

Mineral Industry Surveys

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SILICON IN AUGUST 2018

Domestic production of silicon materials was 36,800 metric tons (t) in August 2018, a 19% decrease from July 2018 production and 23% less than August 2017 production (fig. 1, table 1). Net shipments were 26,200 t, 13% less than shipments in July 2018 and a 15% decrease from shipments in August 2017. Total production and net shipments during the first 8 months of 2018 were 8% more and slightly less, respectively, than those during the same period in 2017 (table 1).

Ending stocks were 27,700 t in August 2018, 14% less than stocks in July 2018 and 32% more than those in August 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.

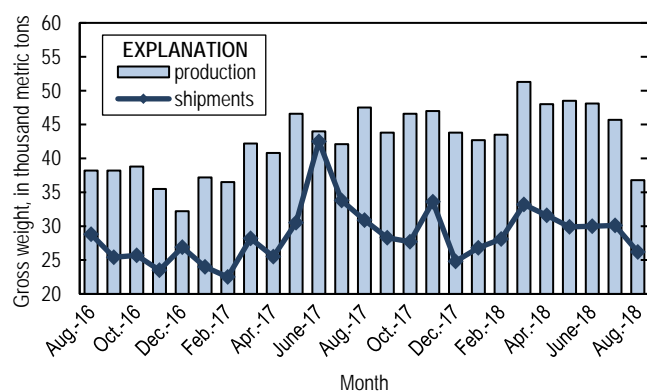


Figure 1. Monthly domestic production of total silicon materials and net shipments from August 2016 through August 2018 (may include revisions to previously published data).

Prices

The average U.S. spot price for silicon metal was 132.6 cents per pound in August 2018, slightly less than the average price in July 2018, and 9% more than the August 2017 price. The average U.S. spot prices for ferrosilicon, 50% and 75% grades were unchanged from the average prices in July 2018 and were 15% and 25% greater, respectively, than their average prices in August 2017 (fig. 2).

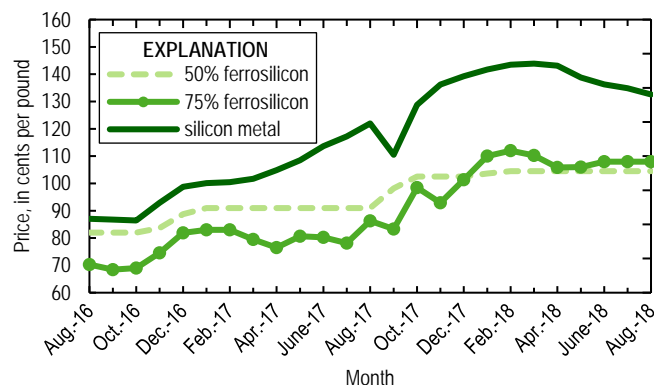


Figure 2. Average monthly spot prices for silicon metal and ferrosilicon 50% and 75% grades, contained silicon, from August 2016 through August 2018. Source: CRU Group and S&P Global Platts.

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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	33,500
January–August	337,000 ^r	238,000 ^r	21,000 ^r
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	43,800	24,800	33,500
2018:			
January	42,700	26,800	29,100
February	43,500	28,100	31,400
March	51,300	33,200	31,200
April	48,000	31,600	31,400
May	48,500	29,900	32,500
June	48,100	30,000	33,000
July	45,700	30,100	32,000
August	36,800	26,200	27,700
January–August	365,000	236,000	27,700

^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 AUGUST 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.	107.00	108.00	109.00	XX
Silicon metal, 553 grade ³	cents per pound	130.00	132.60	134.00	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 AUGUST 2018^{1,2}

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–August ³		
				Gross weight	Contained weight	Value
Ferrosilicon:						
More than 55% silicon:						
Brazil	87	52	\$121,000	99	59	\$140,000
Canada	603	362	991,000	3,360	2,020	5,640,000
Dominican Republic	18	11	39,200	18	11	39,200
Germany	219	131	182,000	219	131	182,000
Iceland	--	--	--	43	26	62,400
India	--	--	--	320	233	380,000
Mexico	248	151	562,000	2,400	1,510	4,990,000
Netherlands	--	--	--	1,410	843	1,410,000
Russia	--	--	--	555	333	233,000
United Kingdom	76	56	98,500	76	56	98,500
Other [3 countries and (or) localities]	10	6	15,000	16	10	25,000
Total	1,260	768	2,010,000	8,510	5,220	13,200,000
Other ferrosilicon:						
Belgium	40	20	62,000	352	160	468,000
Brazil	39	20	76,000	401	180	716,000
Canada	120	60	49,600	872	436	436,000
Finland	--	--	--	41	21	65,400
France	20	9	34,900	248	114	364,000
Korea, Republic of	--	--	--	514	224	595,000
Mexico	194	96	423,000	1,680	746	3,440,000
Poland	--	--	--	80	40	158,000
Turkey	--	--	--	223	107	373,000
United Kingdom	100	44	160,000	936	420	1,540,000
Other [10 countries and (or) localities]	2	1	9,400	184	72	310,000
Total	515	249	815,000	5,530	2,520	8,460,000
Total ferrosilicon	1,780	1,020	2,820,000	14,000	7,740	21,700,000
Metal:						
More than 99.99% silicon:						
China	506	506	6,470,000	2,580	2,580	39,000,000
Germany	67	67	1,290,000	266	266	5,240,000
Hong Kong	342	342	2,670,000	1,200	1,200	9,810,000
Japan	418	418	16,400,000	7,880	7,880	287,000,000
Korea, Republic of	190	190	10,400,000	1,030	1,030	57,100,000
Norway	63	63	1,270,000	740	740	9,100,000
Singapore	(4)	(4)	6,890	206	206	2,910,000
Taiwan	572	572	12,000,000	8,930	8,930	110,000,000
United Kingdom	16	16	779,000	275	275	7,180,000
Vietnam	--	--	--	395	395	9,220,000
Other [39 countries and (or) localities]	78	78	2,770,000	417	417	32,500,000
Total	2,250	2,250	54,000,000	23,900	23,900	570,000,000
99.00%–99.99% silicon:						
Belgium	--	--	--	275	273	312,000
France	--	--	--	9	9	12,500
Germany	--	--	--	438	434	437,000
India	18	18	48,300	34	34	92,900
Mexico	2	2	5,510	13	13	35,600
Netherlands	--	--	--	81	80	127,000
Oman	--	--	--	12	12	16,600
Peru	--	--	--	9	9	12,600
Spain	--	--	--	16	16	33,600
United Kingdom	--	--	--	488	479	726,000

See footnotes at end of table.

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

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–August ³		
				Gross weight	Contained weight	Value
Metal—Continued:						
99.00%–99.99% silicon:						
Other [1 country and (or) locality]	--	--	--	1	1	\$3,460
Total	20	20	\$53,800	1,380	1,360	1,810,000
Other silicon:						
Belgium	20	20	39,000	245	238	361,000
Canada	36	35	84,000	246	239	735,000
China	3	3	3,580	101	98	138,000
France	--	--	--	140	137	151,000
Germany	4	3	4,650	20	20	41,100
Korea, Republic of	--	--	--	114	111	334,000
Netherlands	251	244	293,000	633	615	639,000
South Africa	10	9	16,400	38	37	58,200
Sweden	--	--	--	221	215	325,000
United Kingdom	20	20	38,100	90	87	246,000
Other [12 countries and (or) localities]	3	3	20,400	69	67	540,000
Total	347	337	499,000	1,920	1,870	3,570,000
Total silicon metal	2,620	2,610	54,500,000	27,200	27,100	575,000,000

-- Zero.

¹Presentation of monthly data is based on the quantities (gross weight) of the leading countries and (or) localities.

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 AUGUST 2018^{1,2}

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–August ³		
				Gross weight	Contained weight	Value
Ferrosilicon:						
55%–80% silicon, more than 3% Ca:						
Brazil	--	--	--	183	137	\$239,000
China	111	83	\$159,000	421	309	698,000
France	36	21	104,000	406	244	1,160,000
Hong Kong	--	--	--	60	45	94,400
Russia	--	--	--	10,000	7,620	14,400,000
Slovakia	1	(4)	6,560	1	(4)	6,560
South Africa	126	92	258,000	594	408	1,240,000
Total	274	197	528,000	11,700	8,760	17,800,000
55%–80% silicon, other:						
Brazil	1,320	1,000	1,880,000	4,690	3,550	7,110,000
Canada	1,070	773	2,630,000	9,050	6,560	20,700,000
China	1,960	1,480	2,620,000	10,800	8,160	15,200,000
France	198	132	579,000	1,340	937	3,620,000
Iceland	332	261	441,000	3,980	3,140	5,570,000
Kazakhstan	--	--	--	5,540	4,230	9,660,000
Malaysia	2,840	2,130	2,780,000	8,170	6,100	8,070,000
Russia	--	--	--	58,000	44,100	86,000,000
Slovakia	96	72	143,000	624	469	945,000
South Africa	308	225	724,000	2,080	1,520	4,450,000
Other [8 countries and (or) localities]	266	193	832,000	2,140	1,550	5,560,000
Total	8,390	6,270	12,600,000	106,000	80,300	167,000,000
80%–90% ferrosilicon:						
Argentina	--	--	--	22	18	34,500
Canada	--	--	--	1	1	2,700
Germany	1	1	3,090	214	177	240,000
Total	1	1	3,090	237	196	278,000
More than 90% ferrosilicon, Brazil	50	46	105,000	2,330	2,150	1,240,000
Magnesium ferrosilicon:						
Canada	1,340	616	2,490,000	9,150	4,200	16,900,000
China	--	--	--	79	39	128,000
Germany	16	4	37,900	49	14	140,000
Hong Kong	--	--	--	19	9	33,700
India	643	303	403,000	2,240	908	2,190,000
Norway	--	--	--	162	78	326,000
Total	2,000	924	2,930,000	11,700	5,240	19,700,000
Other ferrosilicon:						
Argentina	--	--	--	40	18	39,900
Canada	814	278	1,010,000	6,570	2,250	8,180,000
China	--	--	--	660	299	1,130,000
France	--	--	--	55	26	147,000
Germany	4	2	20,900	16	8	76,000
Italy	--	--	--	20	3	32,500
Russia	30	15	57,100	224	111	413,000
Slovakia	39	6	65,300	178	47	294,000
Spain	--	--	--	206	91	354,000
United Kingdom	--	--	--	9	4	25,400
Other [1 country and (or) locality]	5	2	7,880	5	2	7,880
Total	891	303	1,160,000	7,980	2,860	10,700,000
Total ferrosilicon	11,600	7,700	17,300,000	140,000	99,500	216,000,000
Metal:						
More than 99.99% silicon:						
Brazil	2,220	2,220	7,070,000	2,220	2,220	7,070,000

See footnotes at end of table.

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

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–August ³		
				Gross weight	Contained weight	Value
Metal—Continued:						
More than 99.99% silicon:						
China	6	6	\$1,020,000	94	94	\$9,990,000
Denmark	(4)	(4)	223,000	1	1	837,000
Finland	(4)	(4)	13,800	3	3	483,000
Germany	106	106	4,440,000	598	598	35,300,000
Japan	9	9	883,000	104	104	7,150,000
Korea, Republic of	1	1	42,200	2	2	268,000
Spain	(4)	(4)	7,560	2	2	19,700
Taiwan	60	60	2,150,000	407	407	14,500,000
Ukraine	(4)	(4)	22,400	4	4	317,000
Other [10 countries and (or) localities]	(4)	(4)	12,900	2	2	121,000
Total	2,410	2,410	15,900,000	3,440	3,440	76,100,000
99.00%–99.99% silicon:						
Australia	334	332	1,030,000	617	613	1,920,000
Bosnia and Herzegovina	488	486	1,200,000	6,010	5,980	15,500,000
Brazil	1,750	1,740	4,960,000	15,100	15,000	43,100,000
Canada	1,870	1,860	5,670,000	16,000	15,900	48,000,000
Germany	20	20	64,200	60	59	192,000
Iceland	--	--	--	100	99	190,000
Kazakhstan	400	398	929,000	1,230	1,230	2,690,000
Laos	120	119	316,000	2,140	2,120	5,270,000
Norway	932	926	2,690,000	10,900	10,800	31,600,000
Thailand	1,100	1,090	3,170,000	12,000	12,000	35,100,000
Other [1 country and (or) locality]	--	--	--	19	19	45,100
Total	7,010	6,960	20,000,000	64,200	63,800	184,000,000
Other silicon:						
Australia	--	--	--	96	95	315,000
Brazil	832	821	2,340,000	5,060	4,990	14,100,000
Canada	89	86	265,000	147	143	416,000
Iceland	--	--	--	119	116	175,000
Japan	--	--	--	366	352	449,000
Kazakhstan	240	230	558,000	420	408	916,000
Laos	--	--	--	309	297	788,000
Norway	271	270	593,000	5,060	4,930	11,700,000
Sweden	--	--	--	135	129	147,000
Thailand	--	--	--	336	323	868,000
Other [10 countries and (or) localities]	118	114	212,000	318	306	526,000
Total	1,550	1,520	3,960,000	12,400	12,100	30,300,000
Total silicon metal	11,000	10,900	39,900,000	80,000	79,300	290,000,000

-- Zero.

¹Presentation of monthly data is based on the quantities (gross weight) of the leading countries and (or) localities.

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.