energy will be needed to produce virgin plastics.** Last but not least, it will also **counteract the European Circular Economy Package and the EU plastics strategy.**

Many of the nowadays practices have been explained in the questionnaire - such as the definition of removal in the WEEE Directive; the fact that industry cannot send a sample of each bag of PCR plastics to an external laboratory for a full analysis of the BFR congeners, as that would be prohibitive in terms of costs and the time taken (2 weeks) for each sample to be analysed. There is a need for practical solutions such as what is developed in the CENELEC EN 50625 WEEE treatment standards that were commissioned by the European Commission. Also clarified, was the existing confusion of product and waste legislation especially in relation to cross border transportation and notifications.

Many stakeholders are unaware of the above and it is encouraging that BiPRO GmbH, who also conducted the WEEE Directive compliance exercise, have an open mind to the industry's sentiments.

EERA now wish to invite different European Parliament members (MEP's) during the summer break in their own respective countries to visit and gain more insight into the practicalities of operating a WEEE recycling plant within existing parameters and discussing the implications of altering the threshold of BFR's.

Fact Sheet Brominated Flame Retardants Part 1 – Elemental Bromine

- ▶ Largest Elemental Bromine stock are the seas and the oceans
 - 65 Gram per Cubic Meter of sea water (even 5 Kg in the Dead Sea)
- ▶ Bromine is mainly found in salts (as anion) and is not hazardous
 - Our human daily intake is 2 to 8 Mg
- ▶ Elemental Bromine in WEEE plastics is often > 5 000 ppm*
- ▶ Celenec simplified approach > 2 000 ppm elemental Br:
 - Below which the plastics can go anywhere
 - Above which the plastics have to go to special facilities that separate BFR containing plastics
 - No need to do analyses if material goes to these specialized facilities (no added value)
- ▶ Elemental Bromine is not a measure for defining plastics with BFR as "POP" containing material.

* Study: Stoffliste im Schweizer Elektronikschrott PDF-Download www.safu.admin.ch/ua-1717-d

Fact Sheet Brominated Flame Retardants Part 2 – Which BFR's are restricted?

- ▶ Most Brominated Flame Retardants can still be used and are not restricted
 - Penta-, Octa-BDE and HBCDD account for 8% of BFR's in WEEE*
 - Deca-BDE for 22%, but thresholds are not fixed yet*
- ▶ All PBDE's are not used in EEE since 2004 (RoHS)
 - Hence they can hardly be present in Flat Panel Displays
- ▶ Analyses of BFR substances/congeners are expensive
 - Not required if delivered to a specialized plant
 - No added value for anyone – refer to Swiss Study*
- ▶ Often notifications are required for WEEE plastics
 - But WEEE plastics with BFR's are not hazardous
 - Thresholds for hazardousness for Octa-BDE 0.3% and for Deca-BDE 25%
 - These values cannot be found in WEEE plastics
 - PBB's and Penta-BDE cannot be found in WEEE and HBCDD only in EPS (expanded PS).

EERA are currently preparing an informative flyer to be distributed on Brominated Flame Retardants.

A stakeholder workshop for the study is planned for June 2018. The objective of this workshop will be to present and discuss the first results of this study including the proposed limit values as well as any other additional measures.

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