



FAQs: STYROFOAM™

Styrofoam™ cups and take-out containers were once used everywhere—but lately, more and more cities are banning the use of Styrofoam™ products at restaurants and stores. Why? Because Styrofoam™ is a public health hazard—it is bad for the environment and our health. For decades we have been creating Styrofoam™ waste in our communities. Polystyrene foam is littered more than any other waste product—despite it being only 1 percent of all waste, it makes up 10 to 40 percent of litter found in streams. Read on to learn why Styrofoam™ is harmful to our health and why we should be embracing the trend to ban it in our communities.

Overview

Expanded polystyrene foam, commonly referred to as Styrofoam™, is a type of polystyrene (hard plastic) that is made of harmful chemicals. Polystyrene is used in the manufacture of a wide range of products, from disposable cups and containers to insulating material in housing.

Children are often more vulnerable to toxic chemicals and pollutants because of certain behaviors, such as crawling or putting things into their mouths. Their bodies are also still developing, so their ability to defend against or break down toxic chemicals is weaker. We should therefore minimize the use of products containing harmful chemicals—such as Styrofoam™—especially around children.

What is polystyrene foam?

Polystyrene (PS) is a versatile, hard, plastic (identified by Recycling Code #6) that is manufactured when multiple molecules of styrene, a liquid plastic, are linked together. Styrofoam™ is the common term for a brand of expanded polystyrene (EPS) foam and it is used for thermal insulation (reduction of heat transfer) in objects such as disposable coffee cups, coolers, and packaging materials. Polystyrene is light weight, squeaky when rubbed, and is usually white

or light green. Packing peanuts are one example of a polystyrene foam that is commonly used as cushioning for transport of fragile objects.

How do I know if something is made of polystyrene?

Materials made of PS are marked with Recycling Code #6. Styrofoam™ products such as cups or plates will be labeled or described as expanded polystyrene, polystyrene, foam, or #6EPS. Other polystyrene products include clear or solid, but flexible, plastic cups, lids, straws, and utensils.

What are the potential health concerns associated with polystyrene foam?

Over fifty chemical byproducts are released during the manufacturing of polystyrene, contaminating the air, water and communities that live near these facilities. Polystyrene is made up of multiple units of styrene. Styrene is believed to be a carcinogen (cancer causing) by the Department of Health and Human Services and the International Agency for Research on Cancer. (<https://ntp.niehs.nih.gov/ntp/roc/content/profiles/styrene.pdf>) Exposure to styrene can cause irritation of the skin, eyes, the upper respiratory tract, and the gastrointestinal tract. Chronic exposure results in more severe effects including depression, headaches, fatigue, weakness, hearing loss, and disrupted kidney function.

The manufacturing of polystyrene requires the use of hydrocarbons such as styrene and benzene. These hydrocarbons are released into the air and react with nitrogen oxides to produce ground-level ozone, a hazardous air pollutant. Ground-level ozone can impair lung function and lead to respiratory illness.

The disposal of polystyrene is also hazardous. Polystyrene does not break down and is often burned to be disposed of. However, burning polystyrene releases styrene gas into the air and produces a

mix of toxicants that can impair the nervous system.

Is polystyrene regulated?

Currently, all bans on polystyrene are at the city or county level. The following list includes a growing number of cities that have decided to ban polystyrene foam in foodservice products, including take-out containers, bowls, plates, trays, cups, and cutlery.

- New York, NY
- Takoma Park, MD
- Seattle, WA
- Washington DC
- Miami Beach, FL
- Freeport, ME
- Portland, ME
- Nantucket (City and county), MA
- Minneapolis, MN
- Portland, OR
- Baltimore, MD
- San Francisco, CA

Why ban Styrofoam™?

Studies show that styrene, a likely carcinogen, can leach from Styrofoam™ cups and containers when heated. Never put hot food/drink into Styrofoam™ containers, and never microwave Styrofoam™ (or any other plastic) products!

Styrofoam™ not only poses a threat to human health, but can also be harmful to the environment. Foam is lightweight and is easily blown by wind or washed away by rain into water sources. It is also very brittle, and can break into small pieces that are easy for animals to eat. Animals that live on or near areas where Styrofoam™ is found in water sources or on the ground could be harmed if they consume the foam particles.

Polystyrene is slow to degrade, and if disposed of improperly, the foam can leach chemicals into the environment harming water sources.

Polystyrene manufacturing is an enormous creator of hazardous waste. Furthermore, polystyrene manufacturing greatly contributes to global warming. Expanded polystyrene is often made using hydrochlorofluorocarbons, compounds which deplete the ozone, which is needed to protect us from harmful ultraviolet rays.

What are acceptable alternatives?

Instead of Styrofoam™, food can be served on compostable plates that are made of plant-based materials. Safer materials include recycled paper and bamboo products and reusable utensils made from corn or potato-based plastics. Store food or drink in glass containers rather than plastic jars and bottles.

Unfortunately, many brands of disposable dinnerware contain chemicals beyond styrene that can harm our health including BPA—a hormone disruptor, dioxins—linked to infertility, and phthalates—linked to breast cancer. If possible it is preferable to use reusable dinnerware.

Stainless steel, pyrex or ceramic reusable plates, bowls, and cups are another option. Child care facilities can use reusable glasses, plates and utensils made of stainless steel or safer plastics (see EHCC's Plastics Fact Sheet for more information on alternative plastics) for food and beverages.

For packing—biodegradable packing peanuts made out of corn or wheat can be used in place of Styrofoam™ packing peanuts. Additional alternative materials that are less harmful are plastic air bags, paper stuffing, and a Styrofoam™ substitute that is made of mushrooms. Visit <https://daily.jstor.org/company-uses-mushrooms-grows-plastic-alternatives/> for more information about the mushroom alternative.

What types of products can I use for hot beverages and food?

Products made of paper, glass, stainless steel, and ceramic can keep food and beverages warm without leaching chemicals.

Is Styrofoam™ recyclable?

Styrofoam™ is slow to degrade, but it is recyclable! However, white Styrofoam™ must be clean and recycling must be done at specialized facilities. Look for a PS recycling drop-off center in your community. Visit <https://www.dartcontainer.com/ca/environment/ps-foam-recycling/> for a map of recycling centers in

the US, and specifications. Recycling centers locations are also available by visiting www.earth911.com and searching “Styrofoam” or by going to www.homeforfoam.com.

What should I do with Styrofoam™?

Styrofoam™ can be recycled by dropping off clean, unmarked pieces at a drop-off site. However, the best way to protect yourself and the environment would be to avoid its use in the first place. Choose not to purchase polystyrene products, or items that are packaged in polystyrene. And ask for alternative containers or bring your own leftover containers when eating out.

Sources:

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