

BSEF Position Paper Essential Use of Flame Retardants

On 22 April 2024, the European Commission [published](#) a Communication on the essential use concept, outlining guiding criteria and principles defining this concept in EU chemical legislation. BSEF have the following remarks with regards to the Essential Use Concept, and on the importance of flame retardants.

General Remarks on the Essential Use Concept

The REACH Restriction and Authorisation are the two main regulatory processes for addressing the “most harmful chemicals”. As the Essential Use concept is proposed to be linked to the management of such chemicals, it needs to complement the existing Restriction and Authorisation provisions. As such, we believe the Essential Use Concept should be limited to SVHC substances.

REACH covers (almost) all chemicals. Therefore, the criteria for essential use need to be flexible enough to take into account the wide range of important uses of chemicals under REACH. There are chemicals with hazardous properties that are used safely and that have a very high benefit for society. However, according to the definition of essential uses in the Montreal Protocol or the recent European Commission Communication, these uses would not be considered as essential.

We advocate for an essential use concept that takes into account both the following aspects:

- the **safe use of a chemical**: if the chemical can be used safely it should not be banned (in REACH terms: the risk needs to be adequately controlled/ there must not be an unacceptable risk).
- the **social benefit of a use**: if the use has a demonstrably high benefit for society, it should not withhold the substance from going through appropriate risk management measures.

We advocate for an essential use assessment that is:

- based on sound science and an **assessment of the risk**, not only hazard.
- **transparent, predictable and proportionate** to the identified risk. Industry requires a level of certainty in order to make investment decisions.
- done on a **case-by-case analysis** of individual uses in the final products, without excluding entire industry sectors.

Essentiality of Flame Retardants

It is a well-known fact that we are surrounded by highly flammable synthetic materials (such as plastics used to manufacture electrical and electronic appliances, textile fabrics, thermal insulation, upholstered furniture in homes and cars) in our daily lives. Nevertheless, we rarely come across a serious fire in our homes (apartments and houses), offices or transport systems.

One of the reasons for these high levels of fire safety is that stringent fire safety standards are in force for products where fire safety is a valid concern like those in high heat areas, in close proximity to electricity or that represent a high fuel load. While these standards are often performance based and do not follow specific requirements for materials, in practice flame retardants (FRs) are often the means by which flammability is reduced. FRs are embedded in small amounts to neutralize fire.

Without fire safety standards and the corresponding use of flame retardants, the risk for fire will greatly increase. Flame retardants are therefore essential to society, preventing numerous deaths, injuries, and minimizing property damage. Given that current alternatives would not provide the same level of safety, both for human health and the environment, flame retardants should be considered under the EU Essential Use Concept.

We therefore welcome the reference to “fire resistance in products anticipated to be heated to a temperature where ignition could occur” as one of the technical functions necessary for health or safety.

A citizens’ opinion on (non-)essential uses of persistent chemicals: A survey in seven European countries, authors A.K. Karinen et al¹, revealed that not only, chemical uses related to safety were frequently considered essential, but every chemical in use for the protection against fire posed to respondents was considered essential. BSEF is of the opinion that flame retardants are essential and any EU action towards their regulation must not compromise the safety of buildings or any of their inhabitant.

FRs support the Chemical Strategy for Sustainability

Fire is an ever-present danger, and we can ill afford to live with its associated human and environmental losses – fire itself is inherently unsustainable.

BSEF member companies are continuing to support the European Commission’s green objectives and innovate with sustainability at the forefront.

- Insulation foam is a major contribution to lower energy consumption, **flame retardants are used to reduce fire risk originating from combustible insulation materials**, and as such contribute to reduction of CO₂ emissions.
- For the transition from combustion to electrical mobility sophisticated batteries are needed, and to safeguard this transition, **flame retardants are crucial to secure fire safety in and around the car**. Fire safety is also particularly important in the case of electric bikes and two-wheelers, which are often charged and stored close to the exit of buildings and apartments.
- **BFR plastics represent nowadays a well-controlled stream**, which is easily sorted out during conventional and industrial recycling processes.

Therefore, this end use of flame retardants takes on global significance in our quest for sustainable applications.

BSEF members are committed to place on the market substances that are safely used and bring environmental, health and socio-economic benefits to society, as well as increase investments in R&D to advance the development of alternatives.

Concluding remarks

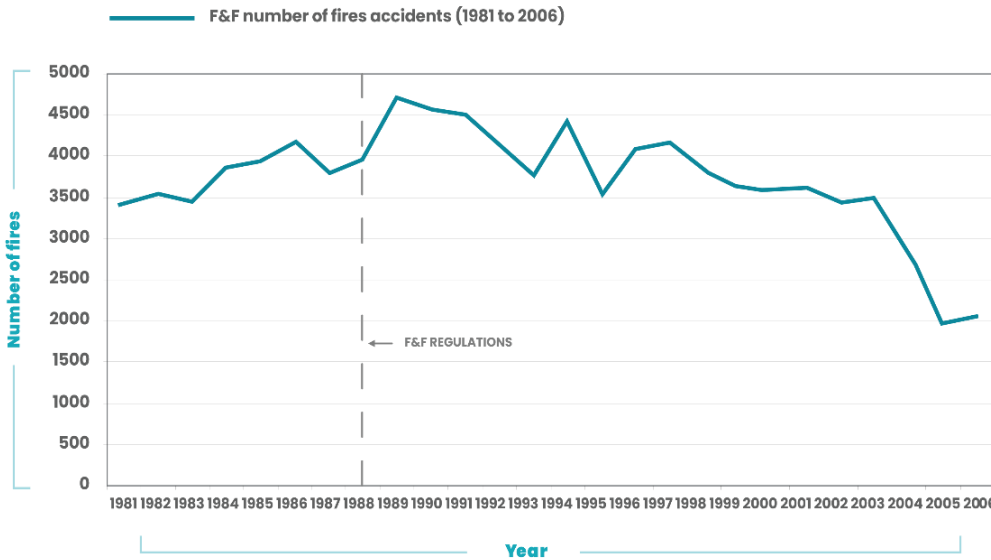
Unexpected or uncontained fire can cause large-scale destruction, injury and loss of life. It is therefore vital that everything practical is done to reduce the risk of fire and, in the event that fire does happen, to help minimise and contain its spread as much as possible. Flame retardants are essential to enhance fire safety and fire prevention by providing flame retardancy to a wide range of materials. They slow the spreading of fire and therefore extend the time available for people to evacuate and emergency services to intervene, saving lives and limiting the damages caused by fire. Our society cannot compromise and fire safety standards and in view of the lack of alternatives providing the same level of safety, flame retardants should be considered essential under the EU Essential Use Concept.

¹ <https://www.sciencedirect.com/science/article/pii/S1462901123003155>

ANNEX

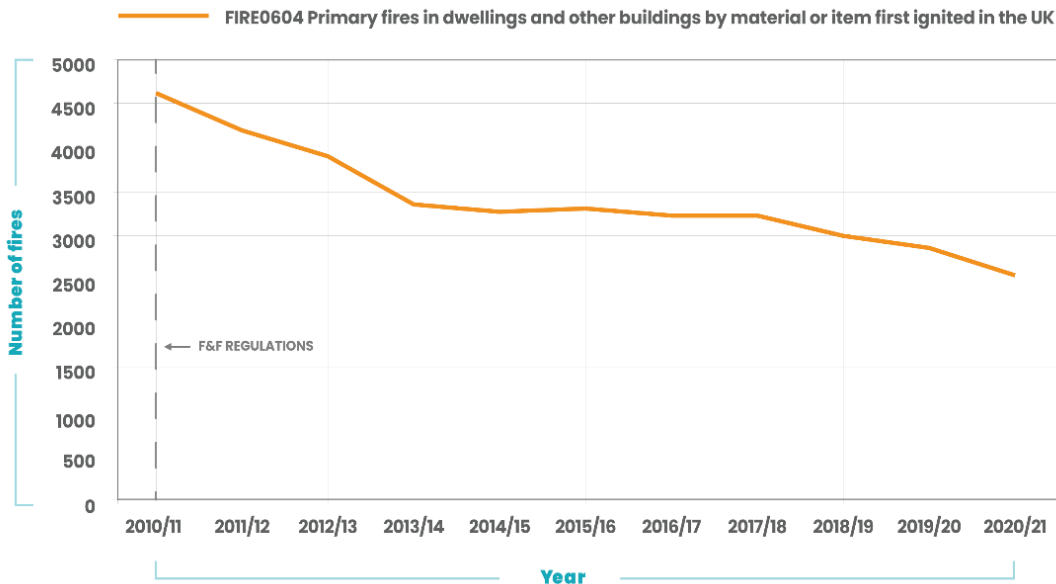
Case Study – Value of Flame Retardant Regulations

UK Government research has shown that the **UK Furniture Regulations** have saved thousands of lives since their inception in 1988. FRs are used to meet the fire standards set by these Furniture Regulations.



Furniture & Furnishings (F&F) fire fatalities with material first ignited – 1981 to 2006 showing the effect of the UK furniture regulation (introduced in 1988)².

Further revision and strengthening of the UK legislation in 2010 has led to a continued downward trend in fires³;



² Source: [A statistical report to investigate the effectiveness of the Furniture and Furnishings \(Fire\) \(Safety\) Regulations 1988](#), commissioned by Consumer and Competition Policy Directorate, BIS

³ Source: [FIRE0604 Primary fires in dwellings and other buildings by material or item first ignited in the UK](#)



Fire fatality rates comparison

United Kingdom / Ireland, regions which have strong Furniture Fire standards, including open flame test, compared with the United States (California) and the rest of the European Union, both of which in general have poor standards, smoulder test only.

The table below shows the success of good standards in the UK and Ireland have led to half the amount of casualties per capita in comparison to that of the US & EU (minus UK & Ireland).

Country/Region	Deaths due to fire in the home (previous 3 years' data, ave.)	Population (millions)	Fire deaths per million head of population
USA	3,343 (NFPA)	327	10.2
EU 28, minus UK and Ireland	4,600 (est.)	442	10.4
England & Wales	286 (DCLG)	59	4.8
Ireland	27 (DHP&LG)	5	5.4

Further information:

For further information, please contact Patrick Fox, Head of Public Affairs & Advocacy (pfox@bsef.org)

About BSEF

BSEF – the International Bromine Council, is the global representative body for bromine producers and producers of bromine technologies. Originally founded in 1997, BSEF works to foster knowledge on the societal benefits of bromine and its applications. The members of BSEF are Albemarle Corporation, ICL Industrial Products, Lanxess and Tosoh.

BSEF is actively involved in responding to and engaging with the EU Green Deal and in particular the EU Circular Economy Action Plan and Chemicals Strategy for Sustainability. Additionally, its member companies are active in a range of projects and investments (some EU co-funded) designed to align bromine technologies with Green Deal goals.

