

Global Powder Metallurgy Market Size to Reach \$4.6 Million by 2030: Latest Report by Vantage Market Research

Powder Metallurgy Market: Overview, Dynamics, Trends, Challenges, Opportunities, and Regional Analysis

WASHINGTON, D.C, DISTRICT OF COLUMBIA, UNITED STATES, January 16, 2024 /EINPresswire.com/ -- Powder metallurgy is a process of producing metal parts or components from metal powders by compacting and heating them in a controlled environment. Powder metallurgy offers several advantages over conventional metal forming techniques, such as reduced



material wastage, improved dimensional accuracy, enhanced mechanical properties, and lower production costs. Powder metallurgy is widely used in various industries, such as automotive, aerospace, defense, electrical and electronics, medical, and industrial.

The Global <u>Powder Metallurgy Market Size</u> is expected to witness a significant growth in the coming years, owing to the increasing demand for lightweight and high-performance metal parts or components across various sectors. According to a report by Vantage Market Research, the global powder metallurgy market size reached \$2.2 Million in 2022 and is projected to reach \$4.6 Million by 2030, at a compound annual growth rate (CAGR) of 11.2% during 2023-2030. The main driving factors for the powder metallurgy market are the growing use of powder metallurgy in the automotive industry to produce engine, transmission, and chassis parts, the rising demand for powder metallurgy in the aerospace and defense industry to manufacture turbine blades, rotors, and structural components, and the increasing adoption of powder metallurgy in the medical industry to fabricate implants, surgical instruments, and dental devices.

The market dynamics of the powder metallurgy market are influenced by various factors, such as the demand and supply of powder metallurgy products, the price and availability of raw materials, the environmental regulations and standards, the technological innovations and developments, and the competitive landscape.

The major drivers for the powder metallurgy market are the increasing demand for lightweight and high-performance metal parts or components across various sectors, such as automotive, aerospace, defense, electrical and electronics, medical, and industrial. Powder metallurgy products offer several advantages over conventional metal products, such as higher strength-to-weight ratio, better corrosion resistance, lower friction coefficient, and higher thermal conductivity. Moreover, the growing use of powder metallurgy in the automotive industry to produce engine, transmission, and chassis parts, the rising demand for powder metallurgy in the aerospace and defense industry to manufacture turbine blades, rotors, and structural components, and the increasing adoption of powder metallurgy in the medical industry to fabricate implants, surgical instruments, and dental devices are some of the factors driving the market growth.

The major restraints for the powder metallurgy market are the high initial investment and operating costs of powder metallurgy equipment, the limited availability and high cost of some metal powders, such as titanium, nickel, and cobalt, and the lack of awareness and knowledge of powder metallurgy among some potential customers and end-users. These factors may hamper the market growth and limit the penetration of powder metallurgy in some regions and sectors.

☐ Molyworks Materials Corp. (U.S.)
☐ Advanced Technology & Materials Co. Ltd. (AT&M) (China)
☐ JSC POLEMA (Switzerland)
□ Sandvik AB (Sweden)
☐ Hoganas AB (Sweden)
☐ GKN PLC (UK)
☐ Rio Tinto Metal Powders (Canada)
☐ Rusal (Russia)
☐ CRS Holdings Inc. (U.S.)
□ Liberty House Group (UK)

The <u>top trends in the powder metallurgy market</u> are the development of new and advanced powder metallurgy products, such as metal matrix composites, metal injection molding, and additive manufacturing, the increasing adoption of powder metallurgy in emerging markets, such as China, India, Brazil, and South Africa, and the collaboration and partnership among the powder metallurgy stakeholders, such as the metal powder producers, the powder metallurgy part manufacturers, the end-users, and the research institutes. These trends are expected to create new opportunities and challenges for the powder metallurgy market in the future.

The powder metallurgy market is the development of new and advanced powder metallurgy products, such as metal matrix composites, metal injection molding, and additive manufacturing. These products are designed to meet the specific and complex requirements of various applications, such as high-temperature, high-pressure, high-wear, and high-strength applications. These products also offer additional benefits, such as improved functionality, enhanced performance, increased efficiency, and reduced environmental impact. The development of new and advanced powder metallurgy products is expected to create new markets and applications for powder metallurgy, as well as increase its competitiveness and differentiation in the market.

The powder metallurgy market is the increasing adoption of powder metallurgy in emerging markets, such as China, India, Brazil, and South Africa. These markets have a huge potential for powder metallurgy, as they have a large population, a growing economy, a rising industrialization, and a high demand for metal parts or components. These markets also have supportive government policies and incentives, such as subsidies, tax exemptions, quality standards, and infrastructure development, that encourage the use of powder metallurgy. The powder metallurgy market is expected to benefit from the increasing adoption of powder metallurgy in these markets, as it will create a large customer base and a new revenue stream for the powder metallurgy stakeholders.

The powder metallurgy market is the collaboration and partnership among powder metallurgy stakeholders, such as the metal powder producers, the powder metallurgy part manufacturers, the end-users, and the research institutes. These stakeholders can work together to create synergies and value propositions for the powder metallurgy market, such as co-developing and co-marketing powder metallurgy products, sharing data and insights, offering integrated solutions and services, and expanding the distribution and supply chain network. The collaboration and partnership among powder metallurgy stakeholders are expected to enhance the customer satisfaction, loyalty, and retention, as well as increase the market penetration and competitiveness of powder metallurgy.

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☐ By product type, the powder metallurgy market is divided into ferrous and non-ferrous metal powders. The ferrous metal powders segment accounted for the largest share of the market in 2022, as they are the most widely used type of metal powders in various applications, such as automotive, aerospace, defense, electrical and electronics, and industrial. The non-ferrous metal powders segment is expected to grow at the highest CAGR during the forecast period, as they offer superior properties, such as higher corrosion resistance, lower density, and higher electrical conductivity, than ferrous metal powders.

☐ By application, the powder metallurgy market is divided into automotive, aerospace, defense, electrical and electronics, medical, industrial, and others. The automotive segment accounted for the largest share of the market in 2022, as powder metallurgy is extensively used to produce engine, transmission, and chassis parts for various types of vehicles, such as passenger cars, light commercial vehicles, and heavy commercial vehicles. The aerospace segment is expected to grow at the highest CAGR during the forecast period, as powder metallurgy is used to manufacture turbine blades, rotors, and structural components for various types of aircraft, such as commercial, military, and space.

☐ By region, the powder metallurgy market is divided into North America, Europe, Asia Pacific, Latin America, and Middle East and Africa. North America accounted for the largest share of the market in 2022, as it is the largest consumer and producer of powder metallurgy products, owing to the high demand from the automotive, aerospace, defense, and medical sectors. North America is also home to some of the leading powder metallurgy stakeholders, such as Carpenter Technology Corporation, GKN PLC, and Allegheny Technologies Incorporated. Asia Pacific is expected to grow at the highest CAGR during the forecast period, as the demand for powder metallurgy products is increasing in various sectors, such as automotive, electrical and electronics, industrial, and medical, especially in emerging countries, such as China, India, and Japan.

One of the major challenges for the powder metallurgy market is the high initial investment and operating costs of powder metallurgy equipment, such as presses, furnaces, sintering machines, and molding machines. These equipment are complex and require skilled labor, maintenance, and energy to operate. Moreover, these equipment are subject to wear and tear, which may affect their efficiency and quality. The high initial investment and operating costs of powder metallurgy equipment may discourage some potential customers and end-users from adopting powder metallurgy, especially in developing and underdeveloped regions.

Another major challenge for the powder metallurgy market is the limited availability and high

cost of some metal powders, such as titanium, nickel, and cobalt. These metal powders are in high demand for various applications, such as aerospace, defense, medical, and industrial, as they offer superior properties, such as high strength, high temperature resistance, and high corrosion resistance. However, these metal powders are scarce and expensive, as they are derived from rare and costly ores, which are subject to geopolitical and environmental factors. The limited availability and high cost of some metal powders may affect the supply and demand balance of the powder metallurgy market, as well as increase the production costs and prices of powder metallurgy products.

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One of the major opportunities for the powder metallurgy market is the development of new and innovative powder metallurgy products, such as metal matrix composites, metal injection molding, and additive manufacturing. These products are designed to meet the specific and complex requirements of various applications, such as high-temperature, high-pressure, high-wear, and high-strength applications. These products also offer additional benefits, such as improved functionality, enhanced performance, increased efficiency, and reduced environmental impact. The development of new and innovative powder metallurgy products is expected to create new markets and applications for powder metallurgy, as well as increase its competitiveness and differentiation in the market.

Another major opportunity for the powder metallurgy market is the expansion and diversification of powder metallurgy applications, such as in the electronics, automotive, industrial coatings, and building and construction sectors. These sectors have a high demand and potential for powder metallurgy, as they require high-quality and efficient coating solutions that can protect and enhance the performance of various components and materials. Moreover, these sectors are also witnessing rapid technological advancements and innovations, such as in the fields of nanotechnology, biotechnology, and renewable energy, that create new challenges and opportunities for powder metallurgy. The expansion and diversification of powder metallurgy applications are expected to increase the demand and market size of powder metallurgy, as well as broaden its scope and reach in the market.

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- Q. What is the current size and projected growth rate of the global powder metallurgy market?
- Q. Which industry segments are driving the market growth, and what are their specific needs?

- Q. What are the latest advancements in powder metallurgy technology, and how are they impacting the market?
- Q. What are the key challenges and opportunities facing the powder metallurgy industry?
- Q. Which geographical regions are expected to witness the fastest growth in the powder metallurgy market?
- Q. What are the major players in the powder metallurgy market, and what are their strategies?
- Q. What are the key factors influencing the pricing of powder metallurgy products?
- Q. What are the regulatory considerations for powder metallurgy products in different regions?

North America has been a traditional powerhouse in the powder metallurgy market, driven by its established automotive and aerospace industries. The region boasts a well-developed infrastructure, with leading powder manufacturers and technology providers. However, the rising competitiveness from Asia-Pacific, with its lower production costs and burgeoning demand for lightweight components, is expected to reshape the market landscape in the coming years.

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☐ Cement Admixture Market: https://www.vantagemarketresearch.com/industry-report/cement-admixture-market-0804

☐ Barium Sulfate Market: https://www.vantagemarketresearch.com/industry-report/barium-sulfate-market-0214

☐ Biodegradable Plastics Market: https://www.vantagemarketresearch.com/industry-report/biodegradable-plastics-market-1191

☐ Biopolymer Coatings Market: https://www.vantagemarketresearch.com/industry-report/biopolymer-coatings-market-1684

☐ Metamaterials Market: https://www.linkedin.com/pulse/metamaterials-market-size-share-trends-opportunities-analysis-ashlev/

☐ Vegan Leather Market: https://www.linkedin.com/pulse/vegan-leather-market-size-share-trends-opportunities-analysis-ashley/

☐ Flow Chemistry Market: https://www.linkedin.com/pulse/flow-chemistry-market-size-share-trends-opportunities-ashley-hancock/

☐ E-Fluids Market: https://www.linkedin.com/pulse/e-fluids-market-size-share-trends-opportunities-analysis-hancock/

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