

Mineral Industry Surveys

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SILICON IN MARCH 2019

Domestic production of silicon materials was 41,600 metric tons (t) in March 2019, a 17% increase from February 2019 production and 19% less than March 2018 production (fig. 1, table 1). Net shipments were 31,000 t, 6% more than shipments in February 2019 and 6% less than shipments in March 2018. Total production and net shipments during the first 3 months of 2019 were 14% less and 4% more, respectively, than those during the same period in 2018 (table 1).

Ending stocks were 22,100 t in March 2019, 11% more than stocks in February 2019 and 29% less than those in March 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.

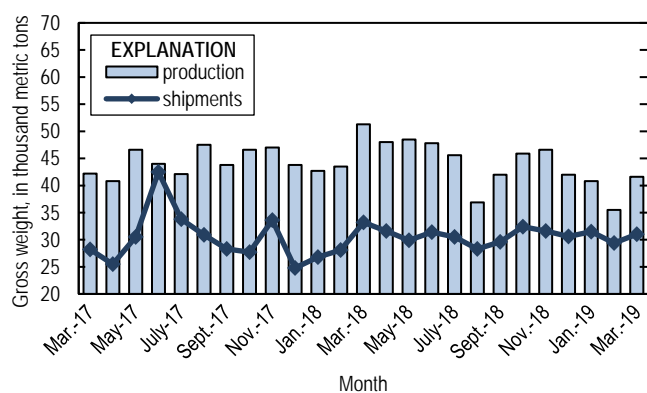


Figure 1. Monthly domestic production of total silicon materials and net shipments from March 2017 through March 2019 (may include revisions to previously published data).

Prices

The average U.S. spot price for silicon metal was 114.13 cents per pound in March 2019, slightly less than the average price in February 2019 and 21% less than that in March 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 February 2019 and were slightly less and 9% less, respectively, than their average prices in March 2018 (fig. 2).

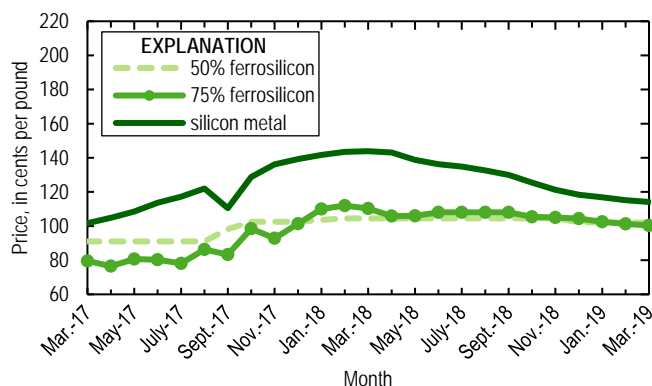


Figure 2. Average monthly spot prices for silicon metal and ferrosilicon 50% and 75% grades, contained silicon, from March 2017 through March 2019. Source: CRU Group and S&P Global Platts.

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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–March	137,000 ^r	88,000 ^r	31,200 ^r
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
March	41,600	31,000	22,100
January–March	118,000	91,900	22,100

^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 MARCH 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.	99.00	100.38	101.00	XX
Silicon metal, 553 grade ³	cents per pound	112.00	114.13	116.00	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, 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 MARCH 2019^{1,2}

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–March ³		
				Gross weight	Contained weight	Value
Ferrosilicon:						
More than 55% silicon:						
Canada	666	399	\$867,000	1,510	906	\$1,950,000
Dominican Republic	--	--	--	39	23	86,200
Germany	--	--	--	62	37	63,000
Mexico	124	76	297,000	461	282	1,030,000
Singapore	1	1	4,860	1	1	4,860
Sweden	140	84	170,000	200	120	242,000
United Kingdom	--	--	--	21	12	30,900
Total	932	560	1,340,000	2,290	1,380	3,410,000
Other ferrosilicon:						
Belgium	20	10	31,000	174	84	224,000
Brazil	--	--	--	59	29	114,000
Canada	23	12	70,400	177	89	163,000
France	20	9	33,200	60	27	99,600
Germany	20	9	35,200	40	19	70,400
Korea, Republic of	80	35	91,200	240	105	274,000
Mexico	216	105	355,000	649	251	1,150,000
Sweden	--	--	--	60	27	101,000
Turkey	60	29	110,000	139	66	249,000
United Kingdom	139	62	224,000	477	214	783,000
Other [2 countries and (or) localities]	53	26	110,000	73	37	141,000
Total	633	298	1,060,000	2,150	948	3,370,000
Total ferrosilicon	1,560	858	2,400,000	4,440	2,330	6,780,000
Metal:						
More than 99.99% silicon:						
China	298	298	4,000,000	1,610	1,610	12,800,000
Germany	534	534	11,300,000	1,960	1,960	28,700,000
Hong Kong	(4)	(4)	5,250	144	144	877,000
Japan	935	935	42,900,000	2,230	2,230	89,000,000
Korea, Republic of	557	557	13,000,000	1,820	1,820	31,900,000
Malaysia	14	14	2,320,000	259	259	9,860,000
Norway	131	131	1,210,000	343	343	2,410,000
Taiwan	190	190	1,200,000	1,140	1,140	15,000,000
United Kingdom	23	23	625,000	88	88	2,300,000
Vietnam	265	265	4,100,000	397	397	6,490,000
Other [24 countries and (or) localities]	24	24	1,360,000	131	131	2,380,000
Total	2,970	2,970	82,000,000	10,100	10,100	202,000,000
99.00%–99.99% silicon:						
Dominican Republic	5	5	6,800	5	5	6,800
Mexico	2	2	5,400	5	5	13,900
United Kingdom	14	14	20,100	33	33	39,800
Total	21	21	32,300	43	43	60,600
Other silicon:						
Australia	2	2	21,800	3	3	28,800
Belgium	103	100	136,000	129	125	169,000
Canada	16	16	51,100	61	59	142,000
China	6	6	7,500	10	10	15,800
Guatemala	--	--	--	2	2	3,130

See footnotes at end of table.

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

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–March ³		
				Gross weight	Contained weight	Value
Metal—Continued:						
Japan	--	--	--	3	3	\$4,290
Korea, Republic of	23	22	\$30,400	23	22	30,400
Mexico	1	1	3,240	28	28	60,000
Netherlands	--	--	--	116	113	154,000
South Africa	(4)	(4)	8,430	11	10	36,600
Other [1 country or locality]	--	--	--	(4)	(4)	4,400
Total	152	147	259,000	387	376	648,000
Total silicon metal	3,140	3,140	82,300,000	10,500	10,500	202,000,000

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

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 MARCH 2019^{1, 2}

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–March ³		
				Gross weight	Contained weight	Value
Ferrosilicon:						
55%–80% silicon, more than 3% Ca:						
Brazil	--	--	--	43	32	\$63,400
China	--	--	--	144	96	345,000
France	54	35	161,000	162	104	448,000
South Africa	18	11	53,600	36	23	96,100
Total	72	46	215,000	385	256	952,000
55%–80% silicon, other:						
Brazil	1,820	1,370	2,390,000	4,300	3,250	5,960,000
Canada	1,020	735	2,400,000	4,200	3,070	8,770,000
China	27	20	44,500	226	168	333,000
France	184	138	1,020,000	712	508	2,910,000
Iceland	748	591	967,000	3,990	3,140	5,380,000
Kazakhstan	1,260	978	1,950,000	4,250	3,280	6,730,000
Malaysia	4,090	3,170	5,280,000	8,020	6,120	10,400,000
Paraguay	1,130	890	1,460,000	2,070	1,640	2,700,000
Russia	15,900	12,000	21,000,000	32,900	24,900	44,100,000
South Africa	216	151	504,000	306	208	721,000
Other [6 countries and (or) localities]	109	78	411,000	464	332	1,510,000
Total	26,500	20,200	37,400,000	61,500	46,600	89,600,000
Magnesium ferrosilicon:						
Argentina	8	4	53,600	27	12	72,400
Canada	883	406	1,620,000	2,740	1,270	5,050,000
China	24	12	54,100	24	12	54,100
Germany	16	3	32,900	16	3	32,900
India	178	39	255,000	629	244	712,000
Norway	--	--	--	74	35	145,000
Thailand	75	34	130,000	75	34	130,000
Total	1,180	497	2,150,000	3,590	1,610	6,190,000
Other ferrosilicon:						
Canada	818	311	936,000	2,540	918	3,040,000
China	--	--	--	9	1	43,900
Germany	--	--	--	3	1	17,200
India	--	--	--	114	44	173,000
Mexico	--	--	--	14	6	23,200
Russia	39	19	77,200	86	42	169,000
Slovakia	2	1	6,590	41	12	69,500
Turkey	--	--	--	22	10	15,500
Total	859	331	1,020,000	2,830	1,040	3,550,000
Total ferrosilicon	28,600	21,000	40,800,000	68,300	49,500	100,000,000
Metal:						
More than 99.99% silicon:						
Brazil	384	384	1,150,000	1,290	1,290	4,010,000
China	1	1	54,800	8	8	1,150,000
Denmark	(4)	(4)	39,200	1	1	512,000
Germany	58	58	3,700,000	144	144	11,400,000
Iceland	7	7	451,000	7	7	451,000
Japan	417	417	18,500,000	438	438	20,300,000
Korea, Republic of	3	3	25,400	4	4	130,000
Norway	24	24	158,000	24	24	158,000
Taiwan	22	22	1,440,000	97	97	5,020,000

See footnotes at end of table.

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

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–March ³		
				Gross weight	Contained weight	Value
Metal—Continued:						
More than 99.99% silicon:						
United Kingdom	--	--	--	1	1	\$10,900
Other [3 countries and (or) localities]	(4)	(4)	\$6,840	1	1	345,000
Total	916	916	25,500,000	2,020	2,020	43,500,000
99.00%–99.99% silicon:						
Australia	177	176	426,000	1,450	1,440	3,930,000
Bosnia and Herzegovina	196	195	428,000	2,650	2,630	5,800,000
Brazil	3,200	3,180	9,110,000	8,010	7,950	22,100,000
Canada	1,890	1,880	5,290,000	6,940	6,890	20,000,000
Iceland	243	241	492,000	983	976	2,050,000
Kazakhstan	483	478	930,000	2,160	2,140	4,370,000
Laos	--	--	--	1,100	1,090	2,750,000
Norway	683	678	1,930,000	2,220	2,210	6,430,000
Slovakia	--	--	--	96	95	222,000
Thailand	2,000	1,990	4,850,000	2,000	1,990	4,850,000
Other [2 countries and (or) localities]	38	38	109,000	38	38	109,000
Total	8,910	8,850	23,600,000	27,600	27,500	72,600,000
Other silicon:						
Australia	792	722	2,100,000	1,250	1,170	3,340,000
Bosnia and Herzegovina	319	303	724,000	319	303	724,000
Brazil	1,050	1,030	2,680,000	2,570	2,520	6,730,000
Canada	--	--	--	233	226	656,000
Iceland	348	343	572,000	448	442	739,000
Japan	46	44	58,100	59	57	82,500
Netherlands	--	--	--	119	117	257,000
Norway	1,290	1,270	2,200,000	1,710	1,680	2,900,000
Slovakia	38	37	64,200	38	37	64,200
Thailand	41	39	93,200	41	39	93,200
Other [5 countries and (or) localities]	(4)	(4)	6,850	100	97	173,000
Total	3,930	3,790	8,500,000	6,890	6,690	15,800,000
Total silicon metal	13,800	13,600	57,600,000	36,600	36,200	132,000,000

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

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.