

Gadolinium Market Size, Share & Trend Analysis Report, By End Use (Medical Imaging / MRI Contrast Agents, Magnetic Refrigeration & Special Alloys, Nuclear Reactors), By Region, And Segment Forecasts, 2026 - 2033

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Abstracts

The global gadolinium market size was valued at USD 278.9 million in 2025 and is projected to grow from USD 289.9 million in 2026 to USD 380.5 million by 2033, at a CAGR of 4.0% from 2026 to 2033. Asia Pacific dominated the market, accounting for the largest revenue share of 52.9% in 2025. Gadolinium is a silvery white, soft, and ductile rare earth element with the chemical symbol Gd and atomic number 64.

It has a high neutron absorption cross-section, making it useful in nuclear reactor applications, while its strong magnetic properties support its use as a contrast agent in magnetic resonance imaging (MRI). It is also used in permanent magnets, phosphors, lasers, electronic components, and specialized alloys, with growing demand from healthcare, electronics, energy, and advanced technology applications.

Gadolinium possesses distinctive magnetic, electrical, and thermal properties, making it useful in NdFeB magnets, electronic devices, optical materials, phosphors, and specialized alloys. Increasing demand for high-performance magnets, electronics, renewable energy technologies, and advanced materials is creating additional opportunities for consumption. Research indicates that growing demand for NdFeB magnets could contribute to tighter gadolinium supply conditions in the future, highlighting the increasing importance of gadolinium in advanced technology applications.

The expansion of nuclear technology is also supporting growth in the gadolinium

industry due to its exceptionally high neutron-absorption capability. Gadolinium is used in nuclear reactor control and shielding, while its isotopes are being investigated for specialized medical applications, such as gadolinium neutron-capture therapy. Growing investments in nuclear energy, medical isotope production, and advanced nuclear technologies are therefore creating additional demand. In 2026, the U.S. Department of Energy announced routine domestic production of gadolinium-153, which is used to calibrate SPECT diagnostic imaging equipment, further demonstrating the strategic importance of gadolinium-based technologies in healthcare and nuclear applications.

Global Gadolinium Market Report Segmentation

This report forecasts revenue growth at global, regional, and country levels and provides an analysis of the latest industry trends in each of the sub-segments from 2021 to 2033. For this study, Grand View Research has segmented the global gadolinium market report based on the end use, and region.

End Use Outlook (Revenue, USD Million, 2021 - 2033)

Medical Imaging / MRI Contrast Agents

Magnetic Refrigeration & Special Alloys

Nuclear Reactors

Phosphors & Optical Glass

Regional Outlook (Revenue, USD Million, 2021 - 2033)

North America

U.S.

Canada

Mexico

Europe

Germany

France

Italy

UK

Asia Pacific

China

India

South Korea

Japan

Latin America

Brazil

Middle East & Africa

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