

Global Semiconductor Grade Etching Gas Supply, Demand and Key Producers, 2023-2029

<https://marketpublishers.com/r/G25E6C217712EN.html>

Date: July 2024

Pages: 127

Price: US\$ 4,480.00 (Single User License)

ID: G25E6C217712EN

Abstracts

The global Semiconductor Grade Etching Gas market size is expected to reach \$ 1402 million by 2029, rising at a market growth of 8.2% CAGR during the forecast period (2023-2029).

In the field of electronic semiconductors, etching gases are widely used in industries such as integrated Circuits, liquid crystal panels, LED and photovoltaics. Among them, integrated circuit manufacturing is the most important application. In recent years, downstream industry technologies have rapidly changed, especially in the field of integrated circuit manufacturing, where process nodes have been continuously reduced, ranging from 28nm to 5nm processes, and wafer sizes from 8-inch to 12-inch wafers. As a key material in integrated circuit manufacturing, with the rapid iteration of downstream industrial technology, the requirements for purity and accuracy of special gases continue to improve.

Asia Pacific is the region with the largest demand for semiconductor grade etching gases. Etching gases mainly include fluorine containing gas, chlorine containing gas, oxygen containing gas and other types. And the fluorine containing gas is the most common. Fluorinated containing gas include the following gases: CF₄, NF₃, SF₆, CH₂F₂, CHF₃, C₂F₆, C₃F₈, C₄F₈, C₅F₈, HF, etc. Silicon wafer etching gases are mainly fluorine-containing gases, but they are isotropic and have poor selectivity.

Electronics manufacturing uses both wet and dry etching, but for different processes, much like using course- and fine-toothed saws to make different size and different quality cuts. In wet etching, aqueous solutions of acids or bases are used to quickly remove large amounts of material, or to completely remove a particular material. Dry etching uses plasma-activated etchant gases, usually containing halogen atoms, to

selectively remove a portion of a material with greater precision and accuracy than wet etching can achieve. It is the dry etching process, often referred to as reactive ion etching or RIE.

The etching process requires a chemical reaction between the electron gas and the etched material. The etching process requires a large amount of fluorocarbon gases, such as hexafluoroethane, carbon tetrafluoride, trifluoromethane, octafluorocyclobutane, octafluorobutane, etc. The etched gas undergoes a chemical reaction with the etched material, resulting in the elimination of the etched material. In the etching process of wafer manufacturing, especially in the dry etching process, in order to achieve directional etching, it is necessary to use electronic special gases to form plasma under ionization conditions. The plasma undergoes chemical or physical reactions with the etched material to remove a portion of the etched material. Different electron gases are also used for reactions in different etching targets.

The commonly used etching gases include fluorinated and chlorinated gases, as well as oxygen-containing gases and some rare gases.

This report studies the global Semiconductor Grade Etching Gas production, demand, key manufacturers, and key regions.

This report is a detailed and comprehensive analysis of the world market for Semiconductor Grade Etching Gas, and provides market size (US\$ million) and Year-over-Year (YoY) Growth, considering 2022 as the base year. This report explores demand trends and competition, as well as details the characteristics of Semiconductor Grade Etching Gas that contribute to its increasing demand across many markets.

Highlights and key features of the study

Global Semiconductor Grade Etching Gas total production and demand, 2018-2029, (MT)

Global Semiconductor Grade Etching Gas total production value, 2018-2029, (USD Million)

Global Semiconductor Grade Etching Gas production by region & country, production, value, CAGR, 2018-2029, (USD Million) & (MT)

Global Semiconductor Grade Etching Gas consumption by region & country, CAGR,

2018-2029 & (MT)

U.S. VS China: Semiconductor Grade Etching Gas domestic production, consumption, key domestic manufacturers and share

Global Semiconductor Grade Etching Gas production by manufacturer, production, price, value and market share 2018-2023, (USD Million) & (MT)

Global Semiconductor Grade Etching Gas production by Type, production, value, CAGR, 2018-2029, (USD Million) & (MT)

Global Semiconductor Grade Etching Gas production by Application production, value, CAGR, 2018-2029, (USD Million) & (MT)

This reports profiles key players in the global Semiconductor Grade Etching Gas market based on the following parameters – company overview, production, value, price, gross margin, product portfolio, geographical presence, and key developments. Key companies covered as a part of this study include Linde, SK Materials, Kanto Denka Kogyo, ADEKA, PERIC Special Gases, Merck (Versum Materials), Showa Denko, Nippon Sanso and Hyosung, etc.

This report also provides key insights about market drivers, restraints, opportunities, new product launches or approvals, COVID-19 and Russia-Ukraine War Influence.

Stakeholders would have ease in decision-making through various strategy matrices used in analyzing the World Semiconductor Grade Etching Gas market

Detailed Segmentation:

Each section contains quantitative market data including market by value (US\$ Millions), volume (production, consumption) & (MT) and average price (US\$/Kg) by manufacturer, by Type, and by Application. Data is given for the years 2018-2029 by year with 2022 as the base year, 2023 as the estimate year, and 2024-2029 as the forecast year.

Global Semiconductor Grade Etching Gas Market, By Region:

United States

China

Europe

Japan

South Korea

ASEAN

India

Rest of World

Global Semiconductor Grade Etching Gas Market, Segmentation by Type

Fluorine Containing Gas

Chlorine Containing Gas

Oxygen Containing Gas

Others

Global Semiconductor Grade Etching Gas Market, Segmentation by Application

Integrated Circuits

Display Panels

Solar

LED

Companies Profiled:

Linde

SK Materials

Kanto Denka Kogyo

ADEKA

PERIC Special Gases

Merck (Versum Materials)

Showa Denko

Nippon Sanso

Hyosung

Air Liquide

Haohua Chemical

Zibo Feiyuan Chemical

Kemeite (Yoke Technology)

Solvay

Huate Gas

Yongjing Technology

Air Products

Jinhong Gas

Concorde Specialty Gases

Linggas

Key Questions Answered

1. How big is the global Semiconductor Grade Etching Gas market?
2. What is the demand of the global Semiconductor Grade Etching Gas market?
3. What is the year over year growth of the global Semiconductor Grade Etching Gas market?
4. What is the production and production value of the global Semiconductor Grade Etching Gas market?
5. Who are the key producers in the global Semiconductor Grade Etching Gas market?
6. What are the growth factors driving the market demand?

Contents

1 SUPPLY SUMMARY

- 1.1 Semiconductor Grade Etching Gas Introduction
- 1.2 World Semiconductor Grade Etching Gas Supply & Forecast
 - 1.2.1 World Semiconductor Grade Etching Gas Production Value (2018 & 2022 & 2029)
 - 1.2.2 World Semiconductor Grade Etching Gas Production (2018-2029)
 - 1.2.3 World Semiconductor Grade Etching Gas Pricing Trends (2018-2029)
- 1.3 World Semiconductor Grade Etching Gas Production by Region (Based on Production Site)
 - 1.3.1 World Semiconductor Grade Etching Gas Production Value by Region (2018-2029)
 - 1.3.2 World Semiconductor Grade Etching Gas Production by Region (2018-2029)
 - 1.3.3 World Semiconductor Grade Etching Gas Average Price by Region (2018-2029)
 - 1.3.4 North America Semiconductor Grade Etching Gas Production (2018-2029)
 - 1.3.5 Europe Semiconductor Grade Etching Gas Production (2018-2029)
 - 1.3.6 China Semiconductor Grade Etching Gas Production (2018-2029)
 - 1.3.7 Japan Semiconductor Grade Etching Gas Production (2018-2029)
 - 1.3.8 South Korea Semiconductor Grade Etching Gas Production (2018-2029)
- 1.4 Market Drivers, Restraints and Trends
 - 1.4.1 Semiconductor Grade Etching Gas Market Drivers
 - 1.4.2 Factors Affecting Demand
 - 1.4.3 Semiconductor Grade Etching Gas Major Market Trends
- 1.5 Influence of COVID-19 and Russia-Ukraine War
 - 1.5.1 Influence of COVID-19
 - 1.5.2 Influence of Russia-Ukraine War

2 DEMAND SUMMARY

- 2.1 World Semiconductor Grade Etching Gas Demand (2018-2029)
- 2.2 World Semiconductor Grade Etching Gas Consumption by Region
 - 2.2.1 World Semiconductor Grade Etching Gas Consumption by Region (2018-2023)
 - 2.2.2 World Semiconductor Grade Etching Gas Consumption Forecast by Region (2024-2029)
- 2.3 United States Semiconductor Grade Etching Gas Consumption (2018-2029)
- 2.4 China Semiconductor Grade Etching Gas Consumption (2018-2029)
- 2.5 Europe Semiconductor Grade Etching Gas Consumption (2018-2029)

- 2.6 Japan Semiconductor Grade Etching Gas Consumption (2018-2029)
- 2.7 South Korea Semiconductor Grade Etching Gas Consumption (2018-2029)
- 2.8 ASEAN Semiconductor Grade Etching Gas Consumption (2018-2029)
- 2.9 India Semiconductor Grade Etching Gas Consumption (2018-2029)

3 WORLD SEMICONDUCTOR GRADE ETCHING GAS MANUFACTURERS COMPETITIVE ANALYSIS

- 3.1 World Semiconductor Grade Etching Gas Production Value by Manufacturer (2018-2023)
- 3.2 World Semiconductor Grade Etching Gas Production by Manufacturer (2018-2023)
- 3.3 World Semiconductor Grade Etching Gas Average Price by Manufacturer (2018-2023)
- 3.4 Semiconductor Grade Etching Gas Company Evaluation Quadrant
- 3.5 Industry Rank and Concentration Rate (CR)
 - 3.5.1 Global Semiconductor Grade Etching Gas Industry Rank of Major Manufacturers
 - 3.5.2 Global Concentration Ratios (CR4) for Semiconductor Grade Etching Gas in 2022
 - 3.5.3 Global Concentration Ratios (CR8) for Semiconductor Grade Etching Gas in 2022
- 3.6 Semiconductor Grade Etching Gas Market: Overall Company Footprint Analysis
 - 3.6.1 Semiconductor Grade Etching Gas Market: Region Footprint
 - 3.6.2 Semiconductor Grade Etching Gas Market: Company Product Type Footprint
 - 3.6.3 Semiconductor Grade Etching Gas Market: Company Product Application Footprint
- 3.7 Competitive Environment
 - 3.7.1 Historical Structure of the Industry
 - 3.7.2 Barriers of Market Entry
 - 3.7.3 Factors of Competition
- 3.8 New Entrant and Capacity Expansion Plans
- 3.9 Mergers, Acquisition, Agreements, and Collaborations

4 UNITED STATES VS CHINA VS REST OF THE WORLD

- 4.1 United States VS China: Semiconductor Grade Etching Gas Production Value Comparison
 - 4.1.1 United States VS China: Semiconductor Grade Etching Gas Production Value Comparison (2018 & 2022 & 2029)
 - 4.1.2 United States VS China: Semiconductor Grade Etching Gas Production Value

Market Share Comparison (2018 & 2022 & 2029)

4.2 United States VS China: Semiconductor Grade Etching Gas Production Comparison

4.2.1 United States VS China: Semiconductor Grade Etching Gas Production Comparison (2018 & 2022 & 2029)

4.2.2 United States VS China: Semiconductor Grade Etching Gas Production Market Share Comparison (2018 & 2022 & 2029)

4.3 United States VS China: Semiconductor Grade Etching Gas Consumption Comparison

4.3.1 United States VS China: Semiconductor Grade Etching Gas Consumption Comparison (2018 & 2022 & 2029)

4.3.2 United States VS China: Semiconductor Grade Etching Gas Consumption Market Share Comparison (2018 & 2022 & 2029)

4.4 United States Based Semiconductor Grade Etching Gas Manufacturers and Market Share, 2018-2023

4.4.1 United States Based Semiconductor Grade Etching Gas Manufacturers, Headquarters and Production Site (States, Country)

4.4.2 United States Based Manufacturers Semiconductor Grade Etching Gas Production Value (2018-2023)

4.4.3 United States Based Manufacturers Semiconductor Grade Etching Gas Production (2018-2023)

4.5 China Based Semiconductor Grade Etching Gas Manufacturers and Market Share

4.5.1 China Based Semiconductor Grade Etching Gas Manufacturers, Headquarters and Production Site (Province, Country)

4.5.2 China Based Manufacturers Semiconductor Grade Etching Gas Production Value (2018-2023)

4.5.3 China Based Manufacturers Semiconductor Grade Etching Gas Production (2018-2023)

4.6 Rest of World Based Semiconductor Grade Etching Gas Manufacturers and Market Share, 2018-2023

4.6.1 Rest of World Based Semiconductor Grade Etching Gas Manufacturers, Headquarters and Production Site (State, Country)

4.6.2 Rest of World Based Manufacturers Semiconductor Grade Etching Gas Production Value (2018-2023)

4.6.3 Rest of World Based Manufacturers Semiconductor Grade Etching Gas Production (2018-2023)

5 MARKET ANALYSIS BY TYPE

5.1 World Semiconductor Grade Etching Gas Market Size Overview by Type: 2018 VS

2022 VS 2029

5.2 Segment Introduction by Type

5.2.1 Fluorine Containing Gas

5.2.2 Chlorine Containing Gas

5.2.3 Oxygen Containing Gas

5.2.4 Others

5.3 Market Segment by Type

5.3.1 World Semiconductor Grade Etching Gas Production by Type (2018-2029)

5.3.2 World Semiconductor Grade Etching Gas Production Value by Type (2018-2029)

5.3.3 World Semiconductor Grade Etching Gas Average Price by Type (2018-2029)

6 MARKET ANALYSIS BY APPLICATION

6.1 World Semiconductor Grade Etching Gas Market Size Overview by Application:
2018 VS 2022 VS 2029

6.2 Segment Introduction by Application

6.2.1 Integrated Circuits

6.2.2 Display Panels

6.2.3 Solar

6.2.4 LED

6.3 Market Segment by Application

6.3.1 World Semiconductor Grade Etching Gas Production by Application (2018-2029)

6.3.2 World Semiconductor Grade Etching Gas Production Value by Application
(2018-2029)

6.3.3 World Semiconductor Grade Etching Gas Average Price by Application
(2018-2029)

7 COMPANY PROFILES

7.1 Linde

7.1.1 Linde Details

7.1.2 Linde Major Business

7.1.3 Linde Semiconductor Grade Etching Gas Product and Services

7.1.4 Linde Semiconductor Grade Etching Gas Production, Price, Value, Gross Margin
and Market Share (2018-2023)

7.1.5 Linde Recent Developments/Updates

7.1.6 Linde Competitive Strengths & Weaknesses

7.2 SK Materials

7.2.1 SK Materials Details

- 7.2.2 SK Materials Major Business
- 7.2.3 SK Materials Semiconductor Grade Etching Gas Product and Services
- 7.2.4 SK Materials Semiconductor Grade Etching Gas Production, Price, Value, Gross Margin and Market Share (2018-2023)
- 7.2.5 SK Materials Recent Developments/Updates
- 7.2.6 SK Materials Competitive Strengths & Weaknesses
- 7.3 Kanto Denka Kogyo
 - 7.3.1 Kanto Denka Kogyo Details
 - 7.3.2 Kanto Denka Kogyo Major Business
 - 7.3.3 Kanto Denka Kogyo Semiconductor Grade Etching Gas Product and Services
 - 7.3.4 Kanto Denka Kogyo Semiconductor Grade Etching Gas Production, Price, Value, Gross Margin and Market Share (2018-2023)
 - 7.3.5 Kanto Denka Kogyo Recent Developments/Updates
 - 7.3.6 Kanto Denka Kogyo Competitive Strengths & Weaknesses
- 7.4 ADEKA
 - 7.4.1 ADEKA Details
 - 7.4.2 ADEKA Major Business
 - 7.4.3 ADEKA Semiconductor Grade Etching Gas Product and Services
 - 7.4.4 ADEKA Semiconductor Grade Etching Gas Production, Price, Value, Gross Margin and Market Share (2018-2023)
 - 7.4.5 ADEKA Recent Developments/Updates
 - 7.4.6 ADEKA Competitive Strengths & Weaknesses
- 7.5 PERIC Special Gases
 - 7.5.1 PERIC Special Gases Details
 - 7.5.2 PERIC Special Gases Major Business
 - 7.5.3 PERIC Special Gases Semiconductor Grade Etching Gas Product and Services
 - 7.5.4 PERIC Special Gases Semiconductor Grade Etching Gas Production, Price, Value, Gross Margin and Market Share (2018-2023)
 - 7.5.5 PERIC Special Gases Recent Developments/Updates
 - 7.5.6 PERIC Special Gases Competitive Strengths & Weaknesses
- 7.6 Merck (Versum Materials)
 - 7.6.1 Merck (Versum Materials) Details
 - 7.6.2 Merck (Versum Materials) Major Business
 - 7.6.3 Merck (Versum Materials) Semiconductor Grade Etching Gas Product and Services
 - 7.6.4 Merck (Versum Materials) Semiconductor Grade Etching Gas Production, Price, Value, Gross Margin and Market Share (2018-2023)
 - 7.6.5 Merck (Versum Materials) Recent Developments/Updates
 - 7.6.6 Merck (Versum Materials) Competitive Strengths & Weaknesses

7.7 Showa Denko

7.7.1 Showa Denko Details

7.7.2 Showa Denko Major Business

7.7.3 Showa Denko Semiconductor Grade Etching Gas Product and Services

7.7.4 Showa Denko Semiconductor Grade Etching Gas Production, Price, Value, Gross Margin and Market Share (2018-2023)

7.7.5 Showa Denko Recent Developments/Updates

7.7.6 Showa Denko Competitive Strengths & Weaknesses

7.8 Nippon Sanso

7.8.1 Nippon Sanso Details

7.8.2 Nippon Sanso Major Business

7.8.3 Nippon Sanso Semiconductor Grade Etching Gas Product and Services

7.8.4 Nippon Sanso Semiconductor Grade Etching Gas Production, Price, Value, Gross Margin and Market Share (2018-2023)

7.8.5 Nippon Sanso Recent Developments/Updates

7.8.6 Nippon Sanso Competitive Strengths & Weaknesses

7.9 Hyosung

7.9.1 Hyosung Details

7.9.2 Hyosung Major Business

7.9.3 Hyosung Semiconductor Grade Etching Gas Product and Services

7.9.4 Hyosung Semiconductor Grade Etching Gas Production, Price, Value, Gross Margin and Market Share (2018-2023)

7.9.5 Hyosung Recent Developments/Updates

7.9.6 Hyosung Competitive Strengths & Weaknesses

7.10 Air Liquide

7.10.1 Air Liquide Details

7.10.2 Air Liquide Major Business

7.10.3 Air Liquide Semiconductor Grade Etching Gas Product and Services

7.10.4 Air Liquide Semiconductor Grade Etching Gas Production, Price, Value, Gross Margin and Market Share (2018-2023)

7.10.5 Air Liquide Recent Developments/Updates

7.10.6 Air Liquide Competitive Strengths & Weaknesses

7.11 Haohua Chemical

7.11.1 Haohua Chemical Details

7.11.2 Haohua Chemical Major Business

7.11.3 Haohua Chemical Semiconductor Grade Etching Gas Product and Services

7.11.4 Haohua Chemical Semiconductor Grade Etching Gas Production, Price, Value, Gross Margin and Market Share (2018-2023)

7.11.5 Haohua Chemical Recent Developments/Updates

- 7.11.6 Haohua Chemical Competitive Strengths & Weaknesses
- 7.12 Zibo Feiyuan Chemical
 - 7.12.1 Zibo Feiyuan Chemical Details
 - 7.12.2 Zibo Feiyuan Chemical Major Business
 - 7.12.3 Zibo Feiyuan Chemical Semiconductor Grade Etching Gas Product and Services
 - 7.12.4 Zibo Feiyuan Chemical Semiconductor Grade Etching Gas Production, Price, Value, Gross Margin and Market Share (2018-2023)
 - 7.12.5 Zibo Feiyuan Chemical Recent Developments/Updates
 - 7.12.6 Zibo Feiyuan Chemical Competitive Strengths & Weaknesses
- 7.13 Kemeite (Yoke Technology)
 - 7.13.1 Kemeite (Yoke Technology) Details
 - 7.13.2 Kemeite (Yoke Technology) Major Business
 - 7.13.3 Kemeite (Yoke Technology) Semiconductor Grade Etching Gas Product and Services
 - 7.13.4 Kemeite (Yoke Technology) Semiconductor Grade Etching Gas Production, Price, Value, Gross Margin and Market Share (2018-2023)
 - 7.13.5 Kemeite (Yoke Technology) Recent Developments/Updates
 - 7.13.6 Kemeite (Yoke Technology) Competitive Strengths & Weaknesses
- 7.14 Solvay
 - 7.14.1 Solvay Details
 - 7.14.2 Solvay Major Business
 - 7.14.3 Solvay Semiconductor Grade Etching Gas Product and Services
 - 7.14.4 Solvay Semiconductor Grade Etching Gas Production, Price, Value, Gross Margin and Market Share (2018-2023)
 - 7.14.5 Solvay Recent Developments/Updates
 - 7.14.6 Solvay Competitive Strengths & Weaknesses
- 7.15 Huate Gas
 - 7.15.1 Huate Gas Details
 - 7.15.2 Huate Gas Major Business
 - 7.15.3 Huate Gas Semiconductor Grade Etching Gas Product and Services
 - 7.15.4 Huate Gas Semiconductor Grade Etching Gas Production, Price, Value, Gross Margin and Market Share (2018-2023)
 - 7.15.5 Huate Gas Recent Developments/Updates
 - 7.15.6 Huate Gas Competitive Strengths & Weaknesses
- 7.16 Yongjing Technology
 - 7.16.1 Yongjing Technology Details
 - 7.16.2 Yongjing Technology Major Business
 - 7.16.3 Yongjing Technology Semiconductor Grade Etching Gas Product and Services

7.16.4 Yongjing Technology Semiconductor Grade Etching Gas Production, Price, Value, Gross Margin and Market Share (2018-2023)

7.16.5 Yongjing Technology Recent Developments/Updates

7.16.6 Yongjing Technology Competitive Strengths & Weaknesses

7.17 Air Products

7.17.1 Air Products Details

7.17.2 Air Products Major Business

7.17.3 Air Products Semiconductor Grade Etching Gas Product and Services

7.17.4 Air Products Semiconductor Grade Etching Gas Production, Price, Value, Gross Margin and Market Share (2018-2023)

7.17.5 Air Products Recent Developments/Updates

7.17.6 Air Products Competitive Strengths & Weaknesses

7.18 Jinhong Gas

7.18.1 Jinhong Gas Details

7.18.2 Jinhong Gas Major Business

7.18.3 Jinhong Gas Semiconductor Grade Etching Gas Product and Services

7.18.4 Jinhong Gas Semiconductor Grade Etching Gas Production, Price, Value, Gross Margin and Market Share (2018-2023)

7.18.5 Jinhong Gas Recent Developments/Updates

7.18.6 Jinhong Gas Competitive Strengths & Weaknesses

7.19 Concorde Specialty Gases

7.19.1 Concorde Specialty Gases Details

7.19.2 Concorde Specialty Gases Major Business

7.19.3 Concorde Specialty Gases Semiconductor Grade Etching Gas Product and Services

7.19.4 Concorde Specialty Gases Semiconductor Grade Etching Gas Production, Price, Value, Gross Margin and Market Share (2018-2023)

7.19.5 Concorde Specialty Gases Recent Developments/Updates

7.19.6 Concorde Specialty Gases Competitive Strengths & Weaknesses

7.20 Linggas

7.20.1 Linggas Details

7.20.2 Linggas Major Business

7.20.3 Linggas Semiconductor Grade Etching Gas Product and Services

7.20.4 Linggas Semiconductor Grade Etching Gas Production, Price, Value, Gross Margin and Market Share (2018-2023)

7.20.5 Linggas Recent Developments/Updates

7.20.6 Linggas Competitive Strengths & Weaknesses

8 INDUSTRY CHAIN ANALYSIS

- 8.1 Semiconductor Grade Etching Gas Industry Chain
- 8.2 Semiconductor Grade Etching Gas Upstream Analysis
 - 8.2.1 Semiconductor Grade Etching Gas Core Raw Materials
 - 8.2.2 Main Manufacturers of Semiconductor Grade Etching Gas Core Raw Materials
- 8.3 Midstream Analysis
- 8.4 Downstream Analysis
- 8.5 Semiconductor Grade Etching Gas Production Mode
- 8.6 Semiconductor Grade Etching Gas Procurement Model
- 8.7 Semiconductor Grade Etching Gas Industry Sales Model and Sales Channels
 - 8.7.1 Semiconductor Grade Etching Gas Sales Model
 - 8.7.2 Semiconductor Grade Etching Gas Typical Customers

9 RESEARCH FINDINGS AND CONCLUSION

10 APPENDIX

- 10.1 Methodology
- 10.2 Research Process and Data Source
- 10.3 Disclaimer

List Of Tables

LIST OF TABLES

Table 1. World Semiconductor Grade Etching Gas Production Value by Region (2018, 2022 and 2029) & (USD Million)

Table 2. World Semiconductor Grade Etching Gas Production Value by Region (2018-2023) & (USD Million)

Table 3. World Semiconductor Grade Etching Gas Production Value by Region (2024-2029) & (USD Million)

Table 4. World Semiconductor Grade Etching Gas Production Value Market Share by Region (2018-2023)

Table 5. World Semiconductor Grade Etching Gas Production Value Market Share by Region (2024-2029)

Table 6. World Semiconductor Grade Etching Gas Production by Region (2018-2023) & (MT)

Table 7. World Semiconductor Grade Etching Gas Production by Region (2024-2029) & (MT)

Table 8. World Semiconductor Grade Etching Gas Production Market Share by Region (2018-2023)

Table 9. World Semiconductor Grade Etching Gas Production Market Share by Region (2024-2029)

Table 10. World Semiconductor Grade Etching Gas Average Price by Region (2018-2023) & (US\$/Kg)

Table 11. World Semiconductor Grade Etching Gas Average Price by Region (2024-2029) & (US\$/Kg)

Table 12. Semiconductor Grade Etching Gas Major Market Trends

Table 13. World Semiconductor Grade Etching Gas Consumption Growth Rate Forecast by Region (2018 & 2022 & 2029) & (MT)

Table 14. World Semiconductor Grade Etching Gas Consumption by Region (2018-2023) & (MT)

Table 15. World Semiconductor Grade Etching Gas Consumption Forecast by Region (2024-2029) & (MT)

Table 16. World Semiconductor Grade Etching Gas Production Value by Manufacturer (2018-2023) & (USD Million)

Table 17. Production Value Market Share of Key Semiconductor Grade Etching Gas Producers in 2022

Table 18. World Semiconductor Grade Etching Gas Production by Manufacturer (2018-2023) & (MT)

Table 19. Production Market Share of Key Semiconductor Grade Etching Gas Producers in 2022

Table 20. World Semiconductor Grade Etching Gas Average Price by Manufacturer (2018-2023) & (US\$/Kg)

Table 21. Global Semiconductor Grade Etching Gas Company Evaluation Quadrant

Table 22. World Semiconductor Grade Etching Gas Industry Rank of Major Manufacturers, Based on Production Value in 2022

Table 23. Head Office and Semiconductor Grade Etching Gas Production Site of Key Manufacturer

Table 24. Semiconductor Grade Etching Gas Market: Company Product Type Footprint

Table 25. Semiconductor Grade Etching Gas Market: Company Product Application Footprint

Table 26. Semiconductor Grade Etching Gas Competitive Factors

Table 27. Semiconductor Grade Etching Gas New Entrant and Capacity Expansion Plans

Table 28. Semiconductor Grade Etching Gas Mergers & Acquisitions Activity

Table 29. United States VS China Semiconductor Grade Etching Gas Production Value Comparison, (2018 & 2022 & 2029) & (USD Million)

Table 30. United States VS China Semiconductor Grade Etching Gas Production Comparison, (2018 & 2022 & 2029) & (MT)

Table 31. United States VS China Semiconductor Grade Etching Gas Consumption Comparison, (2018 & 2022 & 2029) & (MT)

Table 32. United States Based Semiconductor Grade Etching Gas Manufacturers, Headquarters and Production Site (States, Country)

Table 33. United States Based Manufacturers Semiconductor Grade Etching Gas Production Value, (2018-2023) & (USD Million)

Table 34. United States Based Manufacturers Semiconductor Grade Etching Gas Production Value Market Share (2018-2023)

Table 35. United States Based Manufacturers Semiconductor Grade Etching Gas Production (2018-2023) & (MT)

Table 36. United States Based Manufacturers Semiconductor Grade Etching Gas Production Market Share (2018-2023)

Table 37. China Based Semiconductor Grade Etching Gas Manufacturers, Headquarters and Production Site (Province, Country)

Table 38. China Based Manufacturers Semiconductor Grade Etching Gas Production Value, (2018-2023) & (USD Million)

Table 39. China Based Manufacturers Semiconductor Grade Etching Gas Production Value Market Share (2018-2023)

Table 40. China Based Manufacturers Semiconductor Grade Etching Gas Production

(2018-2023) & (MT)

Table 41. China Based Manufacturers Semiconductor Grade Etching Gas Production Market Share (2018-2023)

Table 42. Rest of World Based Semiconductor Grade Etching Gas Manufacturers, Headquarters and Production Site (States, Country)

Table 43. Rest of World Based Manufacturers Semiconductor Grade Etching Gas Production Value, (2018-2023) & (USD Million)

Table 44. Rest of World Based Manufacturers Semiconductor Grade Etching Gas Production Value Market Share (2018-2023)

Table 45. Rest of World Based Manufacturers Semiconductor Grade Etching Gas Production (2018-2023) & (MT)

Table 46. Rest of World Based Manufacturers Semiconductor Grade Etching Gas Production Market Share (2018-2023)

Table 47. World Semiconductor Grade Etching Gas Production Value by Type, (USD Million), 2018 & 2022 & 2029

Table 48. World Semiconductor Grade Etching Gas Production by Type (2018-2023) & (MT)

Table 49. World Semiconductor Grade Etching Gas Production by Type (2024-2029) & (MT)

Table 50. World Semiconductor Grade Etching Gas Production Value by Type (2018-2023) & (USD Million)

Table 51. World Semiconductor Grade Etching Gas Production Value by Type (2024-2029) & (USD Million)

Table 52. World Semiconductor Grade Etching Gas Average Price by Type (2018-2023) & (US\$/Kg)

Table 53. World Semiconductor Grade Etching Gas Average Price by Type (2024-2029) & (US\$/Kg)

Table 54. World Semiconductor Grade Etching Gas Production Value by Application, (USD Million), 2018 & 2022 & 2029

Table 55. World Semiconductor Grade Etching Gas Production by Application (2018-2023) & (MT)

Table 56. World Semiconductor Grade Etching Gas Production by Application (2024-2029) & (MT)

Table 57. World Semiconductor Grade Etching Gas Production Value by Application (2018-2023) & (USD Million)

Table 58. World Semiconductor Grade Etching Gas Production Value by Application (2024-2029) & (USD Million)

Table 59. World Semiconductor Grade Etching Gas Average Price by Application (2018-2023) & (US\$/Kg)

Table 60. World Semiconductor Grade Etching Gas Average Price by Application (2024-2029) & (US\$/Kg)

Table 61. Linde Basic Information, Manufacturing Base and Competitors

Table 62. Linde Major Business

Table 63. Linde Semiconductor Grade Etching Gas Product and Services

Table 64. Linde Semiconductor Grade Etching Gas Production (MT), Price (US\$/Kg), Production Value (USD Million), Gross Margin and Market Share (2018-2023)

Table 65. Linde Recent Developments/Updates

Table 66. Linde Competitive Strengths & Weaknesses

Table 67. SK Materials Basic Information, Manufacturing Base and Competitors

Table 68. SK Materials Major Business

Table 69. SK Materials Semiconductor Grade Etching Gas Product and Services

Table 70. SK Materials Semiconductor Grade Etching Gas Production (MT), Price (US\$/Kg), Production Value (USD Million), Gross Margin and Market Share (2018-2023)

Table 71. SK Materials Recent Developments/Updates

Table 72. SK Materials Competitive Strengths & Weaknesses

Table 73. Kanto Denka Kogyo Basic Information, Manufacturing Base and Competitors

Table 74. Kanto Denka Kogyo Major Business

Table 75. Kanto Denka Kogyo Semiconductor Grade Etching Gas Product and Services

Table 76. Kanto Denka Kogyo Semiconductor Grade Etching Gas Production (MT), Price (US\$/Kg), Production Value (USD Million), Gross Margin and Market Share (2018-2023)

Table 77. Kanto Denka Kogyo Recent Developments/Updates

Table 78. Kanto Denka Kogyo Competitive Strengths & Weaknesses

Table 79. ADEKA Basic Information, Manufacturing Base and Competitors

Table 80. ADEKA Major Business

Table 81. ADEKA Semiconductor Grade Etching Gas Product and Services

Table 82. ADEKA Semiconductor Grade Etching Gas Production (MT), Price (US\$/Kg), Production Value (USD Million), Gross Margin and Market Share (2018-2023)

Table 83. ADEKA Recent Developments/Updates

Table 84. ADEKA Competitive Strengths & Weaknesses

Table 85. PERIC Special Gases Basic Information, Manufacturing Base and Competitors

Table 86. PERIC Special Gases Major Business

Table 87. PERIC Special Gases Semiconductor Grade Etching Gas Product and Services

Table 88. PERIC Special Gases Semiconductor Grade Etching Gas Production (MT), Price (US\$/Kg), Production Value (USD Million), Gross Margin and Market Share (2018-2023)

- Table 89. PERIC Special Gases Recent Developments/Updates
- Table 90. PERIC Special Gases Competitive Strengths & Weaknesses
- Table 91. Merck (Versum Materials) Basic Information, Manufacturing Base and Competitors
- Table 92. Merck (Versum Materials) Major Business
- Table 93. Merck (Versum Materials) Semiconductor Grade Etching Gas Product and Services
- Table 94. Merck (Versum Materials) Semiconductor Grade Etching Gas Production (MT), Price (US\$/Kg), Production Value (USD Million), Gross Margin and Market Share (2018-2023)
- Table 95. Merck (Versum Materials) Recent Developments/Updates
- Table 96. Merck (Versum Materials) Competitive Strengths & Weaknesses
- Table 97. Showa Denko Basic Information, Manufacturing Base and Competitors
- Table 98. Showa Denko Major Business
- Table 99. Showa Denko Semiconductor Grade Etching Gas Product and Services
- Table 100. Showa Denko Semiconductor Grade Etching Gas Production (MT), Price (US\$/Kg), Production Value (USD Million), Gross Margin and Market Share (2018-2023)
- Table 101. Showa Denko Recent Developments/Updates
- Table 102. Showa Denko Competitive Strengths & Weaknesses
- Table 103. Nippon Sanso Basic Information, Manufacturing Base and Competitors
- Table 104. Nippon Sanso Major Business
- Table 105. Nippon Sanso Semiconductor Grade Etching Gas Product and Services
- Table 106. Nippon Sanso Semiconductor Grade Etching Gas Production (MT), Price (US\$/Kg), Production Value (USD Million), Gross Margin and Market Share (2018-2023)
- Table 107. Nippon Sanso Recent Developments/Updates
- Table 108. Nippon Sanso Competitive Strengths & Weaknesses
- Table 109. Hyosung Basic Information, Manufacturing Base and Competitors
- Table 110. Hyosung Major Business
- Table 111. Hyosung Semiconductor Grade Etching Gas Product and Services
- Table 112. Hyosung Semiconductor Grade Etching Gas Production (MT), Price (US\$/Kg), Production Value (USD Million), Gross Margin and Market Share (2018-2023)
- Table 113. Hyosung Recent Developments/Updates
- Table 114. Hyosung Competitive Strengths & Weaknesses
- Table 115. Air Liquide Basic Information, Manufacturing Base and Competitors
- Table 116. Air Liquide Major Business
- Table 117. Air Liquide Semiconductor Grade Etching Gas Product and Services
- Table 118. Air Liquide Semiconductor Grade Etching Gas Production (MT), Price (US\$/Kg), Production Value (USD Million), Gross Margin and Market Share (2018-2023)
- Table 119. Air Liquide Recent Developments/Updates

- Table 120. Air Liquide Competitive Strengths & Weaknesses
- Table 121. Haohua Chemical Basic Information, Manufacturing Base and Competitors
- Table 122. Haohua Chemical Major Business
- Table 123. Haohua Chemical Semiconductor Grade Etching Gas Product and Services
- Table 124. Haohua Chemical Semiconductor Grade Etching Gas Production (MT), Price (US\$/Kg), Production Value (USD Million), Gross Margin and Market Share (2018-2023)
- Table 125. Haohua Chemical Recent Developments/Updates
- Table 126. Haohua Chemical Competitive Strengths & Weaknesses
- Table 127. Zibo Feiyuan Chemical Basic Information, Manufacturing Base and Competitors
- Table 128. Zibo Feiyuan Chemical Major Business
- Table 129. Zibo Feiyuan Chemical Semiconductor Grade Etching Gas Product and Services
- Table 130. Zibo Feiyuan Chemical Semiconductor Grade Etching Gas Production (MT), Price (US\$/Kg), Production Value (USD Million), Gross Margin and Market Share (2018-2023)
- Table 131. Zibo Feiyuan Chemical Recent Developments/Updates
- Table 132. Zibo Feiyuan Chemical Competitive Strengths & Weaknesses
- Table 133. Kemeite (Yoke Technology) Basic Information, Manufacturing Base and Competitors
- Table 134. Kemeite (Yoke Technology) Major Business
- Table 135. Kemeite (Yoke Technology) Semiconductor Grade Etching Gas Product and Services
- Table 136. Kemeite (Yoke Technology) Semiconductor Grade Etching Gas Production (MT), Price (US\$/Kg), Production Value (USD Million), Gross Margin and Market Share (2018-2023)
- Table 137. Kemeite (Yoke Technology) Recent Developments/Updates
- Table 138. Kemeite (Yoke Technology) Competitive Strengths & Weaknesses
- Table 139. Solvay Basic Information, Manufacturing Base and Competitors
- Table 140. Solvay Major Business
- Table 141. Solvay Semiconductor Grade Etching Gas Product and Services
- Table 142. Solvay Semiconductor Grade Etching Gas Production (MT), Price (US\$/Kg), Production Value (USD Million), Gross Margin and Market Share (2018-2023)
- Table 143. Solvay Recent Developments/Updates
- Table 144. Solvay Competitive Strengths & Weaknesses
- Table 145. Huate Gas Basic Information, Manufacturing Base and Competitors
- Table 146. Huate Gas Major Business
- Table 147. Huate Gas Semiconductor Grade Etching Gas Product and Services
- Table 148. Huate Gas Semiconductor Grade Etching Gas Production (MT), Price

(US\$/Kg), Production Value (USD Million), Gross Margin and Market Share (2018-2023)

Table 149. Huate Gas Recent Developments/Updates

Table 150. Huate Gas Competitive Strengths & Weaknesses

Table 151. Yongjing Technology Basic Information, Manufacturing Base and Competitors

Table 152. Yongjing Technology Major Business

Table 153. Yongjing Technology Semiconductor Grade Etching Gas Product and Services

Table 154. Yongjing Technology Semiconductor Grade Etching Gas Production (MT), Price (US\$/Kg), Production Value (USD Million), Gross Margin and Market Share (2018-2023)

Table 155. Yongjing Technology Recent Developments/Updates

Table 156. Yongjing Technology Competitive Strengths & Weaknesses

Table 157. Air Products Basic Information, Manufacturing Base and Competitors

Table 158. Air Products Major Business

Table 159. Air Products Semiconductor Grade Etching Gas Product and Services

Table 160. Air Products Semiconductor Grade Etching Gas Production (MT), Price (US\$/Kg), Production Value (USD Million), Gross Margin and Market Share (2018-2023)

Table 161. Air Products Recent Developments/Updates

Table 162. Air Products Competitive Strengths & Weaknesses

Table 163. Jinhong Gas Basic Information, Manufacturing Base and Competitors

Table 164. Jinhong Gas Major Business

Table 165. Jinhong Gas Semiconductor Grade Etching Gas Product and Services

Table 166. Jinhong Gas Semiconductor Grade Etching Gas Production (MT), Price (US\$/Kg), Production Value (USD Million), Gross Margin and Market Share (2018-2023)

Table 167. Jinhong Gas Recent Developments/Updates

Table 168. Jinhong Gas Competitive Strengths & Weaknesses

Table 169. Concorde Specialty Gases Basic Information, Manufacturing Base and Competitors

Table 170. Concorde Specialty Gases Major Business

Table 171. Concorde Specialty Gases Semiconductor Grade Etching Gas Product and Services

Table 172. Concorde Specialty Gases Semiconductor Grade Etching Gas Production (MT), Price (US\$/Kg), Production Value (USD Million), Gross Margin and Market Share (2018-2023)

Table 173. Concorde Specialty Gases Recent Developments/Updates

Table 174. Linggas Basic Information, Manufacturing Base and Competitors

Table 175. Linggas Major Business

Table 176. Linggas Semiconductor Grade Etching Gas Product and Services

Table 177. Linggas Semiconductor Grade Etching Gas Production (MT), Price (US\$/Kg), Production Value (USD Million), Gross Margin and Market Share (2018-2023)

Table 178. Global Key Players of Semiconductor Grade Etching Gas Upstream (Raw Materials)

Table 179. Semiconductor Grade Etching Gas Typical Customers

Table 180. Semiconductor Grade Etching Gas Typical Distributors

List Of Figures

LIST OF FIGURES

Figure 1. Semiconductor Grade Etching Gas Picture

Figure 2. World Semiconductor Grade Etching Gas Production Value: 2018 & 2022 & 2029, (USD Million)

Figure 3. World Semiconductor Grade Etching Gas Production Value and Forecast (2018-2029) & (USD Million)

Figure 4. World Semiconductor Grade Etching Gas Production (2018-2029) & (MT)

Figure 5. World Semiconductor Grade Etching Gas Average Price (2018-2029) & (US\$/Kg)

Figure 6. World Semiconductor Grade Etching Gas Production Value Market Share by Region (2018-2029)

Figure 7. World Semiconductor Grade Etching Gas Production Market Share by Region (2018-2029)

Figure 8. North America Semiconductor Grade Etching Gas Production (2018-2029) & (MT)

Figure 9. Europe Semiconductor Grade Etching Gas Production (2018-2029) & (MT)

Figure 10. China Semiconductor Grade Etching Gas Production (2018-2029) & (MT)

Figure 11. Japan Semiconductor Grade Etching Gas Production (2018-2029) & (MT)

Figure 12. South Korea Semiconductor Grade Etching Gas Production (2018-2029) & (MT)

Figure 13. Semiconductor Grade Etching Gas Market Drivers

Figure 14. Factors Affecting Demand

Figure 15. World Semiconductor Grade Etching Gas Consumption (2018-2029) & (MT)

Figure 16. World Semiconductor Grade Etching Gas Consumption Market Share by Region (2018-2029)

Figure 17. United States Semiconductor Grade Etching Gas Consumption (2018-2029) & (MT)

Figure 18. China Semiconductor Grade Etching Gas Consumption (2018-2029) & (MT)

Figure 19. Europe Semiconductor Grade Etching Gas Consumption (2018-2029) & (MT)

Figure 20. Japan Semiconductor Grade Etching Gas Consumption (2018-2029) & (MT)

Figure 21. South Korea Semiconductor Grade Etching Gas Consumption (2018-2029) & (MT)

Figure 22. ASEAN Semiconductor Grade Etching Gas Consumption (2018-2029) & (MT)

Figure 23. India Semiconductor Grade Etching Gas Consumption (2018-2029) & (MT)

Figure 24. Producer Shipments of Semiconductor Grade Etching Gas by Manufacturer

Revenue (\$MM) and Market Share (%): 2022

Figure 25. Global Four-firm Concentration Ratios (CR4) for Semiconductor Grade Etching Gas Markets in 2022

Figure 26. Global Four-firm Concentration Ratios (CR8) for Semiconductor Grade Etching Gas Markets in 2022

Figure 27. United States VS China: Semiconductor Grade Etching Gas Production Value Market Share Comparison (2018 & 2022 & 2029)

Figure 28. United States VS China: Semiconductor Grade Etching Gas Production Market Share Comparison (2018 & 2022 & 2029)

Figure 29. United States VS China: Semiconductor Grade Etching Gas Consumption Market Share Comparison (2018 & 2022 & 2029)

Figure 30. United States Based Manufacturers Semiconductor Grade Etching Gas Production Market Share 2022

Figure 31. China Based Manufacturers Semiconductor Grade Etching Gas Production Market Share 2022

Figure 32. Rest of World Based Manufacturers Semiconductor Grade Etching Gas Production Market Share 2022

Figure 33. World Semiconductor Grade Etching Gas Production Value by Type, (USD Million), 2018 & 2022 & 2029

Figure 34. World Semiconductor Grade Etching Gas Production Value Market Share by Type in 2022

Figure 35. Fluorine Containing Gas

Figure 36. Chlorine Containing Gas

Figure 37. Oxygen Containing Gas

Figure 38. Others

Figure 39. World Semiconductor Grade Etching Gas Production Market Share by Type (2018-2029)

Figure 40. World Semiconductor Grade Etching Gas Production Value Market Share by Type (2018-2029)

Figure 41. World Semiconductor Grade Etching Gas Average Price by Type (2018-2029) & (US\$/Kg)

Figure 42. World Semiconductor Grade Etching Gas Production Value by Application, (USD Million), 2018 & 2022 & 2029

Figure 43. World Semiconductor Grade Etching Gas Production Value Market Share by Application in 2022

Figure 44. Integrated Circuits

Figure 45. Display Panels

Figure 46. Solar

Figure 47. LED

Figure 48. World Semiconductor Grade Etching Gas Production Market Share by Application (2018-2029)

Figure 49. World Semiconductor Grade Etching Gas Production Value Market Share by Application (2018-2029)

Figure 50. World Semiconductor Grade Etching Gas Average Price by Application (2018-2029) & (US\$/Kg)

Figure 51. Semiconductor Grade Etching Gas Industry Chain

Figure 52. Semiconductor Grade Etching Gas Procurement Model

Figure 53. Semiconductor Grade Etching Gas Sales Model

Figure 54. Semiconductor Grade Etching Gas Sales Channels, Direct Sales, and Distribution

Figure 55. Methodology

Figure 56. Research Process and Data Source

I would like to order

Product name: Global Semiconductor Grade Etching Gas Supply, Demand and Key Producers, 2023-2029

Product link: <https://marketpublishers.com/r/G25E6C217712EN.html>

Price: US\$ 4,480.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/G25E6C217712EN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:
Last name:
Email:
Company:
Address:
City:
Zip code:
Country:
Tel:
Fax:
Your message:

****All fields are required**

Customer signature _____

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below and fax the completed form to +44 20 7900 3970

