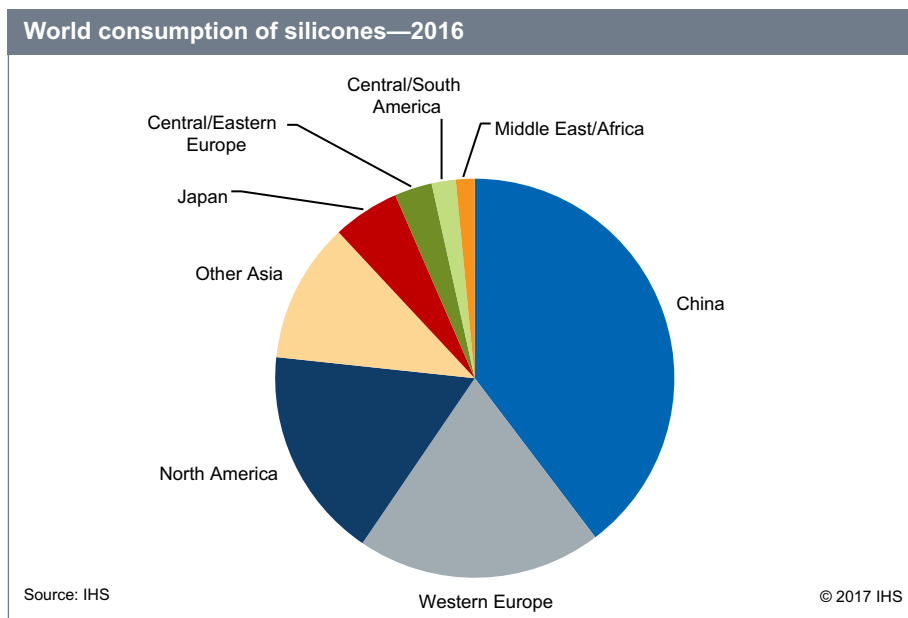


## Abstract

Enabled by the increasing availability of domestic capacity, China continues to be the largest consumer of silicones in the world, surpassing the traditional powerhouses of the United States and Western Europe. In 2002, China accounted for only 7% of global consumption compared with the United States at 30% and Western Europe at 34%. In 2016, China's share of the global market had increased to 40% from 36% in 2012, while the shares of the United States and Western Europe had declined to 17% (the same as in 2012) and 20% (down from 23% in 2012), respectively.

Silicones possess physical and chemical properties that allow their use in a multitude of applications. Silicones or polysiloxanes are versatile polymers consisting of an alternating silicon-oxygen backbone, typically with aliphatic or aromatic side groups. Silicones can be classified as fluids, elastomers, or resins depending on their molecular weight, the extent of cross-linking, and the type and number of organic groups attached to the silicon atoms.

The following pie chart shows world consumption of silicones:



Between 2002 and 2012, China's silicones market grew at a rapid pace of 25% per year. This slowed to about 8% per year during 2012 and 2016. In fact, it was China's demand that kept the global silicones market from shrinking significantly during the great recession of 2008–09. Although future consumption growth is expected to slow somewhat, China's silicones demand is still expected to grow at 7.5% per year, pulling the overall global growth rate close to 5% per year during 2016–21. Strong growth is also expected to continue in Other Asia countries (excluding Japan), and moderate growth in Central and Eastern Europe, as well as in the Middle East and Africa, although consumption levels in these latter

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regions are still fairly low. Consumption in both North America and Central and South America is expected to increase modestly at 2–3% per year, while Western Europe and Japan will each experience limited growth of 1.5–2% per year.

During 2016–21, global demand growth for silicone fluids is expected to average about 3% annually, with cosmetics, toiletries, and medicinal/pharmaceutical preparations leading. Silicone elastomer consumption is expected to increase at 6% per year and will be driven by demand from the construction and automotive industries. Silicone resins growth is also dependent primarily on the construction industry and is expected to increase at about 3% per year.

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