

styrene
a world of possibilities

Discover
them
here >

Styrénics



Packaging food,
safer and better

What is
Styrene?

Manufacturing for
superior
performance

At home
and
work

We care

Contact
us

Protecting
health and
safety

welcome

Styrene is at the heart of some great advances in technology that are essential to our daily lives.

Use this brochure to explore the range of different industries and applications that rely on Styrene to make products we all depend on.

Discover how Styrene makes packaging and storing food safer and better, and how in many healthcare applications, it has unique properties and ensures safety too.

Learn about the many Styrene-based products that are present in homes and workplaces, and in the insulation that keeps those same buildings warm. See the important ways in which Styrene ensures superior performance throughout the transportation industry and much more.

What is Styrene?

The name Styrene comes from Styrax balsam, the resin of liquidambar trees grown in sub-tropical climates around the world. This resin contains, among other components, small amounts of Styrene.

Styrene is the precursor for many polymers and rubbers. On an industrial scale, styrene is manufactured from petroleum and gas derivatives. It also occurs naturally in very small quantities in fruits, vegetables and nuts.

Styrene is used to create many different materials with unique properties:



Polystyrene (PS), which can also be extruded (XPS) or expanded (EPS)

Acrylonitrile Butadiene Styrene (ABS/SAN)

Styrene Butadiene Rubber (SBR)

Unsaturated Polyester Resins (UPR).

Packaging food, safer and better

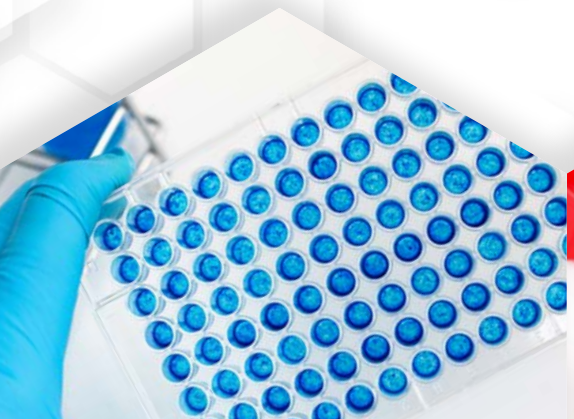
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us

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Packaging food safer and better

Consumers want food to stay fresh longer, maintaining its nutritional value and good taste.

Affordability and accessibility are important too. Brand owners want to make their food look as good as it tastes.

Polystyrene helps to achieve all these goals. For decades, it has consistently protected food with better results for consumers and brands alike.

It is also very resistant to damage, increasing shelf life as well as preventing and reducing food waste. Its light weight makes transportation easier, less costly and contributes to minimising emissions.

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and
work

We care

Contact
us

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health and
safety



In transportation

Making trains, cars, boats and other types of vehicles lighter ensures resource efficiency and minimises environmental impact. Since Styrene-based composites are light and durable, they are the material of choice for many applications.

Styrene-based composites contribute to reducing vehicle weight to meet

increasing fuel efficiency standards in the transportation sector. Styrene-based elastomers used in car tyres improve grip. When applied to the roads themselves, they make the surface last longer.

Foamed Polystyrene helps to insulate and preserve temperature in applications ranging from transport to retail.

Insulating buildings

Choosing the right thermal insulation for buildings is critical to ensure that temperatures remain warm in winter and cool in summer. This decision also impacts energy use and costs for owners, as well as determining a building's environmental footprint.

Experts choose panels made from foamed Polystyrene to insulate walls, floors, and roofs for good reasons. Foamed Polystyrene ensures that insulation remains light, rigid and solid. It helps to make insulation affordable and accessible, benefiting both consumers and the environment.



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What is
Styrene?

Some of the most common devices used at work, such as casings of televisions, computers and phones are made from Styrene-based materials. They offer lifetime functionality combined with great ergonomics and an appealing look.

Styrene-based materials are part of our daily life. In many household appliances and applications such as fridges, washing machines and coffee machines, no other material can provide the same combination of performance, quality, aesthetics and cost-effectiveness as Styrene-based products.

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At work



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What is
Styrene?

At home
and
work

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performance

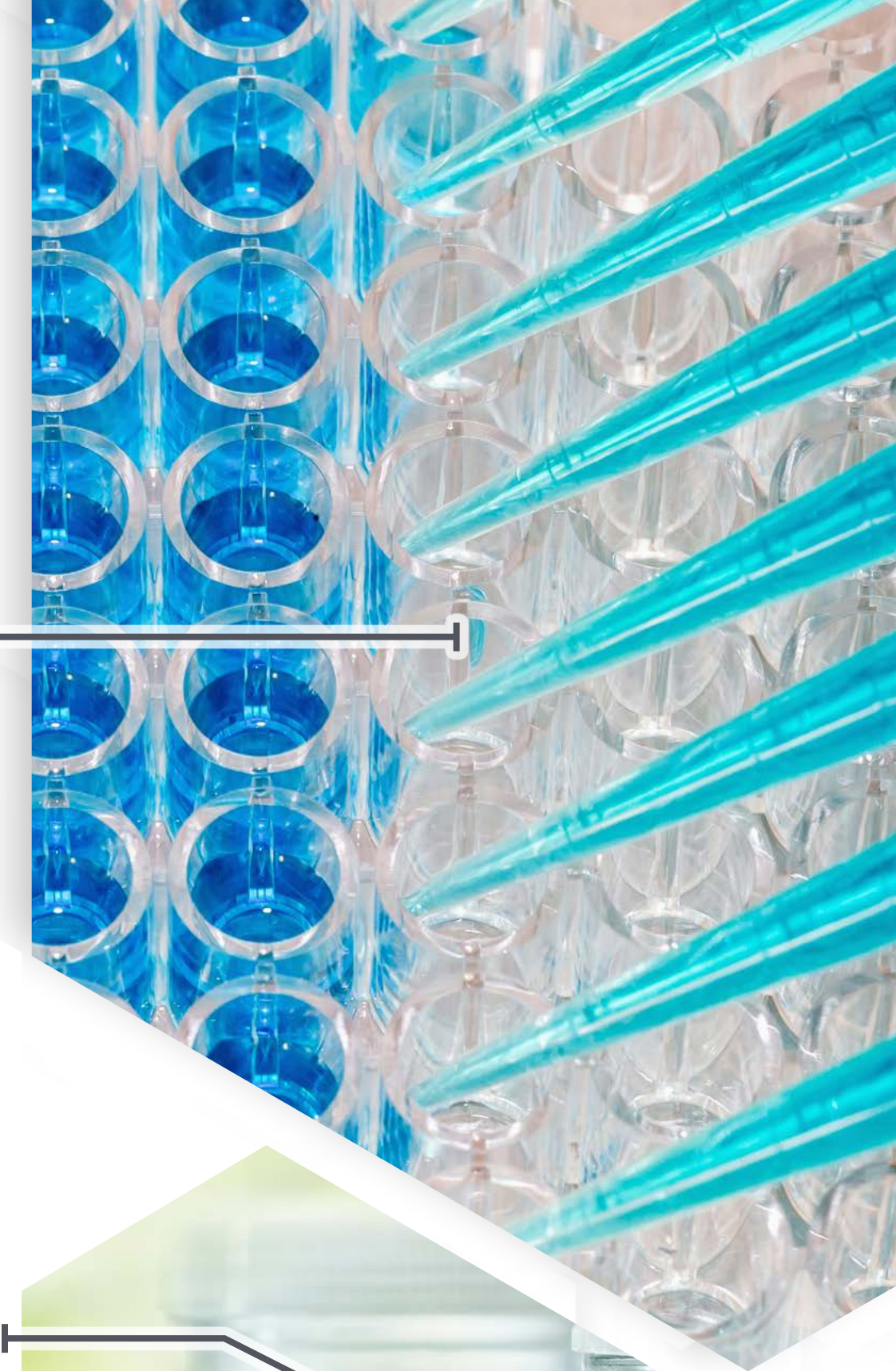
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Protecting health and safety

When it comes to handling blood, serum or other critical liquids, the healthcare sector needs materials that meet strict regulatory standards. That is why medical professionals choose Styrene-based materials. They can rely on them to meet safety standards for sterilizability, heat resistance, durability and more. Polystyrene ensures the transparency, mechanical strength and inertness that professionals need.

Polystyrene-based containers also offer the superior insulation needed to safely transport life-saving goods such as organs and vaccines.



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We care

Manufacturing for
superior
performance

At home
and
work

Contact
us

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health and
safety

Ensuring consumer and environmental safety

Styrene-based products are subject to strict legislation to ensure safety for both consumers and the environment. They are among the most studied food packaging materials, with results consistently proving their strong safety record. Styrene itself is naturally occurring at very low levels in some plants and foods like cinnamon, beans, nuts and

even strawberries. In these small quantities, it poses no adverse effects. Polystyrene-based materials contain similarly low levels of Styrene, and they are safe for consumer use.

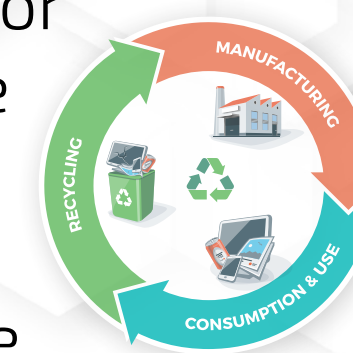


Caring for workers

Safeguarding workers who are handling Styrene is one of the industry's top priorities. Styrene is a substance that has been extensively studied and found safe for use in consumer goods, and also for workers producing Styrene-based products. The high occupational standards in place ensure workers safety across the industry.

Moving the circular economy forward

Realising a circular economy where materials are reused, recycled or turned into energy is a goal the industry shares with policymakers. Already significant progress has been made moving away from the take, make, and throwaway model in favour of a circular approach with the best resource efficiency.



The industry continues to develop technologies to further increase the circularity of its products, and to enhance the important benefits that Styrene-based products provide to people's everyday lives.



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Or visit us:

www.plasticseurope.org

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