

Semiconductor Materials Market Report by Material (Silicon Carbide, Gallium Manganese Arsenide, Copper Indium Gallium Selenide, Molybdenum Disulfide, Bismuth Telluride), Application (Fabrication, Packaging), End Use Industry (Consumer Electronics, Manufacturing, Automotive, Energy and Utility, and Others), and Region 2024-2032

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Abstracts

The global semiconductor materials market size reached US\$ 55.9 Billion in 2023. Looking forward, IMARC Group expects the market to reach US\$ 76.3 Billion by 2032, exhibiting a growth rate (CAGR) of 3.4% during 2024-2032.

Semiconductor materials have an electrical conductivity range between that of a metal and an insulator. As a result, they neither demonstrate the properties of a conductor nor an insulator. However, they acquire the potential of conducting electricity when they are exposed to light, heat, or voltage post the doping process. This process involves the incorporation of small amounts of impurities to pure semiconductors. Semiconductor materials are generally divided into two categories, namely, N-type and P-type. The N-type semiconductors have an excess of electrons, whereas the P-type materials have a higher positive charge. Semiconductor materials show variable resistance and they pass current easily in one direction.

Semiconductor materials represent one of the essential innovations in the electronics industry. This can be accredited to their high electron mobility, wide temperature limits and low energy consumption. By employing material such as silicon (Si), germanium (Ge) and gallium arsenide (GaAs), electronics manufacturers have been able to replace traditional thermionic devices that made electronic items heavy and non-portable.

Consequently, these materials find vast applications in the manufacturing of different electronic components such as diodes, transistors and integrated chips. In addition to this, the availability of these small electronic components has further facilitated the production of miniaturized devices. Additionally, the industry is benefitting from the advent of the Internet of Things (IoT) and the growing demand for consumer electronics, such as smartphones, laptops and tablets.

Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each sub-segment of the global semiconductor materials market report, along with forecasts at the global and regional level from 2024-2032. Our report has categorized the market based on material, application and end use industry.

Breakup by Material:

- Silicon Carbide
- Gallium Manganese Arsenide
- Copper Indium Gallium Selenide
- Molybdenum Disulfide
- Bismuth Telluride

Breakup by Application:

- Fabrication
 - Silicon Wafers
 - Electronic gases
 - Photomasks
 - Photoresist ancillaries
 - CMP Materials
 - Photoresists
 - Wet chemicals
 - Others
- Packaging
 - Leadframes
 - Organic Substrates
 - Ceramic Packages
 - Encapsulation Resins
 - Bonding Wires
 - Die-Attach Materials

Others

Breakup by End Use Industry:

Consumer Electronics

Manufacturing

Automotive

Energy and Utility

Others

Breakup by Region:

North America

Europe

Asia Pacific

Middle East and Africa

Latin America

Competitive Landscape:

The report has also analysed the competitive landscape of the market with some of the key players being BASF SE, LG Chem Ltd, Indium Corporation, Hitachi Chemical Co. Ltd, KYOCERA Corporation, Henkel AG & Company KGAA, Sumitomo Chemical Co. Ltd, DuPont de Nemours Inc., International Quantum Epitaxy PLC., Nichia Corporation, Intel Corporation, UTAC Holdings Ltd, etc.

Key Questions Answered in This Report

1. What is the expected growth rate of the global semiconductor materials market during 2024-2032?
2. What are the key factors driving the global semiconductor materials market?
3. What has been the impact of COVID-19 on the global semiconductor materials market?
4. What is the breakup of the global semiconductor materials market based on the material?
5. What is the breakup of the global semiconductor materials market based on the application?
6. What is the breakup of the global semiconductor materials market based on the end use industry?
7. What are the key regions in the global semiconductor materials market?

8. Who are the key players/companies in the global semiconductor materials market?

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