

Silane Market Report by Product (Alkyl Silane, Sulfur Silane, Amino Silane, Vinyl Silane, Epoxy Silane, Methacrylate Silane, Mono/Chloro Silane, and Others), Application (Coupling Agents, Adhesion Promoters, Hydrophobing and Dispersing Agents, Moisture Scavengers, Silicate Stabilizers, and Others), End Use Industry (Paints and Coatings, Electronics and Semiconductors, Rubber and Plastics, Adhesives and Sealants, and Others), and Region 2024-2032

Market Report | 2024-09-10 | 135 pages | IMARC Group

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Report description:

The global silane market size reached US\$ 1.9 Billion in 2023. Looking forward, IMARC Group expects the market to reach US\$ 2.9 Billion by 2032, exhibiting a growth rate (CAGR) of 4.2% during 2024-2032.

Silane (H₄Si) is a colorless, flammable, poisonous gas with a strong repulsive odor. It is prepared using aluminum silicide and hydrochloric acid or an aqueous solution of ammonium, sodium, manganese, and ferrous chloride. It reacts with oxidizing agents and is a strong irritant to skin, eyes, and mucous membranes. It is extensively used in numerous industrial applications, including adhesion promoters, crosslinkers, coupling agents, moisture scavengers, surface modifiers, and resin additives. Besides this, as it reduces capillary water absorption and harmful substances and improves frost resistance, silane finds application as a water-based liquid or gel.

Global Silane Market Trends:

Rapid urbanization, along with the escalating demand for consumer electronics, represents one of the key factors positively influencing the market. It can be attributed to the extensive applications of silane in the manufacturing of semiconductors and

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low-voltage cable insulation of electronic products. Additionally, it is applied to substrate materials, such as glass, metal, paper, plastic, quartz, and elastomer. Along with this, the rising trend of smart consumer electronics and the emergence of smart homes are creating a positive outlook for the market. Besides this, it is used along with other gases to grow amorphous silicon films that are employed in the manufacturing of solar cells. Furthermore, governments of various countries are offering tax credits, incentives, and price concessions on several solar panel components for encouraging individuals to use solar power. This, in turn, is offering lucrative growth opportunities to manufacturers. Moreover, expanding applications of silane in making under-the-floor hot-water heating pipes and foams on account of its improved crosslinking processes and properties are propelling the market growth.

Key Market Segmentation:

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

Breakup by Product:

- Alkyl Silane
- Sulfur Silane
- Amino Silane
- Vinyl Silane
- Epoxy Silane
- Methacrylate Silane
- Mono/Chloro Silane
- Others

Breakup by Application:

- Coupling Agents
- Adhesion Promoters
- Hydrophobing and Dispersing Agents
- Moisture Scavengers
- Silicate Stabilizers
- Others

Breakup by End Use Industry:

- Paints and Coatings
- Electronics and Semiconductors
- Rubber and Plastics
- Adhesives and Sealants
- Others

Breakup by Region:

- North America
 - o□ United States
 - o□ Canada
- Asia-Pacific
 - o□ China
 - o□ Japan

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- o India
- o South Korea
- o Australia
- o Indonesia
- o Others
- Europe
- o Germany
- o France
- o United Kingdom
- o Italy
- o Spain
- o Russia
- o Others
- Latin America
- o Brazil
- o Mexico
- o Others
- Middle East and Africa

Competitive Landscape:

The competitive landscape of the industry has also been examined along with the profiles of the key players being Air Products Inc., Dow Inc., Evonik Industries AG, Gelest Inc. (Mitsubishi Chemical Holdings Corporation), Momentive Performance Materials Inc., Nanjing Shuguang Chemical Group Co. Ltd., Power Chemical Corporation, Rheinmetall AG, Shin-Etsu Chemical Co. Ltd., Silar, Tokyo Chemical Industry Co. Ltd. and Wacker Chemie AG.

Key Questions Answered in This Report

1. What was the size of the global silane market in 2023?
2. What is the expected growth rate of the global silane market during 2024-2032?
3. What has been the impact of COVID-19 on the global silane market?
4. What are the key factors driving the global silane market?
5. What is the breakup of the global silane market based on the product?
6. What is the breakup of the global silane market based on the application?
7. What is the breakup of the global silane market based on the end use industry?
8. What are the key regions in the global silane market?
9. Who are the key players/companies in the global silane market?

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