

Mineral Industry Surveys

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SILICON IN FEBRUARY 2019

Domestic production of silicon materials was 35,500 metric tons (t) in February 2019, a 13% decrease from January 2019 production and 18% less than February 2018 production (fig. 1, table 1). Net shipments were 29,400 t, 7% less than shipments in January 2019 and 5% more than shipments in February 2018. Total production and net shipments during the first 2 months of 2019 were 11% less and 11% more, respectively, than those during the same period in 2018 (table 1).

Ending stocks were 19,900 t in February 2019, 13% less than stocks in January 2019 and 37% less than those in February 2018 (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.

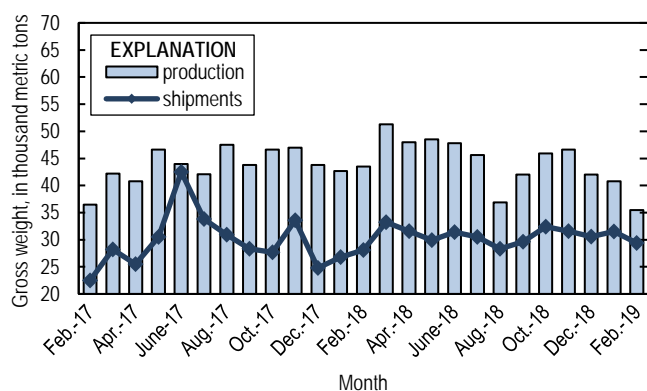


Figure 1. Monthly domestic production of total silicon materials and net shipments from February 2017 through February 2019 (may include revisions to previously published data).

Prices

The average U.S. spot price for silicon metal was 115.13 cents per pound in February 2019, slightly less than the average price in January 2019 and 20% less than that in February 2018. The average U.S. spot prices for ferrosilicon, 50% and 75% grades, were unchanged and slightly less, respectively, when compared with the average prices in January 2019 and were slightly less and 10% less, respectively, than their average prices in February 2018 (fig. 2).

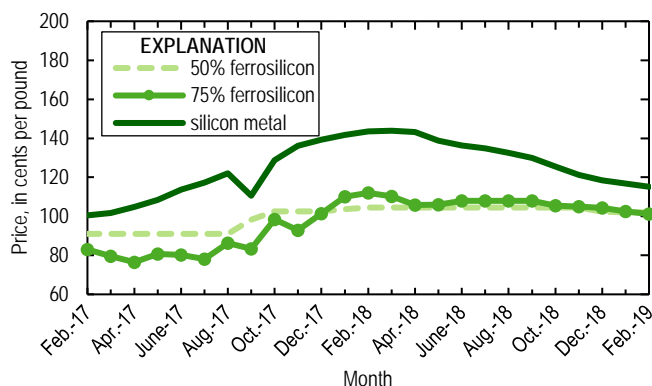


Figure 2. Average monthly spot prices for silicon metal and ferrosilicon 50% and 75% grades, contained silicon, from February 2017 through February 2019. Source: CRU Group and S&P Global Platts.

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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
2018:			
January-December	541,000	364,000	24,000
January-February	86,200 ^r	54,900 ^r	31,400 ^r
February	43,500	28,100	31,400
March	51,300	33,200	31,200
April	48,000	31,600	31,400
May	48,500	29,900	32,500
June	47,800	31,400	32,000
July	45,600	30,500	31,400
August	36,900	28,300	25,800
September	42,000	29,600	24,900
October	45,900	32,400	24,400
November	46,600	31,600	24,900
December	42,000	30,600	24,000
2019:			
January	40,800	31,500	22,800
February	35,500	29,400	19,900
January-February	76,300	60,900	19,900

^rRevised.

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.

TABLE 2
PRICES FOR FERROSILICON AND SILICON METAL IN FEBRUARY 2019

		Low	Average	High	Average low, mid, and high
Ferrosilicon:					
50% ferrosilicon ¹	cents per pound of contained silicon	101.00	XX	103.00	101.00–102.00–103.00
75% ferrosilicon ²	do.	101.00	101.25	103.00	XX
Silicon metal, 553 grade ³	cents per pound	114.00	115.13	117.50	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, in U.S. warehouse, U.S. origin and imported material. Average price reported for all transactions during the month.

³S&P Global Platts, 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 2019^{1,2}

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–February ³		
				Gross weight	Contained weight	Value
Ferrosilicon:						
More than 55% silicon:						
Canada	414	249	\$573,000	844	506	\$1,090,000
Dominican Republic	--	--	--	39	23	86,200
Germany	--	--	--	62	37	63,000
Mexico	147	91	354,000	336	205	738,000
Sweden	60	36	72,700	60	36	72,700
United Kingdom	1	(4)	6,640	21	12	30,900
Total	622	377	1,010,000	1,360	821	2,080,000
Other ferrosilicon:						
Belgium	54	24	37,800	154	74	193,000
Brazil	39	20	76,000	59	29	114,000
Canada	121	61	51,000	154	77	92,200
France	20	10	33,200	40	18	66,400
Korea, Republic of	80	35	91,200	160	70	182,000
Luxembourg	20	10	31,000	20	10	31,000
Mexico	157	76	359,000	433	146	798,000
Sweden	--	--	--	60	27	101,000
Turkey	--	--	--	78	37	139,000
United Kingdom	199	89	325,000	338	152	559,000
Other [1 country or locality]	--	--	--	20	9	35,200
Total	691	325	1,000,000	1,520	650	2,310,000
Total ferrosilicon	1,310	701	2,010,000	2,880	1,470	4,390,000
Metal:						
More than 99.99% silicon:						
China	730	730	3,680,000	1,310	1,310	8,790,000
Germany	515	515	7,990,000	1,420	1,420	17,400,000
Hong Kong	64	64	409,000	143	143	871,000
Japan	417	417	14,200,000	1,300	1,300	46,100,000
Korea, Republic of	539	539	5,040,000	1,260	1,260	18,900,000
Malaysia	114	114	3,140,000	245	245	7,540,000
Norway	65	65	600,000	212	212	1,200,000
Taiwan	335	335	8,360,000	949	949	13,800,000
United Kingdom	58	58	605,000	65	65	1,670,000
Vietnam	132	132	2,390,000	132	132	2,390,000
Other [21 countries and (or) localities]	29	29	208,000	108	108	1,020,000
Total	3,000	3,000	46,600,000	7,140	7,140	120,000,000
99.00%–99.99% silicon:						
Mexico	3	3	8,530	3	3	8,530
United Kingdom	--	--	--	19	19	19,700
Total	3	3	8,530	22	22	28,300
Other silicon:						
Australia	(4)	(4)	3,470	1	1	7,050
Belgium	17	17	22,000	25	25	32,900
Canada	13	12	30,000	45	44	90,500
China	--	--	--	4	4	8,340
Guatemala	--	--	--	2	2	3,130
Japan	--	--	--	3	3	4,290
Mexico	4	4	25,800	27	27	56,700

See footnotes at end of table.

TABLE 3—Continued
U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN FEBRUARY 2019^{1,2}

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–February ³		
				Gross weight	Contained weight	Value
Metal—Continued:						
Other silicon:						
Netherlands	62	60	\$81,600	116	113	\$154,000
South Africa	(4)	(4)	8,130	10	10	28,200
United Kingdom	(4)	(4)	4,400	(4)	(4)	4,400
Total	97	94	175,000	236	229	389,000
Total silicon metal	3,100	3,100	46,800,000	7,400	7,400	120,000,000

-- Zero.

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.

³May include revisions to previously published data.

⁴Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 4
U.S. IMPORTS OF FERROSILICON AND SILICON METAL IN FEBRUARY 2019^{1,2}

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–February ³		
				Gross weight	Contained weight	Value
Ferrosilicon:						
55%–80% silicon, more than 3% Ca:						
Brazil	43	32	\$63,400	43	32	\$63,400
China	144	96	345,000	144	96	345,000
France	54	35	143,000	108	70	287,000
South Africa	--	--	--	18	12	42,500
Total	241	163	551,000	313	210	738,000
55%–80% silicon, other:						
Brazil	713	547	1,080,000	2,480	1,870	3,570,000
Canada	1,520	1,120	2,980,000	3,180	2,340	6,360,000
China	199	147	289,000	199	147	289,000
France	176	122	694,000	528	371	1,890,000
Iceland	1,410	1,120	1,860,000	3,240	2,550	4,410,000
India	61	43	156,000	116	84	250,000
Kazakhstan	1,510	1,160	2,510,000	3,000	2,300	4,780,000
Malaysia	2,830	2,130	3,700,000	3,930	2,950	5,160,000
Paraguay	653	513	849,000	947	745	1,230,000
Russia	271	205	344,000	17,100	12,900	23,200,000
Other [5 countries and (or) localities]	173	121	601,000	329	227	1,070,000
Total	9,520	7,220	15,100,000	35,000	26,500	52,200,000
Magnesium ferrosilicon:						
Argentina	--	--	--	19	9	18,900
Canada	781	361	1,450,000	1,860	859	3,420,000
India	50	22	89,000	451	205	457,000
Norway	54	26	108,000	74	35	145,000
Total	886	410	1,650,000	2,410	1,110	4,050,000
Other ferrosilicon:						
Canada	986	330	1,210,000	1,720	607	2,100,000
China	--	--	--	9	1	43,900
Germany	3	1	17,200	3	1	17,200
India	94	41	141,000	114	44	173,000
Mexico	14	6	23,200	14	6	23,200
Russia	27	13	49,900	47	23	91,900
Slovakia	20	3	31,800	39	11	62,900
Turkey	--	--	--	22	10	15,500
Total	1,140	394	1,470,000	1,970	704	2,530,000
Total ferrosilicon	11,800	8,180	18,700,000	39,700	28,500	59,500,000
Metal:						
More than 99.99% silicon:						
Brazil	452	452	1,400,000	910	910	2,860,000
China	7	7	953,000	7	7	1,100,000
Denmark	1	1	336,000	1	1	473,000
Finland	--	--	--	(4)	(4)	279,000
Germany	62	62	4,070,000	86	86	7,750,000
Japan	9	9	844,000	21	21	1,780,000
Korea, Republic of	1	1	28,800	1	1	104,000
Taiwan	40	40	1,950,000	75	75	3,570,000
Ukraine	--	--	--	1	1	38,500
United Kingdom	--	--	--	1	1	10,900
Other [1 country or locality]	(4)	(4)	9,110	(4)	(4)	20,500
Total	571	571	9,590,000	1,100	1,100	18,000,000
99.00%–99.99% silicon:						
Australia	290	288	753,000	1,280	1,270	3,500,000

See footnotes at end of table.

TABLE 4—Continued
U.S. IMPORTS OF FERROSILICON AND SILICON METAL IN FEBRUARY 2019^{1, 2}

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–February ³		
				Gross weight	Contained weight	Value
Metal—Continued:						
99.00%–99.99% silicon:						
Bosnia and Herzegovina	1,430	1,420	\$3,080,000	2,460	2,440	\$5,370,000
Brazil	1,850	1,840	5,050,000	4,810	4,770	13,000,000
Canada	1,640	1,630	4,760,000	5,050	5,010	14,700,000
Iceland	200	199	419,000	740	735	1,560,000
Kazakhstan	450	446	915,000	1,680	1,660	3,430,000
Laos	380	376	943,000	1,100	1,090	2,750,000
Norway	605	601	1,780,000	1,540	1,530	4,500,000
Slovakia	96	95	222,000	96	95	222,000
Total	6,950	6,890	17,900,000	18,700	18,600	49,100,000
Other silicon:						
Australia	144	138	376,000	456	446	1,240,000
Brazil	1,060	1,030	2,750,000	1,520	1,490	4,050,000
Canada	117	112	352,000	233	226	656,000
China	24	23	25,900	24	23	25,900
Iceland	100	99	167,000	100	99	167,000
Kazakhstan	--	--	--	18	18	27,300
Netherlands	109	107	224,000	119	117	257,000
Norway	54	53	74,000	419	410	699,000
South Africa	20	20	35,700	20	20	35,700
United Kingdom	19	18	32,700	38	37	77,700
Other [1 country or locality]	14	13	24,400	14	13	24,400
Total	1,660	1,610	4,060,000	2,960	2,890	7,260,000
Total silicon metal	9,180	9,080	31,600,000	22,800	22,600	74,300,000

-- Zero.

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⁴Less than ½ unit.

Source: U.S. Census Bureau.