



European
Automobile
Manufacturers
Association



The International
Bromine Council

DIGITALEUROPE



Joint position on the Recast of the Persistent Organic Pollutants (POPs) Regulation (EC 850/2004)

Impact on plastics recycling of setting a disproportionately low unintentional trace contaminant (UTC) threshold (10 mg/kg) for decaBDE in Annex I of the POP Regulation.

The afore mentioned organisations would like to express their serious concern on the [amendments tabled](#) by the European Parliament to set, in Annex I of the EU POP Regulation, a limit regarding the “unintentional trace contaminant” (UTC) for decaBDE at concentrations “*equal to or below 10 mg/kg (0.001 % by weight) [i.e. 10 ppm] when it occurs in substances, mixtures, articles or as constituents of the flame-retarded parts of articles*”.

➤ Brominated flame retardants (BFRs) in plastics from WEEE and ELVs

Flame retardants have been widely used over the last decades in plastics of electrical appliances and vehicles, to meet fire safety standards and prevent and mitigate fire and explosion risks. Some of these flame retardants are brominated and are embedded in the matrix of the plastics of electrical appliances and vehicles. A small number of these brominated flame retardants (tetra, penta, hexa, hepta and decaBDE, HBCD) are restricted under RoHS and REACH and are also banned under the Stockholm Convention on Persistent Organic Pollutants. These restrictions and bans have been ongoing since 2003. This means that electrical and electronic equipment and vehicles reaching end-of-life (WEEE, ELVs) today may still contain them.

Over the last years, the recycling industry has developed advanced separation techniques to sort and eliminate plastics containing brominated flame retardants, so that the recycled plastics meet the concentration levels set in EU and international standards and regulations to protect human health and the environment. European plastics recycling companies are pioneering the development of technology and treatment processes to recover complex plastics from WEEE and ELVs.

➤ What is the current legislation regulating restricted BFRs in plastics in a nutshell?

For those brominated flame retardants already listed in the EU POP Regulation (tetraBDE, pentaBDE, hexaBDE, heptaBDE), an unintentional trace contaminant (UTC) value of 10mg/kg applies. However, there is a derogation for “the production, placing on the market and use of [...] articles and mixtures containing below 0.1% of [PBDE] by weight when produced partially or fully from recycled materials”. This derogation, allowing a limit of 0.1% (1000 mg/kg), is vital for the recycling industry: **it is simply not possible to guarantee a maximum level of POP-BDE of 10ppm in recycled plastics from WEEE and ELVs.**

However, in a proposed amendment to the EU POP Recast for the inclusion of decaBDE in Annex I, **only the UTC limit of 10 mg/kg is mentioned, and no derogation for recycling is foreseen.**

In parallel, in 2017 the European Commission adopted a restriction under REACH allowing a level of decaBDE of 1000mg/kg (0.1%) in articles placed on the EU market. The scientific committees of ECHA have concluded that this concentration limit of 1000 mg/kg was suitable *“to enhance the enforceability of the restriction [and] analytical methods to verify concentration are well established”*¹.

The UTC of 10 mg/kg proposed in the recast of the EU POP Regulation is therefore a **hundred times lower** than what is permitted by the REACH restriction adopted in 2017 with respect to decaBDE. This discrepancy between the

REACH and POP Regulation is all the more questionable since the recast of the EU POP Regulation contains new provisions to increase the involvement of ECHA, which should be involved in the technical preparation of dossiers on substances, taking into account the restriction dossiers, *“to ensure a consistent and efficient implementation of legislation on chemicals in the Union.”*

- **What would be the practical consequences for the recycling industry processing ELVs and WEEE of setting an UTC of 10 ppm and why are they in stark opposition with the objectives of the EU’s Plastics Strategy?**

The annual plastics consumption for the car industry in Europe is close to 4 Million (Mio) tons per annum. The currently reported quantity of End-of-Life Vehicles (ELVs) consists of 6.3 Mio ELVs per year and this represents a quantity of ELV plastics of some 1.2 Mio tons. **The total amount of plastics used in electronic applications in Europe amounts to some 3 Mio tons per annum.** The implementation of the Waste of Electronic and Electric Equipment (WEEE) Directive allows some 1.2 Mio tons of plastics to be separately collected.

Some plastics from WEEE and ELVs still contain brominated flame retardants (restricted or not), at levels well above 1000 mg/kg. State of the art separation and treatment processes in recycling plants allow for the removal and destruction of the brominated plastic fractions above 1000ppm (1000 mg/kg). As a result, recycled plastics from WEEE and ELV sources comply with the current threshold set by the REACH Regulation of 1000mg/kg.

However, if there is a 100 times reduction in the level of decaBDE, the recycling industry will not be able to guarantee or attain these levels as they are close to current detection limits and hence cannot be reliably measured at industrial scale.

Should a concentration limit of 10 mg/kg as an unintentional trace contaminant for decaBDE become mandatory as part of the recast of the POPs regulation, the consequences would be the following:

- **Recycling plastics from WEEE or ELVs in Europe will come to an end:** producing recycled plastics containing less than 10 mg/kg of decaBDE is not technically feasible at industrial scale, even for the best performing operators. A targeted dismantling of flame retarded components would neither be feasible nor would it improve the situation. This would effectively halt companies that invested heavily in the development of innovative sorting processes, while bringing no added benefit to the protection of human health or the environment.
- **As a result, complying with the European recycling targets for WEEE and ELVs set in the directives specific to these two streams will become very challenging if not impossible** since significant fractions of recoverable plastic waste will have to be discarded.
- **Major negative environmental and social impacts will result** since all these plastics wastes from WEEE and ELVs will have to be incinerated or landfilled, increasing the emissions of CO₂ and other organic components as well as the contamination of the soils.
- **Record CO₂ environmental benefits stemming from plastics recycling will be eliminated:** As outlined by the [Plastics Strategy](#) itself according to which recycling 1 million tons of plastics equals the CO₂ savings of taking 1 million cars off the road².
- **Substantial and direct negative socio-economic impacts for the European plastics recycling industry** since plastics recycling is at least 30 times more labour-intensive than options lower in the waste hierarchy, namely incineration or landfill³. This implies the loss of direct and indirect jobs in the sector.

¹ RAC and SEAC opinion: <https://echa.europa.eu/documents/10162/b5ac0c91-e110-4afb-a68d-08a923b53275>

² Figure stemming from the [joint study made by FEDEREC and ADEME](#) assessing the environmental impacts of recycling using a life cycle assessment (LCA) approach, Final report, April 2017.

³ Figure stemming from the [study made by Bio by Deloitte for Plastics Recyclers Europe](#).

The above-mentioned consequences run contrary to the very objectives of the Circular Economy and in particular of the Plastics Strategy. They would *de facto* prohibit any further investments into plastics recycling from WEEE and ELVs and render impossible any pledge for incorporation of recycled plastics from WEEE and ELVs in new products.

- Why is industry requesting the conservation of high quality plastics recycling from WEEE and ELVs in Europe?

The EU-wide “pledging campaign” dimension of the Plastics Strategy has resulted in positive signals for the incorporation of recycled plastics back into electrical and electronic appliances as well as in new cars. **Setting a UTC level for Deca-BDE *de facto* prohibits plastics recycling from WEEE and ELVs and thus runs counter to the objective of the Plastics Strategy to incorporate recycled plastics in new products as well as the expectations of end users.**

Therefore the co-signatories call for:

1. The inclusion of a UTC threshold in line with the others existing for POP-BDEs, allowing a concentration equal to or below 0.1 % (1000mg/kg) - at least for recycled plastics - for decaBDE in the Annex I of the EU POP Regulation. This would be fully in line with the existing [REACH Restriction](#) for decaBDE, hence contributing to regulatory consistency between the POP and REACH Regulations, as well as with the current rules for other congeners of the same PBDE substance family.

Alternatively

2. A moratorium on setting any concentration limit for decaBDE until the completion of discussions at the level of the Stockholm and Basel Conventions. Once these discussions are concluded and a scientifically valid limit value is determined based on health and environmental considerations, the Commission can then move to align the EU POP Regulation via the procedures foreseen in the POP Recast.

Hence, the co-signatories support the amendment (AM) 51 tabled by Ms. Julie Girling, Rapporteur of the ENVI Committee of the European Parliament, providing that the limit value for concentrations of decaBDE [shall be set] at a level to be agreed under the Basel and Stockholm Conventions respectively when it occurs in substances, mixtures, articles or as constituents of the flame-retarded parts of articles.

The co-signatories thank you for the attention paid to this joint paper and stand ready to provide any further information you may be interested in.

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