



EPS fish boxes – the versatile, reliable & sustainable solution for the fish supply chain

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Due to its **unique** qualities, expanded polystyrene (EPS), is an **essential packaging material** in multiple sectors, including fishery.

In this paper, we briefly lay out:

1. The essential **functionality** of EPS packaging;
2. Its **recyclability**;
3. The **excellent environmental performance** over its full life cycle; and
4. **What our industry is doing** to prevent any regrettable environmental impact.

1. We call EPS ‘**engineered air**’, as it is a rigid foam plastic produced from (solid) polystyrene (PS) and **98% air**, creating a different material, which is resource efficient by design.

EPS is the **packaging material of choice** for landed fish. Its excellent **insulation properties** keep fish fresh and **avoid food waste**. Unlike some cellulose-based materials, EPS supports hygiene, because it resists humidity, preventing the spread of bacteria, mould and fungi, thus keeping the food **safe**.

Its light weight, combined with its superior thermal insulation properties, reduces the need for cooling, e.g. with heavy ice, which **saves energy during transport and storage** across the whole logistics chain.

2. Furthermore, EPS is **100% recyclable**. Already in 2017, **recycling rates** for EPS post-consumer packaging waste exceeded **52%** in Belgium and Norway, **47%** in the Netherlands, **46%** in Germany, and **38%** in Italy, showing that **EPS recycling is economical**. Specifically, in countries like Norway, Denmark, and the Netherlands, **at least 80% of EPS fish boxes** are recycled. Moreover, the EPS industry has been working towards further increasing EPS recycling by investing in new technologies to **exceed the EU’s goals**. EUMEPS was one of the first to submit a recycling [pledge](#) to the European Commission and now actively contributes to the Circular Plastics Alliance ([CPA](#)) to collectively achieve the goal that 10 million tonnes of recycled plastics are used in European products by 2025.

3. There are **no more sustainable alternatives** to EPS **with the same essential functionality** available. For example, in a peer-reviewed [comparative life cycle analysis \(LCA\)](#), PwC concluded that for two scenarios in Spain and France, **EPS fish boxes performed similar or better than** Polypropylene (PP) and **cardboard** alternatives on all environmental indicators except one (the formation of photochemical oxidants).

4. **Unjustified claims** about the prevalence of EPS in the marine environment have been based on beach litter item counts. However, *beach* litter does not accurately reflect overall *marine* pollution. [According to the European Environmental Agency \(EEA\)](#) and United Nations Environment Programme (UNEP), only 15% of marine debris floats on the sea surface; another 15% remains in the water column, and 70% rests on the seabed. Due its 98% air content, EPS floats. Thus, it does not contribute to the majority of the marine debris in the water column and on the seabed. Furthermore, *item* counts do not reflect the *mass* of any pollutant in the environment.

The EU-wide **beach litter data** that the EU Institutions have relied upon (European Commission, Impact assessment for the ‘Single-use Plastics Directive’, [SWD\(2018\) 254 final, part 2](#), pp. 31 et seq.) **does not specifically identify EPS**. Relevant categories used in said beach litter counts mix (*solid and foamed*) PS with (*all sorts of*) other plastics. In fact, **less than 1%** of all litter items found on EU beaches have been clearly identified as PS (Impact Assessment, op cit., categories ranking 28 and 53). The preceding [2017 JRC report on Top Marine Beach Litter Items in Europe](#) identified EPS fish boxes - but only as 0.02% of all litter (p. 40).

Having said that, the **EPS industry** shares your concerns about the marine environment. We are **fully committed to protecting the environment** in general from *any* negative impacts. To this end, the industry has been engaged in many initiatives, e.g.:

- EUMEPS' packaging division Power Parts is a [partner of Operation Clean Sweep](#) (OCS). OCS is working on preventing the leakage of plastic pellets during production, handling, transportation, conversion, and recycling across Europe.
- Smart Packaging Europe's supporters Storopack and BASF broke new ground in 2019 by [using material from an innovative recycling process to produce EPS fish boxes](#) and other insulative food packaging. Complementing other, well-established recycling options for EPS, the process allows for the recycling of mixed plastic waste.
- BEWI, another Smart Packaging Europe supporter and EUMEPS member, [is quickly expanding](#) its collaboration with Doca Pesca (a state-owned company under the Ministry of Agriculture) to **collect EPS fish boxes for recycling** in fishing ports across Portugal.
- In Spain, Italy, Portugal, Greece, and beyond, the LIFE-funded project, [EPS-SURE](#) has demonstrated that it is technically, environmentally, and economically viable to collect, store, pre-treat (compaction, briquetting, washing), and **recycle** waste **EPS fish boxes** into new PS food contact packaging. Thus, it has **closed the loop** and overcome challenges that any comparable material used for fish boxes faces. Whilst the final results have not yet been published, the [expected outcome](#) is the **reduction** of the **landfilling** of waste EPS fish boxes **by 80%** in some European countries (70% in Spain and 50% in Italy and Greece).
- In Spain and Portugal, [as documented by the European Commission](#) in 2018, the LIFE project [3-R Fish](#) has contributed to lessening the impact of fishing industry waste. It developed new systems for **collecting, processing, and reusing the fishing industry's main solid wastes** at ports in Galicia and north-west Portugal. These wastes included (plastic) fishing nets and **EPS packaging**, which are used at fish auctions.
- AIPE, EUMEPS' national association in Italy, has [initiated](#) a cooperation with Federpesca, the Italian fishery federation, on a whole series of projects with SMEs for a circular economy. They will build on AIPE's already successful projects on the collection of EPS fish boxes, e.g. from retailers. AIPE has also been collaborating with Corepla, the national consortium for the collection, recycling and recovery of plastic packaging, to promote the **collection and recycling** of all EPS packaging.
- In Greece, EUMEPS' national association, EPS Hellas, is supporting an [initiative](#) led by the non-profit organisation Archipelagos Institute of Marine Conservation to put in place an experimental net for the **cleaning of surface waters** from plastic waste.

The EPS Industry will continue to work with other stakeholders to further improve the already excellent environmental performance of EPS packaging, including fish boxes.

You can find more information on [EPS fish boxes on this dedicated website](#).

About us

- [Smart Packaging Europe](#) is an alliance of companies big and small that reflects the diversity of the European Expanded Polystyrene (EPS) industry.
Transparency register no.: 665271342003-79
- [EUMEPS](#) is the association and voice of European Manufacturers of Expanded Polystyrene. Our members cover the entire EPS value chain from raw material suppliers to EPS converters and recyclers as well as supporting industries including machinery and additive suppliers. Members include individual companies as well as 22 European national EPS associations. This unique representation of the entire value chain ensures that EUMEPS represents both large companies and small- and medium-sized converters and recyclers. Altogether our membership represents more than 1,000 companies, most of them small- and medium-sized enterprises (SMEs), and employs more than 80,000 people.
Transparency register no.: 02100645398-66
- [PlasticsEurope](#) is the pan-European association of plastics manufacturers with offices across Europe. For over 100 years, science and innovation has been the DNA that cuts across our industry. With close to 100 members producing

over 90% of all polymers across Europe, we are the catalyst for the industry with a responsibility to openly engage with stakeholders and deliver solutions which are safe, circular and sustainable. We are committed to implementing long-lasting positive change.

Transparency Register no: 454264611835-56

- **[European Plastics Converters](#)** (EuPC) is the leading EU-level trade association, based in Brussels, representing European plastics converting companies. Plastics converters use plastics raw materials and recycled polymers to manufacture new products. EuPC totals about 45 national as well as European plastics converting industry associations and represents more than 50,000 companies, producing over 50 million tons of plastic products every year. The European plastics industry makes a significant contribution to the welfare in Europe by enabling innovation, creating quality of life to citizens and facilitating resource efficiency and climate protection. More than 1.6 million people are working in EU converting companies (mainly SMEs) to create a turnover in excess of € 260 billion per year.

Transparency Register no: 93255296152-29

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