

# Mineral Industry Surveys

**For information, contact:**

Emily K. Schnebele, Silicon Commodity Specialist  
 National Minerals Information Center  
 U.S. Geological Survey  
 989 National Center  
 Reston, VA 20192  
 Telephone: (703) 648-4945, Fax: (703) 648-7757  
 Email: eschnebele@usgs.gov

Joshua Braunstein (Data)  
 Telephone: (703) 648-7958  
 Fax: (703) 648-7975  
 Email: jbraunstein@usgs.gov

**Internet:** <https://www.usgs.gov/centers/nmic>

## SILICON IN FEBRUARY 2021

Domestic production of silicon materials was 31,100 metric tons (t) in February 2021, slightly more than January 2021 production and 13% less than February 2020 production (fig. 1, table 1). Net shipments were 21,400 t, 9% less than shipments in January 2021 and 17% less than shipments in February 2020. Total production and net shipments during the first 2 months of 2021 were 11% less and 17% less, respectively, than those during the same period in 2020 (table 1).

Ending stocks were 19,800 t in February 2021, 7% more than ending stocks in January 2021 and 10% more than those in February 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.

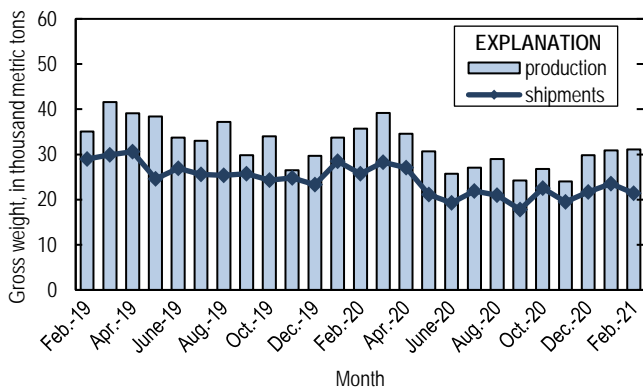


Figure 1. Monthly domestic production of total silicon materials and net shipments from February 2019 through February 2021 (may include revisions to previously published data).

### Prices

The average U.S. spot price for silicon metal was 122.50 cents per pound in February 2021, 10% more than the average price in January 2021 and 28% more than the average price in February 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 February 2020. The average U.S. spot price for ferrosilicon, 75% grade, was 114.63 cents per pound, 10% more than the average price in January 2021 and 42% more than that in February 2020 (fig. 2).

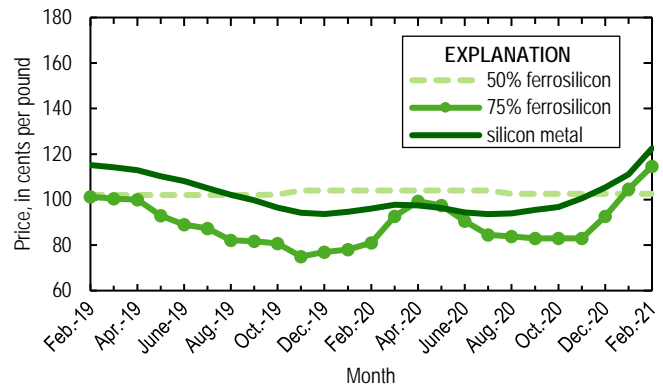


Figure 2. Average monthly spot prices for silicon metal and ferrosilicon 50% and 75% grades, contained silicon, from February 2019 through February 2021. Source: CRU Group and S&P Global Platts Metals Week.

List services and web feed subscribers are the first to receive notification of USGS minerals information publications and data releases. For information on how to subscribe, go to <https://www.usgs.gov/centers/nmic/minerals-information-publication-list-services>.

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–December	360,000	275,000	18,600
January–February	69,400 <sup>r</sup>	54,200 <sup>r</sup>	18,000 <sup>r</sup>
February	35,700	25,700	18,000
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	17,800	23,200
October	26,800	22,500	20,000
November	24,000	19,500	18,100
December	29,800	21,700	18,600
2021:			
January	30,900	23,500	18,500
February	31,100	21,400	19,800
January–February	62,000	44,900	19,800

<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 FEBRUARY 2021

	Low	Average	High	Average low, mid, and high
<b>Ferrosilicon:</b>				
50% ferrosilicon <sup>1</sup>				
cents per pound of contained silicon	101.00	XX	104.00	101.00–102.50–104.00
75% ferrosilicon <sup>2</sup>				
do.	110.00	114.63	120.00	XX
Silicon metal, 553 grade <sup>3</sup>				
cents per pound	116.00	122.50	130.00	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, 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 FEBRUARY 2021<sup>1,2</sup>

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–February <sup>3</sup>		
				Gross weight	Contained weight	Value
<b>Ferrosilicon:</b>						
More than 55% silicon:						
Canada	543	326	\$974,000	840	504	\$1,480,000
Mexico	139	86	292,000	314	193	614,000
Total	681	411	1,270,000	1,160	697	2,090,000
Other ferrosilicon:						
Belgium	18	8	13,600	90	40	67,600
Brazil	134	67	266,000	191	96	380,000
Canada	5	3	16,000	16	8	51,700
Korea, Republic of	--	--	--	20	10	32,200
Mexico	290	141	569,000	580	284	1,140,000
Spain	20	10	31,300	40	20	62,700
Switzerland	40	17	75,200	80	35	151,000
Turkey	80	37	145,000	100	45	183,000
Total	587	283	1,120,000	1,120	538	2,060,000
Total ferrosilicon	1,270	694	2,380,000	2,270	1,240	4,160,000
<b>Metal:</b>						
More than 99.99% silicon:						
China	185	185	5,060,000	373	373	12,000,000
Estonia	23	23	16,200	47	47	33,000
Germany	536	536	14,600,000	1,000	1,000	29,500,000
Japan	785	785	17,600,000	1,710	1,710	51,200,000
Korea, Republic of	420	420	7,260,000	1,040	1,040	18,400,000
Malaysia	396	396	4,760,000	410	410	6,940,000
Norway	15	15	150,000	129	129	1,080,000
Singapore	137	137	2,830,000	219	219	4,450,000
Taiwan	195	195	1,200,000	759	759	6,470,000
Vietnam	342	342	3,420,000	450	450	4,410,000
Other [19 countries and (or) localities]	33	33	2,100,000	62	62	3,110,000
Total	3,070	3,070	59,000,000	6,200	6,200	138,000,000
99.00%–99.99% silicon:						
France	34	34	48,200	34	34	48,200
Japan	2	2	2,640	4	4	5,310
Korea, Republic of	--	--	--	2	2	2,660
Mauritania	--	--	--	3	3	4,220
Mexico	--	--	--	3	3	6,260
Singapore	2	2	3,330	2	2	3,330
Total	38	38	54,200	49	48	70,000
Other silicon:						
Belgium	38	38	45,900	38	38	45,900
Canada	8	8	39,200	12	11	51,800
China	8	7	10,000	8	7	10,000
France	1	1	2,880	1	1	2,880
Korea, Republic of	--	--	--	1	1	10,500
Mexico	7	7	29,400	8	8	42,800
Netherlands	45	43	58,800	45	43	58,800

See footnotes at end of table.

TABLE 3—Continued  
 U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN FEBRUARY 2021<sup>1,2</sup>

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–February <sup>3</sup>		
				Gross weight	Contained weight	Value
<b>Metal—Continued:</b>						
<b>Other silicon:</b>						
Norway	--	--	--	2	2	\$3,250
Romania	3	3	\$4,570	3	3	4,570
Taiwan	57	54	230,000	57	54	230,000
Other [4 countries and (or) localities]	1	1	14,400	1	1	22,500
Total	168	163	435,000	176	170	482,000
Total silicon metal	3,280	3,270	59,500,000	6,420	6,420	138,000,000

-- Zero.

<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>May include revisions to previously published data.

Source: U.S. Census Bureau.

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

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–February <sup>3</sup>		
				Gross weight	Contained weight	Value
<b>Ferrosilicon:</b>						
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	1,020	774	\$1,040,000	3,030	2,290	3,040,000
Canada	1,070	780	2,310,000	1,950	1,430	4,150,000
France	18	13	52,800	179	125	462,000
Iceland	499	394	605,000	1,160	919	1,300,000
Kazakhstan	2,320	1,780	3,920,000	4,310	3,310	6,460,000
Malaysia	1,510	1,130	1,600,000	1,510	1,130	1,600,000
Norway	595	467	679,000	746	587	845,000
Paraguay	50	40	40,700	523	411	435,000
Russia	--	--	--	270	203	361,000
South Africa	167	124	331,000	401	292	702,000
Other [4 countries and (or) localities]	66	48	267,000	150	110	570,000
Total	7,310	5,560	10,800,000	14,200	10,800	19,900,000
80%–90% ferrosilicon, Germany						
	27	22	25,500	27	22	25,500
<b>Magnesium ferrosilicon:</b>						
Argentina	19	9	16,000	76	29	63,800
Brazil	82	37	81,800	131	59	144,000
Canada	962	445	1,670,000	1,840	847	3,160,000
India	25	11	46,800	53	25	90,500
Total	1,090	502	1,820,000	2,100	960	3,460,000
<b>Other ferrosilicon:</b>						
Canada	573	217	674,000	1,080	358	1,390,000
China	--	--	--	24	11	32,600
France	2	1	12,500	2	1	12,500
Germany	--	--	--	2	1	10,400
Russia	39	19	74,300	40	19	77,000
Slovakia	--	--	--	19	9	30,900
Total	614	237	761,000	1,170	398	1,550,000
Total ferrosilicon	9,040	6,320	13,400,000	17,600	12,300	25,200,000
<b>Metal:</b>						
More than 99.99% silicon:						
Brazil	102	102	246,000	191	191	460,000
China	3	3	582,000	12	12	934,000
Denmark	(4)	(4)	150,000	1	1	166,000
Finland	--	--	--	(4)	(4)	10,300
Germany	30	30	2,910,000	64	64	6,140,000
Hong Kong	(4)	(4)	11,700	(4)	(4)	11,700
Japan	2	2	386,000	4	4	1,030,000
Malaysia	--	--	--	86	86	994,000
Taiwan	10	10	1,250,000	64	64	5,500,000
United Kingdom	1	1	9,340	1	1	9,340
Other [3 countries and (or) localities]	(4)	(4)	14,700	(4)	(4)	54,900
Total	149	149	5,550,000	424	424	15,300,000
99.00%–99.99% silicon:						
Australia	124	124	254,000	544	541	1,180,000

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

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–February <sup>3</sup>		
				Gross weight	Contained weight	Value
Metal—Continued:						
99.00%–99.99% silicon:						
Brazil	1,240	1,230	\$2,400,000	2,510	2,490	\$4,690,000
Canada	2,040	2,030	4,840,000	4,260	4,230	10,100,000
China	(4)	(4)	6,670	4	4	8,880
Germany	--	--	--	10	10	29,400
Malaysia	--	--	--	96	95	151,000
Norway	576	573	1,570,000	1,830	1,820	4,530,000
Thailand	--	--	--	200	198	370,000
United Kingdom	(4)	(4)	2,320	(4)	(4)	2,320
Total	3,980	3,960	9,070,000	9,460	9,390	21,000,000
Other silicon:						
Australia	478	467	1,050,000	1,120	1,080	2,270,000
Austria	1	1	5,420	1	1	5,420
Brazil	389	384	820,000	557	550	1,180,000
Canada	1	1	3,000	1	1	3,000
China	--	--	--	2	2	4,280
France	20	20	47,000	68	65	118,000
Germany	--	--	--	149	145	565,000
Netherlands	38	37	108,000	38	37	108,000
Norway	480	464	744,000	1,020	978	1,510,000
Thailand	--	--	--	100	98	185,000
Total	1,410	1,370	2,780,000	3,050	2,960	5,950,000
Total silicon metal	5,540	5,480	17,400,000	12,900	12,800	42,300,000

-- Zero.

<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>May include revisions to previously published data.

<sup>4</sup>Less than ½ unit.

Source: U.S. Census Bureau.