

## BSEF Position Paper

### EU Sustainable Products Initiative

#### Key messages:

- **Define sustainability in the context of products at the outset**
- **Include fire safety as a sustainability principle in product design**
- **Take a practical approach to managing circularity of products**
- **Maintain and strengthen the life cycle methodology to assessing a product's sustainability**

#### Introduction

The Sustainable Products initiative (SPI) is a product-focused, umbrella framework, under the EU CE Action Plan (CEAP) which aims to make products placed on the EU market more sustainable. The expectation is that consumers, the environment and the climate will benefit from products that are more durable, reusable, repairable, recyclable, and energy efficient.

BSEF's understanding is that the core deliverable will be a revamped Ecodesign Directive/Regulation with possible other related measures. It is intended to focus on a range of products to deliver on the CE Action Plan goals. Priority is to be given to addressing particular product groups such as electronics and ICT, textiles, furniture, construction and buildings as well as intermediary products such as steel, cement and chemicals.

The Commission has retained a consortium of consultants led by Trinomics to under the preparatory work for the initiative. This work includes a number of tasks including the development of the regulatory Impact Assessment, the definition of sustainability principles, review of the ecodesign process and associated product assessment methodologies, the identification of appropriate indicators for measuring performance versus overarching goals (e.g. CO2 reduction, energy efficiency) and finally, market surveillance and enforcement.

BSEF, the International Bromine Council, 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. BSEF supports the objectives of the SPI and the goal of making products more sustainable. This position paper sets out its views and perspectives in the context of electrical and electronic equipment, furniture and construction products. These are particular applications where brominated fire safety solutions are used to enable materials and components to meet fire safety standards.

#### About Brominated flame retardants

Brominated flame retardants are a versatile and diverse family of chemical additives designed to provide fire safety solutions for materials used in products where there is a need to meet fire safety standards. There are some 75 brominated flame retardants on the market. Their key attributes include:

- **Excellent & effective performance Resource efficient – lower % mass of FR**

- Reduced likelihood of ignition
- Functionality – ability to operate in the gas phase
- Reduced heat release
- Slower fire growth
- Applicability across a wide range of materials and polymer types

They have a wide range of product applications including building & construction, automotive and transport furnishings and upholstery as well as electrical & electronics.

### The importance of fire safety

On a social level, fire is a traumatic experience for those who experience it with consequent financial and psychological damage. There are also material and intangible losses, injuries or even deaths. Estimates suggest that there are more than 5,000 deaths in the European Union (EU) per year and a multitude of burn survivors who have been marked or scarred for the rest of their lives<sup>1</sup>. During a fire event, building materials are damaged, contents are lost, water is wasted, and pollutants are released into the environment through the air and water. After a fire event, materials that were damaged are transferred to landfills and new materials are brought in to replace them. According to the US National Fire Protection Association (NFPA), fire safety is a sustainable practice<sup>2</sup>. They note that reducing the amount or severity of fires can reduce wasted materials, pollution, and save money.

### BSEF views on the SPI development

#### 1. Define Product Sustainability

An important aspect of the development of the SPI initiative has to be setting out a clear understanding of what is meant by product sustainability. Since the 1987 Brundtland Commission Report “Our Common Future” was published more than 30 years ago, societies and economies including the EU have embraced to varying degrees its central thesis: *“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”* Sustainable development being interpreted as a balancing of economic, social and environmental goals.

Current EU product policy, particularly with respect to the current framework for ecodesign of products is heavily weighted towards energy saving and environmental impacts of energy-related products. Broader social or societal dimensions of products are not systematically provided for. Given then intention to implement the SPI via a revision of the current Ecodesign Directive, the Commission now has the opportunity to more broadly define what a sustainable product is. Defining clearly what sustainability of products means at the outset will ensure all stakeholders have a common understanding as to what is meant and what will be expected to ensure products are effectively assessed.

#### 2. Include fire safety as a sustainability principle in product design

From a societal point of view, with its rapidly aging population (Eurostat noted in 2018 that 20% of the EU population was aged over 65), the EU needs to pay more attention to fire safety considerations in

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<sup>1</sup> European Fire Safety Alliance, European Fire Safety Action Plan. Eurofsa, 2020.

<sup>2</sup> <https://www.nfpa.org/News-and-Research/Resources/Emergency-Responders/Job-tools-and-resources/NFPA-and-sustainability/Fire-safety-in-a-sustainable-world>

the home we build and the products and technologies we put into them. This growing group are more vulnerable in terms of fire risk due to drastically reduced escape times (EUROFSA<sup>3</sup>, 2020) arising from the greatly increased fuel loads in modern homes and apartments.

The vast majority of fires, particularly in domestic settings, start with ignition of materials in a room or building – a mattress, sofa, television, faulty electrics, etc. Therefore, it is important that these products meet stringent fire safety requirements. Products should be inherently safe for consumers and be designed in such a way as to minimise fire risk. This is a requirement for current products and technologies as well as emerging technologies linked to increased electrification and connectiveness of devices and systems (Internet of Things, 5G).

A study in 2020<sup>4</sup> on behalf of the International Bromine Council reviewing product recall data from the EU RAPEX systems and OECD Product Recall Portal found that smaller IT equipment and appliances make up the largest part of product recalls compared to larger consumer products such as whitegoods and TVs. For all these consumer and technical products, one of the main causes of the fires resulted from malfunction (overheating, electrical components failure, etc.) was the use of plastics with poor flame retardancy properties.

Finally, in 2020 the Commission published a report<sup>5</sup> on *safety and liability implications of artificial intelligence, the internet of things and robotics* accompanying its White Paper on AI. It highlighted the need to include clear provisions in EU product safety legislation to explicitly address safety risks linked to products incorporating new technologies. Amongst these risks are those that related to propensity to ignition and fire.

There is clearly a need, therefore, to increase the fire safety of plastics by using appropriate flame retarded grades in electrical consumer products and equipment. Additionally, policy changes to improve the sustainability of products throughout their life cycle should therefore consider the addition of appropriate fire safety assessments as part of product design in the same way as energy efficiency, CO2 footprint, material efficiency and chemical safety are considered.

### 3. Take a practical approach to managing circularity of products

BSEF supports efforts to improve circularity of products. However, any approach needs to be tailored to the particular product context, its value chain and its life cycle from raw materials to end of life treatment.

A number of the SPI objectives are relevant in this respect including:

- **Improving product durability, reusability, upgradability and reparability**
- **Addressing presence of hazardous substances**
- **Increase recycled content in products**
- **Enable re-manufacturing and high-quality recycling**

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<sup>3</sup> <https://www.europeanfiresafetyalliance.org/our-focus/>

<sup>4</sup> E&E Recalls and Fire Safety, Dr Juergen Troitzsch, Fire & Environmental Protection Services, 2020.

<sup>5</sup> Commission report to the European Parliament and Council on the safety and liability implications of Artificial Intelligence, the Internet of Things and robotics. COM (2020) 64 final

Regarding the **presence of hazardous substances**, it is important to note at the outset that there are already existing EU instruments and legislation regulating hazardous substances in products generally or in specific groups (REACH, RoHS, toys Directive, medical devices Directive, etc). For some priority products, end of life treatment legislation already exists. For instance, for electrical and electronic products (including battery packs), the WEEE Directive provides a framework for the end-of-life treatment and recycling of WEEE waste.

Additionally, for waste electrical electronic equipment, the RoHS Directive as well as WEEE CEN standards ensure the effective assessment and management of hazardous substances during the recycling phase of product. A recent study<sup>6</sup> by SOFIES sustainability consultants supports this and with respect to plastics containing brominated flame retardant additives, highlights that they are well managed and that any hazardous or restricted substances are effectively screened out and treated according to the regulatory requirements.

The same report also highlighted clearly the more significant challenges around ensuring WEEE collection rates are improved and that more is done to tackle the large volumes of WEEE waste that are unaccounted for or treated in a substandard way. Hence, assessing a products “circularity” is not just about whether it can be recycled or not, but whether or not it is recycled and that this is done in accordance with relevant legislation.

**Increasing the recycled content in products** will require a material by materials approach. With respect to plastics, while the use of recycled content is possible, there are multiple factors which need to be examined – the significant number and types of plastics polymers used in products, their miscibility, the presence of additives generally and the presence of regulated substances to name but a few. The definition of quality standards can help, but equally, there needs to be investment in recycling technologies to improve the overall recovery and quality of the constituent materials of products. Finally, market stimulus may be needed to ensure uptake coupled with mandatory content targets.

The **deployment of chemical recycling and new technologies to aid use of recycled content and increase circularity should be examined**. A key finding of the SOFIES study (op.cit) was that 55% of WEEE plastics delivered to EU recyclers is recycled back into post-consumer plastics which, relative to other plastics recycling, is substantial. However, the remaining 45% is sent for incineration or co-processing. This recycling efficiency reflects the current state of the art of mechanical recycling of WEEE plastics and the volume of WEEE collected and delivered to EU recycling facilities. The use of chemical recycling or dissolution technologies could help further recover more material for recycling. It is important, therefore that approaches to improving circularity are flexible and take account of evolving innovations and technologies.

#### **4. Maintain and strengthen the life cycle approach to assessing a product’s sustainability**

Article 15.4 (a) of the existing Ecodesign Directive<sup>7</sup> requires the Commission to consider the life cycle of the product and all significant environmental aspects, inter alia energy efficiency in the preparation

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<sup>6</sup> SOFIES Sustainability Consultants (2020). Impact of brominated flame retardants on WEEE plastics recycling in Europe.

<sup>7</sup> Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy-related products

of draft measures under that directive. Over the years, aided by the JRC, the Commission has deployed a systematic, methodology – *Methodology for Ecodesign Energy-related Products (MEErP)*.

Originally developed to assess energy savings potentials for energy using products, since 2013, it has been adapted to include ‘material efficiency’ aspects of energy-related products and is used to identify policy options for reducing the environmental impacts of energy-related products produced or imported into the EU. The methodology has attracted concern and criticism from stakeholders with respect to the material efficiency assessment of products. It is complex and based on models which are not easy to understand. Economic aspects and other relevant characteristics, such as quality, safety and reliability of the product are not given appropriate consideration. Product safety in particular is critical with respect to functionality.

MEErP is exclusively used by EU Commission consultants preparing ecodesign measures for the Commission and it has been used in more than 40 preparatory studies for Ecodesign of energy related products. There is no independent validation of the studies and their findings carried out or the manner in which the methodology is applied, essentially creating a situation where the consultants views are regarded without question or scrutiny.

Based on its own experience with respect to the use of the methodology to assess the impact of halogenated flame retardant additives on “recyclability of plastics” used in enclosures of electronic displays, BSEF sees a need for a very robust methodology for the definition of a products sustainability (including circular aspects such as potential for recycling) as critical to the successful implementation of the initiative.

This will require firstly setting out clearly in any revised ecodesign Directive the manner and scope of any assessment much in the same way as this is set out for the environmental impact assessment of projects in the EU EIA Directive<sup>8</sup>. Secondly, developing a new methodology reflecting the objectives and criteria used to determine a products sustainability. Careful preparation in consultation with all relevant stakeholders will help to ensure it has appropriate buy in from the beginning. Equally important is that it is used in a transparent manner and that all stakeholders including Member States, are bound by it.

Coherence with other EU legislation related to specific product categories or the product life cycle also needs to be taken into account in the development of the methodology. This issue was recently noted during the evaluation of the RoHS Directive and highlighted in the report of the consultants published<sup>9</sup> in March 2021. Interestingly that report concluded that: “... *the Directive reached the objective to reduce hazardous substances in EEE in the EU. This has contributed to the protection of human and environmental health*”.

For instance, with respect to addressing issues related to hazardous substances management, clear alignment with relevant assessments under the EU RoHS Directive and REACH Regulation should be

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<sup>8</sup> Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment

<sup>9</sup> Support for the Evaluation of Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Final report, European Commission 2021.

ensured. Equally important is coherence with existing end-of-life management legislation and standards for electrical and electronic products (e.g. WEEE Directive and WEEE CEN standards).

#### **5. Put in place a representative SPI Stakeholder Forum**

The existing ecodesign process encompasses a high degree of stakeholder involvement mediated via a dedicated consultative committee – the Ecodesign and Energy Labelling Consultation Forum. It assists the Commission with the development and review of implementing measures and delegated acts pursuant respectively to Article 18 of Directive 2009/125/EC and Articles 12 and 16 of Regulation (EU) 2017/1369. The group also provides expert advice and input to operational and implementation issues and development of working plans. The Forum includes representatives/experts from EU Member States, industry, civil society and recyclers.

In the context of product sustainability – which is broader than eco-design per se, a number of significant stakeholders are missing. These are those stakeholders representing upstream raw material extraction and processing as well as those representing social issues related to resource extraction and product safety. If the ecodesign Directive is indeed the vehicle for implementing the SPI, then the Commission should take opportunity to recast the scope and composition of this important body in the interests of a balanced approach to achieving the goals of the initiative.

#### **Further information:**

For further information, please contact Dr Kevin Bradley, Secretary General ([kbradley@bsef.org](mailto:kbradley@bsef.org)) or Patrick Fox, Head of Public Affairs & Advocacy ([pfox@bsef.org](mailto: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.