Cumene

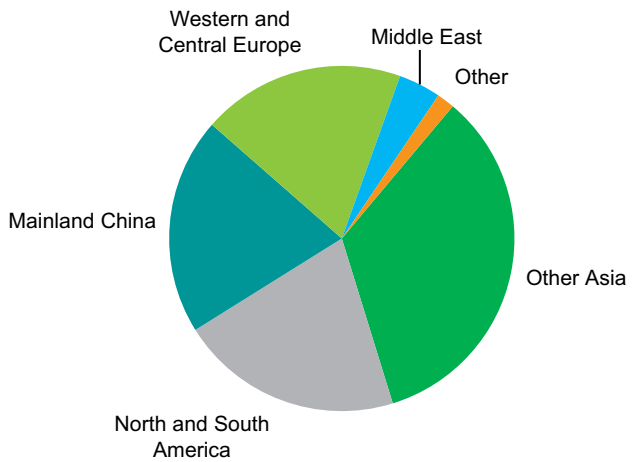
30 April 2020

Abstract

Cumene is an oily, colorless, flammable liquid with a sharp gasoline-like odor, classified as an aromatic hydrocarbon. It is used primarily as a raw material in the synthesis of other organic compounds, such as phenol, acetone, bisphenol A (BPA), phenolic resins, and methyl methacrylate. However, the manufacture of phenol and acetone production is where cumene is utilized the most. Phenol and acetone production consumes approximately 98% of all cumene globally; therefore, cumene demand is closely tied to the phenol and acetone markets.

The following pie chart shows world consumption of cumene:

World consumption of cumene—2019



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

In 2019, global cumene consumption was just under 15.4 million metric tons, with most of the market activity occurring in the three biggest players. Northeast Asia consumed nearly 46% of global cumene, while North America and Western Europe followed, each with around 19% of global cumene demand in 2019. Mainland China and the Indian Subcontinent are projected to be the fastest-growing regions during the forecast period with double-digit average annual growth rates; this will mainly be driven by new Chinese capacity. Cumene demand in Southeast Asia, South Korea, North America, Western Europe, and Japan is expected to decline during 2019–24.

In addition to the production of phenol/acetone, cumene can be used as a paint thinner or in high-octane aviation fuel. When cumene and its feedstocks become undervalued relative to energy, gasoline blenders can use cumene as a blending component, because cumene has a very high octane rating, which is desired sometimes. Although this use is not as common, it will occur periodically, when the chemical price for cumene falls below cumene's alternate octane value. This

Contacts

Maria deGuzman · Maria.deguzman@ihsmarkit.com

IHS Markit®

blending practice is mostly limited to North America, where it is easy to absorb relatively small volumes of cumene in the large regional gasoline pool.

The cumene peroxidation process is the largest source of phenol and acetone production. However, the ratio of phenol and acetone produced does not match up with the ratio of phenol and acetone consumed. As demand for BPA grows, phenol becomes the limiting factor. As the market continues to grow, it is demand for phenol that determines capacity utilization, not acetone. With the exception of BPA, phenol and acetone have no common markets. Historically, phenol has been the more desirable product. Various alternative phenol processes have been developed that bypass acetone; these typically involve benzene-to-phenol conversions using different catalysts.

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

IHS Markit's Chemical Economics Handbook – ***Cumene*** is the comprehensive and trusted guide for anyone seeking information on 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 – ***Cumene*** has been compiled using primary interviews with key suppliers and organizations, and leading representatives from the industry in combination with IHS Markit's unparalleled access to upstream and downstream market intelligence and 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

Contents

IHS Markit Customer Care

CustomerCare@ihsmarkit.com
Americas: +1 800 IHS CARE (+1 800 447 2273)
Europe, Middle East, and Africa: +44 (0) 1344 328 300
Asia and the Pacific Rim: +604 291 3600

IHS Markit®