

Mineral Industry Surveys

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SILICON IN MARCH 2018

Domestic production of silicon materials was 51,300 metric tons (t) in March 2018, an 18% increase from February 2018 production and 22% more than March 2017 production (fig. 1, table 1). Net shipments were 33,700 t, a 13% increase from shipments in February 2018 and a 20% increase from shipments in March 2017. Total production and net shipments during the first 3 months of 2018 were 19% and 23% more, respectively, than those during the same period in 2017 (table 1).

Ending stocks were 30,300 t in March 2018, slightly less than stocks in February 2018 and 28% less than those in March 2017 (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.

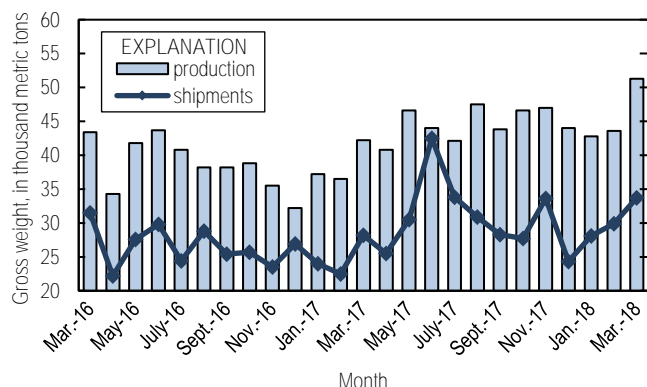


Figure 1. Monthly domestic production of total silicon materials and net shipments from March 2016 through March 2018 (may include revisions to previously published data). Source: U.S. Geological Survey.

The average U.S. spot price for silicon metal was 143.88 cents per pound in March 2018, essentially unchanged from the average price in February 2018, and a 41% increase from the March 2017 price. The average U.S. spot prices for ferrosilicon, 50% and 75% grades, were the same and slightly less than the average prices in February 2018 and were 15% and 39% greater, respectively, than their average prices in March 2017 (fig. 2).

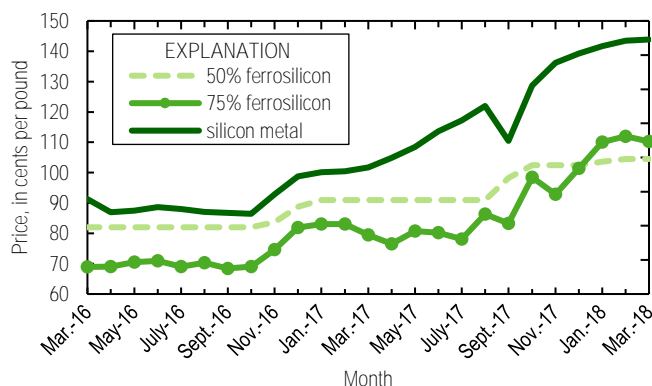


Figure 2. Average monthly spot prices for silicon metal and ferrosilicon 50% and 75% grades, contained silicon, from March 2016 through March 2018. Source: CRU Group and S&P Global Platts.

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

(Metric tons, gross weight)

	Gross production ³	Net shipments	Producers' stocks, end of period
2017:			
January–December	518,000	352,000	34,600
January–March	116,000 ^r	74,700 ^r	41,800 ^r
March	42,200	28,200	41,800
April	40,800	25,500	45,200
May	46,600	30,500	45,400
June	44,000	42,500	28,900
July	42,100	33,800	21,400
August	47,500	30,900	21,000
September	43,800	28,300	22,200
October	46,600	27,700	25,900
November	47,000	33,600	27,600
December	44,000	24,300	34,600
2018:			
January	42,800	28,100	29,500
February	43,600	29,900	30,500
March	51,300	33,700	30,300
January–March	138,000	91,800	30,300

^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 2018

		Low	Average	High	Average low, mid, and high
Ferrosilicon:					
50% ferrosilicon ¹	cents per pound of contained silicon	102.00	XX	107.00	102.00–104.50–107.00
75% ferrosilicon ²	do.	108.00	110.25	113.00	XX
Silicon metal, 553 grade ³	cents per pound	142.00	143.88	145.00	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 MARCH 2018^{1,2}

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–March ³		
				Gross weight	Contained weight	Value
Ferrosilicon:						
More than 55% silicon:						
Canada	554	332	\$942,000	971	583	\$1,610,000
Iceland	--	--	--	43	26	62,400
India	102	61	115,000	320	233	380,000
Malaysia	6	4	10,000	6	4	10,000
Mexico	352	212	710,000	795	483	1,750,000
Netherlands	111	66	193,000	359	215	336,000
Total	1,130	676	1,970,000	2,500	1,540	4,150,000
Other ferrosilicon:						
Belgium	40	20	62,000	212	94	251,000
Brazil	20	10	38,000	195	77	380,000
Canada	98	49	108,000	388	194	232,000
Finland	41	21	65,400	41	21	65,400
France	20	9	37,300	40	18	70,800
Korea, Republic of	98	43	119,000	198	86	228,000
Mexico	189	92	404,000	522	249	1,130,000
Switzerland	40	9	70,000	40	9	70,000
Turkey	20	10	33,800	142	69	235,000
United Kingdom	119	53	192,000	458	206	754,000
Other (7 countries)	18	9	28,300	106	50	176,000
Total	704	325	1,160,000	2,340	1,070	3,590,000
Total ferrosilicon	1,830	1,000	3,130,000	4,840	2,620	7,740,000
Metal:						
More than 99.99% silicon:						
China	299	299	7,160,000	1,220	1,220	16,300,000
Germany	32	32	584,000	128	128	2,560,000
Hong Kong	48	48	619,000	333	333	3,000,000
Japan	845	845	36,700,000	3,760	3,760	121,000,000
Korea, Republic of	6	6	1,040,000	66	66	5,530,000
Malaysia	18	18	2,890,000	73	73	10,600,000
Norway	54	54	667,000	317	317	5,060,000
Singapore	48	48	685,000	204	204	2,850,000
Taiwan	1,690	1,690	16,600,000	4,070	4,070	37,300,000
Vietnam	125	125	4,100,000	125	125	4,100,000
Other (26 countries)	63	63	2,280,000	118	118	5,510,000
Total	3,230	3,230	73,300,000	10,400	10,400	214,000,000
99.00%–99.99% silicon:						
Belgium	--	--	--	80	79	100,000
France	--	--	--	9	9	12,500
Germany	40	40	50,000	413	410	402,000
India	16	16	44,600	16	16	44,600
Korea, Republic of	--	--	--	1	1	3,460
Mexico	1	1	2,750	4	4	11,200
Netherlands	--	--	--	60	60	76,700
United Kingdom	182	181	306,000	383	374	550,000
Total	240	238	403,000	966	953	1,200,000
Other silicon:						
Belgium	--	--	--	182	177	242,000
Canada	19	19	43,600	130	126	357,000
China	--	--	--	61	59	79,900
France	--	--	--	140	137	151,000
Germany	16	15	20,600	16	16	27,400

See footnotes at end of table.

TABLE 3—Continued
U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN MARCH 2018^{1,2}

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–March ³		
				Gross weight	Contained weight	Value
Metal—Continued:						
India	--	--	--	3	3	\$4,320
Japan	--	--	--	13	13	135,000
Korea, Republic of	32	31	\$72,300	32	31	72,300
Mexico	2	2	14,600	10	9	42,800
United Kingdom	2	2	22,400	4	4	43,200
Other (4 countries)	(4)	(4)	3,050	1	1	13,500
Total	71	69	177,000	592	576	1,170,000
Total silicon metal	3,540	3,540	73,900,000	12,000	11,900	217,000,000

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 MARCH 2018^{1,2}

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–March ³		
				Gross weight	Contained weight	Value
Ferrosilicon:						
55%–80% silicon, more than 3% Ca:						
Brazil	48	36	\$60,000	135	101	\$179,000
France	72	43	210,000	198	118	581,000
Hong Kong	--	--	--	60	45	94,400
South Africa	72	50	151,000	216	151	444,000
Total	192	129	420,000	609	415	1,300,000
55%–80% silicon, other:						
Brazil	408	310	714,000	2,960	2,240	4,520,000
Canada	1,190	864	2,740,000	3,730	2,720	8,150,000
China	96	73	155,000	2,030	1,510	2,730,000
Egypt	--	--	--	500	372	679,000
France	144	102	392,000	476	335	1,330,000
Iceland	997	788	1,420,000	2,150	1,700	2,960,000
Kazakhstan	2,490	1,900	4,390,000	2,490	1,900	4,390,000
Malaysia	469	349	661,000	1,270	943	1,770,000
Russia	--	--	--	17,400	13,300	27,000,000
South Africa	129	91	344,000	684	480	1,580,000
Other (8 countries)	135	94	450,000	739	541	1,750,000
Total	6,060	4,570	11,300,000	34,400	26,000	56,900,000
80%–90% ferrosilicon:						
Argentina	--	--	--	22	18	34,500
Canada	--	--	--	1	1	2,700
Germany	--	--	--	137	114	160,000
Total	--	--	--	160	133	198,000
More than 90% ferrosilicon, Brazil	--	--	--	2,280	2,100	1,130,000
Magnesium ferrosilicon:						
Canada	1,250	571	2,320,000	3,610	1,650	6,620,000
China	--	--	--	25	13	52,100
Germany	19	3	44,300	30	9	92,100
India	262	97	289,000	576	160	748,000
Norway	--	--	--	53	25	106,000
Total	1,530	672	2,650,000	4,300	1,860	7,620,000
Other ferrosilicon:						
Canada	718	246	893,000	2,440	846	3,030,000
China	33	15	56,600	353	156	568,000
Germany	2	1	10,400	7	4	39,500
Russia	40	19	71,400	79	39	144,000
Slovakia	20	3	33,500	39	13	60,600
Spain	206	91	354,000	206	91	354,000
United Kingdom	8	4	22,000	9	4	25,400
Total	1,030	378	1,440,000	3,140	1,150	4,220,000
Total ferrosilicon	8,800	5,750	15,800,000	44,900	31,700	71,400,000
Metal:						
More than 99.99% silicon:						
China	9	9	1,610,000	24	24	3,750,000
Denmark	(4)	(4)	40,600	(4)	(4)	235,000
Finland	1	1	41,700	1	1	150,000
Germany	93	93	5,220,000	241	241	14,300,000
Japan	16	16	1,110,000	52	52	3,000,000
Poland	--	--	--	(4)	(4)	12,500
Spain	--	--	--	(4)	(4)	4,090
Sweden	--	--	--	1	1	31,000
Taiwan	44	44	1,480,000	148	148	5,000,000

See footnotes at end of table.

TABLE 4—Continued
U.S. IMPORTS OF FERROSILICON AND SILICON METAL IN MARCH 2018^{1,2}

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–March ³		
				Gross weight	Contained weight	Value
Metal—Continued:						
More than 99.99% silicon:						
Ukraine	(4)	(4)	\$25,700	1	1	\$121,000
Other (5 countries)	(4)	(4)	68,500	(4)	(4)	115,000
Total	163	163	9,600,000	469	469	26,800,000
99.00%–99.99% silicon:						
Bosnia and Herzegovina	280	278	668,000	895	890	2,140,000
Brazil	1,710	1,700	4,900,000	6,290	6,240	17,700,000
Canada	3,530	3,510	11,000,000	7,140	7,090	21,400,000
Germany	20	20	70,700	20	20	70,700
Laos	490	486	1,170,000	1,280	1,270	3,050,000
Norway	2,730	2,720	8,310,000	4,570	4,540	13,100,000
Thailand	264	263	657,000	322	320	816,000
Total	9,030	8,970	26,800,000	20,500	20,400	58,200,000
Other silicon:						
Austria	--	--	--	13	12	14,200
Brazil	113	111	321,000	931	921	2,650,000
Canada	--	--	--	39	39	82,600
China	--	--	--	46	44	57,000
Iceland	--	--	--	119	116	175,000
India	19	18	20,600	19	18	20,600
Japan	31	30	56,200	267	256	318,000
Norway	883	864	1,890,000	3,100	3,030	7,320,000
Sweden	--	--	--	67	65	73,400
Thailand	168	161	462,000	312	300	847,000
Other (2 countries)	11	10	17,300	20	20	34,700
Total	1,230	1,200	2,760,000	4,940	4,820	11,600,000
Total silicon metal	10,400	10,300	39,200,000	25,900	25,700	96,600,000

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.