

Quartz - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2026 - 2031)

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Report description:

Quartz Market Analysis

Quartz Market size in 2026 is estimated at 3.8 million tons, growing from 2025 value of 3.59 million tons with 2031 projections showing 5.05 million tons, growing at 5.86% CAGR over 2026-2031. This steady expansion reflects the mineral's irreplaceable role in semiconductor lithography, photovoltaic ingot growth, optical fibers, and engineered surfaces. As node geometries shrink below 7 nm, chip fabs elevate impurity thresholds to parts-per-billion, forcing suppliers to invest in advanced purification assets. Solar ingot pullers are simultaneously scaling crucible diameters for larger wafers, multiplying baseline quartz volumes. Climate-related supply shocks-most recently Hurricane Helene's disruption of Spruce Pine-have propelled diversification efforts into Norway, Brazil, and Africa while sustaining premium pricing for ultra-high-purity grades. Finally, a wave of consolidation and capacity additions signals confidence that the quartz market will remain a cornerstone of high-tech manufacturing ecosystems through the end of the decade.

Global Quartz Market Trends and Insights

Growing Solar-PV Capacity Surge

Global photovoltaic build-outs require ultra-pure quartz crucibles capable of withstanding 1,723 C during Czochralski silicon ingot growth. Larger wafer formats, such as M12, amplify volume per line, forcing crucible producers to scale both diameter and wall uniformity. Suppliers with track records in more than 99.999% SiO₂ grades secure long-term offtake agreements from wafer

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majors eager to derisk material availability. Asia-Pacific dominates demand, yet European and U.S. energy-transition incentives are creating incremental pull that helps regionalize processing footprints. As a result, solar applications are forecast to be a stabilizing pillar for the quartz market amid cyclical swings in electronics.

Semiconductor Node-Shrink Drives Ultra-High-Purity Demand

Leading-edge logic and memory fabs operating below 7 nm mandate impurity ceilings in the parts-per-billion range, raising the technical bar for fused silica and quartz ware suppliers. Proprietary processes, including synthetic route, fused silica, and multi-stage acid leaching, enable aluminum contents below 9 ppm and iron below 0.2 ppm. The capital intensity and qualification cycles involved effectively deter new entrants, allowing incumbents to negotiate multi-year pricing formulas tracking purity rather than tonnage. As chipmakers move toward 3 nm production and pilot 2 nm, demand for ultra-high-purity quartz is set to outpace broader quartz market growth through 2030.

Ecological Impact of Quartz Mining

Habitat disruption, water-table alteration, and particulate emissions are prompting stricter permitting regimes across North Carolina, Quebec, and parts of Scandinavia. Restoration bonding, baseline biodiversity assessments, and community consultations now extend lead times by up to 24 months. Producers lacking credible ESG roadmaps face escalating capex, while recyclers and tailings-based initiatives gain regulatory goodwill. This environmental scrutiny places a measurable drag on the quartz market, although it simultaneously accelerates innovation in lower-impact sourcing models.

Other drivers and restraints analyzed in the detailed report include:

Boom in Engineered-Quartz Interior Surfaces Tailings-Derived HPQ Lowers Cost Curve Energy-Intensive Purification Process

For complete list of drivers and restraints, kindly check the Table Of Contents.

Segment Analysis

Silicon metal dominated tonnage with a 96.55% quartz market share in 2025, underscoring its indispensable role in aluminum alloys, silicones, and polysilicon. The quartz market size attributed to silicon metal processing is projected to expand steadily in line with light-weighting in transportation, and solar-grade polysilicon capacity adds in China and the U.S. FerroGlobe, Elkem, and Hoshine capitalize on large submerged-arc furnaces and captive quartzite mines to defend cost positions, while electricity availability remains a swing factor for new entrants.

High-purity quartz, though tiny in volume, captures a disproportionate value pool thanks to average selling prices exceeding USD 7,000 per ton. Its forecast 7.18% CAGR through 2031 reflects secular tailwinds from node migration and larger solar wafer formats. Qualification barriers such as ISO 9001:2000 and customer audits spanning 12-18 months cement long-term contracts once secured. Hurricane Helene's interference with Spruce Pine shipments prompted chipmakers to dual-source from Norway and Asia, spotlighting the strategic leverage of certified HPQ suppliers. This dynamic positions HPQ as the fastest-rising slice of the quartz market, even as silicon metal maintains volume leadership.

The Quartz Report is Segmented by Product Type (High-Purity Quartz, Quartz Crystal, and Silicon Metal), End-User Industry (Electronics and Semiconductor, Solar, Building and Construction, Optical Fiber and Telecommunication, Automotive, and Other End-User Industries), and Geography (Asia-Pacific, North America, Europe, South America, and Middle-East and Africa). The Market Forecasts are Provided in Terms of Volume (Tons).

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Geography Analysis

Asia-Pacific accounted for 55.01% of the quartz market share in 2025, driven by China's vertically integrated clusters that convert quartz ore into electronics, solar panels, and engineered surfaces within a few hundred kilometers. Regional regulators continue to streamline mine-to-fab logistics, further compressing working capital cycles. India and Vietnam are emerging as supplementary processing hubs, buoyed by favorable power tariffs and incentives to localize semiconductor back-end. The 6.27% regional CAGR through 2031 is underpinned by relentless smartphone adoption, rooftop solar policies, and middle-class home upgrades across ASEAN economies.

North America remains strategically vital owing to Spruce Pine's ultra-pure vein-the bedrock for 80-90% of global HPQ feedstock before the 2024 hurricane event. Sibelco's USD 700 million expansion and The Quartz Corp's Norway commissioning reflect a dual-axis mitigation strategy that pairs geological excellence with geographic redundancy. U.S. fab build-outs in Arizona, Texas, and New York offer a downstream pull, yet higher energy costs and stringent environmental permitting temper capacity growth in commodity grades. Canada and Mexico serve regional construction markets with proximity advantages, while aiming to attract niche HPQ investments through renewable power corridors.

Europe leverages stringent ESG standards to carve out a premium niche in value-added quartz processing. Imerys operates deposits in Sweden and France, integrating them with fused silica plants adjacent to low-carbon hydro power. Germany supplies precision machinery for slurry-less sawing and hot-zone assembly, ensuring technological leadership despite modest ore endowment. South America, the Middle East, and Africa contribute incremental tonnage, particularly from Brazil's Minas Gerais belt, yet infrastructure deficits and water scarcity cap near-term growth. These regions rely heavily on imports, reinforcing Asia-Pacific and North American suppliers' influence over the global quartz market.

List of Companies Covered in this Report:

AGC Inc. Australian Silica Quartz Group Ltd Dow East Hope Group Elkem ASA Ferroglöbe Hoshine Silicon Industry Co., Ltd. Imerys India Quartz Jiangsu Pacific Quartz Co., Ltd MACTUS NIHON DEMPA KOGYO CO., LTD. Nordic Mining ASA Saint-Gobain Sibelco SIMCOA The Quartz Corp WACKER CHEMIE AG

Additional Benefits:

The market estimate (ME) sheet in Excel format
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