EPS TRANSPORT PACKAGING **BUSINESS CASE**

For the U.S. Plastics Pact

May 20, 2026

Polystyrene Recycling ALLIANCE

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INTRODUCTORY NARRATIVE

The Role of Expanded Polystyrene in Sustainable Transport Packaging

EPS transport packaging, which includes protective packaging for large appliances and insulative packaging for pharmaceutical shipments, is a valuable material that is actively recycled and offers notable environmental benefits. Accordingly, we do not believe EPS transport packaging should be characterized as "problematic and unnecessary" and are urging a fact-based exclusion for it from the US Plastics Pact's (USPP) list of problematic materials.

EPS transport packaging has a recycling rate of 31% in the US according to the EPS Industry Alliance, and the United Nations Environment Programme (UNEP) acknowledges it is recycled in-practice and at-scale in certain global regions. In the US, there is a robust collection network outside of curbside collection and MRF processing. This is comprised of industrial, commercial, and drop-off locations, coupled with industries that actively procure it as a manufacturing feedstock to go back into EPS or other products. There is a competitive EPS densification industry that has blossomed to support EPS recycling, and densified EPS is known to frequently trade in a range of $0.20 to $0.40/lb during normal markets.

The information we present below examines the characteristics of EPS transport packaging in comparison to the evaluation criteria used by USPP to determine if a material should be listed as "Problematic and Unnecessary." We believe that the information provided shows that, across the product lifecycle, EPS transport packaging demonstrates a lower environmental impact than other transport packaging alternatives. Lifecycle analyses show it outperforms many alternatives due to its unmatched ability to deliver superior physical and thermal protection with just a fraction of the material weight compared to alternatives. EPS transport packaging is lightweight, has energy-efficient production and enjoys a growing role in a circular economy. Studies referenced in the information below conclude that EPS transport packaging reduces environmental burdens while ensuring product protection during transportation.

For these reasons, we urge the U.S. Plastics Pact to recognize that other global frameworks—such as the U.K.'s WRAP—have not listed EPS Transport Packaging as "problematic or unnecessary".[i] Rather than pursue elimination, we encourage the U.S. Plastics Pact to support continued innovation, infrastructure investment, and cross-sector collaboration to accelerate circularity.

Making the Case that EPS Transport Packaging Is Recyclable

CRITERION ONE:

Recyclable

Background: Expanded polystyrene (EPS) transport packaging is a durable, versatile, and protective thermoplastic widely used in essential applications such as appliance shipping, pharmaceutical delivery, and cold chain logistics. Contrary to common misconceptions, EPS transport packaging is being recycled today at meaningful scale—and investment and infrastructure to support its circularity continue to grow.

KEY POINT 1:

Recognized by UNEP as Recycled at Scale in Certain Countries and Regions

- **Global Recognition:** The United Nations Environment Programme (UNEP) "now recognizes EPS transport packaging as an at-scale recycled material" in certain countries and regions around the world.[ii]
- **Proven in Practice:** UNEP's report notes that "only a handful of packaging formats have been demonstrated to be recycled in practice and at scale" — and EPS transport packaging (e.g., fish boxes and protective packaging for large items) is among them.[iii]
- **Strengthened Credibility Ahead of INC-4:** This recognition was included in UNEP's 2024 Plastic Pollution Science update, published ahead of the INC-4 global plastics treaty negotiations.
- **Global Acknowledgment Reinforced:** UNEP's recognition underscores that EPS transport packaging is recyclable at scale when supported by collection infrastructure and end markets.

KEY POINT 2:

EPS Transportation Packaging Recycling is Acknowledged by Ellen MacArthur Foundation

- **EMF Designates EPS Transport Packaging as Recyclable in Practice and at Scale:** In January 2024, the Ellen MacArthur Foundation updated its 2023 Recycling Rate Survey to distinguish between two categories of polystyrene foam packaging: (1) EPS transport packaging and (2) business-to-consumer EPS and XPS packaging for fast-moving consumer goods (FMCG). In its correction letter, EMF confirmed that "EPS transport packaging will be deemed recyclable in practice and at scale.[iv]
- **Meets EMF's Recyclability Standard:** EPS transport packaging satisfies the Ellen MacArthur Foundation's benchmark for being "recyclable in practice and at scale"—with recycling rates above 30% in multiple regions collectively representing a population of more than 400 million people.

KEY POINT 3:

End Markets Are Robust and Growing

- **End Markets:** There are 80 companies in the US and Canada with 117 facilities combined that use recycled EPS as a feedstock to manufacture EPS transport packaging and other valuable consumer products. These end markets are in 30 U.S. states and four Canadian provinces according to Resource Recycling Systems (RRS)[v], and they also reach into other states and provinces for recycled EPS feedstock.
- **End Uses:** Recycled EPS is returned to EPS transport packaging and also repurposed into a wide range of durable products—including construction and architectural materials, wood composites, patio furniture, picture frames, interior moldings, textiles and fibers, paints and coatings, adhesives, and virgin-quality polymers—thanks to its strong thermal and material performance.
- **Domestic Sourcing – Broad Collection Network:** These facilities are supported by a system of more than **700 EPS drop-off sites** in the U.S. alone, with the network continuing to grow due to a robust EPS densification industry which has made the transport of EPS economically viable.[vi]
- **Role of Densification:**
  - Non-densified EPS is 95% air, which provides excellent insulation and protective qualities for Transport Packaging but also presents economic challenges for logistics due to low weights and a resulting high cost per pound freight cost.
  - EPS densification solves this challenge by compressing EPS into high density bricks and ingots, allowing a full weight of 40,000 pounds per truckload, on par with other materials.
  - This process makes EPS commercially viable for transporting to recycling end markets.
- Reliable Market Value: EPS is a high-value commodity in North America, trading in a range of **$0.20–$0.40 per pound** depending on quality and overall recycled market conditions.

KEY POINT 4:

Substantial, Independently Verified Recycling Rate

- **Documented Recycling Rate:** According to EPS Industry Alliance, EPS Transport Packaging achieved a 31% recycling rate in North America in 2022, done through an independent survey analysis by Resource Recycling Systems.[vii]
- **Proven Market Value:** Densified EPS transport packaging has established value as a manufacturing feedstock, with informal surveys indicating prices of **$0.20–$0.40 per pound** and strong demand from both domestic and international buyers.
- **Expanding Densification Capacity:** The EPS densification industry continues to grow, with companies such as Runi, GreenMax, Cobalt, REC, and Sebright expanding processing capacity across North America.
- **Municipal Solutions in Action:** Foam Cycle — a patented, turnkey EPS densification solution for municipal recycling programs — is now operating in **30+ locations plus the province of Quebec**, with new installations added each year.

KEY POINT 5:

Major Industry Investment in Recycling

- **Significant Capital Commitments:** EPS transport packaging manufacturers are making substantial investments in post-use recycling capacity and technology. Examples include:
  - **Nexkemia:** Invested more than $20 million in EPS recycling; producing raw materials with 30% recycled content, supporting a circular economy.

  - **Epsilyte:** Expanding EPS collection and processing; manufacturing raw materials with up to 50% post-consumer recycled (PCR) content.
  - **Styropek:** Already offering certified EPS with 25% PCR content (via dissolution recycling) and up to 100% certified recycled content (via chemical recycling). Opened a new **25,000-ton facility** in Q4 of 2025 to produce EPS with **30–50% PCR content** using mechanical recycling.
  - **Foam Cycle:** Deploying modular EPS recycling systems in municipalities and retail settings to expand access to densification and recycling.
- **Industry Partnerships:** Several innovative partnerships are spurring greater recycling of EPS transport packaging, including the Foam Recycling Coalition (FRC) which has awarded 46 grants over 10 years that improved EPS recycling access for over 17 million people, along with the Polystyrene Recycling Alliance (PSRA) which is investing in EPS recycling solutions in Colorado (statewide), Baltimore, MD, Nashville, TN, and Mexico City, Mexico. The success of these projects—driven by the economic value of recycled EPS—improves public visibility and spurs additional private investment with a multiplier effect.
- **Driving Circularity:** These investments extend beyond densification, building robust end markets and advancing true circular solutions for EPS transport packaging.

KEY POINT 6:

EPS Transport Packaging Recycles Through Non-Traditional Channels

- **Collection Pathways:** EPS transport packaging is primarily recycled through business-to-business (B2B) channels and community drop-off programs, rather than curbside collection.
- **Retail Returns:** Protective packaging from large appliances and furniture is returned through retail networks for collection and recycling. Please see example below.
- **Cold Chain Applications:** EPS transport packaging used in food, pharmaceutical, and vaccine delivery is collected and recycled through logistics and distribution systems.
- **Industrial Uses:** EPS protective packaging in automotive and industrial supply chains is recovered through B2B networks.

CASE STUDY

Appliance Transport Packaging:

- **High Recovery Rates:** It's estimated that more than 80% of large appliances are delivered directly to consumers by retailers. In many cases, transport packaging—including EPS—is collected after delivery, sorted, and recycled.
- **Home Depot Example:** As part of direct interviews with Home Deport personnel, we found that EPS packaging from appliance deliveries is returned to Home Depot's Market Distribution Operations, where densifiers compact the material. The densified EPS is palletized and sold as feedstock for resin manufacturing and other applications. That resin, with **30–50% recycled content**, is sold back into a variety of markets.
- **Proven Circular Model:** This system mirrors the **Old Corrugated Container (OCC)** model in the paper industry, where post-use cardboard boxes from retail outlets are collected, densified, and remade into new cardboard with recycled content.
- **Processing for End Markets:** Collected EPS is typically hot-melted or cold-pressed into ingots or bricks, which are then shipped to end markets for use as feedstock in new products.

KEY POINT 7:

EPS Transport Packaging Is Recycled Through Multiple Technologies

EPS transport packaging is compatible with all major recycling technologies, ensuring flexibility and circularity across collection systems.

Mechanical Recycling (Primary Method)

- EPS transport packaging is collected, shredded, densified (via hot melt or compression), and transported to reprocessed into new products.
- Collection occurs through commercial operations, drop-off sites, and targeted retail take-back programs.
- Infrastructure is already established and operational at scale.
- Recycled EPS is clean and consistent, making it an **ideal feedstock** for new products and applications.

Physical (Dissolution) Recycling

- Although mechanical recycling is the preferred method where viable, EPS can be dissolved using a solvent that breaks it down into a polystyrene solution.
- This process maintains the polymer's integrity and allows it to be filtered, purified, and reused.
- Particularly effective for handling low-density EPS in compact urban or retail settings.
- Can process contaminated streams, thereby expanding the volume of recyclable EPS.

Chemical Recycling

- Although mechanical recycling is the preferred method where viable, EPS can be depolymerized into feedstocks or monomers through pyrolysis or gasification.
- Feedstocks are converted into monomers like styrene, which can then be re-polymerized into virgin-equivalent polystyrene.
- These polymers from recycled sources produce virgin-equivalent polystyrene for use in food-grade or high-performance applications.
- Enables circularity for food-grade or high-performance polystyrene even for contaminated or multi-material plastic waste streams.
- Provides a pathway for recycling multi-material plastic waste streams, including mixed bales of polyethylene, polypropylene, and polystyrene.
- The U.S. Plastics Pact has recognized that chemical and physical recycling technologies "offer solutions for specific hard-to-recycle formats." While EPS transportation packaging is not hard-to-recycle as demonstrated by its strong recycling record, it will benefit even further from these technologies, opening more recycling pathways and supporting circularity goals.[viii]
- The Polystyrene Recycling Alliance (PSRA) commissioned Resource Recycling Systems (RRS) to develop a comprehensive roadmap identifying pathways to circularity for all polystyrene formats. RRS estimates that by 2030, growth in chemical recycling capacity could enable 50% to 66% of the U.S. population with access to recycle at least one type of polystyrene. As access expands and end markets continue to develop, more polystyrene will be both recyclable and recycled, placing the material on a durable, scalable path to circularity.[ix]

Addressing Safety Concerns About Polystyrene

CRITERION 2:

Hazardous

Background: Polystyrene, the polymer used in EPS transport packaging, has undergone decades of safety evaluation by global health authorities such as the U.S. Food and Drug Administration (FDA), the European Food Safety Authority (EFSA), and independent scientific bodies. These reviews consistently conclude that polystyrene is safe for its intended uses, including food-contact and medical applications. A clear distinction must be made between styrene, the liquid monomer, and polystyrene, the solid polymer formed through polymerization. In its polymerized form, polystyrene is inert and stable. Only trace amounts of residual styrene remain in finished polystyrene products—well below FDA regulatory limits (0.5–1.0% by weight, depending on application)—and typical commercial levels are far lower. As shown in the information presented below, risk assessments confirm that such exposures are negligible, especially when compared with natural dietary sources of styrene found in foods such as strawberries, cinnamon, coffee, and beef.

KEY POINT 1:

Clarifying styrene vs. polystyrene

- **Styrene vs. Polystyrene:** Styrene is a liquid monomer used in many consumer applications. Through polymerization, styrene is also converted into polystyrene—a solid, stable material with very different properties – that is used in EPS Transport Packaging.
- **Inert and Safe:** Once formed, polystyrene is inert and safe for everyday use, including in food-contact and protective packaging.
- **Regulated and Tested:** Strict regulations ensure that only trace amounts of residual styrene remain in finished polystyrene products. For food-contact uses, the FDA sets limits of 0.5%–1.0% by weight. Polystyrene resins consistently fall well below these thresholds.[x]
- **Perspective on Exposure:** The FDA's acceptable daily intake (ADI) for styrene is 90 milligrams per person per day. Actual exposure from residual polystyrene found in polystyrene packaging is estimated at just 6.6 micrograms per person per day—more than **10,000 times lower** than the ADI.[xi]

KEY POINT 2:

Longstanding FDA Compliance

- **Decades of Approval:** Polystyrene has been approved for food-contact use by the U.S. FDA for more than 50 years.[xii]
- **Proven Safety in Use:** Its continued role in packaging—such as cold-chain logistics for medical products, fresh seafood, and perishable foods—demonstrates the FDA's confidence in its safety and inert properties when manufactured to regulatory standards.[xiii]
- **Broad FDA Recognition:** Approval covers both direct and incidental food-contact applications, including containers, trays, and protective transport packaging.
- **Proof Point:** The FDA maintains a database of *Recalls, Market Withdrawals & Safety Alerts*, and there is no public record of a recall involving EPS Transport Packaging that meets food-contact regulations in its 50-year history.[xiv]

KEY POINT 3:

European Food Safety Authority Reaffirms Safety of Polystyrene in Food-Contact Applications

- **No Evidence of Genotoxicity:** In June 2025, EFSA concluded there is no evidence that residual styrene is genotoxic when ingested, based on a comprehensive review of animal studies, toxicokinetic data, and human exposure research.[xv]
- **Protective Migration Limit:** EFSA established a proposed Specific Migration Limit (SML) of 40 µg/kg food—well within safety guidance for non-genotoxic substances—indicating that compliant polystyrene packaging does not pose a risk.[xvi]
- **Safe for Sensitive Supply Chains:** EFSA's conclusions support the continued use of EPS for transporting sensitive goods—food, medical supplies, and cold chain logistics—so long as regulatory migration limits are met.

KEY POINT 4:

Peer-Reviewed 2019 Risk Assessment (Update to 2002 Harvard Study)

- **Updated Hazard Review:** A 2019 review titled *"Evaluation of potential health effects associated with occupational and environmental exposure to styrene – an update"* was published in Journal of Toxicology and Environmental Health, Part B: Critical Reviews (2019;22(1-4):1-130).[xvii]
- **Consumer Safety Conclusion:** This review maintains that styrene exposure from consumer and environmental sources (including packaging and incidental contact) is unlikely to cause health harms for the general population under normal exposure levels.
- **Cancer & Ototoxicity Findings:** The 2019 review found no consistent epidemiological evidence linking styrene exposure in the general population to cancer or other adverse health outcomes.

KEY POINT 5:

Comprehensive Human Health Risk Assessment by SIRC

- **Large-Scale Review:** The Styrene Information & Research Center (SIRC) published a capstone human health risk assessment in 2019, summarizing over 30 years of toxicological and epidemiological research.[xviii]
- **Negligible Consumer Risk:** The assessment concluded that exposure to styrene through everyday use of consumer products (including packaging) poses negligible risk.[xix]
- **General Population Safety:** It found that the general population is very unlikely to experience adverse health effects from environmental or consumer exposures to styrene.[xx]
- **Styrene in the Workplace:** Comprehensive risk assessments have found no strong or consistent evidence that styrene causes cancer in humans, and occupational exposures are generally within acceptable risk limits for most workers. For job categories with the potential for higher exposure—such as open molding of fiber-reinforced polymer (FRP) composites—appropriate engineering controls and respiratory protection are recommended to further mitigate risk.[xxi]

KEY POINT 6:

Styrene Is Naturally Occurring

- **Present in Everyday Foods**: Styrene isn't only used in plastics—it is a naturally occurring compound found in many foods, including strawberries, cinnamon, coffee, peanuts, and beef.
- **Comparable to Natural Dietary Sources:** The European Food Safety Authority (EFSA) found **that dietary exposure to styrene from polystyrene packaging is comparable to naturally occurring levels of styrene in food**.[xxii]
- **Regulatory Consensus:** Both the FDA and EFSA have concluded that styrene exposure from compliant polystyrene packaging is well below levels of concern and poses **no health risk to consumers.**

Lower Carbon Footprint and Environmental Impact

CRITERION 3:

Material Switching

Background: Efforts to replace EPS transport packaging with alternative materials often overlook a fundamental truth: EPS delivers superior physical protection, thermal protection, and environmental performance in transport applications. Its lightweight, insulative, and protective properties reduce emissions during shipping and prevent costly product damage that itself carries a significant environmental footprint with replacement production. According to a McKinsey & Company analysis, switching from EPS to alternative materials in many transport packaging applications would result in *higher* carbon emissions. EPS is often the *right environmental choice*.

KEY POINT 1:

Lightweight Properties Reduce Emissions During Transportation

- **Ultra-Lightweight Material**: EPS is 95% to **98% air**, making it one of the lightest packaging materials available.[xxiii]
- **Efficient Packaging Design**: Its unmatched protective properties allow package designers to reduce the overall size of packaged goods—for example, fitting more refrigerators into a single 53-foot trailer.
- **Lower Emissions in Transit**: By enabling more goods per shipment, EPS increases transport efficiency, reducing fuel use and greenhouse gas emissions.
- **Cross-Industry Benefits**: This transportation advantage applies across industries, from protecting delicate produce and seafood to large household appliances.

KEY POINT 2:

Real-World Example – Electrolux Sustainability Report

- **Independent Assessment**: In March 2023, Electrolux evaluated alternatives to EPS in its transport packaging and found that environmental impacts increased in several cases.
- **Paper Alternatives Insufficient**: Paper-based materials were shown to be inadequate for protecting large, fragile appliances—particularly in humid environments.
- **Higher Impacts from Substitution**: Replacing EPS with paper materials was projected to raise carbon footprints, increase packaging waste, and lead to more product damage—further compounding emissions from returns and replacements.

KEY POINT 3:

EPS Offers a Unique Set of High-Performance Characteristics

EPS's functionality as a packaging material is unmatched in certain critical categories:

- **Shock Absorption**: EPS transport packaging is engineered to absorb impact and protect fragile goods during long-distance transit, as validated by ASTM and ISTA cushioning tests. By reducing product damage, returns, and replacements, EPS avoids the far greater environmental costs of reproducing damaged goods—such as large appliances—making the investment in packaging an environmental benefit.[xxiv]
- **Ultra Lightweight**: Lower weight reduces shipping emissions and energy consumption.

- **Thermal Insulation**: Keeps food cold, pharmaceuticals stable, and electronics safe from temperature fluctuations.
- **Moisture Resistance**: Performs well in humid or refrigerated environments where paper-based materials often fail.

KEY POINT 4:

McKinsey & Company: EPS Outperforms Alternatives on Carbon

- **Lower Emissions Profile**: A McKinsey & Company study evaluating the lifecycle emissions of various packaging materials found that polystyrene—including EPS—produces **lower greenhouse gas emissions** than many paper-based or alternative packaging solutions.[xxv]
- **Key Drivers of Advantage**:
  - **Weight Efficiency**: Lower energy use in transportation due to EPS's lightweight properties.
  - **Product Protection**: Extended shelf life thanks to thermal insulation and protective performance.
  - **Waste Reduction**: Reduced spoilage of perishable items across supply chains, avoiding carbon emissions from replacement production.

Supports a Compatible and Efficient Recycling System

CRITERION 4:

Does Not Hinder the Recyclability or Composability of Other Materials

Background: We support clean and effective recycling systems. EPS transport packaging is not predominantly collected through curbside recycling; it is primarily recovered through commercial, business-to-business (B2B), and drop-off collection systems—routes that avoid contamination of curbside recycling streams altogether. In some communities, where curbside EPS collection is available, it is identified, separated, densified, and processed efficiently robust infrastructure and end markets exist, making EPS transport packaging part of a functioning circular system, not a disruptor.

Key Point 1:

Drop-Off and B2B Recovery Are Primary Pathways

- **Main Collection Channels**: The majority of EPS transport packaging is recovered through **business-to-business (B2B) and community drop-off models**, rather than curbside collection—reducing opportunities for contamination. (*See Home Depot example above*.)
- **Statistical Support**: In North America in 2022, approximately **31% of EPS transport packaging was recycled—168.6 million pounds diverted from disposal**—with most recovery occurring through B2B and drop-off collection rather than curbside.[xxvi]
- **Efficient and High-Quality**: These recovery pathways are efficient, cost-effective, and yield **high-purity bales** that are well-suited for both mechanical and chemical recycling.

KEY POINT 2:

Dedicated Collection Infrastructure Avoids Contamination

- **Established Network**: The EPS Industry Alliance (EPS-IA) reports that there are **700+ drop-off locations** across the U.S. and Canada that accept clean EPS transport packaging.[xxvii]
- **Targeted Materials**: These programs focus on post-commercial and consumer packaging such as **appliances, electronics, and cold-chain shipping materials**.
- **Maintained Integrity**: By keeping EPS transport packaging out of curbside streams, this infrastructure preserves the quality of both **polystyrene and non-polystyrene material flows**.

KEY POINT 3:

EPS Transport Packaging Is Easily Identifiable and Sortable

- **Visually Distinct**: EPS transport packaging is easy to recognize—rigid, white blocks or molded forms that are visually and physically distinct for sortation.
- **Proven in Programs**: Operational curbside programs in California have successfully captured and separated EPS using **manual sorting** or **dedicated collection bins** within MRFs.[xxviii]
- **Compatible with Other Streams**: Experience shows that when EPS is intentionally accepted, its sortability does **not hinder the processing of other material streams**.

KEY POINT 4:

No Interference with Composability Systems

- **Not Marketed as Compostable**: EPS transport packaging is not positioned for composting and does not enter organic waste streams by design.
- **Easily Screened and Removed in Compost Systems**: Composting regulations and facility practices require finished compost to be "nearly entirely free of visual impurities," and rules define "inert matter" (including polystyrene) among the inorganics that must be excluded. This supports that inorganic materials like EPS are routinely identified and removed in composting operations.[xxix]
- **Distinct Characteristics**: EPS's clear visual and material properties make it easy to keep out of composting, preventing disruption to composting operations.

EPS Transport Packaging Is Not a Litter Problem

CRITERION 5:

Litter

Background: EPS transport packaging is not a typical litter item because it is generally used in commercial or controlled environments, such as appliance delivery, electronics packaging, or cold chain logistics—not in parks, beaches, or public spaces where littering often and unfortunately occurs. As such, EPS transport packaging does not meet the functional definition of litter and contributes minimally, if at all, to marine debris or terrestrial litter streams.

KEY POINT 1:

Marine Debris Data Confirms EPS Is Not a Major Contributor

- **Source of Ocean Plastics**: A 2022 Scientific Reports analysis by The Ocean Cleanup found that 75–86% of plastic debris by mass in the Great Pacific Garbage Patch (GPGP) originates from fishing and aquaculture activities, including nets, ropes, floats, and buoys. The remainder is largely hard plastic fragments from those same sources.[xxx]
- **EPS Not a Significant Contributor**: Only a small fraction of debris is unaccounted for; notably, foamed plastics such as EPS transport packaging were not identified as a significant component in these findings—reaffirming their minor role in marine litter at the GPGP.[xxxi]

KEY POINT 2:

EPS Transport Packaging Is a Minimal Component of U.S. Litter

- **Minimal Share of Litter**: EPS typically represents 0.05%–3.0% of total litter in characterization studies, depending on the survey and location.
- **Marine Debris Share**: In the 2018 Great Pacific Garbage Patch analysis, all foamed plastics—including EPS—accounted for about 0.5% of the plastic load by volume.[xxxii]
- **Lower Than Common Items**: EPS is a far smaller contributor compared with other frequently littered materials such as **cigarettes, snack packaging, plastic bags, and bottles**.

CONCLUSION:

Reimagining EPS Transport Packaging — A Proven Circular Solution

EPS transport packaging is a proven, high-performance material that plays a critical role in product protection, emissions reduction, and the advancement of a circular economy. Across every evaluative criterion—recyclability, safety, environmental performance, system compatibility, and litter potential—EPS transport packaging makes a strong, evidence-based case for removal from the U.S. Plastics Pact's list of "problematic and unnecessary" materials.

EPS transport packaging is already being recycled on a meaningful scale through well-established pathways, including drop-off programs and business-to-business recovery systems. As with all plastics recycling, more needs to be done to increase recycling rates and make the use of EPS transport packaging more circular. But the reality is that manufacturers and users of EPS transport packaging are indeed stepping up and making needed investments. The EPS recycling infrastructure is expanding, supported by strong end-market demand and sustained industry investment. Multiple recycling technologies—mechanical, physical (dissolution), and chemical—are successfully returning post-use EPS into high-performance applications like new packaging, insulation, and consumer products.

Scientific and regulatory consensus affirms that EPS transport packaging is safe for its intended uses, both for the end users or consumers, and for those handling the material during manufacturing. Concerns about it as a system contaminant or litter source are misplaced; EPS transport packaging is used in controlled, commercial settings, where recovery is structured, and contamination risk is low.

Attempts to replace EPS transport packaging with alternative materials often result in unintended consequences: higher carbon and other pollution emissions, increased packaging waste, and greater product damage. These trade-offs run counter to the very sustainability goals the Pact seeks to achieve.

For these reasons, we urge the U.S. Plastics Pact to follow the lead of other global frameworks—such as the U.K.'s WRAP—that have not listed EPS transport packaging as "problematic."[xxxiii] Rather than pursue elimination, the Pact should support continued innovation, infrastructure investment, and cross-sector collaboration to accelerate circularity.

EPS transport packaging is not the problem. It's part of the solution.

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[ii] UNEP, *Plastic Pollution Science*, 2024 (p. 61)
[iii] EPS Transport Packaging Now Recognized As Recyclable in Practice and at Scale in United Nations Environment Programme "Plastic Pollution Science" Report
[iv] Ellen MacArthur Foundation Letter to the EPS-Industry Alliance, March 27, 2024.
[v] New Study Reveals Robust Polystyrene Recycling Infrastructure Across North America
[vi] EPS Industry Alliance Sees Surge In Recycling Locations Across North America
[vii] Alternative Recycling Channels Drive EPS Packaging's 30% Recycling Rate in North America, Diverting 168 Million Pounds from Landfills
[viii] U.S. Plastics Pact | Physical and Chemical Recycling Position Paper
[ix] Recycling Roadmap - Polystyrene Recycling Alliance (PSRA)
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