

Mineral Industry Surveys

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SILICON IN JANUARY 2022

Domestic production of silicon materials was 38,100 metric tons (t) in January 2022, 17% more than December 2021 production and 23% more than January 2021 production (fig. 1, table 1). Net shipments were 25,900 t, 3% less than shipments in December 2021 and 10% more than those in January 2021. Ending stocks were 16,300 t, 15% more than ending stocks in December 2021 and 12% less than those in January 2021.

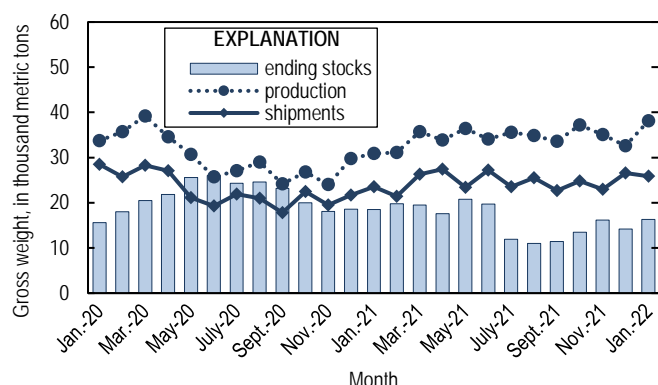


Figure 1. Monthly domestic production of total silicon materials, net shipments, and ending stocks from January 2020 through January 2022 (may include revisions to previously published data).

In January 2022, the leading destinations for silicon metal, more than 99.99% silicon trade category, were Germany, Taiwan, and Vietnam, in descending order (table 3).

In January 2022, the leading import sources for silicon metal, 99.00%–99.99% silicon trade category, were Brazil, Canada, and Thailand, in descending order (table 4). The leading import sources for ferrosilicon, 55%–80% grade, were Russia, Malaysia, and Kazakhstan, in descending order.

Prices

The average U.S. spot price for silicon metal was 450.63 cents per pound in January 2022, 5% less than the average price in December 2021 and more than four times the average price in January 2021. The average U.S. spot price for ferrosilicon, 50% grade, was 265.00 cents per pound, 40% more than the average price in December 2021 and more than two times the average price in January 2021. The average U.S. spot price for ferrosilicon, 75% grade, was 332.50 cents per pound, unchanged from the average price in December 2021 and more than three times that in January 2021 (fig. 2).

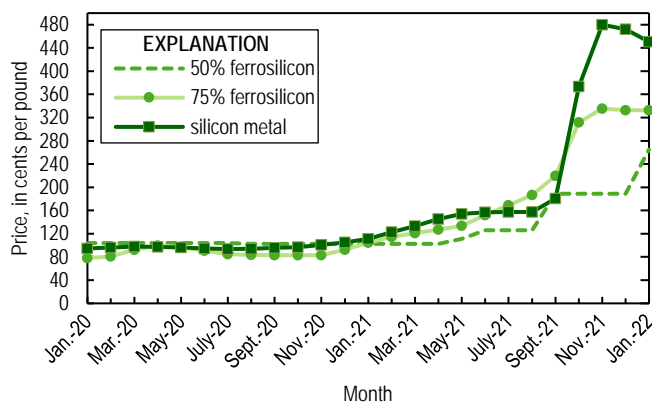


Figure 2. Average monthly spot prices for silicon metal and ferrosilicon 50% and 75% grades, contained silicon, from January 2020 through January 2022. Source: CRU Group and S&P Global Platts Metals Week.

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TABLE 1
PRODUCTION, SHIPMENTS, AND STOCKS OF SILICON ALLOYS
AND METAL IN THE UNITED STATES^{1, 2, 3}

(Metric tons, gross weight)

	Gross production ⁴	Net shipments	Producers' stocks, end of period
2021:			
January	30,900	23,500	18,500
February	31,100	21,400	19,800
March	35,700	26,300	19,500
April	33,900	27,400	17,600
May	36,400	23,400	20,800
June	34,100	27,200	19,700
July	35,600	23,500	11,900 ⁵
August	34,900	25,500	11,000 ⁵
September	33,600	22,700	11,400 ⁵
October	37,200	24,800	13,500 ⁵
November	35,100	23,000	16,200 ⁵
December	32,600	26,600	14,200 ⁵
January–December	411,000	295,000	14,200 ⁵
2022, January	38,100	25,900	16,300

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes ferrosilicon, miscellaneous silicon alloys, and silicon metal, excluding semiconductor and solar grades, except where noted.

³Includes USGS estimates.

⁴Ferrosilicon production includes material consumed in the production of miscellaneous silicon alloys.

⁵Decreased end of period stocks attributable to domestic physical inventory adjustment.

TABLE 2
PRICES FOR FERROSILICON AND SILICON METAL IN JANUARY 2022

		Low	Average	High	Average low, mid, and high
Ferrosilicon:					
50% ferrosilicon ¹	cents per pound of contained silicon	188.00	XX	342.00	264.00–265.00–266.00
75% ferrosilicon ²	do.	330.00	332.50	335.00	XX
Silicon metal, 553 grade ³	cents per pound	420.00	450.63	485.00	XX

do. Ditto. XX Not applicable.

¹CRU Group transaction price, duty paid, f.o.b. Pittsburgh, producing plant or Chicago/Pittsburgh warehouse. Average price reported for price range.

²S&P Global Platts Metals Week, in U.S. warehouse, U.S. origin and imported material. Average price reported for all transactions during the month.

³S&P Global Platts Metals Week, duty paid, delivered Midwest, U.S. spot and imported 553 grade silicon metal (minimum 98.50% silicon). Average price reported for all transactions during the month.

TABLE 3
U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN JANUARY 2022^{1,2}

(Metric tons, unless otherwise specified)

Country or locality	January		
	Gross weight	Contained weight	Value
Ferrosilicon:			
More than 55% silicon:			
Canada	799	479	\$1,420,000
Mexico	207	124	365,000
Total	1,010	603	1,780,000
Other ferrosilicon:			
Belgium	36	15	36,000
Canada	392	75	532,000
Malaysia	15	7	10,000
Mexico	502	190	1,080,000
Total	945	287	1,660,000
Total ferrosilicon	1,950	890	3,440,000
Metal:			
More than 99.99% silicon:			
China	186	186	7,610,000
Denmark	42	42	2,220,000
Germany	743	743	21,000,000
Italy	17	17	525,000
Japan	487	487	25,700,000
Korea, Republic of	196	196	7,910,000
Malaysia	175	175	7,990,000
Singapore	164	164	3,490,000
Taiwan	650	650	10,200,000
Vietnam	540	540	16,700,000
Other [12 countries and (or) localities]	26	26	1,050,000
Total	3,230	3,230	104,000,000
99.00%–99.99% silicon:			
Belgium	40	40	98,300
Czechia	57	57	169,000
Total	97	96	267,000
Other silicon:			
Belgium	2	2	13,900
Canada	13	13	18,100
Mexico	1	1	8,440
Netherlands	39	38	40,000
South Africa	12	11	15,300
Total	68	66	95,800
Total silicon metal	3,390	3,390	105,000,000

¹Presentation of monthly data is based on the quantities (gross weight) of the leading countries and (or) localities.

²Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.

TABLE 4
U.S. IMPORTS OF FERROSILICON AND SILICON METAL IN JANUARY 2022^{1,2}

(Metric tons, unless otherwise specified)

Country or locality	January		
	Gross weight	Contained weight	Value
Ferrosilicon:			
55%–80% silicon, more than 3% Ca:			
France	35	21	\$97,800
Norway	24	17	75,100
South Africa	126	84	335,000
Total	185	123	508,000
55%–80% silicon, other:			
Brazil	1,210	909	2,740,000
Canada	1,120	801	3,570,000
Egypt	264	190	568,000
France	72	53	156,000
Iceland	748	570	2,790,000
Kazakhstan	1,300	991	7,090,000
Malaysia	2,780	2,060	5,840,000
Norway	662	500	1,870,000
Russia	10,600	8,060	54,700,000
South Africa	611	435	1,400,000
Other [3 countries and (or) localities]	132	98	322,000
Total	19,500	14,700	81,000,000
Magnesium ferrosilicon:			
Brazil	267	120	498,000
Canada	1,090	500	2,970,000
China	4	1	12,600
Germany	20	9	38,800
India	40	19	89,000
Russia	20	10	36,000
Total	1,440	658	3,650,000
Other ferrosilicon:			
Brazil	208	91	318,000
Canada	544	188	884,000
Germany	6	2	32,300
Norway	18	8	18,000
Total	776	290	1,250,000
Total ferrosilicon	21,900	15,700	86,400,000
Metal:			
More than 99.99% silicon:			
Brazil	334	334	837,000
China	6	6	861,000
Denmark	(3)	(3)	2,260
Germany	48	48	5,910,000
Japan	2	2	554,000
Korea, Republic of	(3)	(3)	78,300
Malaysia	(3)	(3)	7,610
Taiwan	20	20	2,510,000
Total	410	410	10,800,000
99.00%–99.99% silicon:			
Australia	228	226	1,890,000
Belgium	20	19	46,700
Brazil	1,910	1,890	5,070,000
Canada	1,250	1,240	2,970,000
China	2	2	11,500
Malaysia	100	99	390,000

See footnotes at end of table.

TABLE 4—Continued
U.S. IMPORTS OF FERROSILICON AND SILICON METAL IN JANUARY 2022^{1,2}

(Metric tons, unless otherwise specified)

Country or locality	January		Value
	Gross weight	Contained weight	
Metal—Continued:			
99.00%–99.99% silicon:			
Thailand	580	575	\$1,600,000
Total	4,080	4,050	12,000,000
Other silicon:			
Australia	1,910	1,840	5,210,000
Brazil	902	875	1,370,000
Bulgaria	(3)	(3)	5,150
China	16	15	17,300
Netherlands	53	45	84,000
Norway	341	254	1,110,000
Slovakia	170	163	185,000
Thailand	169	162	184,000
United Kingdom	150	144	163,000
Total	3,710	3,500	8,330,000
Total silicon metal	8,200	7,960	31,100,000

¹Presentation of monthly data is based on the quantities (gross weight) of the leading countries and (or) localities.

²Data are rounded to no more than three significant digits; may not add to totals shown.

³Less than ½ unit.

Source: U.S. Census Bureau.