

POLYSTYRENE: THE SAFETY RECORD

WHAT DECADES OF INDEPENDENT SCIENCE, REGULATORY REVIEW, AND
COMMERCIAL USE CONFIRM ABOUT POLYSTYRENE PACKAGING.

THE DISTINCTION THAT MATTERS

STYRENE – THE MONOMER

A liquid building block

Styrene is the raw liquid monomer used to produce polystyrene. It also occurs naturally in strawberries, cinnamon, coffee, and beef. Research has not found evidence linking everyday styrene exposure and cancer.



POLYSTYRENE – THE POLYMER

A stable, solid material

Through polymerization, styrene becomes polystyrene: a solid, chemically stable material. Once formed, it does not react with food or liquids under normal conditions of use. FDA has determined polystyrene is suitable for food contact for 50+ years.

WHAT GLOBAL AUTHORITIES SAY



U.S. Food & Drug
Administration



European Food Safety
Authority · June 2025



International Agency for
Research on Cancer
Group 2A



Styrene Information and
Research Center · 2019



**50+ YEAR
FOOD-CONTACT
DETERMINATION**



**FOUND NO EVIDENCE OF
HARM AT REAL-WORLD
EXPOSURE LEVELS**



**NOT A FINDING
OF HARM**



**NEGLIGIBLE
CONSUMER RISK**

THE EXPOSURE CONTEXT

FDA SAFETY LIMIT: ESTIMATED EXPOSURE FROM STYRENE IN PACKAGING:

Maximum daily styrene exposure regulators consider acceptable set conservatively

90 mg/day/person



0.007 mg/day/person

ACTUAL EXPOSURE FROM PS PACKAGING:

Estimated daily exposure from all polystyrene packaging for a typical person

NATURALLY
OCCURRING
STYRENE IN
CINNAMON:



~30 mg/kg

Styrene occurs naturally in many common foods, including strawberries , cinnamon , and coffee . The figures above put polystyrene packaging exposure in that everyday context.

SAFETY AND CIRCULARITY ARE THE SAME ARGUMENT

The same polymer property that makes PS safe also makes it recyclable

Polystyrene's chemical stability – the basis of its food-contact safety record – is also the basis of its recyclability, supporting both 50 years of FDA food-contact determination and closed-loop recovery through mechanical, dissolution, and chemical recycling.



The facts are clear:

polystyrene is not a hazard to be regulated away. It is a safe, well-understood material – and a circular opportunity already being realized across North America.

The Polystyrene Recycling Alliance (PSRA), a North American coalition advancing scalable polystyrene recycling solutions, released a comprehensive report documenting the current state of recycling infrastructure, technologies, and end markets for both expanded polystyrene (EPS) transport packaging and rigid polystyrene (HIPS/GPPS) packaging across North America.

To Download the *Polystyrene: The Safety Record*, click [here](#).