Graphite: Technologies and Global Markets

Market Reseach Report | 2022-10-07 | 259 pages | BCC Research

AVAILABLE LICENSES:

- Single User License $5500.00
- 2-5 Users License $6600.00
- Site License $7920.00
- Enterprise License $9504.00

Report description:

Description

Report Scope:

This report provides an updated review of the graphite market, focusing on its types, applications and end-use industries.

The scope of the report covers the four application segments of graphite-refractory and metallurgy, batteries and other conductive materials, lubricants and industrial, and others-analyzed by application and geography.

Refractory and metallurgy markets cover those applications that make use of the high temperature stability of graphite. Electrical applications are those that tap into the high electrical conductivity of purer grades of graphite. Lubricants and industrial markets make use of graphite's strength properties, lubricity and radiation absorption. For these segments, BCC Research reports the status and changes happening in the markets.

The graphite market can also be segmented into natural and synthetic graphite markets. One of the focus areas is the development of natural graphite mining and application, driven largely by the lithium-ion battery markets that are fundamentally changing the structure of the graphite industry.

On the basis of end-use industry, the market is segmented into metal industry, automotive, electronics and others. Graphite finds its major use in the steel industry in the form graphite electrodes. This section of the report will provide detailed descriptions of graphite used in such industries.

In terms of geographic segmentation of the market, this report provides detailed statistics of trade data. Trade statistics for graphite exports and imports for various countries are analyzed in detail, and the past growth rates are provided. Geographical

segmentation for numerous application markets is provided.

The report will also have a separate section discussing the impact of the COVID-19 pandemic on the graphite market at the global level. The section will cover the pandemic's impact on the demand and supply of graphite, and the resulting changes in its prices (during and post lockdown) across various regions.

The report also features a separate section covering the impact of Russia's invasion of Ukraine. This section provides a detailed analysis of the impact of this conflict on the global graphite market

A later chapter reviews in detail the applications for graphite including those in well-established markets such as electrodes, cathodes, carbon brushes, alkaline batteries, pencils and friction, as well as upcoming and faster growing application such as lithium-ion batteries. Each application segment is reviewed in detail to show each industry's market statistics; expected growth rates; technological changes; mergers, acquisitions and sales of companies if any; as well as any unique characteristics of the industry.

Patents and intellectual property issues relating to the global graphite market are detailed in a separate chapter. Here, a review of the number of patents granted by the U.S. Patent Office is analyzed chronologically. In another section of this chapter, all individual players actively developing technologies are discussed. The companies that are at the forefront of such technology and application development, such as Tesla, are specifically analyzed in detail.

The last chapter of the report covers individual companies that are active in the global graphite market. This chapter covers not only the nature and size of each of the operating companies, but also provides financial data for each company wherever available. Address and contact details for the market participants are also provided.

The market size and estimations featured in this report are provided in terms of volume (Kilotons) and value ($ Millions). 2021 serves as the base year, and market forecasts are given for the period from 2022 to 2027. Regional level market size, with respect to types and applications will also be provided. The impacts of the COVID-19 pandemic and the Russia-Ukraine war are factored into the estimates of market size.

Report Includes:

- 111 data tables and 50 additional tables
- A brief overview and up-to-date analysis of the global markets for graphite technologies
- Analyses of the global market trends, with market revenue data for 2021, estimates for 2022, and projections of compound annual growth rates (CAGRs) through 2027
- Estimation of the actual market size for global graphite market in both value and volumetric terms, revenue forecast, and corresponding market share analysis based on type of graphite, application, end-use industry, and geographic region
- In-depth information (facts and figures) concerning market drivers, market deterrents and other macroeconomic forces affecting the demand over the coming years (2022-2027)
- Coverage of the technological, economic, and business considerations of the graphite technologies market, and its vendor landscape
- Highlights of the upcoming market potential for graphite applications and related technologies, along with the industry value chain analysis, competitive environment, and latest developments
- Updated information on the number of U.S. patents on graphite technologies for battery applications
- Identification of the major stakeholders and analysis of the competitive landscape based on recent developments and segmental revenues
- Descriptive company profiles of the leading global players, including Anson Resources, Mason Graphite Inc., Gratomic Inc. and

Westwater Resources Inc.

Executive Summary

Summary:

Graphite markets, contrary to what many people believe, are not commodity markets. Buyers and sellers go through testing and validation processes that often last several years before agreeing to do business. The unique properties of graphite make it widely useful in numerous applications, and the material is expected to have significant growth in the coming years.

The properties that make graphite unique are its stability at high temperatures, extremely high electrical conductivity, lubricity and chemical inertness. Based on these properties, BCC Research has divided the application markets for graphite into three main segments-refractories and metallurgy, batteries and other conductive materials, and lubricants and industrial-with all other application markets being combined into the fourth category of "other."

The global market for graphite was estimated to be $16.4 billion in 2021, growing slightly to $17.5 billion in 2022. The growth through 2027 is projected to be at a CAGR of 7.3%, with the market reaching $25.0 billion by the end of the forecast period.

The refractory and metallurgical segment is the largest and was valued at $9.3 billion in 2021. For the five-year period from 2022 through 2027 it is projected to grow at a CAGR of 5.5% to reach $12.9 billion. The growth here is a combination of volume and price as these markets are recovering from the disruptions of their businesses caused by the COVID-19 pandemic. In contrast, the segment for batteries and other conductive materials has the highest growth rate of 14.2% over the forecast period. The significant growth is catalyzed by the lithium-ion battery segment, which is projected to grow at a healthy growth rate during the forecast period of 2022 through 2027. The demand for these batteries is
primarily witnessed in electric vehicles (EVs). By 2030, the electric vehicles market will need 2,700 GWh worth of lithium-ion batteries every year.

New thermal technology and acid-leaching techniques have enabled the production of higher purity graphite powders that are likely to lead to the development of new applications for graphite in hightechnology fields. Innovative refining techniques have made the use of graphite possible in carbongraphite composites, electronics, foils, friction materials and specialty lubricant applications.

On the basis of region, the market is segmented into North America, Europe, Asia-Pacific and Rest of the World. In 2021, Asia-Pacific accounted for more than a 62% volume share of the global market. China is a major market for both synthetic and natural graphite in the Asia-Pacific region. The country was responsible for 79.0% of world natural graphite production in 2021. Relative to other countries, China was able to recover quickly from the COVID-19 pandemic. The Chinese graphite producers increased production after a few months of closures in 2020. This allowed the country to gain a more dominant position in the market for 2021 and slowed down the diversification of the supply chain.

In India, the recovery from COVID-19 was much slower than that seen in China. However, in 2021, the demand for graphite significantly rose for the production of lithium-ion batteries in the country. Companies like Reliance, Mahindra, Ola had been planning to set up lithium battery manufacturing plants in India in the next two years to fulfill the growing need for lithium-ion batteries for various applications. For example, Reliance's telecom towers are powered by Li-Ion battery. The company is currently in conversation with Ambri, a U.S.-based company focusing on liquid metal batteries, to set up a battery manufacturing giga-factory in India. Such developments related to the expansion of the Li-ion
battery business are expected to provide significant opportunities for the graphite market to grow in India.

Table of Contents:

SCOTTS INTERNATIONAL

Graphite: Technologies and Global Markets

Market Reseach Report | 2022-10-07 | 259 pages | BCC Research

To place an Order with Scotts International:

- - Print this form
- - Complete the relevant blank fields and sign
- - Send as a scanned email to support@scotts-international.com

ORDER FORM:

Select license	License	Price
	Single User License	$5500.00
	2-5 Users License	$6600.00
	Site License	$7920.00
	Enterprise License	$9504.00
	VAT	
	Total	

*Please circle the relevant license option. For any questions please contact support@scotts-international.com or 0048 603 394 346.

** VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

Email*		Phone*	
First Name*		Last Name*	
Job title*			
Company Name*		EU Vat / Tax ID / NIP number*	
Address*		City*	
Zip Code*		Country*	
		Date	2025-06-26
		Signature