CHEMTrust
Protecting humans and wildlife from harmful chemicals

Consultation response
April 2023

CHEM Trust comments on ECHA's "Regulatory strategy for flame retardants" presented at CARACAL 48, 28/3/23

- *Comments sent by email on 26th April 2023 to: GROW-CARACAL@ec.europa.eu ; ENV-CARACAL@ec.europa.eu;*

1 Introduction

CHEM Trust welcomes the production of the ECHA "Regulatory Strategy for Flame Retardants"[1], and our main message is that action needs to be taken rapidly, without further delays. In particular, there needs to be rapid development and implementation of a cross-cutting restriction on all aromatic brominated flame retardants.

It is welcome that the European Commission and ECHA have recognised the importance of action on Flame Retardants in general, and aromatic brominated flame retardants in particular. This makes it even more puzzling that the initial draft 'Restrictions Roadmap' published in 2021 did not mention brominated flame retardants, as we highlighted out in our response[2]. Fortunately our comments were taken on board in the final Restrictions Roadmap in April 2022[3].

Two years ago we used DBDPE as a case study in the effectiveness of REACH processes in controlling chemicals:

- https://chemtrust.org/sofas-polluting-polar-bears/

Unfortunately this strategy suggests further delays in action on DBDPE – see below

2 Overall comments

2.1 The Polluter Pays Principle is absent from EU Chemicals policy

Article 191(2) of the Treaty on the Functioning of the European Union (TFEU)[4] states that:

> *"Union policy on the environment (...) shall be based on the precautionary principle and on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source and that the polluter should pay".*

The example of DBDPE – see below - and many others - shows that the polluter does not pay, they profit. There has been no preventative action in the case of DBDPE, in fact the regulator was aware that its use was likely to increase as a regrettable substitute for Deca BDE, yet controls were not put in place. This is a failure of regulation and should be a key evidence point for the revision of REACH and also a critical examination of how the existing REACH system has been applied.

The ineffectiveness of the REACH regulatory processes has meant that in REACH, in reality, PPP stands for not the Polluter Pays Principle, but the Polluter Profits Principle – or even the Polluter Parties Principle.

The 'Polluter Profits Principle' is clear for many substances, for example in the case of PFAS, where producers are not paying for their global pollution of people, wildlife and environments, except for a few point sources such as Antwerp in Belgium[5].

2.2 Astoundingly slow regulatory action – the DBDPE case study

Our blog "*The polluting chemical in our sofas – and polar bears – that shows that REACH controls are failing*", published on 28th May 2021, outlines the sorry tale of the lack of EU regulatory action on this chemical:

---

[1] https://echa.europa.eu/documents/10162/81b30862-a821-2088-4e6f-9d85c5d5a91d

[2] https://chemtrust.org/wp-content/uploads/ct-comments-restrictions_roadmap.pdf

[3] https://chemtrust.org/restrictions_roadmap/

[4] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A12012E%2FTXT

[5] https://www.theguardian.com/environment/2023/feb/23/revealed-scale-of-forever-chemical-pollution-across-uk-and-europe

- https://chemtrust.org/sofas-polluting-polar-bears/

The information below is examined in more depth in this blog, with full references.

Decabrominateddiphenyl ethane (DBDPE) was added to the Community Rolling Action plan published on the ECHA website on 29th February 2012[6], **over 11 years ago**.

The substance evaluation has still not been completed, with the Flame Retardants strategy stating "*The substance evaluation may be finalised in 2023*" and "*information is requested regarding reproductive toxicity (data expected by 2024)*".

ChemSec put the chemical on their SIN list in October 2014[7], while the UK Environment Agency published a study in 2007 concluding that there were "*concerns over bioaccumulation potential and the potential products of degradation processes that require further investigation*".

Both RAC and SEAC identified DBDPE as likely to be a replacement for decabrominated diphenyl ether (decaBDE), with SEAC assuming this would be the case, as stated in their report in 2015[8]:

- The RAC report, agreed in June 2015, states that EBP – another name for DBDPE – "*is widely regarded to be the most feasible replacement from both a technical and an economic perspective.* ***Concerns for this substance are related to potential PBT/vPvB properties similar to decaBDE (i.e. due to transformation) combined with evidence of long-range atmospheric transport****. RAC supports that further exploration is made of this and other alternatives as regards their risk.*"
- SEAC's report, agreed in September 2015, accepts an analysis of substitution costs that assumes "***EBP will be used to replace decaBDE in all applications*** *(textiles + plastics)*"

For a range of reasons, including a legal challenge by registrants, we are now in 2023, 13y later, still waiting for more data!!

Throughout this period, emissions of this high-volume chemical have continued, contaminating wildlife and people across the world, and adding to the toxic load of furniture in our homes.

Meanwhile, industry continues to claim that DBDPE has no hazards.

The vast majority of companies are still telling their customers that this chemical has no hazards, according to the EU's Classification and Labelling inventory[9] [as at 17th April 2023], with ***only one notifier of 630 classifying it with any hazards at all***, "H413: May cause long lasting harmful effects to aquatic life". The number of notifiers classifying it with no hazards has increased from 617 to 629 since our blog in May 2021!

A key test of the success of this Flame Retardant strategy – and the Chemicals Strategy for Sustainability in general – is the speed in which this chemical, and other aromatic brominated flame retardants, are removed from the market.

Once these chemicals are removed from the market, they will remain in furniture in our homes and workplaces for decades, contaminating ourselves and the environment and preventing a circular economy. Will the polluter pays principle be applied to help clean up this mess?

[6] https://echa.europa.eu/information-on-chemicals/evaluation/community-rolling-action-plan/corap-table/-/dislist/details/0b0236e1807e3287

[7] https://sinsearch.chemsec.org/chemical/84852-53-9

[8] https://echa.europa.eu/documents/10162/b5ac0c91-e110-4afb-a68d-08a923b53275

[9] https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/46986

2.3 Biomonitoring finds contamination by many flame retardant chemicals

The HBM4EU biomonitoring project has identified widespread and significant exposure of people in Europe, including children, to a wide range of flame retardants[10].

There was, however, a significant lack of data, for example DBDPE was classified as having scarce human biomonitoring data for the European population. This is very worrying for a chemical with such a high level of use, with the studies that were available finding it in some children (P95 concentrations in the range of 0.56-2.61 µg/L across studies in children).

The results from HBM4EU studies on flame retardants have been published in the *International Journal of Hygiene and Environmental Health*[11]; the abstract provides a summary:

> *"Many legacy and emerging flame retardants (FRs) have adverse human and environmental health effects. This study reports legacy and emerging FRs in children from nine European countries from the HBM4EU aligned studies.*
>
> *Studies from Belgium, Czech Republic, Germany, Denmark, France, Greece, Slovenia, Slovakia, and Norway conducted between 2014 and 2021 provided data on FRs in blood and urine from 2136 children. […] Ten halogenated FRs were quantified in blood, and four organophosphate flame retardants (OPFR) metabolites quantified in urine*
>
> *Hexabromocyclododecane (HBCDD) and decabromodiphenyl ethane (DBDPE) were infrequently detected (<16% of samples).*
>
> *BDE-47 was quantified in blood from Greece, France, and Norway, with France (0.36 ng/g lipid) having the highest concentrations. BDE-153 and -209 were detected in <40% of samples.*
>
> *Dechlorane Plus (DP) was quantified in blood from four countries, with notably high median concentrations of 16 ng/g lipid in Slovenian children.*
>
> *OPFR metabolites had a higher detection frequency than other halogenated FRs. Diphenyl phosphate (DPHP) was quantified in 99% of samples across 8 countries at levels ~5 times higher than other OPFR metabolites (highest median in Slovenia of 2.43 ng/g lipid).*
>
> *FR concentrations were associated with lifestyle factors such as cleaning frequency, employment status of the father of the household, and renovation status of the house, among others.*
>
> *The concentrations of BDE-47 in children from this study were similar to or lower than FRs found in adult matrices in previous studies, suggesting lower recent exposure and effectiveness of PBDE restrictions."*

The conclusions highlight particular issues regarding organophosphate flame retardants:

> *"OPFR metabolites, particularly BDCIPP and DPHP, have ubiquitous distribution in Europe, with limited differences between countries, perhaps due to the open market conditions. OPFR concentrations should be critically evaluated by regulatory institutions due to their high prevalence and indications of endocrine-disrupting effects."*

[10] https://www.hbm4eu.eu/wp-content/uploads/2022/07/Flame-Retardants_Substance-report.pdf

[11] Van der Schyff et al (2023): Exposure to flame retardants in European children — Results from the HBM4EU aligned studies. In: *International Journal of Hygiene and Environmental Health* 247 (2023) 114070.

3 Answers to the Commission's questions

3.1 Would you support a broad approach on regulatory actions on flame retardants?

Yes, we need broad and rapid regulatory action on large numbers of flame retardants.

In particular, an immediate restriction process is needed for aromatic brominated flame retardants – including DBDPE - which are currently a case study in the ineffectiveness of EU chemicals policy.

We make some points on specific flame retardants below, and a response from CPES and HEAL goes into detail on a large number of flame retardants:

- https://www.env-health.org/wp-content/uploads/2023/04/HEAL-CPES-comment-ECHA-Flame-Retardants.pdf

TBBPA

We were very surprised to read that TBBPA is only proposed to be included in the restriction for aromatic brominated flame retardants when it has PBT/vPvB properties (page 35 of the regulatory strategy for flame retardants). Surely the fact that it is a carcinogen with widespread exposure does in itself justify a restriction? TBBPA is the most widely used brominated flame retardant in the world. And as we have already pointed out in our submission to the SVHC identification,[12] the concern is not new: Already in 2005 WWF reported findings of TBBPA in blood samples of its 'Three-generation human biomonitoring study'[13]: The flame retardant TBBP-A was found in 18 family members (3 grandmothers, 7 mothers and 8 children). The young generation had the highest median level of this chemical and the highest level was found in a child.

TBBPA has also been detected in environmental samples in the Arctic.[14]

The fact that such a high volume chemical was only now officially identified as a carcinogen is worrying enough and should trigger immediate action to reduce exposures to prevent further contamination of people and wildlife.

Chlorinated organophosphorus flame retardants

In addition, we also strongly urge that there is swift regulatory action on chlorinated organophosporus flame retardants where the Commission had asked ECHA already many years ago to prepare a restriction.

Since 2019 this work is on hold, while waiting for a carcinogenicity study from the US (as described on page 41 of the regulatory strategy for flame retardants). This open-ended delay is very frustrating given the scientific concerns about harmful effects and the ongoing widespread use of substances such as TCEP as additive flame retardants which leads to occurrence in house dust, environmental media (surface water) as well as findings in breastmilk. Again we are seeing the 'no data, no problem' principle in action.

[12] https://chemtrust.org/wp-content/uploads/CHEM-Trust-comments-SVHC-nominations_October-2022_final.pdf

[13] https://chemtrust.org/wp-content/uploads/Generationsx_wwf_2005.pdf

[14] see e.g. Vorkamp et al: Current-use halogenated and organophosphorous flame retardants: A review of their presence in Arctic ecosystems, Emerging contaminants 5 (2019), 179-200

3.2 Which information beyond ECHA's regulatory strategy do you consider important to collect prior to initiating regulatory actions?

The restriction on brominated aromatics should be initiated now – these are persistent chemicals that are polluting the environment, and the shocking level of delay in controlling their use must end now.

REACH also needs to demonstrate its ability to control all other flame retardants of concern, with restrictions based on available data and grouping. In any areas where safer alternatives are not available then this will become clear during the restriction process and can be addressed where necessary with temporary derogations.

REACH is based on the 'No data, no market' principle, not the 'No data, no problem' principle – it is now 2023, more than 15 years after REACH entered into force. Lack of data should lead to the use of precautionary read-across and group-based controls, not be rewarded by delay and inaction.

3.3 Are there initiatives on MS level that could support the strategy?

We don't have information on this issue.