

Mineral Industry Surveys

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SILICON IN JULY 2019

Domestic production of silicon materials was 33,000 metric tons (t) in July 2019, a slight decrease from June 2019 production and 28% less than July 2018 production (fig. 1, table 1). Net shipments were 25,100 t, 6% less than shipments in June 2019 and 18% less than shipments in July 2018. Total production and net shipments during the first 7 months of 2019 were 20% less and 7% less, respectively, than those during the same period in 2018 (table 1).

Ending stocks were 27,700 t in July 2019, slightly less than stocks in June 2019 and 12% less than those in July 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.

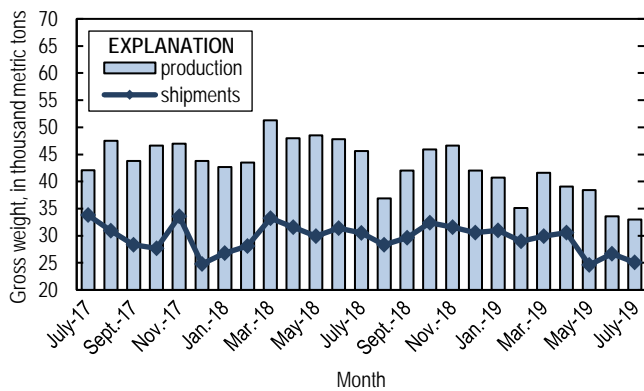


Figure 1. Monthly domestic production of total silicon materials and net shipments from July 2017 through July 2019 (may include revisions to previously published data).

Prices

The average U.S. spot price for silicon metal was 105 cents per pound in July 2019, slightly more than the average price in June 2019 and 22% less than that in July 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 June 2019 and were slightly less and 19% less, respectively, than their average prices in July 2018 (fig. 2).

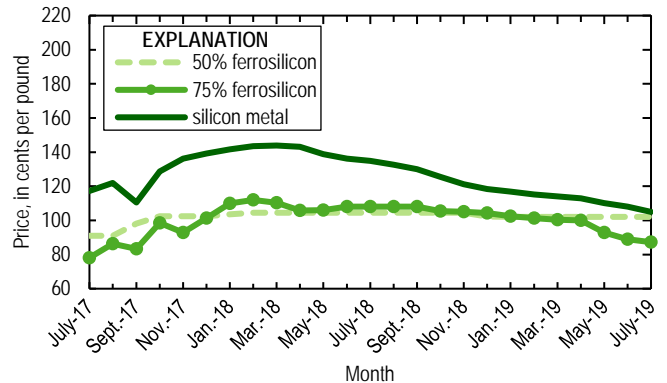


Figure 2. Average monthly spot prices for silicon metal and ferrosilicon 50% and 75% grades, contained silicon, from July 2017 through July 2019. Source: CRU Group and S&P Global Platts.

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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–July	327,000 ^r	211,000 ^r	31,400 ^r
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	39,100 ^r	30,600	23,000 ^r
May	38,400 ^r	24,600 ^r	28,400 ^r
June	33,600 ^r	26,700 ^r	28,200 ^r
July	33,000	25,100	27,700
January–July	262,000	197,000	27,700

^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 JULY 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.	88.00	87.30	90.00	XX
Silicon metal, 553 grade ³	cents per pound	103.00	105.00	108.00	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 JULY 2019^{1,2}

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–July ³		
				Gross weight	Contained weight	Value
Ferrosilicon:						
More than 55% silicon:						
Brazil	12	7	\$18,500	24	14	\$37,000
Canada	469	281	660,000	3,830	2,300	5,260,000
Dominican Republic	--	--	--	39	23	86,200
Germany	--	--	--	62	37	63,000
Hong Kong	237	142	129,000	237	142	129,000
Mexico	154	95	373,000	1,110	677	2,410,000
Pakistan	--	--	--	7	4	10,800
South Africa	95	67	108,000	95	67	108,000
Sweden	--	--	--	200	120	242,000
United Kingdom	--	--	--	21	12	30,900
Other [3 countries and (or) localities]	6	3	9,000	10	6	17,900
Total	972	595	1,300,000	5,630	3,400	8,390,000
Other ferrosilicon:						
Belgium	71	31	68,100	394	181	430,000
Brazil	59	29	114,000	254	127	494,000
Canada	42	21	54,600	253	126	315,000
France	40	18	49,200	140	67	215,000
Korea, Republic of	80	34	91,200	580	253	661,000
Luxembourg	--	--	--	121	60	186,000
Mexico	129	62	285,000	1,190	502	2,200,000
Spain	20	10	35,200	139	70	246,000
Turkey	--	--	--	279	131	490,000
United Kingdom	40	18	64,200	676	304	1,110,000
Other [3 countries and (or) localities]	--	--	--	135	63	250,000
Total	480	225	761,000	4,160	1,880	6,600,000
Total ferrosilicon	1,450	820	2,060,000	9,790	5,290	15,000,000
Metal:						
More than 99.99% silicon:						
China	348	348	2,330,000	3,950	3,950	35,700,000
Germany	426	426	7,120,000	3,760	3,760	66,200,000
Hong Kong	56	56	207,000	515	515	2,920,000
Japan	874	874	31,700,000	5,330	5,330	209,000,000
Korea, Republic of	773	773	17,000,000	4,590	4,590	91,300,000
Malaysia	15	15	2,100,000	323	323	19,700,000
Norway	--	--	--	669	669	5,410,000
Taiwan	152	152	989,000	2,500	2,500	32,300,000
United Kingdom	56	56	387,000	224	224	4,010,000
Vietnam	167	167	2,800,000	1,170	1,170	18,000,000
Other [37 countries and (or) localities]	32	32	1,430,000	307	307	7,770,000
Total	2,900	2,900	66,000,000	23,300	23,300	492,000,000
99.00%–99.99% silicon:						
Dominican Republic	--	--	--	5	5	6,800
France	--	--	--	3	3	3,790
Japan	--	--	--	2	2	2,660
Mexico	3	3	8,000	14	14	35,600
Taiwan	--	--	--	2	2	2,780
United Kingdom	57	39	99,700	149	112	244,000
Total	60	42	108,000	174	137	296,000
Other silicon:						
Australia	(4)	(4)	2,980	5	5	47,300

See footnotes at end of table.

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

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–July ³		
				Gross weight	Contained weight	Value
Metal—Continued:						
Other silicon:						
Belgium	33	32	\$39,900	282	274	\$368,000
Canada	22	21	37,000	123	119	251,000
China	14	14	18,700	60	58	82,000
Japan	--	--	--	9	8	11,300
Korea, Republic of	--	--	--	23	22	30,400
Mexico	1	1	4,150	34	33	96,500
Netherlands	--	--	--	324	315	350,000
South Africa	10	9	12,600	43	42	79,700
United Kingdom	--	--	--	4	4	40,800
Other [5 countries and (or) localities]	2	2	22,800	9	9	79,500
Total	82	80	138,000	916	890	1,440,000
Total silicon metal	3,040	3,020	66,200,000	24,400	24,400	494,000,000

-- 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 JULY 2019^{1,2}

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–July ³		
				Gross weight	Contained weight	Value
Ferrosilicon:						
55%–80% silicon, more than 3% Ca:						
Azerbaijan	--	--	--	48	37	\$50,600
Brazil	--	--	--	691	517	773,000
China	--	--	--	229	147	545,000
France	90	55	\$248,000	414	259	1,160,000
India	--	--	--	19	12	51,000
South Africa	18	11	38,900	76	47	184,000
Total	108	66	287,000	1,480	1,020	2,770,000
55%–80% silicon, other:						
Brazil	1,030	778	1,090,000	11,800	8,900	14,700,000
Canada	818	587	1,900,000	7,700	5,600	17,200,000
France	162	117	989,000	1,250	888	6,110,000
Germany	26	18	132,000	436	313	1,720,000
Iceland	1,330	1,010	1,570,000	7,310	5,700	9,610,000
India	21	16	38,000	358	264	721,000
Malaysia	2,090	1,560	2,320,000	17,200	13,200	21,600,000
Paraguay	1,060	803	1,410,000	5,340	4,170	6,990,000
South Africa	76	58	140,000	980	665	2,260,000
United Kingdom	8	6	50,400	122	94	890,000
Other [7 countries and (or) localities]	--	--	--	55,100	41,800	72,800,000
Total	6,620	4,960	9,650,000	108,000	81,700	155,000,000
80%–90% ferrosilicon, Brazil	51	42	57,600	283	251	325,000
More than 90% ferrosilicon, Brazil	40	38	84,000	95	90	200,000
Magnesium ferrosilicon:						
Argentina	38	17	35,400	166	76	232,000
Canada	855	393	1,520,000	6,410	2,950	11,800,000
China	--	--	--	24	12	54,100
Germany	2	1	10,400	41	11	123,000
India	71	36	96,000	880	364	1,120,000
Norway	27	11	53,000	101	47	198,000
Thailand	--	--	--	75	34	130,000
Total	993	458	1,720,000	7,700	3,490	13,700,000
Other ferrosilicon:						
Canada	592	196	723,000	5,740	2,020	6,890,000
China	--	--	--	34	12	86,200
France	--	--	--	62	28	142,000
Germany	--	--	--	4	2	22,500
India	54	23	79,200	310	131	462,000
Mexico	--	--	--	14	6	23,200
Russia	21	11	42,400	152	74	299,000
Slovakia	59	9	101,000	176	44	297,000
Turkey	--	--	--	22	10	15,500
United Kingdom	--	--	--	3	1	23,300
Other [1 country and locality]	--	--	--	2	1	3,130
Total	726	239	945,000	6,520	2,330	8,270,000
Total ferrosilicon	8,540	5,800	12,700,000	124,000	88,800	180,000,000
Metal:						
More than 99.99% silicon:						
Brazil	109	109	310,000	3,020	3,020	9,150,000
China	2	2	323,000	22	22	2,370,000
Denmark	(4)	(4)	232,000	2	2	1,070,000
Germany	50	50	2,220,000	313	313	19,100,000
Iceland	--	--	--	7	7	451,000

See footnotes at end of table.

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

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–July ³		
				Gross weight	Contained weight	Value
Metal—Continued:						
More than 99.99% silicon:						
Japan	29	29	\$1,390,000	572	572	\$26,600,000
Korea, Republic of	(4)	(4)	90,500	4	4	238,000
Norway	--	--	--	52	52	490,000
Taiwan	14	14	1,690,000	165	165	11,700,000
Ukraine	--	--	--	1	1	71,200
Other [9 countries and (or) localities]	1	1	77,100	3	3	659,000
Total	205	205	6,340,000	4,160	4,160	71,900,000
99.00%–99.99% silicon:						
Australia	177	176	434,000	2,500	2,480	6,330,000
Bosnia and Herzegovina	1,310	1,300	2,690,000	6,580	6,530	14,100,000
Brazil	1,380	1,370	3,410,000	14,500	14,400	38,500,000
Canada	2,640	2,620	7,080,000	18,200	18,100	50,800,000
Iceland	240	238	445,000	3,170	3,150	6,320,000
Kazakhstan	662	656	1,250,000	5,990	5,930	11,500,000
Laos	--	--	--	1,840	1,820	4,500,000
Malaysia	480	477	926,000	1,500	1,480	2,910,000
Norway	644	640	1,900,000	4,800	4,770	14,000,000
Thailand	--	--	--	3,050	3,030	7,440,000
Other [6 countries and (or) localities]	14	14	35,000	336	333	813,000
Total	7,550	7,490	18,200,000	62,500	62,100	157,000,000
Other silicon:						
Australia	96	95	233,000	1,440	1,360	3,820,000
Bosnia and Herzegovina	--	--	--	341	324	771,000
Brazil	1,040	1,020	2,470,000	5,480	5,360	13,800,000
Canada	20	20	17,000	253	246	673,000
France	--	--	--	285	273	459,000
Iceland	--	--	--	480	473	792,000
Japan	38	37	69,300	221	213	294,000
Kazakhstan	162	156	177,000	280	269	410,000
Netherlands	19	19	64,200	228	222	598,000
Norway	799	782	1,260,000	4,390	4,300	7,190,000
Other [8 countries and (or) localities]	96	95	178,000	649	629	1,930,000
Total	2,280	2,220	4,480,000	14,100	13,700	30,700,000
Total silicon metal	10,000	9,910	29,000,000	80,700	79,900	260,000,000

-- 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.