

Mineral Industry Surveys

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SILICON IN MAY 2019

Domestic production of silicon materials was 37,800 metric tons (t) in May 2019, a slight decrease from April 2019 production and 22% less than May 2018 production (fig. 1, table 1). Net shipments were 25,000 t, 18% less than shipments in April 2019 and 16% less than shipments in May 2018. Total production and net shipments during the first 5 months of 2019 were 17% less and 3% less, respectively, than those during the same period in 2018 (table 1).

Ending stocks were 26,700 t in May 2019, 20% more than stocks in April 2019 and 18% less than those in May 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.

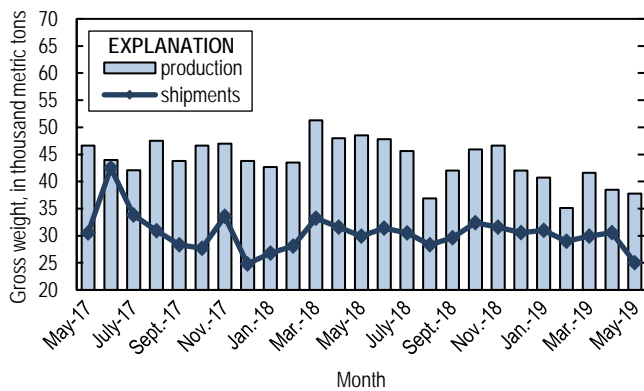


Figure 1. Monthly domestic production of total silicon materials and net shipments from May 2017 through May 2019 (may include revisions to previously published data).

Prices

The average U.S. spot price for silicon metal was 110.2 cents per pound in May 2019, slightly less than the average price in April 2019 and 21% less than that in May 2018. The average U.S. spot prices for ferrosilicon, 50% and 75% grades, were unchanged and 7% less, respectively, when compared with the average prices in April 2019 and were slightly less and 12% less, respectively, than their average prices in May 2018 (fig. 2).

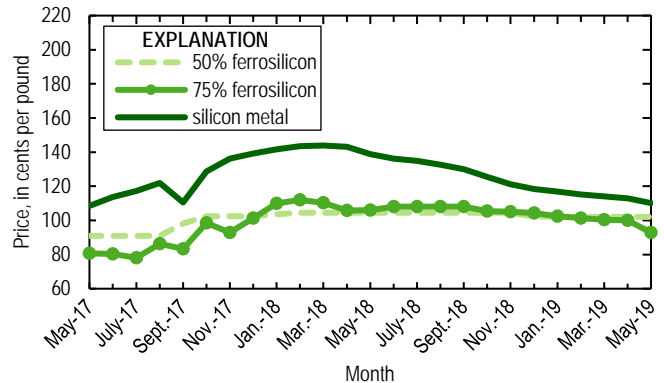


Figure 2. Average monthly spot prices for silicon metal and ferrosilicon 50% and 75% grades, contained silicon, from May 2017 through May 2019. Source: CRU Group and S&P Global Platts.

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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–May	234,000 ^r	149,000 ^r	32,500
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	40,700	31,000	22,900
February	35,100	29,000	19,400
March	41,600	29,900	22,300
April	38,500	30,600	22,300
May	37,800	25,000	26,700
January–May	194,000	145,000	26,700

^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 MAY 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.	92.00	92.90	94.00	XX
Silicon metal, 553 grade ³	cents per pound	108.00	110.20	113.00	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 MAY 2019^{1,2}

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–May ³		
				Gross weight	Contained weight	Value
Ferrosilicon:						
More than 55% silicon:						
Brazil	--	--	--	12	7	\$18,500
Canada	685	411	\$791,000	2,890	1,730	3,840,000
Dominican Republic	--	--	--	39	23	86,200
Germany	--	--	--	62	37	63,000
Mexico	332	202	653,000	875	535	1,880,000
Pakistan	7	4	10,800	7	4	10,800
Singapore	--	--	--	1	1	4,860
Sweden	--	--	--	200	120	242,000
United Kingdom	--	--	--	21	12	30,900
Total	1,020	617	1,450,000	4,100	2,470	6,180,000
Other ferrosilicon:						
Belgium	18	8	12,600	286	135	336,000
Brazil	59	29	114,000	176	88	342,000
Canada	21	11	69,400	203	101	236,000
France	20	9	33,200	100	45	166,000
Korea, Republic of	100	44	114,000	420	185	479,000
Luxembourg	41	20	62,000	80	40	124,000
Mexico	93	39	175,000	854	343	1,550,000
Spain	--	--	--	80	40	141,000
Turkey	40	19	67,500	259	122	454,000
United Kingdom	60	27	100,000	636	286	1,050,000
Other [3 countries and (or) localities]	--	--	--	135	63	250,000
Total	452	206	748,000	3,230	1,450	5,130,000
Total ferrosilicon	1,480	823	2,200,000	7,330	3,920	11,300,000
Metal:						
More than 99.99% silicon:						
China	929	929	9,830,000	3,350	3,350	31,500,000
Germany	525	525	12,300,000	3,000	3,000	50,200,000
Hong Kong	67	67	397,000	354	354	2,120,000
Japan	626	626	19,900,000	3,460	3,460	135,000,000
Korea, Republic of	627	627	7,880,000	3,270	3,270	61,200,000
Malaysia	17	17	2,730,000	290	290	14,900,000
Norway	131	131	1,200,000	571	571	4,510,000
Taiwan	490	490	5,780,000	2,260	2,260	30,500,000
United Kingdom	37	37	337,000	165	165	3,140,000
Vietnam	170	170	2,740,000	1,000	1,000	15,200,000
Other [33 countries and (or) localities]	5	5	792,000	234	234	4,950,000
Total	3,620	3,620	63,800,000	18,000	18,000	353,000,000
99.00%–99.99% silicon:						
Dominican Republic	--	--	--	5	5	6,800
Japan	2	2	2,660	2	2	2,660
Mexico	4	4	10,900	10	10	27,600
United Kingdom	19	19	19,700	91	73	145,000
Total	25	25	33,300	109	90	182,000
Other silicon:						
Australia	--	--	--	3	3	28,800

See footnotes at end of table.

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

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–May ³		
				Gross weight	Contained weight	Value
Metal—Continued:						
Other silicon:						
Belgium	104	101	\$137,000	233	226	\$306,000
Canada	5	5	13,500	88	86	195,000
China	8	8	10,900	32	31	44,600
Japan	2	2	2,820	5	5	7,110
Korea, Republic of	--	--	--	23	22	30,400
Mexico	2	2	25,900	32	31	88,900
Netherlands	60	59	79,600	244	237	287,000
South Africa	--	--	--	11	10	36,600
United Kingdom	(4)	(4)	3,940	4	4	40,800
Other [3 countries and (or) localities]	2	2	18,900	7	7	54,000
Total	184	178	293,000	682	663	1,120,000
Total silicon metal	3,830	3,820	64,100,000	18,800	18,800	354,000,000

-- Zero.

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 MAY 2019^{1,2}

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–May ³		
				Gross weight	Contained weight	Value
Ferrosilicon:						
55%–80% silicon, more than 3% Ca:						
Azerbaijan	48	37	\$50,600	48	37	\$50,600
Brazil	300	225	320,000	391	292	446,000
China	85	51	200,000	229	147	545,000
France	90	55	260,000	306	193	859,000
India	--	--	--	19	12	51,000
South Africa	4	2	8,610	58	36	145,000
Total	527	370	838,000	1,050	718	2,100,000
55%–80% silicon, other:						
Brazil	2,490	1,840	2,950,000	8,170	6,130	10,700,000
Canada	882	638	2,140,000	5,950	4,340	13,000,000
France	198	143	1,610,000	1,020	724	4,920,000
Iceland	499	393	657,000	4,740	3,730	6,390,000
Kazakhstan	200	153	314,000	4,450	3,430	7,050,000
Kuwait	500	384	549,000	500	384	549,000
Malaysia	3,010	2,360	3,770,000	12,200	9,390	15,800,000
Paraguay	653	516	849,000	3,630	2,860	4,720,000
Russia	--	--	--	32,900	24,900	44,100,000
South Africa	178	118	434,000	738	494	1,780,000
Other [7 countries and (or) localities]	220	158	690,000	1,160	844	3,410,000
Total	8,830	6,710	14,000,000	75,500	57,300	112,000,000
80%–90% ferrosilicon, Brazil	232	209	268,000	232	209	268,000
More than 90% ferrosilicon, Brazil	--	--	--	15	14	31,500
Magnesium ferrosilicon:						
Argentina	3	1	17,900	52	24	126,000
Canada	824	378	1,600,000	4,570	2,100	8,530,000
China	--	--	--	24	12	54,100
Germany	--	--	--	19	4	48,600
India	111	53	202,000	768	310	957,000
Norway	--	--	--	74	35	145,000
Thailand	--	--	--	75	34	130,000
Total	938	432	1,820,000	5,590	2,520	9,990,000
Other ferrosilicon:						
Canada	815	272	988,000	4,220	1,490	5,080,000
China	25	11	42,300	34	12	86,200
France	--	--	--	14	6	24,200
Germany	--	--	--	3	1	17,200
India	--	--	--	172	70	260,000
Mexico	--	--	--	14	6	23,200
Russia	39	19	77,200	128	62	251,000
Slovakia	--	--	--	99	27	167,000
Turkey	--	--	--	22	10	15,500
United Kingdom	3	1	23,300	3	1	23,300
Total	882	304	1,130,000	4,710	1,680	5,950,000
Total ferrosilicon	11,400	8,020	18,000,000	87,100	62,400	131,000,000
Metal:						
More than 99.99% silicon:						
Brazil	404	404	1,120,000	2,800	2,800	8,520,000
China	6	6	556,000	18	18	1,820,000
Denmark	(4)	(4)	109,000	2	2	760,000
Germany	39	39	2,160,000	226	226	15,100,000
Iceland	--	--	--	7	7	451,000

See footnotes at end of table.

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

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–May ³		
				Gross weight	Contained weight	Value
Metal—Continued:						
More than 99.99% silicon:						
Japan	28	28	\$1,230,000	508	508	\$23,400,000
Korea, Republic of	(4)	(4)	18,000	4	4	148,000
Norway	--	--	--	26	26	172,000
Taiwan	20	20	1,780,000	137	137	8,250,000
Ukraine	1	1	27,500	1	1	68,400
Other [6 countries and (or) localities]	(4)	(4)	15,100	1	1	361,000
Total	499	499	7,020,000	3,730	3,730	59,000,000
99.00%–99.99% silicon:						
Australia	662	658	1,500,000	2,200	2,180	5,630,000
Bosnia and Herzegovina	440	437	940,000	4,440	4,410	9,630,000
Brazil	1,790	1,780	4,330,000	12,600	12,500	33,900,000
Canada	1,760	1,750	4,850,000	12,200	12,100	34,400,000
Iceland	609	605	1,160,000	2,510	2,490	5,070,000
Kazakhstan	1,600	1,580	2,960,000	4,820	4,780	9,340,000
Laos	720	713	1,710,000	1,840	1,820	4,500,000
Malaysia	324	321	640,000	536	530	1,060,000
Norway	624	620	1,840,000	3,530	3,510	10,200,000
Thailand	--	--	--	2,050	2,040	4,960,000
Other [4 countries and (or) localities]	41	40	92,500	250	248	597,000
Total	8,570	8,510	20,000,000	46,900	46,600	119,000,000
Other silicon:						
Australia	--	--	--	1,340	1,260	3,580,000
Bosnia and Herzegovina	--	--	--	341	324	771,000
Brazil	439	434	1,020,000	3,800	3,720	9,810,000
Canada	--	--	--	233	226	656,000
France	190	182	306,000	190	182	306,000
Iceland	--	--	--	448	442	739,000
Japan	52	50	61,800	183	176	223,000
Netherlands	32	31	105,000	209	203	533,000
Norway	855	839	1,380,000	3,040	2,980	5,050,000
Slovakia	72	70	108,000	148	144	260,000
Other [8 countries and (or) localities]	188	181	305,000	498	479	1,670,000
Total	1,830	1,790	3,280,000	10,400	10,100	23,600,000
Total silicon metal	10,900	10,800	30,300,000	61,100	60,500	202,000,000

-- Zero.

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.