# Methanol

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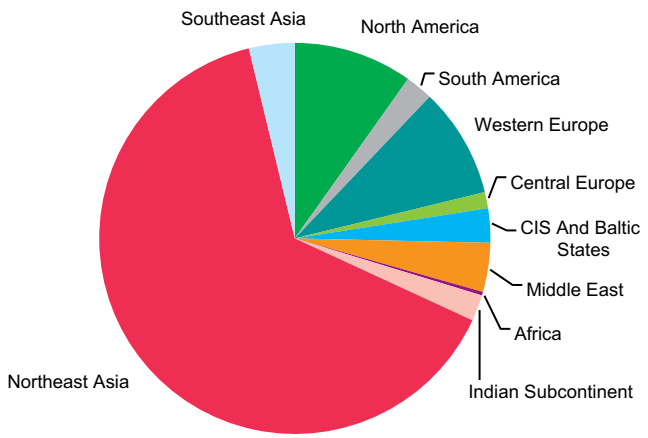
## Abstract

Methanol (or methyl alcohol) is a colorless liquid essentially produced from natural gas or coal. Methanol is a commodity product, which can either be used directly or further transformed to produce a wide range of chemicals that ultimately find applications in diverse sectors (construction, textiles, packaging, furniture, paints, coatings, etc.). Methanol markets are fairly fragmented; formaldehyde synthesis, methanol's single largest outlet, accounts for 27% of the 2017 demand. Other major outlets include the production of olefins (15%), methyl tert-butyl ether/methyl tert-amyl ether (MTBE/TAME [11%]), blending component for gasoline (9%), and dimethyl ether (DME [8%]). The methanol demand pattern is therefore relatively complex and influenced by several distinct market forces including fuel prices, fuel consumption, environmental policies, biofuel mandates, chemical demand, plastics consumption, and housing markets.


The following pie chart shows world consumption of methanol:

**World consumption of methanol—2017**




Source: IHS Markit



Over the last five years, world capacity for methanol has expanded at an average rate of almost 5% per year, driven by new plants built in Northeast Asia; China alone accounted for 75% of the new additions. In 2017, Northeast Asia accounts for 54% of global methanol capacity, with more than 200 different producing locations in China. The methanol production landscape is thus highly fragmented; the world's top 10 producers account for only 26% of global capacity. Methanex is the methanol market leader, with production assets in the Americas, Africa, and Asia, and benefits from a comprehensive supply chain network to distribute methanol on a global scale.

## Contacts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North America constitutes the second-largest consuming region, but its 10% share is far smaller than that of Northeast Asia (64%); the next-largest consuming regions are Western Europe (9%), the Middle East (4%), and Southeast Asia (4%). Since the turn of the century, while methanol demand has broadly stagnated in most regions of the world, it has grown at a fast pace in Northeast Asia (almost 12% per year on average). A fast-rising fuel demand in China as well as the development of unconventional chemical production plants (MTO/MTP) have primarily driven methanol consumption in Northeast Asia.

Methanol demand has been negatively affected by bearish crude oil prices since late 2014; the overall market expanded at an average rate of 6.5% per year over the last five years. Methanol demand for fuel applications has slowed, but new developments within the chemical industry have filled the gap; the construction of new methanol-to-olefins (MTO) and methanol-to-propylene (MTP) units in China have accounted for 52% of the world's new methanol requirements since 2012. China's goal of reaching chemical self-sufficiency is prompting the development of a wide range of unconventional production techniques, leading to, among other things, the development of MTO and MTP production facilities. The sizeable development of global methanol production created an opportunity for China to diversify away from conventional naphtha cracking to produce olefins. Aside from DMT production, all other traditional methanol end-use segments have grown over the past five years.

Worldwide, formaldehyde production is the largest consumer of methanol. Demand is driven by the construction industry since formaldehyde is used primarily to produce adhesives for the manufacture of various construction board products. Historically, the major end product has been plywood, but in developed countries, demand is also driven by the expanding use of engineering board products such as OSB (oriented strandboard). These wood composite products require more formaldehyde-based resin per square foot of board than plywood. Demand for formaldehyde is highly dependent on general economic conditions, and, as an example, a slowdown in construction can considerably reduce formaldehyde demand. Overall, global methanol demand for formaldehyde production will grow at an average rate of just over 5% per year from 2013 to 2018; it will remain the single-largest end use in 2018. Although it will remain the largest end use, its share of total world methanol demand will decline to 28% in 2018 as a result of higher growth rates displayed by other end-use segments for methanol.

Over the next five years, methanol consumption is expected to grow further, albeit at a slower average rate of about 4% per year. The continuing development of MTO/MTP production in China, as well as the increasing global production of formaldehyde, are expected to drive methanol market growth through 2022. Global methanol capacity is forecast to grow at an average rate of almost 4% per year, with China, the Middle East, and the United States accounting for most of the new increases. The lifting of sanctions on Iran will allow the country to significantly expand its methanol production. As a result, global operating rates are currently forecast to remain broadly stable. By 2022, China is projected to account for as much as 61% of global methanol demand. Methanol trade will further expand to meet growing Chinese requirements.

# Contents

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