

Shape Memory Alloys Market by Type (Nitinol, Copper based, Iron-Manganese-Silicon), End-use Industry (Biomedical, Aerospace & Defense, Automotive, Consumer Electronics, and Home appliances) and Region - Global Forecast to 2026

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Abstracts

The global shape memory alloys market size is projected to grow from USD 11.0 billion in 2021 to USD 18.8 billion by 2026, at a CAGR of 11.2% from 2021 and 2026. The growth in the market is highly attributed to the increasing demand for SMAs in the manufacturing of biomedical devices & surgical instruments, aircraft components and automotive actuators, and consumer electronics. North America is the largest market for SMAs, owing to huge demand from biomedical device manufacturing. The growth in the market is also attributed to the increasing demand for high-quality life-saving medical devices and better automotive & aircraft components. The physical properties of SMAs are encouraging their use in various end-use industries. However, the high cost of implantable devices, which is the largest application of SMAs in the biomedical industry, is the major challenge for the growth of the SMAs market.

“Nitinol type segment estimated to lead the shape memory alloys market in 2020”

By type, the Nitinol segment accounted for the largest share in the overall shape memory alloys market. Nitinol alloys are the largest type of SMAs, accounting for a major share of the market. The significantly growing biomedical end-use industry, especially for medical implants, is driving the demand for nitinol SMAs. These alloys are used in the form of wires, sheets, ribbons, and rods. Other types of SMAs include gold, cadmium, iron, zinc, and platinum-based alloys.

“Biomedical end-use segment is estimated to be the largest segment of shape memory

alloys”

Biomedical is the largest end-use industry of SMAs, followed by aerospace & defense. The applications of SMAs in the automotive industry will increase as the EV market is gaining traction. SMAS are widely used in dentistry applications for the manufacturing of orthodontic wires due to their shape memory properties, super-elasticity, high ductility, and resistance to corrosion. However, due to the COVID-19 pandemic in 2020, and because of social distancing, only essential services were left open. Oral dental professionals were significantly affected due to the mass closure of dental offices. The pandemic has had a continuing effect on orthodontic treatment, which is a long process that requires regular visits. Thus, the demand for SMAs in dentistry applications declined in 2020.

“North America projected to account for the largest share of the shape memory alloys market during the forecast period”

North America is projected to have the largest share in the global shape memory alloys market, in terms of both value, from 2021 to 2026. The growth of the North American SMAs market is mainly driven by new product development and capacity expansion strategies adopted by the leading players in this region. In addition, the region is the leading market for SMAs in the biomedical industry owing to the increased demand for medical implants. The US is projected to continue dominating the market, followed by Canada, in North America. It is a developed market for SMAs, with major global market players headquartered in the country.

In-depth interviews were conducted with Chief Executive Officers (CEOs), marketing directors, innovation and technology directors, and other executives from various key organizations operating in the shape memory alloys market.

By Company Type: Tier 1: 55%, Tier 2: 30%, and Tier 3: 15%

By Designation: C-level Executives: 21%, Directors: 23%, and Others: 56%

By Region: North America: 15%, Europe: 27%, Asia Pacific: 45%, South America: 7%, and Middle East & Africa: 6%.

The global shape memory alloys market comprises major manufacturers such as SAES Getters (Italy), ATI Specialty Alloys & Components (US), Furukawa Electric Co., Ltd

(Japan), Nippon Steel & Sumitomo Metal (Japan), and Johnson Matthey (UK).

Research Coverage

The market study covers the shape memory alloys market across various segments. It aims at estimating the market size and the growth potential of this market across different segments based on type, end-use industry, and region. The study also includes an in-depth competitive analysis of key players in the market, along with their company profiles, key observations related to their products and business offerings, recent developments undertaken by them, and key growth strategies adopted by them to enhance their position in the shape memory alloys market.

Key Benefits of Buying the Report

The report is expected to help the market leaders/new entrants in this market with information on the closest approximations of the revenue numbers of the overall shape memory alloys market and its segments and sub-segments. This report is projected to help stakeholders understand the competitive landscape of the market and gain insights to improve the position of their businesses and plan suitable go-to-market strategies. The report also aims at helping stakeholders understand the pulse of the market and provides them with information on the key market drivers, challenges, and opportunities.

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