

Mineral Industry Surveys

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SILICON IN JUNE 2020

Domestic production of silicon materials was 24,900 metric tons (t) in June 2020, a 16% decrease from May 2020 production and 26% less than June 2019 production (fig. 1, table 1). Net shipments were 17,000 t, 16% less than shipments in May 2020 and 37% less than shipments in June 2019. Total production and net shipments during the first 6 months of 2020 were 15% less and 18% less, respectively, than those during the same period in 2019 (table 1).

Ending stocks were 26,800 t in June 2020, 6% more than the stocks in May 2020 and 8% less than those in June 2019 (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.

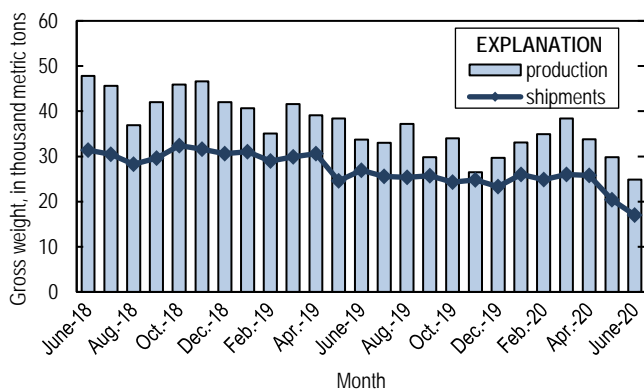


Figure 1. Monthly domestic production of total silicon materials and net shipments from June 2018 through June 2020 (may include revisions to previously published data).

Prices

The average U.S. spot price for silicon metal was 94.38 cents per pound in June 2020, slightly less from the average price in May 2020 and 13% less than that in June 2019. The average U.S. spot price for ferrosilicon, 50% grade, was 104 cents per pound, unchanged since November 2019 and slightly more than the average price in June 2019. The average U.S. spot price for ferrosilicon, 75% grade, was 90.50 cents per pound, 7% less than the average price in May 2020 and slightly more than that in June 2019 (fig. 2).

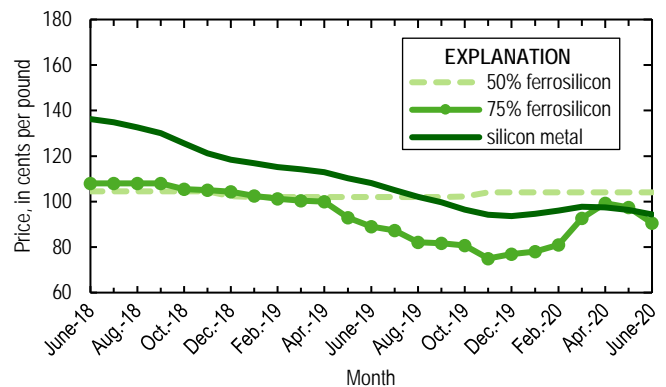


Figure 2. Average monthly spot prices for silicon metal and ferrosilicon 50% and 75% grades, contained silicon, June 2018 through June 2020. Source: CRU Group and S&P Global Platts.

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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
2019:			
January–December	419,000	321,000	18,900
January–June	229,000 ^r	172,000	29,000 ^r
June	33,700	26,900	29,000
July	33,000	25,600	29,000
August	37,200	25,400	31,800
September	29,800	25,700	27,900
October	34,000	24,300	27,800
November	26,500	24,800	22,200
December	29,700	23,300	18,900
2020:			
January	33,100	26,000	16,700
February	34,900	24,900	18,300
March	38,400	26,000	21,800
April	33,800	25,800	21,900
May	29,800	20,400	25,400
June	24,900	17,000	26,800
January–June	195,000	140,000	26,800

^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 JUNE 2020

		Low	Average	High	Average low, mid, and high
Ferrosilicon:					
50% ferrosilicon ¹	cents per pound of contained silicon	103.00	XX	105.00	103.00–104.00–105.00
75% ferrosilicon ²	do.	82.00	90.50	100.00	XX
Silicon metal, 553 grade ³	cents per pound	92.00	94.38	96.00	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 JUNE 2020^{1,2}

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–June ³		
				Gross weight	Contained weight	Value
Ferrosilicon:						
More than 55% silicon:						
Bahamas	--	--	--	1	(4)	\$2,780
Belgium	--	--	--	95	63	93,800
Brazil	--	--	--	12	7	18,500
Canada	51	31	\$84,900	945	567	1,430,000
France	--	--	--	80	48	95,100
Mexico	59	36	112,000	745	458	1,540,000
Netherlands	9	5	18,700	9	5	18,700
Singapore	7	4	10,100	7	4	10,100
South Africa	--	--	--	19	13	14,200
United Kingdom	--	--	--	86	51	134,000
Total	126	76	226,000	2,000	1,220	3,360,000
Other ferrosilicon:						
Belgium	76	35	86,400	238	107	202,000
Brazil	--	--	--	155	78	304,000
Canada	11	5	35,300	240	120	411,000
Finland	--	--	--	20	10	29,800
Japan	--	--	--	2	1	9,400
Mexico	192	79	382,000	677	251	1,290,000
Spain	--	--	--	99	50	157,000
Switzerland	20	9	36,000	100	46	176,000
Turkey	20	9	36,000	60	27	100,000
United Kingdom	--	--	--	80	36	144,000
Total	319	138	575,000	1,670	725	2,830,000
Total ferrosilicon	444	213	801,000	3,670	1,940	6,190,000
Metal:						
More than 99.99% silicon:						
China	50	50	1,420,000	732	732	12,300,000
Estonia	--	--	--	62	62	43,700
Germany	306	306	11,600,000	1,890	1,890	65,300,000
Japan	929	929	47,900,000	4,660	4,660	199,000,000
Korea, Republic of	348	348	11,600,000	2,450	2,450	53,100,000
Malaysia	8	8	1,240,000	61	61	9,720,000
Norway	30	30	300,000	395	395	3,760,000
Singapore	183	183	3,630,000	425	425	8,490,000
Taiwan	100	100	1,830,000	682	682	6,240,000
Vietnam	529	529	5,200,000	1,980	1,980	18,900,000
Other [27 countries and (or) localities]	13	13	658,000	191	191	8,460,000
Total	2,500	2,500	85,400,000	13,500	13,500	386,000,000
99.00%–99.99% silicon:						
Dominican Republic	--	--	--	5	5	6,800
Germany	--	--	--	21	20	22,200
Guatemala	--	--	--	4	4	5,860
Mexico	--	--	--	21	21	40,900
Netherlands	--	--	--	53	48	54,000
Pakistan	--	--	--	5	5	7,400
United Kingdom	--	--	--	117	117	137,000
Total	--	--	--	227	221	274,000
Other silicon:						
Australia	--	--	--	10	9	25,000
Belgium	19	18	26,200	186	181	217,000
Canada	2	2	5,530	57	55	170,000
China	--	--	--	57	55	78,000
France	3	3	4,380	11	11	14,700

See footnotes at end of table.

TABLE 3—Continued
 U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN JUNE 2020^{1,2}

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–June ³		
				Gross weight	Contained weight	Value
Metal—Continued:						
Korea, Republic of	--	--	--	29	28	\$72,900
Mexico	1	1	\$4,380	27	27	98,300
Netherlands	81	79	85,500	138	134	123,000
South Africa	--	--	--	18	17	41,700
United Kingdom	1	1	6,470	78	76	94,100
Other [8 countries and (or) localities]	6	6	8,450	28	28	76,800
Total	113	110	141,000	640	622	1,010,000
Total silicon metal	2,610	2,610	85,600,000	14,400	14,400	387,000,000

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 JUNE 2020^{1, 2}

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–June ³		
				Gross weight	Contained weight	Value
Ferrosilicon:						
55%–80% silicon, more than 3% Ca:						
China	--	--	--	80	43	\$179,000
France	36	22	\$103,000	178	110	475,000
South Africa	--	--	--	72	48	142,000
Total	36	22	103,000	330	202	796,000
55%–80% silicon, other:						
Brazil	2,330	1,740	2,360,000	9,720	7,290	10,500,000
Canada	675	497	1,410,000	6,060	4,460	11,600,000
Iceland	665	525	863,000	5,540	4,370	5,990,000
Kazakhstan	1,550	1,190	2,250,000	7,540	5,780	10,200,000
Malaysia	198	149	203,000	7,070	5,480	6,890,000
Netherlands	--	--	--	3,400	2,590	3,760,000
Norway	443	350	667,000	1,140	902	1,670,000
Paraguay	280	215	294,000	2,770	2,150	3,520,000
Russia	480	365	528,000	18,900	14,300	20,600,000
South Africa	90	64	159,000	1,050	753	1,570,000
Other [5 countries and (or) localities]	67	48	239,000	791	552	2,600,000
Total	6,780	5,150	8,980,000	63,900	48,700	78,900,000
80%–90% ferrosilicon, Brazil	46	38	56,100	326	269	556,000
Magnesium ferrosilicon:						
Argentina	38	17	37,000	342	155	319,000
Brazil	34	17	47,600	204	95	234,000
Canada	659	303	1,150,000	4,410	2,030	7,830,000
Germany	16	6	40,500	31	11	86,200
India	46	21	65,000	154	69	233,000
Norway	24	12	47,000	73	35	141,000
Total	817	376	1,390,000	5,220	2,390	8,840,000
Other ferrosilicon:						
Brazil	--	--	--	216	93	248,000
Canada	489	163	604,000	4,230	1,480	5,100,000
China	28	12	48,100	135	60	232,000
France	--	--	--	18	8	44,400
Germany	--	--	--	9	3	36,000
India	--	--	--	73	32	103,000
Russia	19	9	36,100	102	48	205,000
Slovakia	39	12	60,900	214	60	283,000
Spain	--	--	--	1	1	4,910
United Kingdom	--	--	--	5	2	39,100
Total	575	197	749,000	5,010	1,790	6,290,000
Total ferrosilicon	8,260	5,780	11,300,000	74,800	53,300	95,300,000
Metal:						
More than 99.99% silicon:						
Brazil	82	82	198,000	522	522	1,370,000
China	3	3	359,000	39	39	4,590,000
Denmark	(4)	(4)	48,700	1	1	255,000
Germany	11	11	1,530,000	129	129	14,000,000
Japan	2	2	462,000	97	97	6,460,000
Korea, Republic of	(4)	(4)	7,200	1	1	97,600
Laos	--	--	--	36	36	792,000
Norway	14	14	120,000	31	31	314,000
Taiwan	23	23	2,600,000	120	120	13,700,000

See footnotes at end of table.

TABLE 4—Continued
U.S. IMPORTS OF FERROSILICON AND SILICON METAL IN JUNE 2020^{1, 2}

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–June ³		
				Gross weight	Contained weight	Value
Metal—Continued:						
More than 99.99% silicon:						
United Kingdom	(4)	(4)	\$3,270	3	3	\$18,800
Other [6 countries and (or) localities]	(4)	(4)	30,400	2	2	128,000
Total	136	136	5,360,000	981	981	41,700,000
99.00%–99.99% silicon:						
Australia	96	95	212,000	1,010	1,010	2,200,000
Bosnia and Herzegovina	654	649	1,290,000	4,620	4,580	8,200,000
Brazil	1,060	1,050	2,450,000	6,240	6,190	14,500,000
Canada	1,050	1,050	2,400,000	8,890	8,830	21,100,000
Iceland	--	--	--	1,650	1,640	2,640,000
Kazakhstan	--	--	--	805	799	1,260,000
Laos	--	--	--	720	713	1,580,000
Malaysia	312	309	488,000	4,210	4,180	6,570,000
Norway	960	954	2,550,000	3,900	3,870	10,400,000
South Africa	20	20	29,400	380	376	487,000
Other [3 countries and (or) localities]	--	--	--	56	56	103,000
Total	4,150	4,120	9,420,000	32,500	32,200	69,000,000
Other silicon:						
Australia	301	289	575,000	2,340	2,270	4,650,000
Brazil	979	957	1,990,000	5,150	4,910	10,800,000
Canada	--	--	--	216	208	515,000
Iceland	--	--	--	183	181	273,000
Japan	47	45	56,200	117	112	169,000
Malaysia	--	--	--	120	118	218,000
Netherlands	--	--	--	121	116	381,000
Norway	120	118	163,000	2,700	2,640	3,740,000
South Africa	--	--	--	140	138	241,000
Sweden	--	--	--	141	136	154,000
Other [6 countries and (or) localities]	19	18	42,400	219	210	360,000
Total	1,470	1,430	2,830,000	11,400	11,000	21,500,000
Total silicon metal	5,750	5,680	17,600,000	44,900	44,300	132,000,000

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

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⁴Less than ½ unit.

Source: U.S. Census Bureau.