

Mineral Industry Surveys

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SILICON IN AUGUST 2019

Domestic production of silicon materials was 37,400 metric tons (t) in August 2019, a 13% increase from July 2019 production and slightly more than August 2018 production (fig. 1, table 1). Net shipments were 24,000 t, 5% less than shipments in July 2019 and 15% less than shipments in August 2018. Total production and net shipments during the first 8 months of 2019 were 18% less and 8% less, respectively, than those during the same period in 2018 (table 1).

Ending stocks were 30,500 t in August 2019, 10% more than stocks in July 2019 and 19% more than those in August 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.

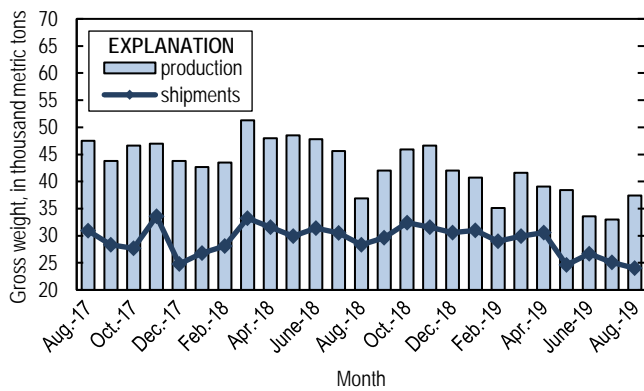


Figure 1. Monthly domestic production of total silicon materials and net shipments from August 2017 through August 2019 (may include revisions to previously published data).

Prices

The average U.S. spot price for silicon metal was 102.13 cents per pound in August 2019, 3% less than the average price in July 2019 and 23% less than that in August 2018. The average U.S. spot prices for ferrosilicon, 50% and 75% grades, were unchanged and 6% less, respectively, when compared with the average prices in July 2019 and were slightly less and 24% less, respectively, than their average prices in August 2018 (fig. 2).

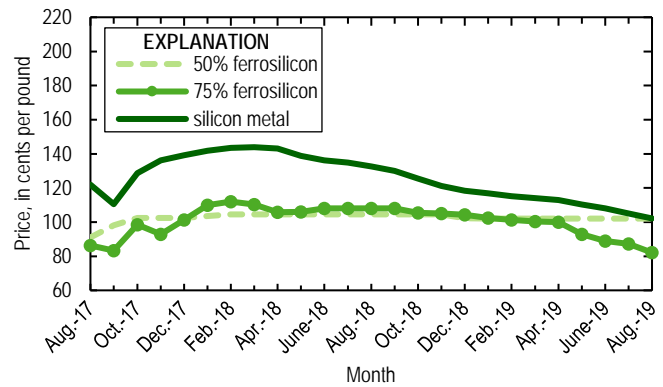


Figure 2. Average monthly spot prices for silicon metal and ferrosilicon 50% and 75% grades, contained silicon, from August 2017 through August 2019. Source: CRU Group and S&P Global Platts.

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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–August	364,000 ^r	240,000 ^r	25,800 ^r
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	30,600	23,000
May	38,400	24,600	28,400
June	33,600	26,700	28,200
July	33,000	25,100	27,700
August	37,400	24,000	30,500
January–August	299,000	221,000	30,500

^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 AUGUST 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.	79.00	82.13	83.00	XX
Silicon metal, 553 grade ³	cents per pound	100.00	102.13	105.00	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 AUGUST 2019^{1,2}

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–August ³		Value
				Gross weight	Contained weight	
Ferrosilicon:						
More than 55% silicon:						
Brazil	--	--	--	24	14	\$37,000
Canada	307	184	\$423,000	4,140	2,480	5,680,000
Dominican Republic	--	--	--	39	23	86,200
Germany	--	--	--	62	37	63,000
Hong Kong	1,330	801	751,000	1,570	943	880,000
Mexico	198	121	377,000	1,300	798	2,780,000
Pakistan	--	--	--	7	4	10,800
South Africa	--	--	--	95	67	108,000
Sweden	--	--	--	200	120	242,000
United Kingdom	--	--	--	21	12	30,900
Other [3 countries and (or) localities]	--	--	--	10	6	17,900
Total	1,840	1,110	1,550,000	7,470	4,510	9,940,000
Other ferrosilicon:						
Belgium	34	16	23,800	428	197	453,000
Brazil	39	20	76,000	293	147	570,000
Canada	16	8	55,300	268	134	370,000
France	20	9	32,300	160	73	247,000
Korea, Republic of	--	--	--	580	253	661,000
Luxembourg	18	2	31,000	139	62	217,000
Mexico	225	68	418,000	1,410	570	2,620,000
Spain	20	10	35,200	160	80	282,000
Turkey	20	9	31,600	299	140	522,000
United Kingdom	60	28	99,800	736	332	1,210,000
Other [4 countries and (or) localities]	95	45	45,700	230	108	296,000
Total	548	214	849,000	4,700	2,100	7,450,000
Total ferrosilicon	2,390	1,320	2,400,000	12,200	6,600	17,400,000
Metal:						
More than 99.99% silicon:						
China	343	343	958,000	4,290	4,290	36,600,000
Germany	354	354	4,310,000	4,110	4,110	70,500,000
Hong Kong	33	33	156,000	547	547	3,080,000
Japan	314	314	15,400,000	5,640	5,640	224,000,000
Korea, Republic of	66	66	1,880,000	4,650	4,650	93,100,000
Malaysia	10	10	1,570,000	332	332	21,300,000
Norway	--	--	--	669	669	5,410,000
Taiwan	49	49	177,000	2,540	2,540	32,400,000
United Kingdom	3	3	479,000	227	227	4,480,000
Vietnam	195	195	2,620,000	1,360	1,360	20,600,000
Other [37 countries and (or) localities]	34	34	274,000	342	342	8,040,000
Total	1,400	1,400	27,900,000	24,700	24,700	520,000,000
99.00%–99.99% silicon:						
China	5	5	7,640	5	5	7,640
Dominican Republic	--	--	--	5	5	6,800
France	3	3	4,390	6	6	8,170
Japan	--	--	--	2	2	2,660
Mexico	--	--	--	14	14	35,600
Taiwan	--	--	--	2	2	2,780
United Kingdom	--	--	--	149	112	244,000
Total	9	8	12,000	182	145	308,000
Other silicon:						
Belgium	--	--	--	282	274	368,000

See footnotes at end of table.

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

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–August ³		Value
				Gross weight	Contained weight	
Metal—Continued:						
Other silicon:						
Canada	31	30	\$56,900	154	149	\$308,000
China	--	--	--	60	58	82,000
France	19	18	16,600	19	18	16,600
Japan	--	--	--	9	8	11,300
Korea, Republic of	--	--	--	23	22	30,400
Mexico	--	--	--	34	33	96,500
Netherlands	44	43	58,500	368	358	409,000
South Africa	14	14	19,100	58	56	98,800
United Kingdom	1	1	8,080	5	5	48,900
Other [7 countries and (or) localities]	1	1	8,380	15	14	135,000
Total	110	107	168,000	1,030	997	1,600,000
Total silicon metal	1,520	1,520	28,000,000	25,900	25,900	522,000,000

-- 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.

Source: U.S. Census Bureau.

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

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–August 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	54	33	\$170,000	468	292	1,330,000
India	--	--	--	19	12	51,000
South Africa	18	11	38,900	94	58	223,000
Total	72	44	209,000	1,550	1,060	2,980,000
55%–80% silicon, other:						
Brazil	750	564	735,000	12,600	9,470	15,500,000
Canada	865	621	2,010,000	8,560	6,220	19,200,000
France	30	20	105,000	1,280	908	6,220,000
Iceland	997	760	1,170,000	8,310	6,460	10,800,000
Kazakhstan	1,520	1,160	2,010,000	5,970	4,580	9,050,000
Kuwait	--	--	--	500	384	549,000
Malaysia	1,120	844	1,260,000	18,400	14,100	22,900,000
Paraguay	388	306	447,000	5,730	4,480	7,430,000
Russia	12,000	9,150	13,600,000	61,600	46,700	77,800,000
South Africa	182	134	369,000	1,160	800	2,630,000
Other [7 countries and (or) localities]	163	122	450,000	1,710	1,250	4,830,000
Total	18,100	13,700	22,200,000	126,000	95,400	177,000,000
80%–90% ferrosilicon, Brazil	--	--	--	283	251	325,000
More than 90% ferrosilicon, Brazil	10	9	21,000	105	100	221,000
Magnesium ferrosilicon:						
Argentina	95	43	92,000	261	119	324,000
Canada	916	420	1,650,000	7,330	3,370	13,500,000
China	--	--	--	24	12	54,100
Germany	--	--	--	41	11	123,000
India	56	26	64,500	936	390	1,190,000
Norway	--	--	--	101	47	198,000
Thailand	--	--	--	75	34	130,000
Total	1,070	489	1,810,000	8,770	3,980	15,500,000
Other ferrosilicon:						
Canada	836	271	1,080,000	6,570	2,290	7,970,000
China	4	2	7,330	38	14	93,500
France	--	--	--	62	28	142,000
Germany	--	--	--	4	2	22,500
India	--	--	--	310	131	462,000
Mexico	--	--	--	14	6	23,200
Russia	23	11	41,900	175	86	341,000
Slovakia	20	3	33,200	196	47	330,000
Turkey	--	--	--	22	10	15,500
United Kingdom	2	1	28,000	5	2	51,300
Other [1 country and locality]	--	--	--	2	1	3,130
Total	885	288	1,190,000	7,400	2,610	9,460,000
Total ferrosilicon	20,100	14,500	25,400,000	144,000	103,000	205,000,000
Metal:						
More than 99.99% silicon:						
Brazil	166	166	453,000	3,190	3,190	9,600,000
China	2	2	390,000	25	25	2,760,000
Denmark	(4)	(4)	145,000	3	3	1,220,000
Germany	41	41	2,470,000	353	353	21,600,000
Iceland	--	--	--	7	7	451,000

See footnotes at end of table.

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

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–August ³		
				Gross weight	Contained weight	Value
Metal—Continued:						
More than 99.99% silicon:						
Japan	29	29	\$1,500,000	601	601	\$28,100,000
Korea, Republic of	--	--	--	4	4	238,000
Norway	--	--	--	52	52	490,000
Taiwan	17	17	2,100,000	182	182	13,800,000
Ukraine	(4)	(4)	5,310	1	1	76,500
Other [10 countries and (or) localities]	(4)	(4)	5,680	3	3	665,000
Total	256	256	7,080,000	4,420	4,420	79,000,000
99.00%–99.99% silicon:						
Australia	370	367	873,000	2,870	2,850	7,200,000
Bosnia and Herzegovina	412	409	867,000	6,990	6,940	15,000,000
Brazil	1,060	1,050	2,510,000	15,600	15,500	41,000,000
Canada	3,030	3,010	8,030,000	21,300	21,100	58,800,000
Iceland	318	316	580,000	3,490	3,460	6,900,000
Kazakhstan	960	951	1,820,000	6,950	6,880	13,400,000
Laos	--	--	--	1,840	1,820	4,500,000
Malaysia	164	162	310,000	1,660	1,650	3,220,000
Norway	624	620	1,840,000	5,430	5,390	15,800,000
Thailand	--	--	--	3,050	3,030	7,440,000
Other [6 countries and (or) localities]	24	24	42,100	359	357	856,000
Total	6,950	6,900	16,900,000	69,500	69,000	174,000,000
Other silicon:						
Australia	--	--	--	1,440	1,360	3,820,000
Bosnia and Herzegovina	--	--	--	341	324	771,000
Brazil	853	830	1,990,000	6,340	6,190	15,800,000
Canada	--	--	--	253	246	673,000
France	--	--	--	285	273	459,000
Iceland	--	--	--	480	473	792,000
Japan	--	--	--	221	213	294,000
Kazakhstan	--	--	--	280	269	410,000
Netherlands	19	18	62,700	247	240	660,000
Norway	740	726	1,240,000	5,130	5,030	8,430,000
Other [9 countries and (or) localities]	67	66	152,000	716	695	2,090,000
Total	1,680	1,640	3,440,000	15,700	15,300	34,200,000
Total silicon metal	8,890	8,800	27,400,000	89,600	88,700	287,000,000

-- 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.