

Isophthalic Acid and meta-Xylene

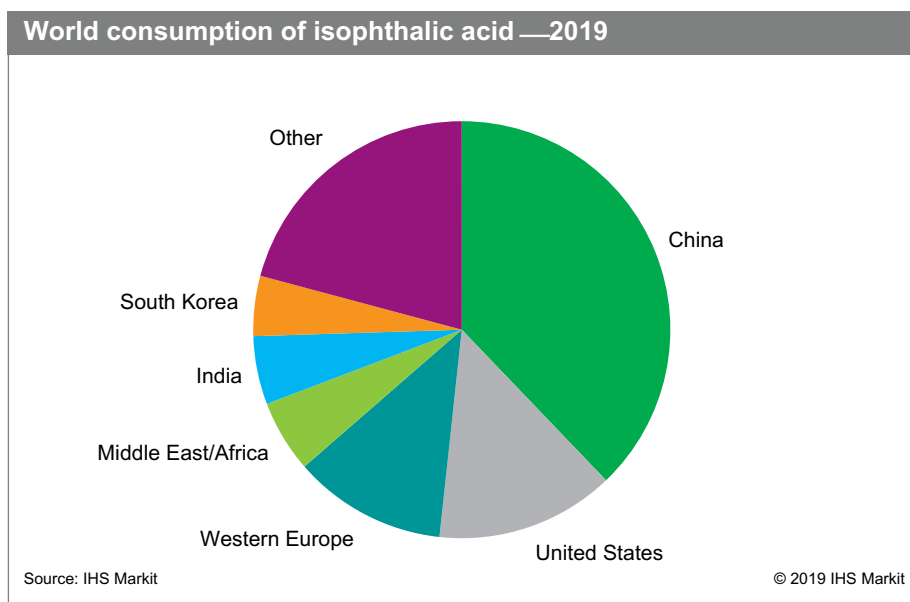
15 November 2019

Abstract

Isophthalic acid is an aromatic dicarboxylic acid industrially produced by the oxidation of m-xylene. Commercially, it is used primarily as a component of PET (polyethylene terephthalate) copolymer, which is used in bottle resins and, to a much lesser extent, for fibers. Isophthalic acid reduces the crystallinity of PET, which serves to improve clarity and increase the productivity of bottle-making. Isophthalic acid's second major use is as a component of high-quality alkyds and polyester resins for industrial coatings and unsaturated polyesters for fiberglass-reinforced plastics applications.

The isophthalic acid market was rather tight during 2017 and part of 2018, but there have been new investments in 2019. New m-xylene capacity has been added in Spain (CEPSA) and Japan (Mitsubishi Chemical Advanced Material), and a new large isophthalic acid plant started up in the United States (Indorama). At the same time, isophthalic acid demand growth is slowing, and the market is currently amply supplied.

The following pie chart shows world consumption of isophthalic acid:



In spite of being the major consumer, China is not self-sufficient in isophthalic acid, and covers almost 90% of its domestic demand through imports. Lotte Chemical in South Korea and FCFC in Taiwan are the major exporters of isophthalic acid into China. Other major consumers of isophthalic acid are the United States and the EMEA region.

The best prospects for growth in PIA consumption are Asian countries such as China; however, India and Thailand will also show good growth predominantly as a result of increases in PET bottle resin manufacture.

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In North America, consumption of PIA will continue to grow, driven primarily by the start of a new large-scale PET bottle resin facility in the United States. In Europe, consumption growth will be more limited, as PET bottle resin production in the region faces strong competition from material coming from Turkey or the Middle East in general. Coatings and unsaturated polyester resins will show moderate growth, following limited GDP growth expected for the region.

With only seven major producers worldwide, the isophthalic acid business can be considered very global. Trade also plays a significant role in the global supply/demand pattern of this chemical, as the transport of isophthalic acid is easy and not cost-intensive. The isophthalic acid market is becoming competitive and product integration is gaining in importance. Indorama has developed into a large globally integrated PIA producer vertically integrated along the polyester business chain. It owns a number of PX, PTA, MEG, and PET facilities in Europe and the Americas.

The global market for isophthalic acid will show positive growth over the next five years; however, the market situation is expected to remain amply supplied. Significant volumes of new capacity for both m-xylene and isophthalic acid are ready to operate at the beginning of 2020 in South Korea. India's Reliance Industry is also studying the conversion of an existing PTA production unit to produce PIA. As a result, some restructuring might occur.

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

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