

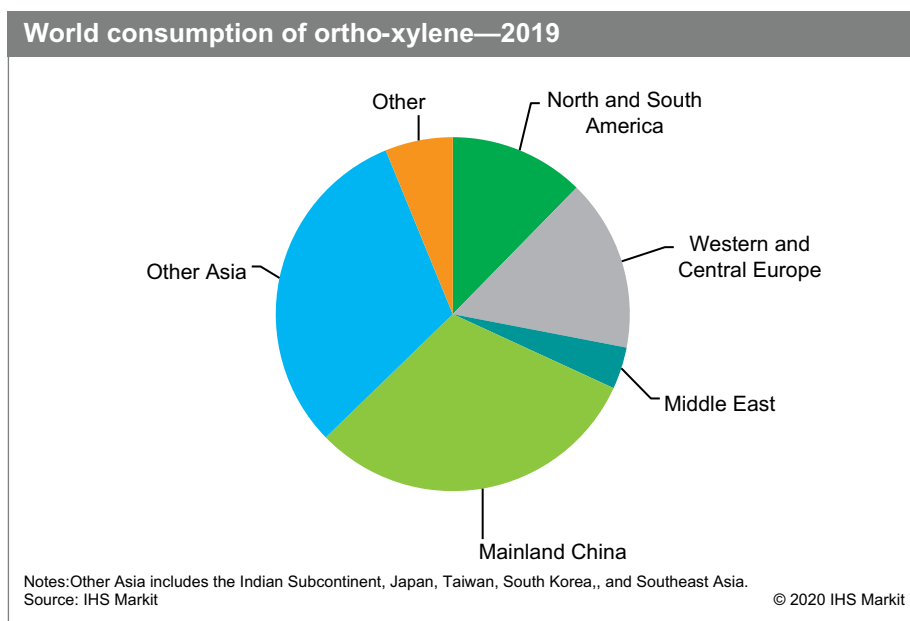
ortho-Xylene

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Abstract

ortho-Xylene (1,2-dimethyl-benzene, o-xylene, or OX) is an aromatic compound that is commonly derived from crude oil sources. It is found in the mixed xylenes stream, which is a mixture of ortho-xylene, meta-xylene (MX), and para-xylene (PX). While very similar in structure, these three isomers have very different chemical properties and applications. OX is the second-most-consumed component obtained from the mixed xylenes stream.

The following pie chart shows world consumption of ortho-xylene:



The 10 largest OX producers, many of which are in Asia, accounted for about 70% of total capacity globally in 2019; the OX market is therefore relatively concentrated. Most of these producers are international oil companies, national oil companies, or large refiners and petrochemical producers. In 2019, the world's largest OX producers were SINOPEC, ExxonMobil, and Formosa.

Isolated ortho-xylene is used primarily to manufacture PA, a key component in the manufacture of plasticizers; PA can also be produced from naphthalene in some regions. PA is used primarily to produce phthalate-based PVC plasticizers, unsaturated polyester resins used for fiber-reinforced resins, and alkyd resins used for coatings. Over the past five years, global OX consumption has declined, driven down by the increasing use of naphthalene as a phthalic anhydride feedstock in mainland China, as well as the overall stagnant demand for PA globally. Ultimately, increasingly stringent regulations, such as the REACH regulation in the European Union, are calling for the gradual replacement of phthalate-based plasticizers, which is limiting PA—and thus OX—consumption growth. In developed regions, where regulations are more

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stringent, OX demand has declined over the past five years; in emerging countries, where construction and consumer markets are still growing, PA demand is still broadly increasing, but this has not necessarily led to higher OX demand. Since 2014, some Asian PA manufacturing units have stopped consuming ortho-xylene, preferring to use naphthalene as its feedstock, leading to the idling of OX capacity in Northeast Asia.

Over the next five years, global OX capacity is projected to increase minimally, following the restart of few big units. Even with rising mainland Chinese OX production, mainland Chinese OX imports will increase at a faster pace to keep up with consumption growth. ortho-Xylene trade is relatively limited globally, amounting to about 20–30% of global consumption in recent years. Western Europe and mainland China are, by far, the major recipient of imports, while the major OX exporters in 2019 were the Indian Subcontinent, Southeast Asia, and North America.

In the developed world, the OX and PA markets are believed to have stabilized and are projected to post slow growth through 2024. Stricter environmental regulations in mainland China are projected to limit the growth of PA produced from naphthalene over the coming years. Softer growth prospects for the mainland Chinese steel industry will limit the amount of new naphthalene volumes available, which will prevent the further replacement of domestic OX-based PA units.

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

IHS Markit's Chemical Economics Handbook – *ortho-Xylene* is the comprehensive and trusted guide for anyone seeking information on this industry. This latest report details global and regional information, including



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- Identify and evaluate potential customers and competitors
- Evaluate producers
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- Analyze the impact of feedstocks, regulations, and other factors on chemical profitability

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