

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

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Abstracts

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 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

United States

Canada

Asia-Pacific

China

Japan

India

South Korea

Australia

Indonesia

Others

Europe

Germany

France

United Kingdom

Italy

Spain

Russia

Others

Latin America

Brazil

Mexico

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?

Contents

1 PREFACE

2 SCOPE AND METHODOLOGY

- 2.1 Objectives of the Study
- 2.2 Stakeholders
- 2.3 Data Sources
 - 2.3.1 Primary Sources
 - 2.3.2 Secondary Sources
- 2.4 Market Estimation
 - 2.4.1 Bottom-Up Approach
 - 2.4.2 Top-Down Approach
- 2.5 Forecasting Methodology

3 EXECUTIVE SUMMARY

4 INTRODUCTION

- 4.1 Overview
- 4.2 Key Industry Trends

5 GLOBAL SILANE MARKET

- 5.1 Market Overview
- 5.2 Market Performance
- 5.3 Impact of COVID-19
- 5.4 Market Forecast

6 MARKET BREAKUP BY PRODUCT

- 6.1 Alkyl Silane
 - 6.1.1 Market Trends
 - 6.1.2 Market Forecast
- 6.2 Sulfur Silane
 - 6.2.1 Market Trends
 - 6.2.2 Market Forecast
- 6.3 Amino Silane

- 6.3.1 Market Trends
- 6.3.2 Market Forecast
- 6.4 Vinyl Silane
 - 6.4.1 Market Trends
 - 6.4.2 Market Forecast
- 6.5 Epoxy Silane
 - 6.5.1 Market Trends
 - 6.5.2 Market Forecast
- 6.6 Methacrylate Silane
 - 6.6.1 Market Trends
 - 6.6.2 Market Forecast
- 6.7 Mono/Chloro Silane
 - 6.7.1 Market Trends
 - 6.7.2 Market Forecast
- 6.8 Others
 - 6.8.1 Market Trends
 - 6.8.2 Market Forecast

7 MARKET BREAKUP BY APPLICATION

- 7.1 Coupling Agents
 - 7.1.1 Market Trends
 - 7.1.2 Market Forecast
- 7.2 Adhesion Promoters
 - 7.2.1 Market Trends
 - 7.2.2 Market Forecast
- 7.3 Hydrophobing and Dispersing Agents
 - 7.3.1 Market Trends
 - 7.3.2 Market Forecast
- 7.4 Moisture Scavengers
 - 7.4.1 Market Trends
 - 7.4.2 Market Forecast
- 7.5 Silicate Stabilizers
 - 7.5.1 Market Trends
 - 7.5.2 Market Forecast
- 7.6 Others
 - 7.6.1 Market Trends
 - 7.6.2 Market Forecast

8 MARKET BREAKUP BY END USE INDUSTRY

- 8.1 Paints and Coatings
 - 8.1.1 Market Trends
 - 8.1.2 Market Forecast
- 8.2 Electronics and Semiconductors
 - 8.2.1 Market Trends
 - 8.2.2 Market Forecast
- 8.3 Rubber and Plastics
 - 8.3.1 Market Trends
 - 8.3.2 Market Forecast
- 8.4 Adhesives and Sealants
 - 8.4.1 Market Trends
 - 8.4.2 Market Forecast
- 8.5 Others
 - 8.5.1 Market Trends
 - 8.5.2 Market Forecast

9 MARKET BREAKUP BY REGION

- 9.1 North America
 - 9.1.1 United States
 - 9.1.1.1 Market Trends
 - 9.1.1.2 Market Forecast
 - 9.1.2 Canada
 - 9.1.2.1 Market Trends
 - 9.1.2.2 Market Forecast
- 9.2 Asia-Pacific
 - 9.2.1 China
 - 9.2.1.1 Market Trends
 - 9.2.1.2 Market Forecast
 - 9.2.2 Japan
 - 9.2.2.1 Market Trends
 - 9.2.2.2 Market Forecast
 - 9.2.3 India
 - 9.2.3.1 Market Trends
 - 9.2.3.2 Market Forecast
 - 9.2.4 South Korea
 - 9.2.4.1 Market Trends

- 9.2.4.2 Market Forecast
- 9.2.5 Australia
 - 9.2.5.1 Market Trends
 - 9.2.5.2 Market Forecast
- 9.2.6 Indonesia
 - 9.2.6.1 Market Trends
 - 9.2.6.2 Market Forecast
- 9.2.7 Others
 - 9.2.7.1 Market Trends
 - 9.2.7.2 Market Forecast
- 9.3 Europe
 - 9.3.1 Germany
 - 9.3.1.1 Market Trends
 - 9.3.1.2 Market Forecast
 - 9.3.2 France
 - 9.3.2.1 Market Trends
 - 9.3.2.2 Market Forecast
 - 9.3.3 United Kingdom
 - 9.3.3.1 Market Trends
 - 9.3.3.2 Market Forecast
 - 9.3.4 Italy
 - 9.3.4.1 Market Trends
 - 9.3.4.2 Market Forecast
 - 9.3.5 Spain
 - 9.3.5.1 Market Trends
 - 9.3.5.2 Market Forecast
 - 9.3.6 Russia
 - 9.3.6.1 Market Trends
 - 9.3.6.2 Market Forecast
 - 9.3.7 Others
 - 9.3.7.1 Market Trends
 - 9.3.7.2 Market Forecast
- 9.4 Latin America
 - 9.4.1 Brazil
 - 9.4.1.1 Market Trends
 - 9.4.1.2 Market Forecast
 - 9.4.2 Mexico
 - 9.4.2.1 Market Trends
 - 9.4.2.2 Market Forecast

9.4.3 Others

9.4.3.1 Market Trends

9.4.3.2 Market Forecast

9.5 Middle East and Africa

9.5.1 Market Trends

9.5.2 Market Breakup by Country

9.5.3 Market Forecast

10 SWOT ANALYSIS

10.1 Overview

10.2 Strengths

10.3 Weaknesses

10.4 Opportunities

10.5 Threats

11 VALUE CHAIN ANALYSIS

12 PORTERS FIVE FORCES ANALYSIS

12.1 Overview

12.2 Bargaining Power of Buyers

12.3 Bargaining Power of Suppliers

12.4 Degree of Competition

12.5 Threat of New Entrants

12.6 Threat of Substitutes

13 PRICE ANALYSIS

14 COMPETITIVE LANDSCAPE

14.1 Market Structure

14.2 Key Players

14.3 Profiles of Key Players

14.3.1 Air Products Inc.

14.3.1.1 Company Overview

14.3.1.2 Product Portfolio

14.3.1.3 Financials

14.3.1.4 SWOT Analysis

- 14.3.2 Dow Inc.
 - 14.3.2.1 Company Overview
 - 14.3.2.2 Product Portfolio
 - 14.3.2.3 Financials
 - 14.3.2.4 SWOT Analysis
- 14.3.3 Evonik Industries AG
 - 14.3.3.1 Company Overview
 - 14.3.3.2 Product Portfolio
 - 14.3.3.3 Financials
 - 14.3.3.4 SWOT Analysis
- 14.3.4 Gelest Inc. (Mitsubishi Chemical Holdings Corporation)
 - 14.3.4.1 Company Overview
 - 14.3.4.2 Product Portfolio
- 14.3.5 Momentive Performance Materials Inc.
 - 14.3.5.1 Company Overview
 - 14.3.5.2 Product Portfolio
- 14.3.6 Nanjing Shuguang Chemical Group Co. Ltd.
 - 14.3.6.1 Company Overview
 - 14.3.6.2 Product Portfolio
- 14.3.7 Power Chemical Corporation
 - 14.3.7.1 Company Overview
 - 14.3.7.2 Product Portfolio
- 14.3.8 Rheinmetall AG
 - 14.3.8.1 Company Overview
 - 14.3.8.2 Product Portfolio
 - 14.3.8.3 Financials
- 14.3.9 Shin-Etsu Chemical Co. Ltd.
 - 14.3.9.1 Company Overview
 - 14.3.9.2 Product Portfolio
 - 14.3.9.3 Financials
 - 14.3.9.4 SWOT Analysis
- 14.3.10 Silar
 - 14.3.10.1 Company Overview
 - 14.3.10.2 Product Portfolio
- 14.3.11 Tokyo Chemical Industry Co. Ltd.
 - 14.3.11.1 Company Overview
 - 14.3.11.2 Product Portfolio
- 14.3.12 Wacker Chemie AG
 - 14.3.12.1 Company Overview

14.3.12.2 Product Portfolio

14.3.12.3 Financials

14.3.12.4 SWOT Analysis

List Of Tables

LIST OF TABLES

Table 1: Global: Silane Market: Key Industry Highlights, 2023 and 2032

Table 2: Global: Silane Market Forecast: Breakup by Product (in Million US\$), 2024-2032

Table 3: Global: Silane Market Forecast: Breakup by Application (in Million US\$), 2024-2032

Table 4: Global: Silane Market Forecast: Breakup by End Use Industry (in Million US\$), 2024-2032

Table 5: Global: Silane Market Forecast: Breakup by Region (in Million US\$), 2024-2032

Table 6: Global: Silane Market: Competitive Structure

Table 7: Global: Silane Market: Key Players

List Of Figures

LIST OF FIGURES

Figure 1: Global: Silane Market: Major Drivers and Challenges

Figure 2: Global: Silane Market: Sales Value (in Billion US\$), 2018-2023

Figure 3: Global: Silane Market Forecast: Sales Value (in Billion US\$), 2024-2032

Figure 4: Global: Silane Market: Breakup by Product (in %), 2023

Figure 5: Global: Silane Market: Breakup by Application (in %), 2023

Figure 6: Global: Silane Market: Breakup by End Use Industry (in %), 2023

Figure 7: Global: Silane Market: Breakup by Region (in %), 2023

Figure 8: Global: Silane (Alkyl Silane) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 9: Global: Silane (Alkyl Silane) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 10: Global: Silane (Sulfur Silane) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 11: Global: Silane (Sulfur Silane) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 12: Global: Silane (Amino Silane) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 13: Global: Silane (Amino Silane) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 14: Global: Silane (Vinyl Silane) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 15: Global: Silane (Vinyl Silane) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 16: Global: Silane (Epoxy Silane) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 17: Global: Silane (Epoxy Silane) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 18: Global: Silane (Methacrylate Silane) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 19: Global: Silane (Methacrylate Silane) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 20: Global: Silane (Mono/Chloro Silane) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 21: Global: Silane (Mono/Chloro Silane) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 22: Global: Silane (Other Products) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 23: Global: Silane (Other Products) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 24: Global: Silane (Coupling Agents) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 25: Global: Silane (Coupling Agents) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 26: Global: Silane (Adhesion Promoters) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 27: Global: Silane (Adhesion Promoters) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 28: Global: Silane (Hydrophobing and Dispersing Agents) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 29: Global: Silane (Hydrophobing and Dispersing Agents) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 30: Global: Silane (Moisture Scavengers) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 31: Global: Silane (Moisture Scavengers) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 32: Global: Silane (Silicate Stabilizers) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 33: Global: Silane (Silicate Stabilizers) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 34: Global: Silane (Other Applications) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 35: Global: Silane (Other Applications) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 36: Global: Silane (Paints and Coatings) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 37: Global: Silane (Paints and Coatings) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 38: Global: Silane (Electronics and Semiconductors) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 39: Global: Silane (Electronics and Semiconductors) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 40: Global: Silane (Rubber and Plastics) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 41: Global: Silane (Rubber and Plastics) Market Forecast: Sales Value (in Million

US\$), 2024-2032

Figure 42: Global: Silane (Adhesives and Sealants) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 43: Global: Silane (Adhesives and Sealants) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 44: Global: Silane (Other End Use Industries) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 45: Global: Silane (Other End Use Industries) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 46: North America: Silane Market: Sales Value (in Million US\$), 2018 & 2023

Figure 47: North America: Silane Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 48: United States: Silane Market: Sales Value (in Million US\$), 2018 & 2023

Figure 49: United States: Silane Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 50: Canada: Silane Market: Sales Value (in Million US\$), 2018 & 2023

Figure 51: Canada: Silane Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 52: Asia-Pacific: Silane Market: Sales Value (in Million US\$), 2018 & 2023

Figure 53: Asia-Pacific: Silane Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 54: China: Silane Market: Sales Value (in Million US\$), 2018 & 2023

Figure 55: China: Silane Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 56: Japan: Silane Market: Sales Value (in Million US\$), 2018 & 2023

Figure 57: Japan: Silane Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 58: India: Silane Market: Sales Value (in Million US\$), 2018 & 2023

Figure 59: India: Silane Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 60: South Korea: Silane Market: Sales Value (in Million US\$), 2018 & 2023

Figure 61: South Korea: Silane Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 62: Australia: Silane Market: Sales Value (in Million US\$), 2018 & 2023

Figure 63: Australia: Silane Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 64: Indonesia: Silane Market: Sales Value (in Million US\$), 2018 & 2023

Figure 65: Indonesia: Silane Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 66: Others: Silane Market: Sales Value (in Million US\$), 2018 & 2023

Figure 67: Others: Silane Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 68: Europe: Silane Market: Sales Value (in Million US\$), 2018 & 2023

Figure 69: Europe: Silane Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 70: Germany: Silane Market: Sales Value (in Million US\$), 2018 & 2023

Figure 71: Germany: Silane Market Forecast: Sales Value (in Million US\$), 2024-2032

- Figure 72: France: Silane Market: Sales Value (in Million US\$), 2018 & 2023
- Figure 73: France: Silane Market Forecast: Sales Value (in Million US\$), 2024-2032
- Figure 74: United Kingdom: Silane Market: Sales Value (in Million US\$), 2018 & 2023
- Figure 75: United Kingdom: Silane Market Forecast: Sales Value (in Million US\$), 2024-2032
- Figure 76: Italy: Silane Market: Sales Value (in Million US\$), 2018 & 2023
- Figure 77: Italy: Silane Market Forecast: Sales Value (in Million US\$), 2024-2032
- Figure 78: Spain: Silane Market: Sales Value (in Million US\$), 2018 & 2023
- Figure 79: Spain: Silane Market Forecast: Sales Value (in Million US\$), 2024-2032
- Figure 80: Russia: Silane Market: Sales Value (in Million US\$), 2018 & 2023
- Figure 81: Russia: Silane Market Forecast: Sales Value (in Million US\$), 2024-2032
- Figure 82: Others: Silane Market: Sales Value (in Million US\$), 2018 & 2023
- Figure 83: Others: Silane Market Forecast: Sales Value (in Million US\$), 2024-2032
- Figure 84: Latin America: Silane Market: Sales Value (in Million US\$), 2018 & 2023
- Figure 85: Latin America: Silane Market Forecast: Sales Value (in Million US\$), 2024-2032
- Figure 86: Brazil: Silane Market: Sales Value (in Million US\$), 2018 & 2023
- Figure 87: Brazil: Silane Market Forecast: Sales Value (in Million US\$), 2024-2032
- Figure 88: Mexico: Silane Market: Sales Value (in Million US\$), 2018 & 2023
- Figure 89: Mexico: Silane Market Forecast: Sales Value (in Million US\$), 2024-2032
- Figure 90: Others: Silane Market: Sales Value (in Million US\$), 2018 & 2023
- Figure 91: Others: Silane Market Forecast: Sales Value (in Million US\$), 2024-2032
- Figure 92: Middle East and Africa: Silane Market: Sales Value (in Million US\$), 2018 & 2023
- Figure 93: Middle East and Africa: Silane Market: Breakup by Country (in %), 2023
- Figure 94: Middle East and Africa: Silane Market Forecast: Sales Value (in Million US\$), 2024-2032
- Figure 95: Global: Silane Industry: SWOT Analysis
- Figure 96: Global: Silane Industry: Value Chain Analysis
- Figure 97: Global: Silane Industry: Porter's Five Forces Analysis

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