

Mineral Industry Surveys

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SILICON IN JUNE 2016

Domestic production of silicon materials was 43,700 metric tons (t) in June 2016, a 5% increase from May 2016 production and a 4% decrease from June 2015 production (fig. 1, table 1). Net shipments were 29,800 t, an 8% increase from shipments in May 2016 and a 6% decrease from shipments in June 2015. Total production and net shipments during the first 6 months of 2016 were 8% less and 4% less, respectively, than those during the same period in 2015 (table 1).

Ending stocks were 45,600 t in June 2016, slightly less than those in May 2016 and 11% more than those in June 2015 (table 1). Adjustments in stocks included in-plant consumption of ferrosilicon to produce magnesium ferrosilicon and other miscellaneous alloys.

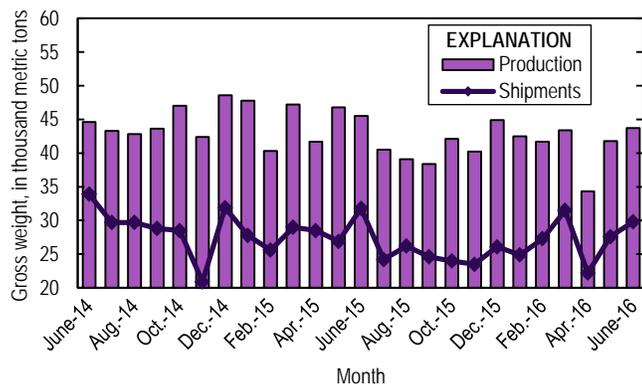


Figure 1. Monthly domestic production of total silicon materials and net shipments from June 2014 through June 2016 (may include revisions to previously published data). Source: U.S. Geological Survey.

The average U.S. spot price for silicon metal was 88.6 cents per pound in June 2016, a slight increase from the average price in May 2016, and 31% less than the June 2015 price. The average U.S. spot prices for ferrosilicon, 50% and 75% grades, were the same and slightly more, respectively, than the average prices in May 2016 and were 19% and 22% less, respectively, than their average prices in June 2015 (fig. 2).

All comparative statistics were calculated based on unrounded, gross-weight figures.

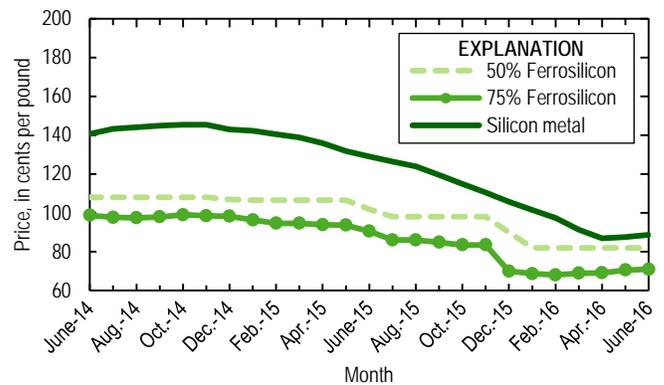


Figure 2. Average monthly prices for silicon metal and ferrosilicon 50% and 75% grades, contained silicon, from June 2014 through June 2016. Source: CRU Ryan's Notes and Platts Metals Week.

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TABLE 1
PRODUCTION, SHIPMENTS, AND STOCKS OF SILICON ALLOYS
AND METAL IN THE UNITED STATES^{1,2}

(Metric tons, gross weight)

	Gross production ³	Net shipments	Producers' stocks, end of period
2015:^p			
January–December	514,000	318,000	45,100
January–June	269,000 ^r	170,000	41,000 ^r
June	45,500	31,800	41,000
July	40,500	24,200	41,600
August	39,100	26,200	38,900
September	38,400	24,600	37,800
October	42,100	24,000	40,400
November	40,200	23,500	43,100
December	44,900	26,100	45,100
2016:			
January	42,500	24,900	48,900
February	41,700	27,300	50,800
March	43,400	31,500	45,100
April	34,300	22,200	45,800
May	41,800	27,600	46,200
June	43,700	29,800	45,600
January–June	247,000	163,000	45,600

^pPreliminary. ^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.

³Ferrosilicon production includes material consumed in the production of miscellaneous silicon alloys.

TABLE 2
PRICES FOR FERROSILICON AND SILICON METAL IN JUNE 2016

	Low	Average	High	Average low, mid, and high
Ferrosilicon:				
50% ferrosilicon ¹	80.00	XX	84.00	80.00–82.00–84.00
75% ferrosilicon ²	70.00	70.90	73.00	XX
Silicon metal, 553 grade ³	86.00	88.60	91.00	XX

do. Ditto. XX Not applicable.

¹CRU Ryan's Notes, North American transaction price, duty paid, f.o.b. Pittsburgh, producing plant or Chicago/Pittsburgh warehouse. Average price reported for price range.

²Platts Metals Week, in U.S. warehouse, U.S. origin and imported material. Average prices reported for all transactions during the month.

³Platts Metals Week, 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 2016^{1,2}

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	January–June ³		
				Gross weight	Contained weight	Value
Ferrosilicon:						
More than 55% silicon:						
Brazil	3	2	\$9,860	21	12	\$41,600
Canada	235	141	366,000	912	547	1,420,000
Colombia	--	--	--	8	6	23,800
France	120	84	75,100	120	84	75,100
Hong Kong	4	2	6,000	4	2	6,000
Mexico	254	153	558,000	1,700	1,020	3,800,000
Singapore	--	--	--	9	6	19,900
Turkey	18	12	21,400	18	12	21,400
United Kingdom	23	13	21,600	223	162	176,000
Total	657	407	1,060,000	3,010	1,850	5,580,000
Other ferrosilicon:						
Belgium	40	18	60,600	260	120	391,000
Brazil	18	9	79,800	154	70	370,000
Canada	191	96	256,000	979	489	1,080,000
Japan	--	--	--	108	52	195,000
Korea, Republic of	60	26	63,300	360	159	388,000
Mexico	331	166	754,000	1,360	664	3,010,000
Netherlands	60	25	30,800	240	102	123,000
Thailand	--	--	--	120	54	228,000
Turkey	80	37	134,000	719	328	1,150,000
United Kingdom	--	--	--	140	64	233,000
Other (11 countries)	143	67	243,000	286	135	512,000
Total	923	444	1,620,000	4,720	2,240	7,680,000
Total ferrosilicon	1,580	851	2,680,000	7,730	4,090	13,300,000
Metal:						
More than 99.99% silicon:						
China	286	286	4,510,000	1,290	1,290	33,800,000
Germany	99	99	3,010,000	564	564	11,800,000
Hong Kong	271	271	1,820,000	2,110	2,110	16,600,000
Italy	74	74	2,300,000	235	235	7,210,000
Japan	1,150	1,150	57,200,000	6,440	6,440	322,000,000
Korea, Republic of	397	397	12,300,000	1,750	1,750	53,900,000
Malaysia	103	103	4,580,000	332	332	20,000,000
Norway	83	83	2,450,000	349	349	7,500,000
Taiwan	2,220	2,220	36,800,000	6,610	6,610	95,200,000
United Kingdom	104	104	2,080,000	129	129	6,050,000
Other (30 countries)	7	7	162,000	403	403	11,400,000
Total	4,790	4,790	127,000,000	20,200	20,200	585,000,000
99.00%–99.99% silicon:						
Austria	--	--	--	20	20	28,400
Brazil	--	--	--	2	2	4,950
China	--	--	--	3	3	3,590
Germany	3	3	3,630	323	320	817,000
Israel	8	8	11,700	8	8	11,700
Korea, Republic of	2	2	2,610	2	2	2,610
Mexico	2	2	5,760	10	9	26,900
Netherlands	281	279	463,000	281	279	463,000
Taiwan	--	--	--	2	2	2,780
United Kingdom	--	--	--	6	6	8,640
Total	295	293	487,000	656	651	1,370,000

See footnotes at end of table.

TABLE 3—Continued
 U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN JUNE 2016^{1,2}

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	January–June ³		
				Gross weight	Contained weight	Value
Metal—Continued:						
Other silicon:						
Belgium	213	206	\$256,000	673	654	\$799,000
Canada	28	27	62,700	338	328	704,000
China	11	10	14,000	70	67	114,000
Germany	14	13	17,900	41	40	69,500
Hong Kong	--	--	--	26	25	98,700
Korea, Republic of	5	5	30,800	21	20	68,500
Mexico	6	6	10,600	195	189	305,000
South Africa	14	14	45,400	50	49	101,000
Taiwan	--	--	--	24	24	226,000
United Kingdom	--	--	--	71	69	137,000
Other (6 countries)	--	--	--	33	32	105,000
Total	290	282	438,000	1,540	1,500	2,730,000
Total silicon metal	5,380	5,370	128,000,000	22,400	22,400	589,000,000

-- Zero.

¹Presentation of monthly data is based on the "January–June" 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 JUNE 2016^{1,2}

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	January–June ³		
				Gross weight	Contained weight	Value
Ferrosilicon:						
55%–80% silicon, more than 3% Ca:						
Brazil	340	258	\$318,000	3,870	2,930	\$3,830,000
China	33	24	66,400	1,040	789	954,000
France	54	32	163,000	355	216	1,040,000
South Africa	252	170	615,000	612	420	1,350,000
Vietnam	--	--	--	79	59	77,000
Total	679	484	1,160,000	5,960	4,410	7,260,000
55%–80% silicon, other:						
Brazil	3,070	2,310	2,810,000	20,900	15,700	18,500,000
Canada	1,130	835	2,360,000	7,430	5,460	14,600,000
China	311	242	320,000	2,430	1,830	2,370,000
France	108	71	275,000	719	487	2,010,000
Iceland	1,570	1,180	1,500,000	8,510	6,470	7,740,000
Ireland	--	--	--	1,500	1,120	1,280,000
Malaysia	--	--	--	690	513	728,000
Norway	989	749	921,000	4,550	3,490	4,380,000
Russia	1,010	759	858,000	17,800	13,600	16,900,000
Venezuela	--	--	--	12,900	9,700	11,800,000
Other (6 countries)	118	84	514,000	842	606	2,450,000
Total	8,310	6,230	9,550,000	78,300	59,000	82,800,000
80%–90% ferrosilicon, Germany	--	--	--	87	72	117,000
More than 90% ferrosilicon:						
Brazil	--	--	--	845	773	851,000
China	24	22	7,300	40	35	26,700
Total	24	22	7,300	885	808	877,000
Magnesium ferrosilicon:						
Argentina	76	35	83,300	984	455	407,000
Canada	1,430	645	2,660,000	7,460	3,370	13,900,000
China	--	--	--	123	56	191,000
France	--	--	--	39	15	94,700
Germany	9	4	21,400	64	27	96,100
India	128	45	215,000	128	45	215,000
Norway	27	13	59,400	711	335	1,320,000
Total	1,670	742	3,040,000	9,500	4,300	16,300,000
Other ferrosilicon:						
Australia	--	--	--	6	1	5,670
Canada	1,040	271	1,100,000	5,460	1,930	5,900,000
China	137	62	190,000	610	265	815,000
Germany	33	13	98,400	66	27	184,000
India	--	--	--	78	32	109,000
Italy	--	--	--	20	3	26,500
New Zealand	--	--	--	3	1	2,560
Russia	29	14	44,200	59	28	89,400
Singapore	86	38	46,700	86	38	46,700
Slovakia	--	--	--	19	9	26,200
Total	1,320	398	1,480,000	6,410	2,330	7,210,000
Total ferrosilicon	12,000	7,870	15,200,000	101,000	70,900	114,000,000
Metal:						
More than 99.99% silicon:						
Brazil	--	--	--	1,260	1,260	4,180,000
China	8	8	554,000	51	51	2,500,000
Germany	146	146	4,290,000	833	833	27,000,000
Japan	3	3	376,000	13	13	2,380,000

See footnotes at end of table.

TABLE 4—Continued
U.S. IMPORTS OF FERROSILICON AND SILICON METAL IN JUNE 2016^{1,2}

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	January–June ³		
				Gross weight	Contained weight	Value
Metal—Continued:						
More than 99.99% silicon:						
Korea, Republic of	1	1	\$14,600	206	206	\$4,830,000
Norway	--	--	--	20	20	150,000
Poland	--	--	--	11	11	29,800
Taiwan	19	19	424,000	85	85	1,870,000
Ukraine	(4)	(4)	3,650	2	2	113,000
United Kingdom	(4)	(4)	2,090	14	14	81,500
Other (8 countries)	2	2	238,000	5	5	1,090,000
Total	178	178	5,910,000	2,500	2,500	44,300,000
99.00%–99.99% silicon:						
Australia	1,260	1,250	2,420,000	8,720	8,660	18,900,000
Brazil	2,370	2,350	5,480,000	7,980	7,910	19,500,000
Canada	1,170	1,160	3,270,000	9,830	9,760	26,400,000
France	--	--	--	900	894	2,420,000
Kazakhstan	699	695	1,090,000	4,590	4,560	9,050,000
Laos	--	--	--	2,160	2,140	5,100,000
Malaysia	113	112	162,000	631	628	1,210,000
Norway	216	214	616,000	2,340	2,320	6,790,000
South Africa	675	670	1,480,000	16,000	15,800	38,500,000
Spain	--	--	--	100	99	300,000
Other (5 countries)	20	20	60,800	152	139	288,000
Total	6,520	6,480	14,600,000	53,400	53,000	128,000,000
Other silicon:						
Australia	--	--	--	144	142	325,000
Bhutan	211	209	366,000	1,840	1,810	3,590,000
Brazil	1,460	1,420	2,540,000	4,340	4,260	10,300,000
Canada	225	220	435,000	1,210	1,180	2,630,000
China	--	--	--	210	204	274,000
Kazakhstan	--	--	--	677	646	1,340,000
Norway	995	973	1,430,000	3,180	3,110	5,120,000
South Africa	120	116	358,000	364	350	1,230,000
Sweden	--	--	--	81	78	88,300
United Kingdom	19	19	40,100	87	85	192,000
Other (9 countries)	49	48	69,600	263	257	525,000
Total	3,070	3,000	5,240,000	12,400	12,100	25,600,000
Total silicon metal	9,780	9,650	25,700,000	68,300	67,600	198,000,000

-- Zero.

¹Presentation of monthly data is based on the "January–June" 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.