

Mineral Industry Surveys

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SILICON IN APRIL 2017

Domestic production of silicon materials was 41,000 metric tons (t) in April 2017, a slight decrease from March 2017 production and 20% more than April 2016 production (fig. 1, table 1). Net shipments were 28,500 t, a 3% increase from shipments in March 2017 and a 29% increase from shipments in April 2016. Total production and net shipments during the first 4 months of 2017 were 3% less and slightly less, respectively, than those during the same period in 2016 (table 1).

Ending stocks were 41,600 t in April 2017, slightly less than those in March 2017 and 9% less than those in April 2016 (table 1). Adjustments in stocks included in-plant consumption of ferrosilicon to produce magnesium ferrosilicon and other alloys.

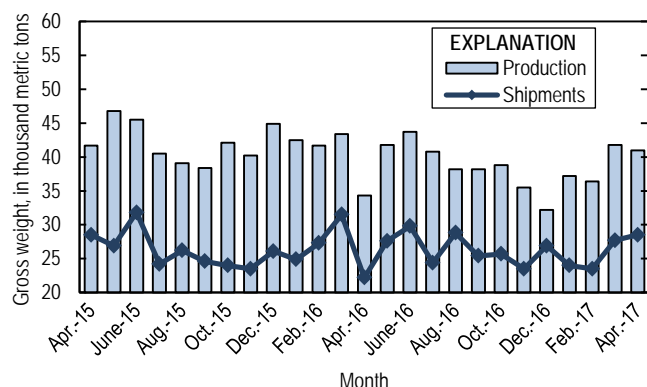


Figure 1. Monthly domestic production of total silicon materials and net shipments from April 2015 through April 2017 (may include revisions to previously published data). Source: U.S. Geological Survey.

The average U.S. spot price for silicon metal was 104.88 cents per pound in April 2017, a 3% increase from the average

price in March 2017, and a 21% increase from the April 2016 price. The average U.S. spot prices for ferrosilicon, 50% and 75% grades, were the same and 4% less, respectively, than the average prices in March 2017 and were both 11% greater than their average prices in April 2016 (fig. 2).

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

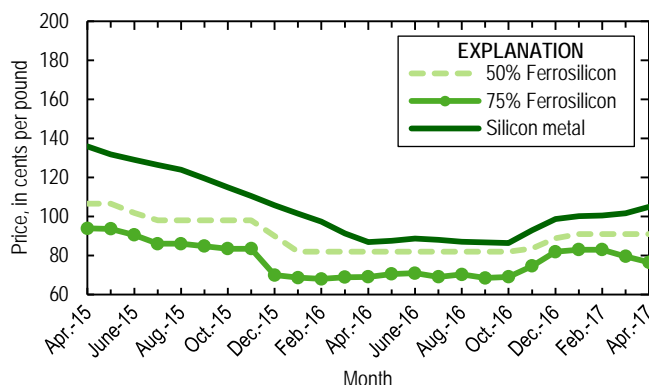


Figure 2. Average monthly spot prices for silicon metal and ferrosilicon 50% and 75% grades, contained silicon, from April 2015 through April 2017. Source: CRU Ryan's Notes and Platts Metals Week.

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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
2016: ^p			
January–December	471,000	318,000	37,100
January–April	162,000	106,000	45,800
April	34,300	22,200	45,800
May	41,800	27,600	46,200
June	43,700	29,800	45,600
July	40,800	24,400	48,700
August	38,200	28,800	42,800
September	38,200	25,400	41,400
October	38,800	25,700	42,000
November	35,500	23,500	41,900
December	32,200	26,900	37,100
2017:			
January	37,200	24,000	38,400
February	36,400	23,500	40,600
March	41,800	27,700	42,600
April	41,000	28,500	41,600
January–April	156,000	104,000	41,600

^pPreliminary.

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 APRIL 2017

		Low	Average	High	Average low, mid, and high
Ferrosilicon:					
50% ferrosilicon ¹	cents per pound of contained silicon	89.00	XX	93.00	89.00–91.00–93.00
75% ferrosilicon ²	do.	75.00	76.50	78.00	XX
Silicon metal, 553 grade ³	cents per pound	102.00	104.88	107.00	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 APRIL 2017^{1,2}

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	January–April ³		Value
				Gross weight	Contained weight	
Ferrosilicon:						
More than 55% silicon:						
Belgium	--	--	--	289	160	\$128,000
Brazil	7	4	\$11,100	32	19	53,900
Canada	395	237	548,000	860	516	1,140,000
Germany	--	--	--	6	3	11,100
Mexico	206	124	383,000	1,340	802	2,480,000
Netherlands	--	--	--	567	408	461,000
Turkey	--	--	--	12	7	18,500
United Kingdom	20	13	18,000	20	13	18,000
Total	628	378	960,000	3,120	1,930	4,310,000
Other ferrosilicon:						
Belgium	94	42	82,700	322	148	343,000
Brazil	38	19	38,000	115	55	190,000
Canada	18	9	7,500	752	376	380,000
France	--	--	--	80	37	128,000
Indonesia	20	10	30,500	60	22	91,600
Korea, Republic of	40	18	43,200	220	96	233,000
Mexico	509	255	831,000	1,660	759	2,990,000
Poland	--	--	--	41	20	79,000
Turkey	20	10	30,200	61	31	90,700
United Kingdom	40	18	60,700	246	115	395,000
Other (3 countries)	58	28	100,000	64	31	106,000
Total	838	409	1,220,000	3,630	1,690	5,020,000
Total ferrosilicon	1,470	787	2,180,000	6,750	3,620	9,340,000
Metal:						
More than 99.99% silicon:						
China	578	578	8,050,000	1,570	1,570	22,700,000
Germany	475	475	12,500,000	1,440	1,440	38,300,000
Hong Kong	31	31	330,000	864	864	7,710,000
Japan	1,560	1,560	47,200,000	6,090	6,090	194,000,000
Korea, Republic of	589	589	22,100,000	1,540	1,540	50,500,000
Malaysia	19	19	2,950,000	363	363	16,600,000
Norway	19	19	36,600	45	45	357,000
Philippines	83	83	1,210,000	83	83	1,210,000
Singapore	64	64	2,640,000	653	653	16,400,000
Taiwan	1,410	1,410	20,100,000	7,840	7,840	115,000,000
Other (30 countries)	48	48	2,230,000	205	205	6,360,000
Total	4,880	4,880	119,000,000	20,700	20,700	469,000,000
99.00%–99.99% silicon:						
China	181	181	175,000	203	203	206,000
Costa Rica	--	--	--	(4)	(4)	3,320
Dominican Republic	5	5	6,640	5	5	6,640
Israel	--	--	--	26	26	37,200
Japan	--	--	--	12	12	17,000
Mexico	1	1	2,970	5	5	15,000
Netherlands	--	--	--	461	457	348,000
Spain	--	--	--	5	5	7,500
Thailand	--	--	--	12	12	17,500
United Kingdom	--	--	--	139	138	146,000
Total	187	187	185,000	869	863	805,000

See footnotes at end of table.

TABLE 3—Continued
U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN APRIL 2017^{1,2}

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	January–April ³		
				Gross weight	Contained weight	Value
Metal—Continued:						
Other silicon:						
Australia	(4)	(4)	\$2,740	1	1	\$12,500
Belgium	153	149	187,000	508	495	570,000
Canada	15	15	29,600	150	146	267,000
China	18	17	23,700	44	43	58,700
Germany	3	3	3,750	13	13	21,800
Korea, Republic of	--	--	--	7	7	9,660
Mexico	1	1	9,130	20	19	50,500
Netherlands	--	--	--	157	154	119,000
South Africa	13	12	16,600	36	35	66,800
United Kingdom	3	3	24,700	67	64	124,000
Other (3 countries)	1	1	7,600	3	3	17,300
Total	207	201	304,000	1,010	981	1,320,000
Total silicon metal	5,270	5,260	120,000,000	22,600	22,500	471,000,000

-- Zero.

¹Presentation of monthly data is based on the "January–April" 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 APRIL 2017^{1,2}

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	January–April ³		
				Gross weight	Contained weight	Value
Ferrosilicon:						
55%–80% silicon, more than 3% Ca:						
Brazil	--	--	--	1,340	906	\$1,710,000
China	60	45	\$67,300	60	45	67,300
France	36	21	97,600	162	97	446,000
South Africa	50	36	100,000	68	47	151,000
Total	146	102	265,000	1,630	1,100	2,370,000
55%–80% silicon, other:						
Brazil	216	163	239,000	2,250	1,690	2,480,000
Canada	1,090	795	2,440,000	4,740	3,450	9,680,000
China	300	225	323,000	928	699	1,000,000
France	72	51	196,000	452	308	1,280,000
Iceland	1,660	1,310	2,020,000	6,450	4,910	6,940,000
Kazakhstan	--	--	--	8,140	6,200	9,770,000
Kuwait	--	--	--	299	225	296,000
Malaysia	226	170	231,000	3,640	2,700	3,760,000
Norway	--	--	--	1,010	763	1,120,000
Russia	--	--	--	24,800	19,100	26,800,000
Other (9 countries)	340	248	838,000	1,040	754	2,720,000
Total	3,910	2,960	6,280,000	53,700	40,800	65,800,000
80%–90% ferrosilicon, Germany	--	--	--	13	11	17,000
More than 90% ferrosilicon:						
Brazil	--	--	--	1,440	1,330	453,000
China	--	--	--	52	47	15,800
Total	--	--	--	1,490	1,370	468,000
Magnesium ferrosilicon:						
Argentina	38	17	37,200	194	73	227,000
Canada	864	395	1,560,000	4,220	1,920	7,540,000
China	--	--	--	10	5	16,000
France	--	--	--	10	5	42,500
Germany	47	17	140,000	67	27	187,000
India	247	82	321,000	591	179	764,000
Norway	27	13	50,500	55	26	96,700
Total	1,220	524	2,100,000	5,150	2,240	8,880,000
Other ferrosilicon:						
Canada	1,100	368	1,030,000	5,310	1,870	4,380,000
China	5,060	794	1,180,000	5,260	881	1,450,000
Germany	18	7	28,500	41	16	132,000
Japan	2	1	3,440	7	3	11,600
Russia	--	--	--	49	24	77,800
Slovakia	19	9	24,200	58	14	78,100
South Africa	--	--	--	7	3	9,990
Trinidad and Tobago	--	--	--	89	14	34,800
Total	6,200	1,180	2,260,000	10,800	2,820	6,180,000
Total ferrosilicon	11,500	4,770	10,900,000	72,800	48,300	83,800,000
Metal:						
More than 99.99% silicon:						
Brazil	875	875	2,040,000	3,330	3,330	7,990,000
China	7	7	501,000	33	33	3,620,000
Denmark	--	--	--	1	1	200,000
Germany	63	63	3,690,000	215	215	12,000,000

See footnotes at end of table.

TABLE 4—Continued
U.S. IMPORTS OF FERROSILICON AND SILICON METAL IN APRIL 2017^{1,2}

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	January–April ³		
				Gross weight	Contained weight	Value
Metal—Continued:						
More than 99.99% silicon:						
Japan	17	17	\$1,210,000	77	77	\$3,930,000
Norway	--	--	--	38	38	155,000
Spain	1	1	3,510	2	2	13,900
Sweden	--	--	--	1	1	37,100
Taiwan	43	43	1,080,000	157	157	4,100,000
Ukraine	--	--	--	(4)	(4)	33,100
Other (4 countries)	(4)	(4)	6,140	(4)	(4)	57,900
Total	1,010	1,010	8,540,000	3,850	3,850	32,200,000
99.00%–99.99% silicon:						
Australia	2,030	2,010	4,290,000	6,000	5,960	12,500,000
Bosnia and Herzegovina	--	--	--	696	692	1,100,000
Brazil	2,610	2,590	5,250,000	7,120	7,070	16,000,000
Canada	2,820	2,800	7,270,000	8,150	8,090	21,100,000
France	--	--	--	626	620	985,000
Kazakhstan	260	259	463,000	3,130	3,110	5,660,000
Malaysia	--	--	--	114	113	177,000
Norway	792	787	1,660,000	1,850	1,840	4,210,000
South Africa	--	--	--	550	545	1,040,000
Thailand	180	179	353,000	1,000	995	1,810,000
Other (4 countries)	80	79	134,000	101	100	178,000
Total	8,770	8,710	19,400,000	29,300	29,100	64,700,000
Other silicon:						
Australia	--	--	--	873	848	1,480,000
Brazil	563	553	1,190,000	5,360	5,260	11,800,000
Canada	20	19	14,000	733	715	1,870,000
China	--	--	--	108	104	130,000
Iceland	48	47	69,700	144	141	205,000
Japan	39	37	47,500	130	125	188,000
Norway	969	946	1,670,000	3,050	2,970	4,810,000
South Africa	423	412	624,000	423	412	624,000
Spain	--	--	--	(4)	(4)	2,100
United Kingdom	9	9	19,700	76	76	163,000
Other (2 countries)	(4)	(4)	11,600	(4)	(4)	25,900
Total	2,070	2,020	3,660,000	10,900	10,700	21,300,000
Total silicon metal	11,800	11,700	31,600,000	44,100	43,600	118,000,000

-- Zero.

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