

Semiconductor Gases Market Predicted to Reach USD 12,450.3 Mn by 2027 – Astute Analytica

CHICAGO, UNITED STATES, November 17, 2022 /EINPresswire.com/ -- [Global Semiconductor Gases Market](#) revenue was US\$ 8,584.7 million in 2021 and will reach US\$ 12,450.3 Mn by 2027, growing at a CAGR of 6.4% during the forecast period from 2022 to 2027.

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Semiconductor gases are utilized in the manufacturing of semiconductors. Semiconductor materials have properties of both insulators and metals, which is a component of contemporary electronics such as transistors and diodes. Diodes are used in LEDs and inverters while transistors are employed in power electronics, CPUs, and sensors. Additionally, semiconductor gases enable the layers formation of oxide, nitride, and poly or dope on the wafers to alter semiconductors' electrical properties.

Market Influencing Factors

The semiconductor gases market is driven by various factors such as increasing demand for efficient semiconductor processing, rising usage of these gases in the electrical and electronic industries, and favorable government initiatives to support the semiconductor gases industry are anticipated to propel the market growth over the forecast period.

As semiconductor gases significantly lower the production costs of electrical and electronic devices, there has been a surge in the use of semiconductors in electrical and electronic devices, including smartphones, laptops, televisions, and more. It has strengthened the need for semiconductor gases in these applications. The government and other players are making significant efforts to advance the semiconductor sector and increase the use of electrical insulating materials in semiconductor production, which will boost global market growth.

However, high gas exposure poses problems for the semiconductor sector because of the



poisonous, explosive, and flammable gas nature. A further issue impeding the expansion of the global semiconductor gas market over the anticipated years is the high material and fabrication expenses related to semiconductor production.

Segmentation Overview

In 2021, on the basis of type, the electronic special gases segment acquired a substantial market share due to its increased application in the electronic manufacturing industry. In addition, over the projected period, the electronic special gases segment will have the fastest growth rate since these gases optimize performance, aid enhance yield, and reduce costs.

In 2021, in terms of process, the chamber cleaning segment held a significant share in the global marketplace owing to its increasing need in the semiconductor manufacturing sector. The widespread use of fluorinated gases in semiconductor chamber cleaning support acquiring the majority of the market share across the world. However, the etching segment is likely to exhibit the highest growth rate during the forecast period due to its increase in the need for manufacturing printed circuit boards.

Based on application, the semiconductor type segment will have a substantial share over the analysis period owing to the fact that semiconductor manufacturers are expanding production, achieving the highest levels of purity, providing new materials, and quality control possible through the use of such semiconductor gases. However, the Solar photovoltaic (PV) segment will have the highest annual growth rate during the projection period owing to the rising investment in the solar sector.

In 2021, in terms of geography, the Asia Pacific semiconductor gases market accounted for a substantial market share and is forecast to grow at the highest rate during the forecast period. As a result of rapid urbanization and increasing digitalization in countries such as China and India drive market growth in the region.

Regional Summary

Over the forecast period, the United States is likely to have a huge market share.

During the projected period, it is likely that the US will hold the largest market share for semiconductor gases in North America. Due to the expansion of large production facilities in the area, the nation will also project the highest CAGR of 6.6% during the projected period. In North America, due to the extensive use of electronic special gases in the electronic manufacturing sector, the electronic special gases segment accounts for the majority of revenue in the market. Based on the process segment, the chamber cleaning sector generated the largest proportion of the North America semiconductor gases market in 2021.

Germany will grow at the highest CAGR in the Europe industry.

Due to the considerable expansion of the electronic sector and the rising prevalence of printed circuit boards (PCBs), Germany semiconductor gases market witnessed the maximum share in the Europe semiconductor gases market in 2021. The regional market is likely to see the highest CAGR of 5.2% during the forecast period.

However, due to the development in demand for the production of PCBs, the etching category will grow at the highest CAGR of 5.8% during the forecast period.

In 2021, China dominated the market.

In 2021, China dominated the display segment due to its rapid urbanization and industrialization, and increased investment. The Asia Pacific semiconductor gas sector generates the majority of its revenue from semiconductor applications. However, solar PV anticipates the highest CAGR of 7.7% during the projected period because of the industry's rising investment and supportive government policies.

South Africa is likely to grow with the highest CAGR in the Middle East & Africa Market

South Africa is forecast to grow at the highest CAGR of 5.5% throughout the forecast period. The electronic special gases sector dominates the MEA semiconductor gas market, which is predicted to grow at the quickest rate of 5.5% during the forecast period and accounted for the majority of revenue in 2021.

In South America, in terms of the country, Brazil is likely to acquire a significant market share.

Over the forecast period, on the basis of revenue, Brazil will maintain a dominant position in South America semiconductor gases market. Additionally, over the projected period, the country is anticipated to have the highest CAGR of 5% in the market. Due to its significant demand in the semiconductor production industry, the chamber cleaning segment contributed the largest market share in terms of the process segment.

Browse Detailed Summary of Research Report: <https://www.astuteanalytica.com/industry-report/semiconductor-gases-market>

Company Profile

The prominent companies in the global semiconductor gases market are:

Air Liquide S.A.

American Gas Products (AGP)

Air Products and Chemicals, Inc.

Indiana Oxygen Company Inc.

Iwatani Corporation

Linde Plc.

Merck (Versum Material)

Messer Group

Mitsui Chemicals, Inc.

REC Silicon ASA

Solvay S.A.

Sumitomo Seika Chemicals Company

Taiyo Nippon

Other Prominent Players

Segmentation Outline

The global semiconductor gases market segmentation focuses on Type, Process, Application, and Region.

Segmentation based on Type

Bulk Gases

- o Nitrogen
- o Oxygen
- o Argon
- o Helium
- o Hydrogen
- o Carbon-di-oxide

Electronic Special Gases (ESGs)

- o Chlorine
- o Ammonia
- o Silicon
- o Others

Segmentation based on Process

Chamber Cleaning

Oxidation

Deposition

Etching

Doping

Others

Segmentation based on Application

Semiconductor Type

PCBs

Displays

Solar (PV)

LED

Others

Segmentation based on Region

North America

The U.S.

Canada

Mexico

Europe

Western Europe

The UK

Germany

France

Italy

Spain

Rest of Western Europe

Eastern Europe

Poland

Russia

Rest of Eastern Europe

Asia Pacific

China

India

Japan

Australia & New Zealand

ASEAN

Rest of Asia Pacific

Middle East & Africa (MEA)

UAE

Saudi Arabia

South Africa

Rest of MEA

South America

Brazil

Argentina

Rest of South America

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short period, thanks to the tangible outcomes we have delivered to our clients. We pride ourselves in generating unparalleled, in-depth, and uncannily accurate estimates and projections for our very demanding clients spread across different verticals. We have a long list of satisfied and repeat clients from a wide spectrum including technology, healthcare, chemicals, semiconductors, FMCG, and many more. These happy customers come to us from all across the Globe. They are able to make well-calibrated decisions and leverage highly lucrative opportunities while surmounting the fierce challenges all because we analyze for them the complex business environment, segment-wise existing and emerging possibilities, technology formations, growth estimates, and even the strategic choices available. In short, a complete package. All this is possible because we have a highly qualified, competent, and experienced team of professionals comprising business analysts, economists, consultants, and technology experts. In our list of priorities, you-our patron-come at the top. You can be sure of best cost-effective, value-added package from us, should you decide to engage with us.

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