

FOUNDRY & COATED SAND SOLUTIONS



FOUNDRY SANDS

PROVEN HISTORY

For over 115 years, U.S. Silica has been providing some of the highest quality silica products to the North American foundry industry. We developed our Ottawa White® product at our northern Illinois operation, and it has become the standard for whole grain silica products industry-wide.

In addition to the benchmark products produced at our Ottawa, IL location, our Utica, IL and Pacific, MO operations also mine the St. Peter sandstone. The round and sub-round shape of our foundry sand grains are ideal for use in all resin systems and the high silica content ensures predictable, repeatable results.

The OK-series sand from our Mill Creek, OK operation is recognized industry-wide for solving some of the most difficult strength and surface finish issues.

U.S. Silica offers solutions to help you achieve superior casting finishes in all binder systems and metals. All of our operations sustainably mine and wet wash high-silica deposits providing excellent size gradation control with minimal fines.

Company highlights:

- Our Ottawa, IL facility is one of the largest industrial sand operations in North America, producing over 3.5 million tons per year.
- Our logistics network can deliver products quicker and to more locations than ever before.
- Our distribution partners provide the service and support your foundry needs to react to the quickly changing industry.
- U.S. Silica's Sustainability activities provide an ongoing commitment to our customers, neighbors and stakeholders.
- U.S. Silica was honored as Forbes Magazine's "America's Best Small Company" in 2014.



Our Rochelle, IL facility is among the newest, most advanced stand-alone coating facility in America.

FOUNDRY MINING & PROCESSING LOCATIONS

U.S. Silica’s mining and processing facilities are strategically located at the best available mineral resources for that geographical region. Each plant has the right processing equipment, quality systems and shipping capabilities necessary to supply our valued customers.

LOCATION	DESCRIPTION	PRODUCTS OFFERED	YEAR EST.
Ottawa, IL	Our Ottawa plant is one of North America’s largest silica production facilities, mining whole grain, nearly pure quartz sand stone from the St. Peter Sandstone Formation.	Whole Grain & Ground Silica Testing Silica Ottawa White® Proppants	1910
Pacific, MO	Our Pacific plant mines 98.8% whole grain silica from the St. Peter’s Formation. The physical properties of the Pacific products make it effective in multiple industrial applications.	Whole Grain & Ground Silica Proppants	1924
Mill Creek, OK	Our Mill Creek plant mines silica sand from the Oil Creek Formation producing a wide range of products from fine ground to whole grain high-purity silica sand. Mill Creek offers the most spherical grain to the industry.	Whole Grain & Ground Silica Proppants	1940
Columbia, SC	The Columbia plant is located in the “Sandhills” of the Carolinas. These “Sandhills” consist of high-grade silica that is perfect for filtration, fiber glass, building products and geothermal grout.	Whole Grain & Ground Silica	1962
Mauricetown, NJ	Mauricetown mines mineral deposits from nearby Port Elizabeth. These silica sand deposits are 99% pure silica, with a consistent grain shape that is distributed across a wide-range of sizes, perfect for foundry, industrial, recreational and filtration grade sands and gravels.	Gravels & Whole Grain Silica	1999
Rochelle, IL	Our Rochelle facility creates high performance resin coated products for the foundry and oil and gas markets. It is strategically located near the BNSF and Union Pacific railroads.	InnoSet® Resin Coated Sands	2012
Dubberly, LA	Our Dubberly plant produces whole grain silica from a mineral source known as the Sparta Formation that consists of light colored sand.	Whole Grain Silica	1972
Hurtsboro, AL	Our Hurtsboro plant processes whole grain silica from reserves of the Cusseta member of the lower Ripley Formation. This silica is primarily used by foundry and roofing manufacturers.	Whole Grain Silica	1950

FOUNDRY SANDS

WIDE RANGE OF PRODUCTS. NARROW DISTRIBUTION.

Consistent particle size distribution is critical to achieve maximum performance and efficient operations. Our ISO 9001 registered laboratories ensure our products meet your expectations through our Certificates of Analysis. By following strict ASTM procedures for gradation, acid demand, loss-on-ignition and other tests, you can feel secure that we monitor our products and processes very closely.

% RETAINED ON	OTTAWA, IL						MAURICETOWN, NJ			PACIFIC, MO		MILL CREEK, OK		DUBBERLY, LA	HURTSBORO, AL			COLUMBIA, SC
	F-35	F-50	F-55	F-60	F-65	F-75	FJ-40	FJ-50	FJ-60	P-57	P-57	OK-75	OK-85	L-55	HI-50	HI-58	HI-62	C-50
20							2											
30	2						13	5	2						6	1	1	1
40	45	2	1	1	1		24	12	7	6	5	1	1	1	15	10	8	20
50	48	37	31	22	11	5	24	24	20	19	18	4	3	29	22	18	14	31
70	4	44	40	38	32	34	24	34	34	34	33	14	14	49	30	30	30	28
100	1	11	22	30	43	46	10	18	24	33	35	45	43	16	20	32	32	14
140		3	5	8	12	13	2	6	11	8	9	28	30	4	6	10	14	5
200			1	1	3	2	1	1	1			7	8	1	1	1	2	1
270									1			1	1					
AFS-GFN	36	51	55	59	66	68	42	51	59	58	59	80	82	53	50	58	62	50

Strict control of mining and silica sand processing ensures that each product above, showing the individual percent retained on standard U.S. sieve sizes, has a minimal range of variation. These values provide a starting point for selecting the correct product, they are shown for *illustrative* purposes only and do not represent a guarantee or specification. Please contact our sales or technical departments for more information. Our newest InnoSet® products use many of these substrates to produce our resin coated sands.



TECHNICAL SERVICE & FOUNDRY LAB CAPABILITIES

Advanced product and process analysis, including thermo-graphic imaging, gas chromatography and mass spectroscopy, provide the technical support necessary for all of our foundry products. Automated production processes at Rochelle assure product consistency from batch to batch for superior product repeatability.



The Corporate Quality Assurance Laboratory, located in Berkeley Springs, WV, helps ensure the delivery of quality products by supporting our operations through routine equipment standardization and backup testing. The Corporate Lab also provides customer testing, new product development and advanced material research. Our Technical Service Representatives provide laboratory and field support of customer trials, and assist in the development of new products.

COATED SAND SOLUTIONS

RESIN COATED SANDS: FROM MINE TO FOUNDRY

U.S. Silica's Rochelle, IL facility produces resin coated foundry sands for use in all shell-core and shell-mold (Hot Box) applications – delivering solutions for use in aluminum, cast iron, brass, bronze, silicon metal and steel castings, including:

- Intake manifolds and other engine components for automotive
- Gears and structural parts for automotive, agricultural and industrial equipment
- Fittings and hub cores for ductile iron pipe for water and fluid transport

The InnoSet® product line is highly versatile and produces high-performance shell-cores and shell-molds to address your most demanding casting challenges through formulation, product development and technical support by incorporating:

- Curing and release agents to optimize production efficiency and product quality
- Blended sands and anti-veining agents for high-temperature applications
- Binder systems/formulations that reduce VOC emissions and odors to address environmental and HSE concerns

Because we are able to control the whole process through our ISO 9001 registered facilities, you have more options and higher quality products.





INNOVATION IS AT OUR CORE.

Our formulating chemists solve the most difficult core and casting related issues. We have patents pending for our innovative solutions for odor control and pattern release. For aluminum castings our OX series combines excellent strength, easy shake-out, and some of the lowest odor available. Our modern, \$30 million coating facility in Rochelle, IL has both the capacity to handle the largest customers and the state-of-the-art controls to ensure superior product consistency.

With decades of experience, our commercial team has the technical and product knowledge to help you choose the right product for your application, develop the testing and trial protocol, and provide the on-going field service support like no other producer. We have the tools and knowledge to ensure our products work with your process and will provide greater long-term value for your business.



U.S. SILICA LOCATIONS



Berkeley Springs, WV
Chicago, IL (*Office*)
Columbia, SC
Dubberly, LA
Frederick, MD (*Headquarters*)
Houston, TX (*Office*)
Hurtsboro, AL

Jackson, TN
Kosse, TX
Mapleton Depot, PA
Mauricetown, NJ
Mill Creek, OK
Montpelier, VA
Ottawa, IL

Pacific, MO
Peru, IL
Rochelle, IL
Rockwood, MI
Sparta, WI
Utica, IL
Voca, TX



U.S. Silica is a leading silica sand supplier with a focus on performance materials that are essential to modern living.

For more information: www.ussilica.com or 800.345.6170

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