

Global Magnesium Alloys Market Poised for Significant Growth

Global Magnesium Alloys Market Set for Significant Growth: Key Drivers, Challenges, and Innovations

VANCOUVER, BC, CANADA, June 3, 2024 /EINPresswire.com/ -- Magnesium alloy Market size reached USD 1.63 Billion in 2022 and is expected to register a revenue CAGR of 16.54% during the forecast period. The global <u>magnesium</u> <u>alloys market</u> is experiencing rapid growth, driven by increasing demand in the automotive, aerospace, and defense sectors. The unique properties



of magnesium alloys, including their lightweight and high-strength characteristics, make them ideal for a range of applications aimed at improving fuel efficiency and reducing weight.

Key Market Drivers:

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Discover how the global magnesium alloys market is rapidly growing, driven by demand in aerospace, defense, and automotive sectors, with key innovations and challenges shaping the future"

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Rising Demand in Aerospace and Defense: Magnesium alloys are increasingly used in aerospace and defense applications due to their excellent thermal conductivity and high damping capacity. These properties are crucial for components like engine casings, heat exchangers, and structural parts exposed to high temperatures. Additionally, magnesium alloys help absorb and dissipate vibrations, enhancing noise control and structural integrity in aircraft.

Automotive Industry Growth: The automotive industry is a

major driver for magnesium alloys due to their lightweight and strong properties. These alloys help reduce vehicle weight and improve fuel efficiency, which is essential for meeting environmental regulations and enhancing performance. Magnesium alloys also offer good corrosion resistance, which is vital for the durability of automotive components. Technological Advancements: Rapid advancements in magnesium alloy technologies, such as Severe Plastic Deformation, Recycled Magnesium Alloys, and Rare Earth Element (REE) Alloying, are expected to boost market growth. Innovations like biodegradable magnesium and recycled magnesium alloys are particularly noteworthy. For instance, the FDA's breakthrough device designation for a resorbable magnesium alloy screw used in orthopedic procedures highlights the potential of these alloys in medical applications.

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Market Challenges:

Despite the promising growth, the magnesium alloys market faces challenges, primarily the high cost of raw materials. The production of magnesium alloys is more complex and energyintensive compared to other metals like aluminum and steel. Limited supply and specialized extraction processes contribute to the higher costs. Additionally, magnesium alloys are difficult to process due to their sensitivity to moisture and reactivity with certain tools, further increasing manufacturing costs.

Segment Insights:

Type Dynamics: The market is segmented into cast alloys and wrought alloys. Cast alloys held the largest market share in 2022 due to their versatility and ability to produce complex shapes with minimal machining. Wrought alloys, expected to grow steadily, are favored for their excellent strength-to-weight ratio and improved properties from advancements in processing techniques.

Application Insights: The aerospace and defense segment dominated the market in 2022, benefiting from the thermal conductivity and corrosion resistance of magnesium alloys. The electronics segment is expected to grow at the highest CAGR, driven by the demand for devices like computers, wearables, and smartphones. Magnesium alloys provide essential properties such as electromagnetic shielding and thermal conductivity, making them suitable for electronic applications.

Strategic Partnerships:

Collaborations between industries are further propelling market growth. For example, a partnership between the National University of Science and Technology (NUST) and LG Electronics resulted in the development of two new magnesium alloys that are lighter than traditional alloys, maintaining high mechanical and thermal conductivity properties.

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Magnesium Alloys Top Companies and Competitive Landscape

The global Magnesium alloys market is fairly fragmented, with many large and medium-sized players accounting for the majority of market revenue. Major players are deploying various strategies, entering into mergers & acquisitions, strategic agreements & contracts, developing, testing, and introducing a more effective Magnesium alloys market.

Magontec Limited

m-tec powder

Smiths Advanced Metals.

Weijie Magnesium Industry Co.

US Magnesium LLC

Meridian Lightweight Technologies.

AMACOR

Globe Specialty Metals, Inc.

Spartan Light Metal Products.

Posco

Nanjing Yunhai Special Metals Co.

Fugu Jinwantong Magnesium Industry Co.

Ningxia Hui-ye Magnesium Marketing Group Co.,Ltd.

Elektron

Ka Shui International Holdings Ltd.

Shanghai Regal Magnesium Ltd. Co.

Rima Group

Smiths Advanced Metals

Shanxi Fugu Tianyu Mineral Industry

Luxfer MEL Technologies

Magnesium Alloys Latest Industry Updates

On 7 January 2020, ALLITE Inc. and Xi'an Jiaotong University have formed a partnership to advance research on magnesium alloys, specifically focusing on their proprietary ALLITE Super Magnesium alloys. Ultra-high strength magnesium alloys, machine learning assisted design of high-performance magnesium alloys, high dampening magnesium alloys, and the design and production of high-performance magnesium alloys. This partnership aims to utilize their respective strengths in developing advanced magnesium alloys and processing techniques.

On 6 January 2023, Olight lunched Baton 3 Pro Max Magnesium Alloy in Desert Tan. This flashlight marks Olight's first foray into using magnesium alloy, a material that offers a unique blend of lightness, strength, and heat dissipation properties. It's lightest structural metallic material and features high-temperature performance, which makes it ideal for use in aerospace, mobile devices, bicycles, and in electronic tools.

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Magnesium Alloys Market Segment Analysis

For the purpose of this report, Emergen Research has segmented global Magnesium alloy Market on the basis of Type, Application, and region:

Type Outlook (Revenue, USD Billion; 2019-2032)

Wrought Alloys

Cast Alloys

Application Outlook (Revenue, USD Billion; 2019-2032)

Aerospace and defense

Medical

Power tools

Automobile

Electronics

Others

Regional Outlook (Revenue, USD Billion; 2019-2032)

North America

U.S.

Canada

Mexico

Europe

Germany

France

U.K.

Italy

Spain

Benelux

Rest of Europe

Asia Pacific

China

India

Japan

South Korea

Rest of APAC

Latin America

Brazil

Rest of LATAM

Middle East & Africa

Saudi Arabia

UAE

South Africa

Turkey

Rest of MEA

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