

Mineral Industry Surveys

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SILICON IN JULY 2018

Domestic production of silicon materials was 45,700 metric tons (t) in July 2018, a 5% decrease from June 2018 production and 9% more than July 2017 production (fig. 1, table 1). Net shipments were 30,100 t, essentially unchanged from shipments in June 2018 and an 11% decrease from shipments in July 2017. Total production and net shipments during the first 7 months of 2018 were 13% and slightly more, respectively, than those during the same period in 2017 (table 1).

Ending stocks were 32,000 t in July 2018, 3% less than stocks in June 2018 and 50% more than those in July 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.

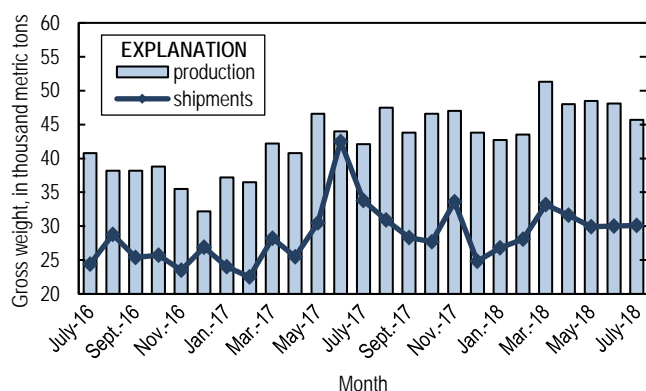


Figure 1. Monthly domestic production of total silicon materials and net shipments from July 2016 through July 2018 (may include revisions to previously published data).

Prices

The average U.S. spot price for silicon metal was 134.88 cents per pound in July 2018, slightly less than the average price in June 2018, and 15% more than the July 2017 price. The average U.S. spot prices for ferrosilicon, 50% and 75% grades were unchanged from the average prices in June 2018 and were 15% and 38% greater, respectively, than their average prices in July 2017 (fig. 2).

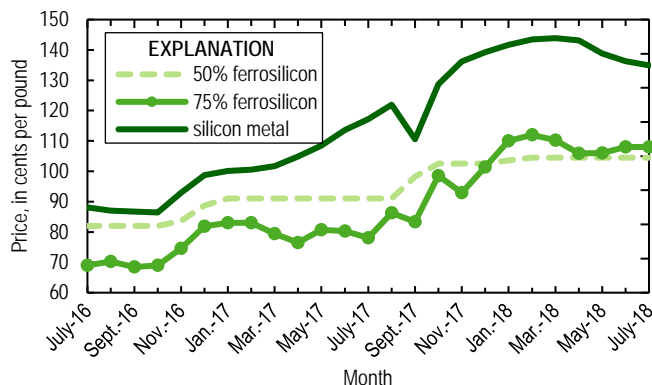


Figure 2. Average monthly spot prices for silicon metal and ferrosilicon 50% and 75% grades, contained silicon, from July 2016 through July 2018. Source: CRU Group and S&P Global Platts.

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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–July	289,000	207,000	21,400
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	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
January–July	328,000	210,000	32,000

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 JULY 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	132.00	134.88	137.00	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 JULY 2018^{1,2}

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–July ³		
				Gross weight	Contained weight	Value
Ferrosilicon:						
More than 55% silicon:						
Brazil	--	--	--	12	7	\$18,500
Canada	436	262	\$771,000	2,760	1,650	4,650,000
Iceland	--	--	--	43	26	62,400
India	--	--	--	320	233	380,000
Malaysia	--	--	--	6	4	10,000
Mexico	170	108	312,000	2,150	1,360	4,430,000
Netherlands	442	265	255,000	1,410	843	1,410,000
Russia	--	--	--	555	333	233,000
Total	1,050	634	1,340,000	7,250	4,460	11,200,000
Other ferrosilicon:						
Belgium	--	--	--	312	140	406,000
Brazil	127	64	184,000	362	160	640,000
Canada	9	4	3,690	752	376	386,000
Finland	--	--	--	41	21	65,400
France	108	49	116,000	228	105	329,000
Korea, Republic of	60	26	66,000	514	224	595,000
Mexico	204	101	418,000	1,480	651	3,020,000
Poland	40	20	79,000	80	40	158,000
Turkey	--	--	--	223	107	373,000
United Kingdom	140	63	236,000	837	376	1,380,000
Other (10 countries)	--	--	--	182	71	301,000
Total	688	328	1,100,000	5,010	2,270	7,650,000
Total ferrosilicon	1,740	962	2,440,000	12,300	6,730	18,800,000
Metal:						
More than 99.99% silicon:						
China	294	294	4,660,000	2,070	2,070	32,600,000
Germany	7	7	109,000	199	199	3,950,000
Hong Kong	55	55	363,000	861	861	7,140,000
Japan	1,100	1,100	47,900,000	7,460	7,460	271,000,000
Korea, Republic of	467	467	23,400,000	838	838	46,700,000
Norway	90	90	1,260,000	677	677	7,830,000
Singapore	(4)	(4)	5,680	206	206	2,900,000
Taiwan	307	307	6,430,000	8,360	8,360	98,400,000
United Kingdom	58	58	940,000	259	259	6,400,000
Vietnam	--	--	--	395	395	9,220,000
Other (39 countries)	34	34	3,330,000	339	339	29,700,000
Total	2,410	2,410	88,400,000	21,700	21,700	516,000,000
99.00%–99.99% silicon:						
Belgium	--	--	--	275	273	312,000
France	--	--	--	9	9	12,500
Germany	--	--	--	438	434	437,000
India	--	--	--	16	16	44,600
Mexico	1	1	2,760	11	11	30,100
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
Other (1 country)	--	--	--	1	1	3,460
Total	1	1	2,760	1,360	1,340	1,760,000

See footnotes at end of table.

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

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–July ³		
				Gross weight	Contained weight	Value
Metal—Continued:						
Other silicon:						
Belgium	--	--	--	225	218	\$322,000
Canada	35	34	\$100,000	210	204	651,000
China	--	--	--	99	96	135,000
France	--	--	--	140	137	151,000
Germany	--	--	--	17	16	36,500
Korea, Republic of	--	--	--	114	111	334,000
Netherlands	58	56	76,300	382	371	346,000
South Africa	--	--	--	29	28	41,700
Sweden	--	--	--	221	215	325,000
United Kingdom	22	22	62,800	69	68	208,000
Other (11 countries)	4	4	20,200	66	64	520,000
Total	119	116	260,000	1,570	1,530	3,070,000
Total silicon metal	2,530	2,530	88,600,000	24,600	24,500	521,000,000

-- Zero.

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 JULY 2018^{1,2}

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–July ³		
				Gross weight	Contained weight	Value
Ferrosilicon:						
55%–80% silicon, more than 3% Ca:						
Brazil	--	--	--	183	137	\$239,000
China	65	54	\$95,800	309	226	539,000
France	36	23	87,600	370	223	1,050,000
Hong Kong	--	--	--	60	45	94,400
Russia	--	--	--	10,000	7,620	14,400,000
South Africa	72	39	153,000	468	316	980,000
Total	173	116	336,000	11,400	8,560	17,300,000
55%–80% silicon, other:						
Brazil	--	--	--	3,370	2,550	5,230,000
Canada	907	660	2,060,000	7,980	5,790	18,000,000
China	2,670	2,020	3,700,000	8,850	6,670	12,600,000
France	178	127	465,000	1,140	804	3,050,000
Iceland	244	193	368,000	3,650	2,880	5,130,000
Kazakhstan	--	--	--	5,540	4,230	9,660,000
Malaysia	1,030	771	238,000	5,330	3,970	5,290,000
Russia	15,100	11,400	21,500,000	58,000	44,100	86,000,000
Slovakia	96	72	153,000	528	397	802,000
South Africa	490	362	1,020,000	1,770	1,300	3,720,000
Other (8 countries)	109	80	328,000	1,880	1,360	4,720,000
Total	20,800	15,600	29,800,000	98,000	74,100	154,000,000
80%–90% ferrosilicon:						
Argentina	--	--	--	22	18	34,500
Canada	--	--	--	1	1	2,700
Germany	76	63	76,900	213	176	237,000
Total	76	63	76,900	236	195	275,000
More than 90% ferrosilicon, Brazil	--	--	--	2,280	2,100	1,130,000
Magnesium ferrosilicon:						
Canada	902	418	1,650,000	7,810	3,580	14,400,000
China	--	--	--	79	39	128,000
Germany	--	--	--	32	10	103,000
Hong Kong	19	9	33,700	19	9	33,700
India	236	106	228,000	1,590	604	1,790,000
Norway	--	--	--	162	78	326,000
Total	1,160	532	1,910,000	9,690	4,320	16,800,000
Other ferrosilicon:						
Argentina	--	--	--	40	18	39,900
Canada	660	208	873,000	5,750	1,970	7,170,000
China	117	56	237,000	660	299	1,130,000
France	--	--	--	55	26	147,000
Germany	--	--	--	12	6	55,100
Italy	--	--	--	20	3	32,500
Russia	11	5	19,600	195	96	356,000
Slovakia	62	17	102,000	139	41	228,000
Spain	--	--	--	206	91	354,000
United Kingdom	--	--	--	9	4	25,400
Total	850	286	1,230,000	7,090	2,560	9,530,000
Total ferrosilicon	23,000	16,600	33,400,000	129,000	91,800	199,000,000
Metal:						
More than 99.99% silicon:						
China	44	44	1,220,000	89	89	8,960,000
Denmark	(4)	(4)	145,000	1	1	614,000
Finland	(4)	(4)	31,100	3	3	469,000

See footnotes at end of table.

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

(Metric tons, unless otherwise specified)

Country or locality	Gross weight	Contained weight	Value	January–July ³		
				Gross weight	Contained weight	Value
Metal—Continued:						
More than 99.99% silicon:						
Germany	84	84	\$4,480,000	492	492	\$30,900,000
Japan	9	9	863,000	95	95	6,270,000
Korea, Republic of	(4)	(4)	50,500	1	1	226,000
Spain	(4)	(4)	3,890	1	1	12,100
Sweden	(4)	(4)	8,750	1	1	39,800
Taiwan	46	46	1,710,000	346	346	12,300,000
Ukraine	-4	(4)	4,150	4	4	295,000
Other (8 countries)	-4	(4)	16,400	1	1	67,900
Total	184	184	8,530,000	1,030	1,030	60,200,000
99.00%–99.99% silicon:						
Australia	265	263	838,000	282	280	891,000
Bosnia and Herzegovina	268	267	665,000	5,530	5,500	14,300,000
Brazil	826	820	2,280,000	13,400	13,300	38,200,000
Canada	1,720	1,710	5,200,000	14,100	14,000	42,300,000
Germany	--	--	--	40	40	127,000
Iceland	--	--	--	100	99	190,000
Kazakhstan	413	410	897,000	834	828	1,770,000
Laos	50	50	133,000	2,020	2,000	4,960,000
Norway	1,620	1,610	4,630,000	9,930	9,870	28,900,000
Thailand	1,500	1,490	4,400,000	11,000	10,900	31,900,000
Other (1 country)	--	--	--	19	19	45,100
Total	6,670	6,620	19,000,000	57,200	56,800	164,000,000
Other silicon:						
Australia	96	95	315,000	96	95	315,000
Brazil	854	841	2,330,000	4,230	4,170	11,700,000
Germany	--	--	--	67	65	97,700
Iceland	--	--	--	119	116	175,000
Japan	52	50	62,300	366	352	449,000
Kazakhstan	93	92	183,000	180	178	358,000
Laos	38	36	96,900	309	297	788,000
Norway	439	427	816,000	4,790	4,660	11,100,000
Sweden	--	--	--	135	129	147,000
Thailand	--	--	--	336	323	868,000
Other (8 countries)	24	24	43,000	191	185	368,000
Total	1,600	1,560	3,850,000	10,800	10,600	26,400,000
Total silicon metal	8,450	8,370	31,400,000	69,000	68,400	250,000,000

-- Zero.

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.