

# ELECTRONIC SPECIALTY GASES REPORT

71 GAS PRODUCTS • APPLICATIONS • GROWTH FORECAST • REGIONAL ANALYSIS

## DETAILED INSIGHTS AND FORECASTS ON THE GLOBAL ELECTRONICS GASES MARKET

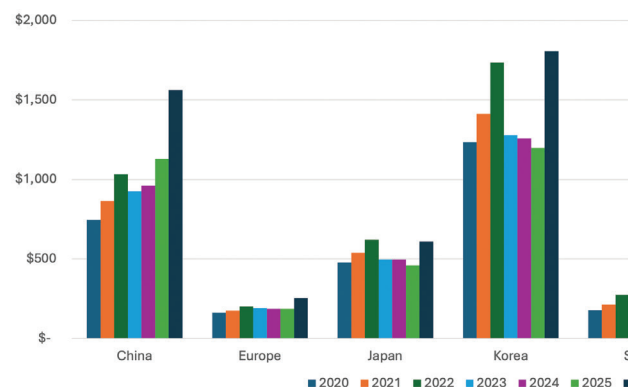
The Electronic Specialty Gases (ESG) report is SEMI's definitive resource for in-depth analysis of all gas products and the global market. As the industry faces price hikes, expands fab capacity, and adopts new technologies such as cryo etch, this report delivers precise insights on growth drivers and regional breakdowns that are critical for informed decision-making.

Our proprietary research spans **71 specialty gas products across 6 categories**, focusing on critical applications in semiconductors, flat panel displays, compound **semiconductors, solar technologies, LEDs, and photovoltaics**. Combined with our extensive analysis, the ESG report provides a strong foundation for optimized operations and effective, data-driven planning.



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### Electronics Specialty Gases Market Demand



### BENEFITS

- Strategic Insights**  
 Gain end-to-end visibility into the electronic specialty gases market across the global supply chain.
- Market Intelligence**  
 Understand supply and demand dynamics, regional trends, and evolving market conditions to support informed decision-making.
- Accurate Forecasts**  
 Support long-term planning with reliable volume and value forecasts across key market segments.
- Technology & Regional Trends**  
 Refine strategies with detailed insights into technology trends, regional market dynamics, and product demand.
- Competitive Advantage**  
 Stay abreast of market dynamics, minimize risks and identify emerging opportunities with the latest supplier-share data.



**METHODOLOGY**

The forecasts are based on direct input from key industry players in Asia, Europe and the USA, leveraging the Linx Materials Forecast Model and emerging technology analysis to develop unique segment forecasts. Additionally, the report integrates SEMI's primary and secondary research, including field interviews with key end users, equipment manufacturers, materials suppliers, and industry experts, to validate and enhance the findings.

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**REPORT HIGHLIGHTS**

- **Forecasts**  
5-year forecast by products volume, value, and market sizing across 7 global markets: US, China, Europe, Japan, Korea, SE Asia & Taiwan.
- **Market Analysis**  
Supply and demand analysis with detailed growth trends across key market segments.
- **Industry Coverage**  
Analysis across 4 major industries:
  - Semiconductor
  - Compound Semiconductor
  - Flat Panel Display (FPD)
  - Photovoltaics (PV)
- **Gas Products**  
Coverage of 71 electronic specialty gas products across key categories including (see ESG Gas Products Coverage table):
  - Etchants/Chamber Cleans
  - Dopants & Blends
  - Deposition Gases & Sources
  - Silicon Precursors
  - Corrosives
  - Lithography Gases

Category	Gases
Fluorinated Gases	CH <sub>2</sub> F <sub>2</sub> -R-32, CHF <sub>3</sub> -R-23 , C <sub>3</sub> F <sub>8</sub> , C <sub>4</sub> F <sub>6</sub> , C <sub>5</sub> F <sub>8</sub> , CH <sub>3</sub> F-R-41, C <sub>2</sub> F <sub>6</sub> , CF <sub>4</sub> , C <sub>4</sub> F <sub>8</sub>
Silicon Precursors	SiH <sub>4</sub> , Si <sub>2</sub> H <sub>6</sub> , Si(OC <sub>2</sub> H <sub>5</sub> ) <sub>4</sub> (TEOS), SiH <sub>2</sub> Cl <sub>2</sub> (DCS), SiHCl <sub>3</sub> , SiCl <sub>4</sub> , Si <sub>2</sub> Cl <sub>6</sub> (HCDS), SiH <sub>3</sub> Cl, SiF <sub>4</sub>
Dopants & Blends	AsH <sub>3</sub> , PH <sub>3</sub> , <sup>11</sup> BF <sub>3</sub> , B <sub>2</sub> H <sub>6</sub> Blends, <sup>72</sup> GeF <sub>4</sub> , TEB/TEPO/TMB, POCl <sub>3</sub> , BBr <sub>3</sub>
Lithography Laser Gases	KrF & ArF
Other Specialty Gases	BCl <sub>3</sub> , C <sub>2</sub> H <sub>2</sub> , C <sub>2</sub> H <sub>4</sub> , C <sub>3</sub> H <sub>6</sub> , Cl <sub>2</sub> , ClF <sub>3</sub> , CO, COS, GeH <sub>4</sub> , H <sub>2</sub> Deuterium, H <sub>2</sub> S, H <sub>2</sub> Se, HBr, HCl, HF, N <sub>2</sub> F <sub>2</sub> Blends, NF <sub>3</sub> , NH <sub>3</sub> , NO, SF <sub>6</sub> , SiF <sub>4</sub> , SO <sub>2</sub> , TiCl <sub>4</sub> , WF <sub>6</sub> , Xe, Kr



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**DETAILS:**

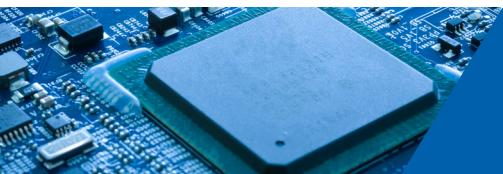
- **Publication Schedule:** Annually
- **Format:** Microsoft® Excel® file (.xls), PowerPoint® file
- **Principal Analysts:** Clark Tseng, SEMI; and Mike Corbett, Linx Consulting

**RELATED REPORTS:**

- **Bulk Wet Chemicals**
- **Wafer Fab Materials Quarterly**
- **Silicon Wafer Market Monitor**
- **Materials Market Data Subscription (MMDS)**

**APPLICABLE TO:** Semiconductor manufacturing equipment and materials suppliers, compound semiconductor, solar, LED, flat panel display, photovoltaics, semiconductor IP, and fabless companies; IDMs, foundries, EDA providers, and design & verification service providers; as well as other suppliers supporting the semiconductor design and manufacturing ecosystem.

Market analysts, consulting firms, investors and investment banks. Executives, marketing and business development teams, supply chain management, engineers, and strategic planning.



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