

Mineral Industry Surveys

For information, contact:

Emily K. Schnebele, Silicon Commodity Specialist
National Minerals Information Center
U.S. Geological Survey
989 National Center
Reston, VA 20192
Telephone: (703) 648-4945, Fax: (703) 648-7757
Email: eschnebele@usgs.gov

Molly L. Reid (Data)
Telephone: (703) 648-7942
Fax: (703) 648-7975
Email: mlreid@usgs.gov

Internet: <http://minerals.usgs.gov/minerals/>

SILICON IN MARCH 2017

Domestic production of silicon materials was 41,800 metric tons (t) in March 2017, a 15% increase from February 2017 production and 4% less than March 2016 production (fig. 1, table 1). Net shipments were 27,700 t, an 18% increase from shipments in February 2017 and a 12% decrease from shipments in March 2016. Total production and net shipments during the first 3 months of 2017 were each 10% less than those during the same period in 2016 (table 1)

Ending stocks were 42,600 t in March 2017, 5% more than those in February 2017 and 5% less than those in March 2016 (table 1). Adjustments in stocks included in-plant consumption of ferrosilicon to produce magnesium ferrosilicon and other alloys.

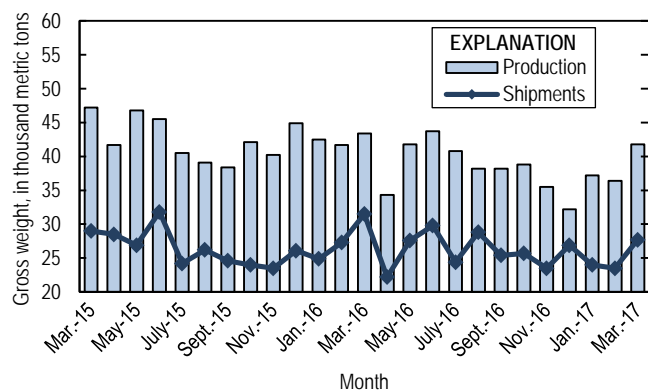


Figure 1. Monthly domestic production of total silicon materials and net shipments from March 2015 through March 2017 (may include revisions to previously published data). Source: U.S. Geological Survey.

The average U.S. spot price for silicon metal was 101.7 cents per pound in March 2017, a slight increase from the average

price in February 2017, and an 11% increase from the March 2016 price. The average U.S. spot prices for ferrosilicon, 50% and 75% grades, were the same as and 4% less, respectively, than the average prices in February 2017 and were 11% greater and 15% greater, respectively, than their average prices in March 2016 (fig. 2).

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

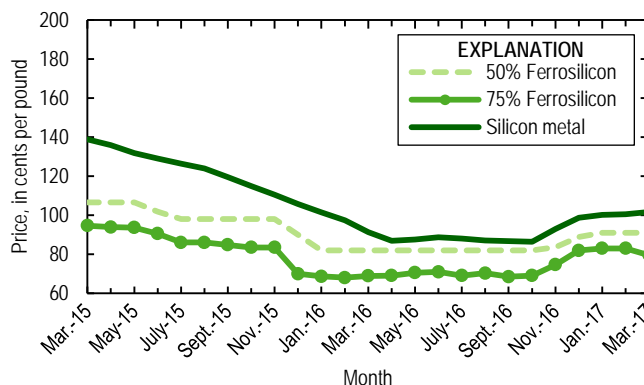


Figure 2. Average monthly spot prices for silicon metal and ferrosilicon 50% and 75% grades, contained silicon, from March 2015 through March 2017. Source: CRU Ryan's Notes and Platts Metals Week.

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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–March ^r	128,000	83,700	45,100
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
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 ^r	36,400	23,500	40,600
March	41,800	27,700	42,600
January–March	115,000	75,200	42,600

^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 MARCH 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	79.50	82.00	XX
Silicon metal, 553 grade ³ cents per pound	99.00	101.70	106.00	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 MARCH 2017^{1,2}

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	January–March ³		
				Gross weight	Contained weight	Value
Ferrosilicon:						
More than 55% silicon:						
Belgium	--	--	--	289	160	\$128,000
Brazil	12	7	\$18,500	24	15	42,800
Canada	192	115	244,000	465	279	593,000
Germany	3	2	4,000	6	3	11,100
Mexico	381	228	775,000	1,130	678	2,100,000
Netherlands	--	--	--	567	408	461,000
Turkey	12	7	18,500	12	7	18,500
Total	599	360	1,060,000	2,490	1,550	3,350,000
Other ferrosilicon:						
Belgium	40	18	55,200	228	105	261,000
Brazil	39	18	76,300	77	36	152,000
Canada	--	--	--	734	367	373,000
France	40	18	64,800	80	37	128,000
Indonesia	--	--	--	40	11	61,100
Korea, Republic of	60	26	63,300	180	79	190,000
Mexico	633	243	1,120,000	1,160	504	2,160,000
Poland	41	20	79,000	41	20	79,000
Turkey	41	20	60,500	41	20	60,500
United Kingdom	60	26	91,000	206	97	334,000
Other (1 country)	--	--	--	6	3	6,400
Total	953	391	1,610,000	2,790	1,280	3,800,000
Total ferrosilicon	1,550	751	2,670,000	5,280	2,830	7,150,000
Metal:						
More than 99.99% silicon:						
China	492	492	5,250,000	993	993	14,600,000
Czechia	15	15	480,000	45	45	1,320,000
Dominican	29	29	29,700	38	38	74,000
Germany	482	482	13,800,000	962	962	25,800,000
Hong Kong	162	162	1,760,000	833	833	7,380,000
Japan	1,760	1,760	44,600,000	4,530	4,530	147,000,000
Korea, Republic of	439	439	15,000,000	946	946	28,400,000
Malaysia	29	29	3,640,000	344	344	13,600,000
Singapore	214	214	7,080,000	589	589	13,800,000
Taiwan	1,830	1,830	34,900,000	6,430	6,430	94,600,000
Other (25 countries)	50	50	997,000	100	100	3,060,000
Total	5,510	5,510	127,000,000	15,800	15,800	350,000,000
99.00%–99.99% silicon:						
China	22	22	31,300	22	22	31,300
Costa Rica	--	--	--	(4)	(4)	3,320
Israel	--	--	--	26	26	37,200
Japan	--	--	--	12	12	17,000
Mexico	2	2	5,940	4	4	12,000
Netherlands	150	148	113,000	461	457	348,000
Spain	--	--	--	5	5	7,500
Thailand	12	12	17,500	12	12	17,500
United Kingdom	124	123	126,000	139	138	146,000
Total	310	308	293,000	682	676	620,000
Other silicon:						
Belgium	235	229	256,000	355	347	383,000

See footnotes at end of table.

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

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	January–March ³		
				Gross weight	Contained weight	Value
Metal—Continued:						
Other silicon:						
Canada	60	59	\$102,000	135	131	\$237,000
China	17	16	22,200	26	26	35,000
Germany	10	10	18,100	10	10	18,100
Guatemala	--	--	--	1	1	6,990
Korea, Republic of	--	--	--	7	7	9,660
Mexico	5	5	15,800	18	18	41,400
Netherlands	157	154	119,000	157	154	119,000
South Africa	22	21	29,100	23	23	50,200
United Kingdom	1	1	14,400	64	62	99,400
Other (2 countries)	1	1	9,810	2	2	12,500
Total	509	497	586,000	800	780	1,010,000
Total silicon metal	6,330	6,310	128,000,000	17,300	17,300	351,000,000

-- Zero.

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

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	January–March ³		
				Gross weight	Contained weight	Value
Ferrosilicon:						
55%–80% silicon, more than 3% Ca:						
Brazil	211	158	\$233,000	1,340	906	\$1,710,000
France	36	21	103,000	126	76	348,000
South Africa	--	--	--	18	11	50,500
Total	247	179	336,000	1,490	993	2,110,000
55%–80% silicon, other:						
Brazil	540	406	588,000	2,040	1,530	2,240,000
Canada	940	678	2,180,000	3,650	2,660	7,250,000
China	572	431	621,000	628	474	680,000
France	162	111	473,000	380	257	1,090,000
Iceland	1,670	1,250	1,750,000	4,780	3,600	4,920,000
Kazakhstan	3,070	2,330	3,910,000	8,140	6,200	9,770,000
Kuwait	299	225	296,000	299	225	296,000
Malaysia	3,170	2,350	3,240,000	3,410	2,530	3,530,000
Norway	501	381	552,000	1,010	763	1,120,000
Russia	23,300	17,900	25,300,000	24,800	19,100	26,800,000
Other (8 countries)	246	179	878,000	695	505	1,880,000
Total	34,400	26,300	39,800,000	49,800	37,800	59,600,000
80%–90% ferrosilicon, Germany	9	7	13,200	13	11	17,000
More than 90% ferrosilicon:						
Brazil	--	--	--	1,440	1,330	453,000
China	52	47	15,800	52	47	15,800
Total	52	47	15,800	1,490	1,370	468,000
Magnesium ferrosilicon:						
Argentina	76	23	74,400	155	56	190,000
Canada	1,160	527	2,040,000	3,360	1,530	5,990,000
China	--	--	--	10	5	16,000
France	10	5	42,500	10	5	42,500
Germany	7	3	19,500	20	10	47,500
India	101	20	143,000	344	97	443,000
Norway	28	13	46,100	28	13	46,100
Total	1,380	591	2,360,000	3,930	1,710	6,770,000
Other ferrosilicon:						
Canada	1,450	503	1,240,000	4,210	1,500	3,350,000
China	89	41	123,000	193	86	276,000
Germany	17	7	71,900	23	9	104,000
Japan	3	1	4,700	5	2	8,140
Russia	19	9	29,500	49	24	77,800
Slovakia	20	3	27,200	39	6	53,800
South Africa	--	--	--	7	3	9,990
Trinidad and Tobago	--	--	--	89	14	34,800
Total	1,600	564	1,490,000	4,620	1,640	3,910,000
Total ferrosilicon	37,700	27,700	44,100,000	61,300	43,500	72,800,000
Metal:						
More than 99.99% silicon:						
Brazil	621	621	1,440,000	2,450	2,450	5,950,000
China	5	5	724,000	26	26	3,120,000
Denmark	--	--	--	1	1	200,000
Germany	26	26	1,860,000	152	152	8,330,000
Japan	18	18	853,000	60	60	2,710,000

See footnotes at end of table.

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

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	January–March ³		
				Gross weight	Contained weight	Value
Metal—Continued:						
More than 99.99% silicon:						
Norway	--	--	--	38	38	\$155,000
Spain	1	1	\$6,980	1	1	10,400
Sweden	--	--	--	1	1	37,100
Taiwan	59	59	1,650,000	113	113	3,010,000
Ukraine	(4)	(4)	13,600	(4)	(4)	33,100
Other (2 countries)	(4)	(4)	8,380	(4)	(4)	51,700
Total	730	730	6,550,000	2,850	2,850	23,600,000
99.00%–99.99% silicon:						
Australia	1,960	1,950	4,140,000	3,970	3,950	8,190,000
Bosnia and Herzegovina	192	190	304,000	696	692	1,100,000
Brazil	1,670	1,660	4,380,000	4,510	4,480	10,700,000
Canada	1,840	1,830	4,700,000	5,330	5,290	13,800,000
France	386	383	602,000	626	620	985,000
Kazakhstan	785	778	1,380,000	2,870	2,850	5,200,000
Malaysia	--	--	--	114	113	177,000
Norway	792	787	1,760,000	1,060	1,060	2,540,000
South Africa	--	--	--	550	545	1,040,000
Thailand	50	50	112,000	823	817	1,460,000
Other (3 countries)	5	5	9,560	22	22	44,200
Total	7,690	7,630	17,400,000	20,600	20,400	45,300,000
Other silicon:						
Australia	323	310	352,000	873	848	1,480,000
Brazil	1,600	1,570	3,460,000	4,800	4,710	10,600,000
Canada	19	19	48,300	713	696	1,860,000
China	--	--	--	108	104	130,000
Germany	(4)	(4)	6,000	(4)	(4)	6,000
Iceland	96	94	135,000	96	94	135,000
Japan	(4)	(4)	12,600	91	87	141,000
Norway	720	695	1,100,000	2,080	2,020	3,140,000
Spain	--	--	--	(4)	(4)	2,100
United Kingdom	17	16	35,100	68	67	143,000
Other (1 country)	(4)	(4)	8,280	(4)	(4)	8,280
Total	2,780	2,700	5,160,000	8,830	8,630	17,700,000
Total silicon metal	11,200	11,100	29,100,000	32,300	31,900	86,600,000

-- Zero.

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