

Expandable Polystyrene

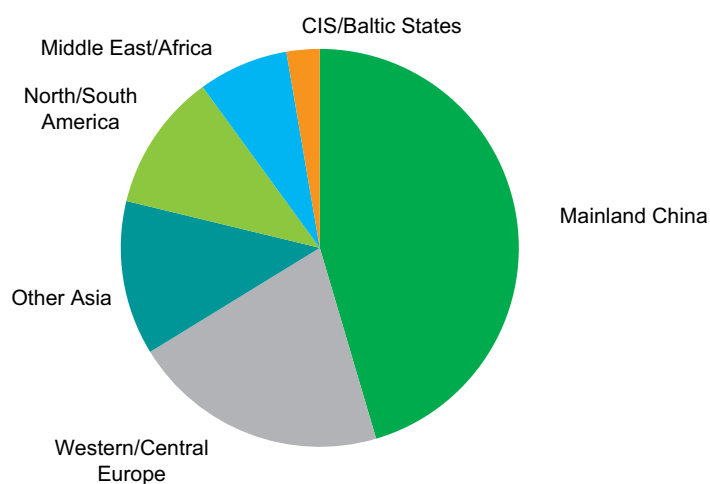
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Abstract

Expanded polystyrene (EPS) is a rigid cellular plastic originally invented in Germany by BASF in 1950. EPS is 98% air and the rest is made from tiny, spherical EPS beads—themselves made only of carbon and hydrogen. EPS is among the largest commodity polymers produced in the world and is the second-largest styrene derivative, after polystyrene. It is a solid foam with a unique combination of characteristics, such as lightness, insulation properties, durability, and excellent processability. EPS is used in many applications, such as thermal insulation board in buildings, packaging, cushioning of valuable goods, and food packaging.

In the last few years, the EPS market has faced the challenges of a worldwide oversupply, weakened demand, and continued negative customer perception of EPS products. Although global demand will see a slight increase during the next five years, the overall capacity burden does not seem to be going away during the forecast period. As of 2020, there is an excess EPS capacity of over 5.5 million metric tons, with the majority held in mainland China, accounting for 66% of the global surplus. Due to Northeast Asia's capacity abundance, the region's operating rate currently sits near 52%. Although there is much needed room for significant consolidation and rationalization, there are no official capacity expansions or reductions anticipated worldwide over the next five years.

World consumption of expandable polystyrene (EPS)—2020



Note: Other Asia includes the Indian Subcontinent, Japan, Taiwan, South Korea, and Southeast Asia.
Source: IHS Markit

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Building and construction is the largest demand segment, accounting for over 52% of global EPS demand in 2020. However, this application no longer leads the EPS industry from a growth perspective due to stagnant demand in Northeast Asia and Western Europe, coupled with an offset in stronger packaging growth. Mainland China's construction industry downturn, along with declining insulation demand, have been significant factors leading to the overall weakening of global EPS demand into the building and construction markets. Another possible threat that may affect the future outlook is that the use of glass in mainland China's construction industry appears to be rising due to attempts at going "green" in building and construction, which entails a reduction in the use of electricity. Since the use of glass would allow more sunlight into buildings, concrete (EPS insulation) could potentially face future substitution. North America has shown some of the strongest growth in these markets; however, the region only accounts for approximately 9% of overall global demand. EPS is commonly used for building and construction in molded sheets for building insulation, which are often packaged as rigid panels in both residential and commercial construction. In recent years, geofoam projects have also contributed to global EPS demand growth. Geofoam is used to provide a lightweight void fill below a highway, bridge approach, embankment, or parking lot. Over the next five years, global EPS demand for building and construction is projected to increase at an average rate of 2.6% per year to reach over 3.5 million metric tons by 2025.

For more detailed information, see the table of contents, shown below.

IHS Markit's Chemical Economics Handbook – *Expandable Polystyrene* is the comprehensive and trusted guide for anyone seeking information into this industry. This latest report details global and regional information, including:



Global summary;
regional coverage



Producers with
annual capacities
and plant sites



Production figures
and trends



Consumption and
forecasts by end use
application



Manufacturing
processes and
environmental issues



Trade – imports
and exports

Key Benefits

IHS Markit's Chemical Economics Handbook – *Expandable Polystyrene* has been compiled using primary interviews with key suppliers, organizations and leading representatives from the industry in combination with IHS Markit's unparalleled access to upstream and downstream market intelligence, expert insights into industry dynamics, trade and economics.

This report can help you:

- Identify trends and driving forces influencing chemical markets
- Forecast and plan for future demand
- Understand the impact of competing materials
- Identify and evaluate potential customers and competitors
- Evaluate producers

- Track changing prices and trade movements
- Analyze the impact of feedstocks, regulations, and other factors on chemical profitability

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