

# The Unwarranted Stigma of Styrofoam: Why EPS Still Deserves a Seat at the Packaging Table

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Few materials have been demonized in recent years as intensely—or as inaccurately—as expanded polystyrene (EPS), commonly referred to as *Styrofoam*. For many consumers and even some policymakers, EPS has become shorthand for “wasteful” or “unsustainable.” The truth is far more nuanced. When evaluated through a modern lifecycle lens instead of outdated assumptions, Styrofoam continues to deliver best-in-class performance, cost savings, and environmental advantages that many alternatives simply cannot match.

As packaging consultants working across foodservice, retail, and distribution channels for more than three decades, we’ve watched the pendulum swing. Today, too many brands are making packaging decisions based on perception instead of data—and EPS is suffering from an image problem it does not deserve.

This article sets the record straight.

## 1. EPS Is One of the Most Energy-Efficient Packaging Materials Ever Developed

Styrofoam has long been mischaracterized as an energy-intensive, resource-heavy material. In reality, EPS is roughly **95% air**. Compared to molded fiber, coated paperboard, and bioplastics, EPS requires **significantly less energy** in production and transport.

### Key Advantages:

- **Ultra-lightweight:** Reduces fuel use and carbon emissions across the supply chain.
- **Lower energy input:** Manufacturing EPS uses far less water and energy than molded pulp or paper-based alternatives.
- **Efficient insulation:** Thermal performance reduces food waste—a major environmental win often ignored in packaging debates.

When a material contains more air than resin, the environmental math changes dramatically. Yet few consumers understand this.

## 2. Landfill Impact Is Vastly Overstated

EPS's durability is often mistaken for environmental harm. The reality: **EPS takes up only about 1% of landfill volume** nationally, far less than paper, organics, and textiles. Its lightweight structure means it contributes minimally to landfill mass.

More importantly, modern landfill engineering isolates and manages materials effectively. The narrative that EPS "never breaks down" is outdated—landfills are designed to limit decomposition of *all* materials, organic or otherwise.

### 3. The Recycling Story Is Stronger Than Most People Know

Critics often cite low recycling rates as evidence that EPS is environmentally irresponsible. The truth is that **EPS recycling infrastructure exists, is growing, and is increasingly efficient.**

**What's happening today:**

- Over **200 U.S. collection sites** now accept EPS.
- Densification technology allows EPS to be compressed and reused in frames, molding, insulation, and protective components.
- Communities that add EPS programs typically see high participation because it's lightweight, clean, and easy to manage.

The recycling system was late to the game—but it's here now, expanding quickly, and already outperforming many "sustainable" materials once they hit MRFs.

### 4. Alternatives Aren't Always Greener—Just Trendier

Paper, molded fiber, and plant-based plastics have enjoyed a PR renaissance, but their environmental profiles are often misunderstood.

**Hidden environmental costs of EPS substitutes:**

- **High water usage** (especially for paper/molded fiber).
- **Deforestation and agricultural impacts.**
- **Need for coatings and adhesives** that reduce recyclability.
- **Heavier weight**, leading to more transport emissions.

In many applications—particularly in foodservice—EPS performs better with a **lower cradle-to-grave footprint.**

Sometimes the most sustainable solution is the one that's been quietly doing the job for decades.

### 5. Food Safety and Performance Still Matter

Brands switching from EPS sometimes overlook why it became the dominant material in the first place.

EPS delivers:

- **Exceptional insulation** for hot and cold foods.
- **Strength at low weight**—perfect for takeout and delivery.
- **Consistent, predictable manufacturing** that drives profitability.
- **No PFAS**, unlike many “green” molded fiber products now under regulatory scrutiny.

In fact, many operators are returning to EPS after trialing alternatives, citing customer complaints, poor performance, and increased costs.

## 6. The Real Problem Isn't Styrofoam—It's Miscommunication

The stigma surrounding EPS stems largely from outdated messaging from the 1980s and '90s. Modern sustainability conversations rarely include full lifecycle analysis, transportation impacts, or food waste mitigation—all crucial metrics where EPS excels.

As consultants, we see a recurring theme:

**When brands assess true environmental impact—not just perception—EPS often ranks among the smartest choices.**

The solution isn't banning Styrofoam. It's educating consumers, regulators, and purchasing teams with current, science-based data.

## Conclusion: It's Time to Re-evaluate EPS with Real Science, Not Soundbites

Styrofoam isn't the enemy. Misunderstanding is.

As sustainability becomes more data-driven, the packaging industry must move beyond outdated narratives and acknowledge EPS for what it truly is: a lightweight, efficient, cost-effective, and often environmentally superior material. At Packaging Resources, we help brands cut through the noise, evaluate real environmental impacts, and choose packaging solutions that align with performance, cost, and sustainability goals—not trends.

If your team is reassessing packaging formats or facing regulatory pressure, we can help you make informed, evidence-based decisions.