

The Global Bulk Wet Chemical Market 2027–2037

<https://marketpublishers.com/r/G540B83361BFEN.html>

Date: June 2026

Pages: 159

Price: US\$ 1,500.00 (Single User License)

ID: G540B83361BFEN

Abstracts

The bulk wet chemical market covers the high-purity, SEMI-grade commodity chemicals that semiconductor fabs consume in large volumes during wafer processing. Eight chemistries define the segment: sulfuric acid, hydrogen peroxide, hydrofluoric acid, hydrochloric acid, nitric acid, and phosphoric acid, together with the single base ammonium hydroxide and the solvent isopropyl alcohol. These materials perform the foundational wet-process steps of chip manufacturing — cleaning and surface preparation (notably the RCA SC1/SC2 sequence and sulfuric-peroxide "Piranha" cleans), oxide and nitride etching, photoresist stripping, and post-process rinsing and drying. Unlike formulated specialty etchants and slurries, they are procured as bulk commodities, but at purity levels measured in parts per billion or trillion, since trace metal or particle contamination can destroy device yield.

Demand is anchored to installed wafer-fab capacity and, increasingly, to how much chemistry each wafer consumes. The migration to advanced nodes, the shift from batch immersion to single-wafer processing, and the proliferation of multi-patterning and 3D device architectures all raise consumption per wafer, so chemical demand grows faster than wafer counts alone. Declining on-site reclaim and recycling rates further expand the volume of newly purchased material. Etch-weighted chemistries such as hydrofluoric and phosphoric acid are the fastest-growing, while sulfuric acid remains the largest by volume and IPA scales with single-wafer drying.

Geographically, the market spans seven regions — China, Taiwan, Korea, Japan, the United States, Europe, and Southeast Asia — with demand heavily concentrated in East Asia. China is the fastest-expanding market and is aggressively localizing supply, Japan is the most self-sufficient and the heartland of high-purity fluorine chemistry, while Taiwan, Europe, the United States, and Southeast Asia depend on imports for hydrofluoric acid in particular.

The supplier landscape comprises roughly fifty significant producers and is fragmented globally yet concentrated within individual chemicals and regions. Key themes shaping the sector include supply-chain localization following new fab construction, the acute single-source and geopolitical risk surrounding hydrofluoric acid and the upstream fluorspar chain, tightening PFAS and fluorochemical regulation, and sustainability pressures around reclaim, recycling, and waste treatment. Together these forces make supply security, purity capability, and regional proximity the defining competitive considerations.

The Global Bulk Wet Chemical Market 2027–2037 provides a comprehensive ten-year outlook for the eight high-purity bulk wet chemicals at the heart of semiconductor wafer processing: sulfuric acid (H₂SO₄), hydrogen peroxide (H₂O₂), hydrofluoric acid (HF), hydrochloric acid (HCl), nitric acid (HNO₃), phosphoric acid (H₃PO₄), ammonium hydroxide (NH₄OH), and isopropyl alcohol (IPA). Spanning seven regions — China, Taiwan, Korea, Japan, the United States, Europe, and Southeast Asia — it quantifies demand, maps supply, and reconstructs supplier share by chemical and by region across a base of roughly fifty major producers. The analysis links chemical consumption to wafer-fab capacity, node migration, single-wafer processing, etch intensity, and declining reclaim rates, and examines the localization, geopolitical, and PFAS-regulation forces reshaping the supply chain.

The report covers:

Market drivers and process context — wafer-fab capacity outlook, technology-node migration, single-wafer processing, consumption-per-wafer trends, and recycling/reclaim dynamics. Segmentation and application mapping — acids, base, and solvent grouped against cleaning, etch, strip, and surface-preparation steps, with SEMI grade-tier definitions. Ten-year forecasts — demand by chemical, region, and application, plus volume-versus-value dynamics and base/high/low scenario analysis. Chemical-by-chemical deep dives — for all eight chemistries: demand, regional split, supply base, supplier share, and pricing. Regional analysis — country-level demand by chemical, self-sufficiency versus import reliance, supplier leadership, and inter-regional trade flows (notably HF). Competitive landscape — supplier footprints, multi-region majors versus specialists, consolidated share, M&A and ownership lineage, and a full supplier directory. Supply chain, packaging, and logistics — bulk delivery modes, point-of-use considerations, lead times, and single-source risk. Pricing analysis — historical and forecast price trends, regional differentials, and cost-driver sensitivities. Trends and challenges — supply localization, export controls, the fluorine/HF supply chain, PFAS regulation, and sustainability. Company profiles — 57 suppliers profiled including

products, production footprint, and recent developments including ADEKA, Air Liquide, Arkema, Ashland, Avantor, BASF, Central Glass, Chang Chun Group, Chemtrade Logistics, Daikin Industries, Do-Fluoride, Dongjin Semichem, Dongwoo Fine-Chem, ENF Technology, Entegris (CMC Materials), Everlight Chemical, Evonik, Foosung, Fujian Yongjing Technology, Fujifilm Electronic Materials, Greenda Electronic Materials, Hansol Chemical, Honeywell, Jiangyin Runma, Jianghua Micro, Jingrui Electronic Materials, Juhua Group, Kanto Chemical, Kanto Denka Kogyo, LCY Chemical, Linde, Merck KGaA / EMD Electronics, Mitsubishi Chemical and more....

The study is designed for chemical suppliers, fab procurement teams, investors, and policymakers needing a grounded view of where demand concentrates, which chemistries carry the greatest growth and risk, and how the competitive map evolves through 2037.

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