

Mineral Industry Surveys

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SILICON IN FEBRUARY 2018

Domestic production of silicon materials was 43,600 metric tons (t) in February 2018, a slight increase from the revised January 2018 production and 19% more than February 2017 production (fig. 1, table 1). Net shipments were 29,900 t, a 6% increase from the revised shipments in January 2018 and a 33% increase from shipments in February 2017. Total production and net shipments during the first 2 months of 2018 were 17% and 25% more, respectively, than those during the same period in 2017 (table 1).

Ending stocks were 30,500 t in February 2018, 4% more than the revised stocks in January 2018 and 25% less than those in February 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.

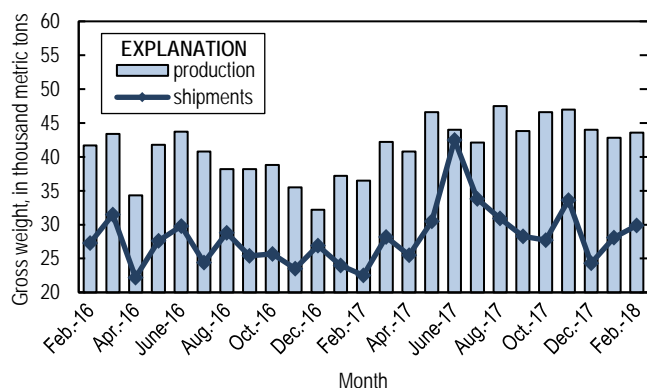


Figure 1. Monthly domestic production of total silicon materials and net shipments from February 2016 through February 2018 (may include revisions to previously published data). Source: U.S. Geological Survey.

The average U.S. spot price for silicon metal was 143.50 cents per pound in February 2018, a slight increase from the average price in January 2018, and a 43% increase from the February 2017 price. The average U.S. spot prices for ferrosilicon, 50% and 75% grades, were both slightly more than the average prices in January 2018 and were 15% and 35% greater, respectively, than their average prices in February 2017 (fig. 2).

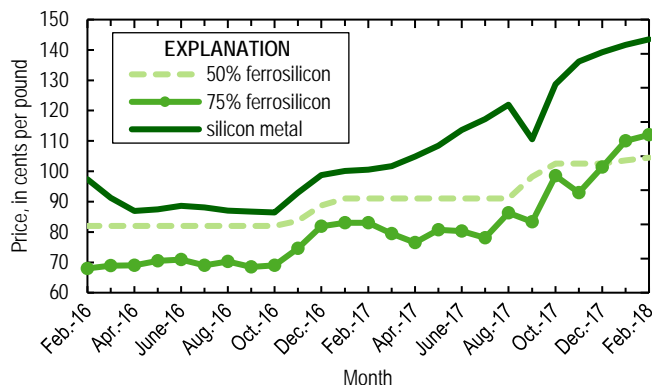


Figure 2. Average monthly spot prices for silicon metal and ferrosilicon 50% and 75% grades, contained silicon, from February 2016 through February 2018. Source: CRU Group and S&P Global Platts.

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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–February	73,700	46,500	40,800
February	36,500	22,500	40,800
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 ^r	28,100 ^r	29,500 ^r
February	43,600	29,900	30,500
January–February	86,500	58,000	30,500

^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 FEBRUARY 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.	110.00	112.00	113.00	XX
Silicon metal, 553 grade ³	cents per pound	142.00	143.50	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 FEBRUARY 2018^{1,2}

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–February ³		
				Gross weight	Contained weight	Value
Ferrosilicon:						
More than 55% silicon:						
Canada	141	85	\$217,000	417	250	\$670,000
Iceland	43	26	62,400	43	26	62,400
India	102	69	133,000	218	171	265,000
Mexico	213	130	507,000	443	271	1,040,000
Netherlands	248	149	143,000	248	149	143,000
Total	746	458	1,060,000	1,370	867	2,180,000
Other ferrosilicon:						
Belgium	172	74	189,000	172	74	189,000
Brazil	176	67	342,000	176	67	342,000
Canada	117	58	48,700	290	145	124,000
Denmark	--	--	--	20	9	32,800
France	--	--	--	20	9	33,500
Indonesia	--	--	--	20	10	30,500
Korea, Republic of	60	26	66,000	100	43	109,000
Mexico	134	63	291,000	333	157	723,000
Turkey	60	28	104,000	122	59	201,000
United Kingdom	100	46	170,000	339	153	562,000
Other (4 countries)	21	10	40,000	47	21	84,700
Total	839	373	1,250,000	1,640	748	2,430,000
Total ferrosilicon	1,590	831	2,310,000	3,010	1,620	4,620,000
Metal:						
More than 99.99% silicon:						
China	159	159	1,890,000	917	917	9,180,000
Denmark	16	16	871,000	21	21	1,130,000
Germany	78	78	1,540,000	96	96	1,970,000
Hong Kong	65	65	330,000	285	285	2,380,000
Japan	1,010	1,010	25,200,000	2,910	2,910	84,700,000
Korea, Republic of	5	5	807,000	60	60	4,490,000
Malaysia	40	40	5,380,000	55	55	7,750,000
Norway	82	82	1,050,000	262	262	4,400,000
Singapore	24	24	339,000	156	156	2,170,000
Taiwan	1,020	1,020	6,980,000	2,390	2,390	20,700,000
Other (20 countries)	11	11	706,000	35	35	2,100,000
Total	2,510	2,510	45,100,000	7,190	7,190	141,000,000
99.00%–99.99% silicon:						
Belgium	80	79	100,000	80	79	100,000
France	9	9	12,500	9	9	12,500
Germany	206	205	189,000	373	370	352,000
Korea, Republic of	--	--	--	1	1	3,460
Mexico	--	--	--	3	3	8,470
Netherlands	60	60	76,700	60	60	76,700
United Kingdom	182	176	231,000	200	193	245,000
Total	538	529	610,000	726	715	798,000
Other silicon:						
Belgium	67	65	85,300	182	177	242,000
Canada	93	90	275,000	110	107	313,000
China	12	11	15,400	61	59	79,900
France	--	--	--	140	137	151,000
Germany	--	--	--	(3)	(3)	6,850
India	--	--	--	3	3	4,320
Iran	--	--	--	(3)	(3)	3,520

See footnotes at end of table.

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

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–February ³		
				Gross weight	Contained weight	Value
Metal—Continued:						
Other silicon:						
Japan	--	--	--	13	13	\$135,000
Mexico	3	3	\$13,600	8	8	28,300
United Kingdom	2	2	20,800	2	2	20,800
Other (2 countries)	--	--	--	1	(3)	6,950
Total	177	172	410,000	521	507	992,000
Total silicon metal	3,230	3,220	46,200,000	8,430	8,410	143,000,000

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.

³Less than ½ unit.

Source: U.S. Census Bureau.

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

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–February ³		
				Gross weight	Contained weight	Value
Ferrosilicon:						
55%–80% silicon, more than 3% Ca:						
Brazil	87	65	\$119,000	87	65	\$119,000
France	36	21	105,000	126	75	372,000
Hong Kong	--	--	--	60	45	94,400
South Africa	36	25	74,000	144	101	293,000
Total	159	111	298,000	416	285	878,000
55%–80% silicon, other:						
Argentina	89	68	155,000	252	191	332,000
Brazil	1,450	1,100	2,290,000	2,560	1,930	3,800,000
Canada	1,090	785	2,470,000	2,540	1,860	5,420,000
China	1,780	1,320	2,370,000	1,930	1,440	2,580,000
Egypt	500	372	679,000	500	372	679,000
France	178	124	519,000	332	233	942,000
Iceland	160	126	207,000	1,160	914	1,540,000
Malaysia	533	397	733,000	796	594	1,110,000
Russia	17,100	13,100	26,600,000	17,400	13,300	27,000,000
South Africa	483	338	1,050,000	555	389	1,240,000
Other (6 countries)	139	100	536,000	352	256	966,000
Total	23,500	17,800	37,600,000	28,300	21,400	45,600,000
80%–90% ferrosilicon:						
Argentina	22	18	34,500	22	18	34,500
Canada	1	1	2,700	1	1	2,700
Germany	81	67	106,000	137	114	160,000
Total	104	86	143,000	160	133	198,000
More than 90% ferrosilicon, Brazil	1,010	925	307,000	2,280	2,100	1,130,000
Magnesium ferrosilicon:						
Canada	988	451	1,780,000	2,360	1,080	4,300,000
China	25	13	52,100	25	13	52,100
Germany	6	3	25,900	12	6	47,900
India	109	33	174,000	315	62	459,000
Norway	53	25	106,000	53	25	106,000
Total	1,180	526	2,140,000	2,770	1,190	4,960,000
Other ferrosilicon:						
Canada	781	231	1,000,000	1,730	600	2,140,000
China	142	66	228,000	320	141	511,000
Germany	5	3	29,000	5	3	29,000
Russia	19	9	34,300	39	19	72,300
Slovakia	--	--	--	19	10	27,100
United Kingdom	--	--	--	1	(3)	3,440
Total	948	309	1,300,000	2,110	774	2,780,000
Total ferrosilicon	26,900	19,800	41,800,000	36,100	25,900	55,600,000
Metal:						
More than 99.99% silicon:						
China	7	7	481,000	15	15	2,140,000
Denmark	(3)	(3)	80,100	(3)	(3)	195,000
Germany	40	40	3,720,000	148	148	9,130,000
Japan	15	15	914,000	36	36	1,890,000
Korea, Republic of	(3)	(3)	23,400	(3)	(3)	36,200
Poland	--	--	--	(3)	(3)	12,500
Spain	(3)	(3)	4,090	(3)	(3)	4,090
Sweden	--	--	--	1	1	31,000
Taiwan	60	60	2,080,000	104	104	3,520,000
Ukraine	1	1	95,300	1	1	95,300

See footnotes at end of table.

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

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–February ³		
				Gross weight	Contained weight	Value
Metal—Continued:						
More than 99.99% silicon:						
Other (4 countries)	(3)	(3)	\$8,060	(3)	(3)	\$118,000
Total	124	124	7,410,000	306	306	17,200,000
99.00%–99.99% silicon:						
Bosnia and Herzegovina	--	--	--	615	612	1,470,000
Brazil	2,540	2,510	7,350,000	4,580	4,540	12,800,000
Canada	1,410	1,400	4,070,000	3,600	3,580	10,400,000
Laos	500	497	1,190,000	790	785	1,880,000
Norway	1,240	1,230	3,460,000	1,840	1,830	4,800,000
Thailand	--	--	--	58	57	159,000
Total	5,690	5,640	16,100,000	11,500	11,400	31,500,000
Other silicon:						
Austria	13	12	14,200	13	12	14,200
Brazil	454	449	1,300,000	819	810	2,330,000
Canada	19	19	67,800	39	39	82,600
China	(3)	(3)	7,010	46	44	57,000
Germany	(3)	(3)	7,200	10	9	17,500
Iceland	20	20	36,500	119	116	175,000
Japan	56	54	61,500	235	226	262,000
Norway	1,710	1,660	4,430,000	2,220	2,160	5,430,000
Sweden	--	--	--	67	65	73,400
Thailand	--	--	--	144	138	386,000
Total	2,270	2,220	5,920,000	3,710	3,620	8,840,000
Total silicon metal	8,080	7,990	29,400,000	15,500	15,300	57,500,000

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.

³Less than ½ unit.

Source: U.S. Census Bureau.