

# Mineral Industry Surveys

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## SILICON IN JUNE 2021

Domestic production of silicon materials was 34,100 metric tons (t) in June 2021, 6% less than May 2021 production and 33% more than June 2020 production (fig. 1, table 1). Net shipments were 27,200 t, 16% more than shipments in May 2021 and 41% more than shipments in June 2020. Total production and net shipments during the first 6 months of 2021 were slightly more and essentially unchanged, respectively, than those during the same period in 2020 (table 1).

Ending stocks were 19,700 t in June 2021, 5% less than ending stocks in May 2021 and 24% less than those in June 2020 (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.

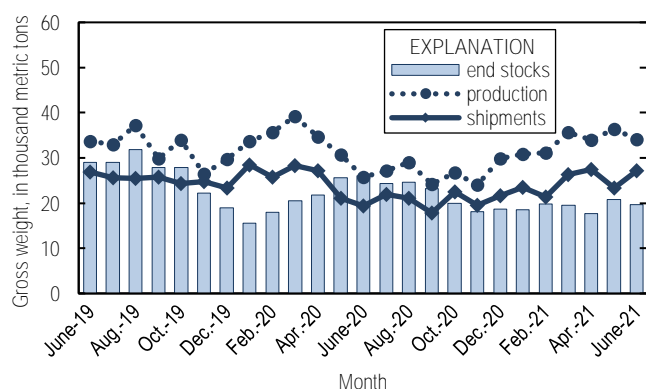


Figure 1. Monthly domestic production of total silicon materials, net shipments, and end stocks from June 2019 through June 2021 (may include revisions to previously published data).

## Prices

The average U.S. spot price for silicon metal was 157.10 cents per pound in June 2021, slightly more than the average price in May 2021 and 66% more than the average price in June 2020. The average U.S. spot price for ferrosilicon, 50% grade, was 126.00 cents per pound, 13% more than the average price in May 2021 and 21% more than the average price in June 2020. The average U.S. spot price for ferrosilicon, 75% grade, was 151.80 cents per pound, 14% more than the average price in May 2021 and 68% more than that in June 2020 (fig. 2).

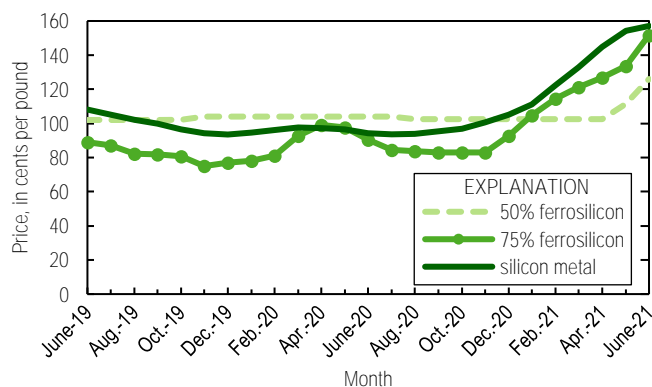


Figure 2. Average monthly spot prices for silicon metal and ferrosilicon 50% and 75% grades, contained silicon, from June 2019 through June 2021. Source: CRU Group and S&P Global Platts Metals Week.

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TABLE 1  
PRODUCTION, SHIPMENTS, AND STOCKS OF SILICON ALLOYS  
AND METAL IN THE UNITED STATES<sup>1, 2, 3</sup>

(Metric tons, gross weight)

	Gross production <sup>4</sup>	Net shipments	Producers' stocks, end of period
2020:			
January–December	360,000	275,000	18,600
January–June	200,000 <sup>r</sup>	150,000 <sup>r</sup>	26,000 <sup>r</sup>
June	25,700	19,300	26,000
July	27,100	21,900	24,300
August	29,000	21,000	24,600
September	24,200	17,800	23,200
October	26,800	22,500	20,000
November	24,000	19,500	18,100
December	29,800	21,700	18,600
2021:			
January	30,900	23,500	18,500
February	31,100	21,400	19,800
March	35,700	26,300	19,500
April	33,900	27,400	17,600
May	36,400	23,400	20,800
June	34,100	27,200	19,700
January–June	202,000	149,000	19,700

<sup>r</sup>Revised.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Includes ferrosilicon, miscellaneous silicon alloys, and silicon metal, excluding semiconductor and solar grades, except where noted.

<sup>3</sup>Includes USGS estimates.

<sup>4</sup>Ferrosilicon production includes material consumed in the production of miscellaneous silicon alloys.

TABLE 2  
PRICES FOR FERROSILICON AND SILICON METAL IN JUNE 2021

		Low	Average	High	Average low, mid, and high
Ferrosilicon:					
50% ferrosilicon <sup>1</sup>	cents per pound of contained silicon	125.00	XX	127.00	125.00–126.00–127.00
75% ferrosilicon <sup>2</sup>	do.	142.00	151.80	158.00	XX
Silicon metal, 553 grade <sup>3</sup>	cents per pound	153.00	157.10	160.00	XX

do. Ditto. XX Not applicable.

<sup>1</sup>CRU Group transaction price, duty paid, f.o.b. Pittsburgh, producing plant or Chicago/Pittsburgh warehouse. Average price reported for price range.

<sup>2</sup>S&P Global Platts Metals Week, in U.S. warehouse, U.S. origin and imported material. Average price reported for all transactions during the month.

<sup>3</sup>S&P Global Platts Metals, 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 2021<sup>1,2</sup>

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–June <sup>3</sup>		
				Gross weight	Contained weight	Value
Ferrosilicon:						
More than 55% silicon:						
Brazil	12	7	\$18,500	19	11	\$29,600
Canada	210	126	334,000	1,980	1,190	3,450,000
Colombia	--	--	--	2	1	9,360
India	--	--	--	3	2	4,180
Mexico	139	92	327,000	742	469	1,580,000
Poland	--	--	--	3	2	5,310
Total	360	225	679,000	2,750	1,680	5,080,000
Other ferrosilicon:						
Belgium	96	45	119,000	403	182	365,000
Brazil	38	19	76,000	364	182	722,000
Canada	14	7	51,800	98	49	323,000
Luxembourg	--	--	--	40	9	30,700
Mexico	292	144	564,000	1,820	893	3,540,000
Spain	20	10	31,300	158	79	248,000
Sweden	--	--	--	100	45	186,000
Switzerland	20	9	35,700	240	106	418,000
Turkey	40	18	70,200	280	127	506,000
United Kingdom	60	27	113,000	218	98	395,000
Other [4 countries and (or) localities]	5	3	8,820	50	24	74,600
Total	584	281	1,070,000	3,770	1,790	6,810,000
Total ferrosilicon	945	506	1,750,000	6,520	3,470	11,900,000
Metal:						
More than 99.99% silicon:						
China	540	540	9,630,000	1,870	1,870	37,800,000
Germany	394	394	9,230,000	3,070	3,070	68,100,000
Japan	2,730	2,730	70,000,000	11,900	11,900	231,000,000
Korea, Republic of	296	296	7,600,000	2,750	2,750	61,300,000
Malaysia	381	381	8,670,000	1,290	1,290	28,300,000
Netherlands	--	--	--	315	315	409,000
Norway	165	165	3,870,000	669	669	14,900,000
Singapore	136	136	2,820,000	824	824	17,100,000
Taiwan	327	327	6,100,000	4,090	4,090	33,300,000
Vietnam	314	314	4,040,000	2,660	2,660	31,900,000
Other [32 countries and (or) localities]	30	30	1,440,000	308	308	9,850,000
Total	5,320	5,320	123,000,000	29,700	29,700	534,000,000
99.00%–99.99% silicon:						
China	--	--	--	12	12	16,900
France	--	--	--	34	34	48,200
Germany	101	100	164,000	128	127	235,000
Ireland	--	--	--	2	2	2,770
Japan	--	--	--	6	6	7,870
Korea, Republic of	--	--	--	40	39	42,100
Mauritania	--	--	--	3	3	4,220
Mexico	2	2	3,320	19	19	36,000
Netherlands	--	--	--	73	72	78,200
Singapore	--	--	--	2	2	3,330
Total	103	103	167,000	318	315	475,000
Other silicon:						
Belgium	--	--	--	161	157	213,000
Canada	3	3	11,300	40	39	133,000
China	10	10	13,600	125	122	165,000
Germany	--	--	--	28	28	45,400
Japan	--	--	--	37	36	279,000
Mexico	1	1	6,330	13	13	65,000
Netherlands	--	--	--	128	124	157,000

See footnotes at end of table.

TABLE 3—Continued  
U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN JUNE 2021<sup>1,2</sup>

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–June <sup>3</sup>		
				Gross weight	Contained weight	Value
Metal—Continued:						
Other silicon:						
South Africa	24	23	\$31,900	48	47	\$76,600
Taiwan	--	--	--	57	54	230,000
United Kingdom	10	10	13,600	48	47	67,100
Other [11 countries and (or) localities]	1	1	15,600	22	21	85,300
Total	50	49	92,400	708	687	1,520,000
Total silicon metal	5,470	5,470	124,000,000	30,800	30,700	536,000,000

-- Zero.

<sup>1</sup>Presentation of monthly data is based on the quantities (gross weight) of the leading countries and (or) localities.

<sup>2</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>3</sup>May include revisions to previously published data.

Source: U.S. Census Bureau.

TABLE 4  
U.S. IMPORTS OF FERROSILICON AND SILICON METAL IN JUNE 2021<sup>1,2</sup>

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–June <sup>3</sup>		
				Gross weight	Contained weight	Value
Ferrosilicon:						
55%–80% silicon, more than 3% Ca:						
China	--	--	--	100	65	\$221,000
France	90	53	\$264,000	252	151	712,000
Russia	8	4	19,600	8	4	19,600
South Africa	--	--	--	18	12	25,100
Total	98	57	283,000	378	232	978,000
55%–80% silicon, other:						
Brazil	1,690	1,270	2,130,000	9,090	6,870	10,200,000
Canada	1,080	781	2,290,000	6,190	4,500	13,000,000
France	195	134	531,000	846	587	2,190,000
Iceland	582	446	1,100,000	3,990	3,080	6,090,000
Kazakhstan	1,410	1,080	2,970,000	9,930	7,640	17,100,000
Malaysia	1,540	1,150	2,220,000	7,240	5,440	8,980,000
Norway	--	--	--	2,410	1,870	3,140,000
Paraguay	150	107	160,000	1,680	1,260	1,980,000
Russia	16,900	12,900	32,900,000	40,700	30,900	70,400,000
South Africa	288	204	450,000	1,280	925	2,140,000
Other [8 countries and (or) localities]	124	91	255,000	817	603	2,320,000
Total	24,000	18,100	45,000,000	84,200	63,700	138,000,000
80%–90% ferrosilicon, Germany	--	--	--	27	22	25,500
More than 90% ferrosilicon, China	--	--	--	15	14	59,100
Magnesium ferrosilicon:						
Argentina	57	26	57,800	209	80	185,000
Brazil	163	63	191,000	579	251	711,000
Canada	1,030	475	1,790,000	5,930	2,730	10,200,000
China	--	--	--	34	17	70,100
Germany	--	--	--	42	16	93,100
India	26	12	43,100	232	106	403,000
Panama	--	--	--	49	22	36,700
South Africa	--	--	--	130	61	85,200
Total	1,270	575	2,080,000	7,210	3,290	11,800,000
Other ferrosilicon:						
Canada	864	259	1,120,000	3,910	1,260	5,090,000
China	34	15	51,400	58	26	83,900
France	--	--	--	20	10	61,200
Germany	--	--	--	4	2	20,900
Mexico	--	--	--	2	1	4,200
Russia	27	13	60,900	103	49	210,000
Slovakia	123	35	210,000	200	58	346,000
South Africa	51	8	74,700	85	11	125,000
Spain	--	--	--	25	11	42,500
Total	1,100	330	1,520,000	4,410	1,430	5,990,000
Total ferrosilicon	26,400	19,100	48,900,000	96,200	68,700	156,000,000
Metal:						
More than 99.99% silicon:						
Brazil	128	128	301,000	652	652	1,590,000
China	1	1	426,000	25	25	1,930,000
Germany	55	55	5,000,000	267	267	23,800,000
Japan	29	29	1,500,000	94	94	6,260,000
Malaysia	--	--	--	86	86	994,000
Norway	1	1	3,150	6	6	90,000
Taiwan	86	86	8,720,000	261	261	24,300,000
Ukraine	1	1	22,000	2	2	150,000
United Kingdom	--	--	--	2	2	12,600
Vietnam	--	--	--	49	49	121,000
Other [8 countries and (or) localities]	(4)	(4)	24,200	3	3	630,000
Total	300	302	16,000,000	1,450	1,450	59,800,000
99.00%–99.99% silicon:						
Australia	361	359	874,000	2,180	2,170	5,010,000

See footnotes at end of table.

TABLE 4—Continued  
U.S. IMPORTS OF FERROSILICON AND SILICON METAL IN JUNE 2021<sup>1,2</sup>

(Metric tons, unless otherwise specified)

Country or locality	January–June <sup>3</sup>					
	Gross weight	Contained weight	Value	Gross weight	Contained weight	Value
Metal—Continued:						
99.00%–99.99% silicon:						
Brazil	2,850	2,820	\$6,680,000	11,000	11,000	\$23,000,000
Canada	2,850	2,830	6,700,000	15,200	15,100	36,100,000
China	--	--	--	5	5	11,100
Germany	--	--	--	11	11	32,900
Malaysia	--	--	--	96	95	151,000
Norway	1,150	1,150	3,170,000	4,430	4,410	11,300,000
Switzerland	--	--	--	20	20	53,400
Thailand	440	436	1,110,000	2,120	2,100	5,080,000
Vietnam	--	--	--	44	44	108,000
Other [1 country or locality]	--	--	--	(4)	(4)	2,320
Total	7,650	7,600	18,500,000	35,200	35,000	80,900,000
Other silicon:						
Australia	353	348	874,000	1,760	1,710	3,890,000
Brazil	413	407	966,000	2,950	2,900	6,590,000
Canada	2	2	2,500	49	48	125,000
France	--	--	--	68	65	118,000
Germany	--	--	--	224	217	670,000
Japan	(4)	(4)	8,400	87	84	110,000
Netherlands	--	--	--	83	79	236,000
Norway	381	373	634,000	2,970	2,870	4,820,000
South Africa	--	--	--	48	47	84,000
Thailand	--	--	--	336	331	602,000
Other [5 countries and (or) localities]	3	3	20,700	87	84	192,000
Total	1,150	1,130	2,510,000	8,660	8,440	17,400,000
Total silicon metal	9,100	9,030	37,000,000	45,300	44,800	158,000,000

-- Zero.

<sup>1</sup>Presentation of monthly data is based on the quantities (gross weight) of the leading countries and (or) localities.

<sup>2</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>3</sup>May include revisions to previously published data.

<sup>4</sup>Less than ½ unit.

Source: U.S. Census Bureau.