

A GLOBAL
LEADER IN
HIGH-PURITY
SILICON
MATERIALS

RECSiLICON
▶ ADVANCING MATERIALS, ADVANCING TECHNOLOGY

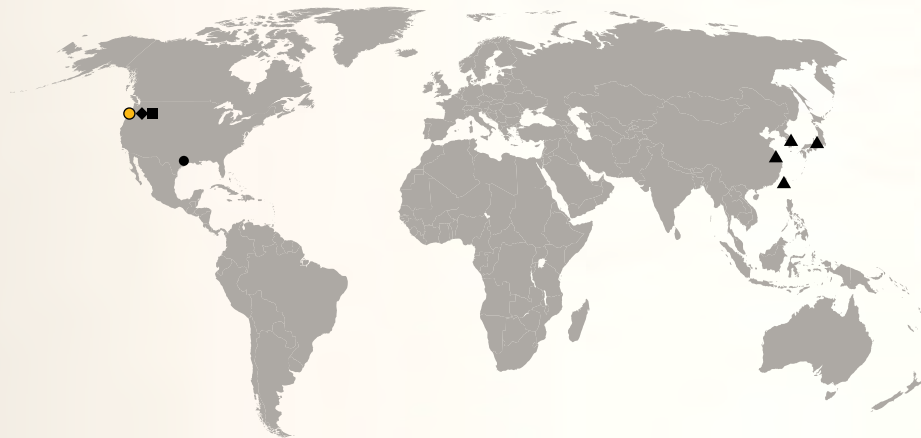
LEADING THE WORLD IN HIGH-PURITY SILICON MATERIALS

One of the world's largest producers of silicon materials, REC Silicon manufactures solar and electronic grade silicon and silane gas – raw materials essential in the photovoltaic and electronics industries. Our products are shipped worldwide to leading solar and semiconductor manufacturing companies.

Pick up a product containing electronics in the world today and you may very well be experiencing the synergy of our materials. For example, polysilicon and/or silane are used in technologies to create smartphones, flat screen TVs, laptops, hybrid electric vehicles, plus ubiquitous solar panels.

High-purity Signature Silane® gas (SiH_4) is central to the quality and consistency of all the company's materials. REC Silicon is the world's largest silane gas producer and one of the world's largest polysilicon manufacturers, with a capacity of more than 20,000 MT of polysilicon and 29,000 MT of silane gas annually from two US-based manufacturing plants. Our solar grade polysilicon is manufactured in Moses Lake, Washington, and our electronic grade polysilicon and silicon gas products are manufactured in Butte, Montana.

Listed on the Oslo Stock Exchange (ticker: REC), the company is headquartered in Moses Lake, Washington and employs 750 people.



REC Silicon

● Headquarters: Moses Lake, WA, USA

REC Silicon locations

◆ Manufacturing Facility: Moses Lake, WA, USA

■ Manufacturing Facility: Butte, MT, USA

▲ Sales Offices: Seoul, Shanghai, Taipei, Tokyo

● Commercial, Design/Development Office: Houston, TX, USA



25 YEARS OF SILANE-BASED SILICON SOLUTIONS

REC Silicon's products help energy and technology providers shape the future via a comprehensive selection of solar and electronic grade polysilicon and silicon gases. Our trademark Signature Silane® gas (SiH_4) and advanced operational techniques enable production of the highest purity silicon materials in the world. Expertise gained from 25 years of solution-oriented silicon materials manufacturing and global support helps enhance customer satisfaction.

POLYSILICON

As one of the largest manufacturers of polysilicon, REC Silicon provides this product in a variety of form factors including NextSi™ granular, as-grown Siemens and Float Zone (FZ) rods, as well as rod segments, chunks, chips, fines and powder. These materials are grouped into three main product grades.

SOLAR GRADE

Solar grade polysilicon form factors include NextSi™ granular, Siemens rod sections, chunks and chips. Solar grade is widely used in various solar processes including casting multicrystalline-based ingot/wafer manufacturing, Czochralski (CZ) monocrystalline-based ingot/wafer manufacturing, and novel wafer applications such as string ribbon and molded wafer.

ELECTRONIC GRADE

Electronic grade polysilicon, including as-grown Siemens rods, rod sections, chunks and chips are principally used in CZ monocrystalline ingot/wafer manufacturing for the semiconductor industry. Additional applications include other electronic market segments such as optics and MEMS.

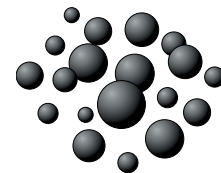
FLOAT ZONE (FZ)

As the world's leading provider of ultra-pure Float Zone polysilicon, our ability and reputation for producing the highest quality and consistency FZ silicon is unsurpassed. Green energy technologies such as solar, wind and hybrid electric vehicles favor FZ silicon-based components for voltage transmission and conversion.

SILICON GASES

With an annual capacity approaching 29,000 MT, REC Silicon is the world's largest manufacturer and supplier of high-purity Signature Silane® gas (SiH_4). Ultra-pure Signature Silane® is supplied worldwide via the industry's largest silane ISO module container fleet.

In addition to our Signature Silane®, significant volumes of differentiated silicon gases are also produced, including DCS (SiH_2Cl_2), MCS (SiH_3Cl), and disilane (Si_2H_6). Silicon gases are commonly required in the manufacturing process of flat panel displays, semiconductors and solar cells.



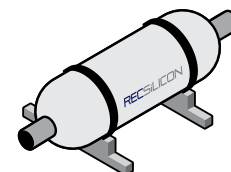
NEXTSI™ GRANULAR
POLYSILICON



SIEMENS
POLYSILICON



FLOAT ZONE (FZ)
POLYSILICON



SILICON
GASES



REC SILICON'S TECHNOLOGY AND SCALE SERVE DEMAND MARKETS

REC Silicon's recent investments to expand production capacity of both polysilicon and silane are a result of demand markets within the photovoltaic and electronics industries. A silane-based, next-generation granular polysilicon plant and two copy-exact silane plants (pictured: Moses Lake, WA) are now demonstrating the production and cost advantages of scaled-up designs.

Our engagement in traditional solar grade silicon manufacturing practices, while simultaneously deploying efficient new FBR technology for granular polysilicon, allows us to achieve low manufacturing costs. Increased capacity and production growth, coupled with proprietary technologies, ISO certification and strategic supplier relationships, help customers – both direct and downstream – set their next wave of innovation in motion.



SILICON MATERIALS FOR SOLAR AND ELECTRONICS APPLICATIONS

Our specialized silicon materials are strategic for key global markets and enable advances in technologies where there is little room for error. REC Silicon is:

- The largest manufacturer and supplier of silane gas (SiH_4) and provider of other silicon gases for production of semiconductors, flat panel displays, and many solar cells technologies.
- One of the world's largest producers of polysilicon for the photovoltaic (PV) industry.
- The largest producer of ultra-pure FZ polysilicon for the electronics industry. FZ-based devices are used in power and conversion processes for hybrid and electric vehicles, wind energy, high voltage transmission, and other markets that can benefit from power device performance.
- The largest producer of granular polysilicon.



SILANE-BASED NEXTSI™ GRANULAR POLYSILICON



REC Silicon has an established history of technological leadership. Substantial investments to commercialize fluidized bed reactor (FBR) technology for granular polysilicon production recently resulted in the largest plant of its type. Our next-generation, solar-grade granular – marketed as NextSi™ – is a game changer for crystalline cell producers. Its ready to use, flowable form factor increases productivity and reduces operational cost through increased initial crucible loads, reduced crucible load times, high-speed fill and recharge abilities.

Granules form when proprietary Signature Silane® gas is deposited onto small particles, which provide a surface area for deposition that can be more than a hundred times larger than occurs in a Siemens thermal reactor.

A patented closed-loop manufacturing process results in minimal by-products or waste materials. As a result, NextSi™ granular polysilicon helps customers meet product goals and also addresses environmental concerns.

Ready-to-use granular form factor allows unparalleled logistical and operational efficiency to lower manufacturing cost, while maintaining quality and consistency.

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THE MOLECULE BEHIND THE MATERIALS

High-purity Signature Silane® gas (SiH_4) is central to the quality and consistency of all REC Silicon materials. Our patented closed-loop manufacturing process and 25 years of technology advancements – beginning at the molecular level – help safeguard your product success.



RECSILICON

recsilicon.com