

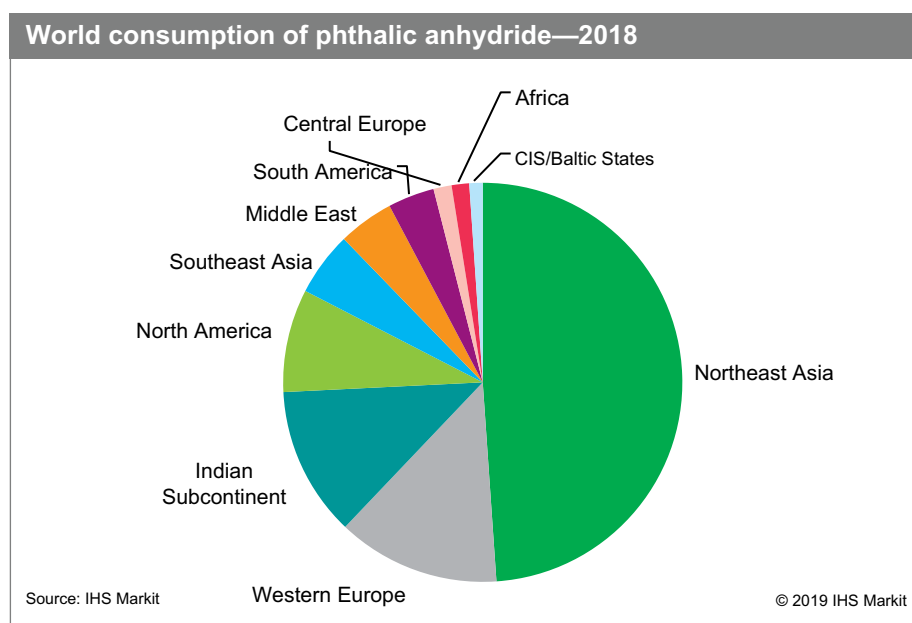
Phthalic Anhydride

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Abstract

Phthalic anhydride is a white crystalline solid that is the commercial form of phthalic acid. The largest markets for phthalic anhydride are phthalate plasticizers, unsaturated polyester resins, and alkyd resins for surface coatings. Commercial phthalic anhydride is 99.8–99.9% pure (99.5% is generally guaranteed) and is available in two forms—flake and molten. Most worldwide consumption of phthalic anhydride is molten.

The following pie chart shows world consumption of phthalic anhydride:



The largest market for phthalic anhydride is the manufacture of phthalate plasticizers, which consumed nearly half of all phthalic anhydride consumed. Asia is the largest consumer of phthalic anhydride for the production of plasticizers, accounting for two-thirds of the phthalic anhydride consumed. China is the world's largest consumer of phthalic anhydride for phthalate plasticizers. The next-largest markets for phthalic anhydride outside of Asia are Western Europe and the United States.

The second-largest market for phthalic anhydride is the manufacture of alkyd resins, which consumed nearly a quarter of all phthalic anhydride consumed. Again, Asia is the largest consumer of phthalic anhydride for this application, accounting for nearly three-quarters of the phthalic anhydride consumed for alkyd resins. China is the world's largest consumer of phthalic anhydride for alkyd resins. The next-largest markets for phthalic anhydride outside of Asia are Western Europe and the United States.

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Demand for most of the downstream markets of phthalic anhydride is greatly influenced by general economic conditions. As a result, consumption of phthalic anhydride largely follows the patterns of the leading world economies. Consumption of phthalic anhydride depends heavily on construction/remodeling activity (residential and nonresidential), automobile production, and original equipment manufacture.

For plasticizers, Asia (China, India) and Western Europe will be the leaders in volume growth; a growing economy in Asia will result in higher domestic demand for phthalic anhydride. North American consumption of phthalic anhydride for plasticizers is forecast to decline modestly (0.4% per year) during the next five years. Environmental concerns and chemical replacement are the major causes for this lower consumption.

Consumption of phthalic anhydride in alkyd resins is expected to increase slightly for the next five years. Above-average growth is expected in Asia (particularly China), the Indian Subcontinent, and Southeast Asia, even though consumption is declining in Japan and South Korea.

Consumption of phthalic anhydride for unsaturated polyester resin production is expected to increase moderately in 2018–23, but growth also varies by region. The Asian markets are forecast to see growth in demand, particularly China, India, and Southeast Asia, while consumption for unsaturated polyester resin is declining in Japan.

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