

# Mineral Industry Surveys

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## SILICON IN JANUARY 2021

Domestic production of silicon materials was 30,900 metric tons (t) in January 2021, 4% more than December 2020 production and 8% less than January 2020 production (fig. 1, table 1). Net shipments were 23,500 t, 8% more than shipments in December 2020 and 17% less than shipments in January 2020 (table 1).

Ending stocks were 18,500 t in January 2021, slightly less than ending stocks in December 2020 and 18% more than those in January 2020 (table 1). Adjustments in stocks included in-plant consumption of ferrosilicon to produce magnesium ferrosilicon and other alloys. All comparative statistics were calculated based on unrounded, gross-weight figures.

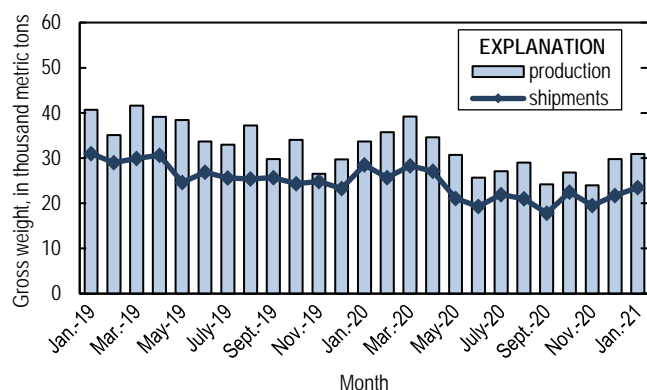


Figure 1. Monthly domestic production of total silicon materials and net shipments from January 2019 through January 2021 (may include revisions to previously published data).

## Prices

The average U.S. spot price for silicon metal was 111.13 cents per pound in January 2021, 6% more than the average price in December 2020 and 17% more than the average price in January 2020. The average U.S. spot price for ferrosilicon, 50% grade, was 102.50 cents per pound, unchanged since August 2020 and slightly less than the average price in January 2020. The average U.S. spot price for ferrosilicon, 75% grade, was 104.56 cents per pound, 13% more than the average price in December 2020 and 34% more than that in January 2020 (fig. 2).

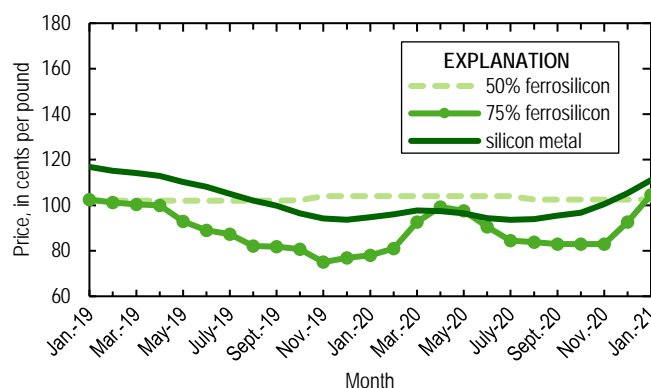


Figure 2. Average monthly spot prices for silicon metal and ferrosilicon 50% and 75% grades, contained silicon, from January 2019 through January 2021. Source: CRU Group and S&P Global Platts Metals Week.

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TABLE 1  
PRODUCTION, SHIPMENTS, AND STOCKS OF SILICON ALLOYS  
AND METAL IN THE UNITED STATES<sup>1, 2, 3</sup>

(Metric tons, gross weight)

	Gross production <sup>4</sup>	Net shipments	Producers' stocks, end of period
2020:			
January	33,700	28,500	15,600
February	35,700 <sup>r</sup>	25,700 <sup>r</sup>	18,000 <sup>r</sup>
March	39,200	28,300	20,500
April	34,600	27,100	21,800
May	30,700	21,100	25,600
June	25,700	19,300	26,000
July	27,100	21,900	24,300
August	29,000	21,000	24,600
September	24,200 <sup>r</sup>	17,800	23,200 <sup>r</sup>
October	26,800 <sup>r</sup>	22,500 <sup>r</sup>	20,000 <sup>r</sup>
November	24,000 <sup>r</sup>	19,500 <sup>r</sup>	18,100 <sup>r</sup>
December	29,800 <sup>r</sup>	21,700 <sup>r</sup>	18,600 <sup>r</sup>
January–December	360,000 <sup>r</sup>	275,000 <sup>r</sup>	18,600 <sup>r</sup>
2021, January	30,900	23,500	18,500

<sup>r</sup>Revised.

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

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

<sup>3</sup>Includes USGS estimates.

<sup>4</sup>Ferrosilicon production includes material consumed in the production of miscellaneous silicon alloys.

TABLE 2  
PRICES FOR FERROSILICON AND SILICON METAL IN JANUARY 2021

		Low	Average	High	Average low, mid, and high
Ferrosilicon:					
50% ferrosilicon <sup>1</sup>	cents per pound of contained silicon	101.00	XX	104.00	101.00–102.500–104.00
75% ferrosilicon <sup>2</sup>	do.	96.00	104.56	112.00	XX
Silicon metal, 553 grade <sup>3</sup>	cents per pound	105.00	111.13	119.00	XX

do. Ditto. XX Not applicable.

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

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

<sup>3</sup>S&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 2021<sup>1,2</sup>

(Metric tons, unless otherwise specified)

Country or locality	January		
	Gross weight	Contained weight	Value
Ferrosilicon:			
More than 55% silicon:			
Canada	298	179	\$507,000
Mexico	176	108	322,000
Total	474	286	829,000
Other ferrosilicon:			
Belgium	72	32	54,000
Brazil	57	29	114,000
Canada	11	5	35,700
Korea, Republic of	20	10	32,200
Mexico	290	143	566,000
Spain	20	10	31,300
Switzerland	40	17	75,800
Turkey	20	9	37,600
Total	530	255	947,000
Total ferrosilicon	1,000	541	1,780,000
Metal:			
More than 99.99% silicon:			
China	188	188	6,950,000
Estonia	24	24	16,800
Germany	467	467	15,000,000
Japan	921	921	33,600,000
Korea, Republic of	623	623	11,100,000
Norway	114	114	930,000
Singapore	82	82	1,620,000
Taiwan	564	564	5,270,000
United Kingdom	14	14	725,000
Vietnam	108	108	994,000
Other [11 countries and (or) localities]	29	29	2,460,000
Total	3,130	3,130	78,600,000
99.00%–99.99% silicon:			
Japan	2	2	2,660
Korea, Republic of	2	2	2,660
Mauritania	3	3	4,220
Mexico	3	3	6,260
Total	10	10	15,800
Other silicon:			
Canada	3	3	12,500
Korea, Republic of	1	1	10,500
Mexico	1	1	13,400
Norway	2	2	3,250
United Kingdom	(3)	(3)	8,090
Total	8	8	47,800
Total silicon metal	3,150	3,150	78,700,000

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

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

<sup>3</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 4  
U.S. IMPORTS OF FERROSILICON AND SILICON METAL IN JANUARY 2021<sup>1,2</sup>

(Metric tons, unless otherwise specified)

Country or locality	January		
	Gross weight	Contained weight	Value
Ferrosilicon:			
55%–80% silicon, more than 3% Ca:			
China	21	21	\$35,800
France	72	43	208,000
Total	93	63	244,000
55%–80% silicon, other:			
Brazil	2,000	1,520	2,000,000
Canada	882	646	1,840,000
France	161	111	409,000
Germany	37	27	160,000
Iceland	665	525	700,000
Kazakhstan	1,990	1,530	2,550,000
Norway	152	120	165,000
Paraguay	473	371	394,000
Russia	270	203	361,000
South Africa	234	168	371,000
Other [3 countries and (or) localities]	47	34	144,000
Total	6,910	5,250	9,090,000
Magnesium ferrosilicon:			
Argentina	57	20	47,700
Brazil	49	22	62,200
Canada	876	403	1,490,000
India	28	13	43,700
Total	1,010	458	1,650,000
Other ferrosilicon:			
Canada	504	140	716,000
China	24	11	32,600
Germany	2	1	10,400
Russia	1	1	2,720
Slovakia	19	9	30,900
Total	551	162	793,000
Total ferrosilicon	8,570	5,940	11,800,000
Metal:			
More than 99.99% silicon:			
Brazil	89	89	214,000
China	9	9	352,000
Denmark	(3)	(3)	15,800
Finland	(3)	(3)	10,300
France	(3)	(3)	17,500
Germany	34	34	3,230,000
Japan	3	3	646,000
Korea, Republic of	(3)	(3)	20,400
Malaysia	86	86	994,000
Taiwan	53	53	4,250,000
Other [1 country or locality]	(3)	(3)	2,350
Total	275	275	9,760,000
99.00%–99.99% silicon:			
Australia	420	417	931,000
Brazil	1,270	1,260	2,290,000
Canada	2,220	2,200	5,210,000
China	4	4	2,200
Germany	10	10	29,400
Malaysia	96	95	151,000

See footnotes at end of table.

TABLE 4—Continued  
U.S. IMPORTS OF FERROSILICON AND SILICON METAL IN JANUARY 2021<sup>1,2</sup>

(Metric tons, unless otherwise specified)

Country or locality	January		Value
	Gross weight	Contained weight	
Metal—Continued:			
99.00%–99.99% silicon:			
Norway	1,260	1,250	\$2,960,000
Thailand	200	198	370,000
Total	5,470	5,440	12,000,000
Other silicon:			
Australia	637	612	1,220,000
Brazil	168	166	362,000
China	2	2	4,280
France	48	46	71,300
Germany	149	145	565,000
Norway	535	514	761,000
Thailand	100	98	185,000
Total	1,640	1,580	3,170,000
Total silicon metal	7,390	7,300	24,900,000

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

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

<sup>3</sup>Less than ½ unit.

Source: U.S. Census Bureau.