

Synthetic Graphite Market | Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

Market Report | 2023-01-23 | 200 pages | Mordor Intelligence

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Report description:

The global synthetic graphite market is estimated to register a growth by volume of 1,889 kilotons by the end of this year. It is projected to record a CAGR of over 4.5% during the forecast period.

Due to the outbreak of COVID-19, the chemical sector was negatively affected. Lack of resources, shortage of human resources, and other constraints significantly obstructed the expansion of the industry. In 2021, the market recovered to the pre-COVID-19 level and is expected to recover further over 2022.

Key Highlights

The major factors driving the market's growth are the high purity levels of synthetic graphite and the increasing demand for electric vehicles.

On the flip side, the high costs compared to natural graphite and stringent environmental regulations act as a roadblock to the growth of the market studied.

Metallurgy dominated the application segment of the market and is expected to continue its dominance during the forecast period.

Asia-Pacific dominated the global market, with the largest consumption seen in China, Japan, and India.

Synthetic Graphite Market Trends

Metallurgy Segment to Drive the Market

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Graphite is used in several forms in metallurgical applications, such as electrodes, refractories, bricks, monolithic crucibles, etc. During the production of steel or ferroalloys and aluminum, synthetic graphite is used as an anode in the electric arc furnace (EAF) method.

Synthetic graphite electrodes are employed in metallurgical applications as a source of energy for processes, including melting scrap iron in an electric furnace, refining ceramic materials, manufacturing chemicals, such as calcium carbide, and other applications that require high-temperature and clean energy sources.

The rising crude steel and aluminum production across the world is expected to drive the application of synthetic graphite in metallurgical applications. However, irregular trends in producing these metals are expected to provide uncertainty to the market demand.

Synthetic graphite electrodes are made in various grades, like ultra-high power (UHP), high power (HP), and regular power (RP), based on electric current capability.

According to the World Steel Association, crude steel production increased from 1,879 million tons in 2020 to 1951 million tons in 2021.

According to the International Aluminum Institute, global aluminum production was estimated at around 65.32 million tons in 2020, which increased to 67.09 million tons in 2021.

Hence, based on the aspects mentioned above, with the increase in the production of major metals and alloys like steel and aluminum, synthetic graphite is also projected to increase, driving the market.

China to Dominate the Asia-Pacific Region

The Asia-Pacific region dominated the market studied, with more than 50% of the total market by volume, with China being the key consumer in the region.

China continues to dominate the production and demand of synthetic graphite across the world. Almost all stages of the lithium-ion battery manufacturing chain are focused on China. China is by far the largest and most rapidly growing market for lithium-ion batteries, paving the way for synthetic graphite's market growth.

China is one of the largest graphite manufacturers in the world, mainly due to the immense demand from budding sectors like lithium-ion batteries, electronics, steel production, the solar industry, and the nuclear industry.

According to the US Geological Survey, the country accounted for 820 thousand tons of graphite mine production in 2021.

China's battery manufacturers, led by CATL and BYD, supported by the government's industrial expansion vision, are developing massive battery production plants.

Furthermore, China was the global leader in lithium-ion batteries the previous year, and according to BloombergNEF (BNEF), the country ranked first in the lithium-ion battery supply chain for 2021. The country is estimated to have control of 80% of the global battery cell manufacturing, and within five years, the production in the country is estimated to reach 2TWh. The rise in position is mainly due to encouraging government policies, a huge manufacturing base, and rising demand for batteries.

There are more than 40 official graphite electrode producers in China, with 30 more new players entering the market in the past two years, making other refractory products and electrodes.

Therefore, considering the abovementioned factors, the demand for synthetic graphite is expected to increase in China during the forecast period.

Synthetic Graphite Market Competitor Analysis

The global market for synthetic graphite is partially consolidated in nature. The top five players in the global synthetic graphite market include Showa Denko KK (including SGL Carbon), Beiterui New Material Group Co. Ltd, GrafTech International, Shanshan

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Technology, and Lianyungang Jinli Carbon Co. Ltd.

Additional Benefits:

The market estimate (ME) sheet in Excel format
3 months of analyst support

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