

Mineral Industry Surveys

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SILICON IN JULY 2017

Domestic production of silicon materials was 42,100 metric tons (t) in July 2017, a 4% decrease from June 2017 production and 3% more than July 2016 production (fig. 1, table 1). Net shipments were 33,800 t, a 20% decrease from shipments in June 2017 and a 39% increase from shipments in July 2016. Total production and net shipments during the first 7 months of 2017 were essentially unchanged and 10% more, respectively, than those during the same period in 2016 (table 1).

Ending stocks were 21,400 t in July 2017, 26% less than those in June 2017 and 56% less than those in July 2016 (table 1). Adjustments in stocks included in-plant consumption of ferrosilicon to produce magnesium ferrosilicon and other alloys.

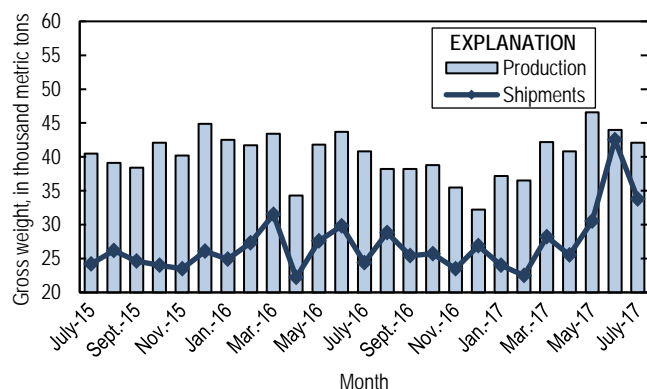


Figure 1. Monthly domestic production of total silicon materials and net shipments from July 2015 through July 2017 (may include revisions to previously published data). Source: U.S. Geological Survey.

The average U.S. spot price for silicon metal was 117.25 cents per pound in July 2017, a 3% increase from the average

price in June 2017, and a 33% increase from the July 2016 price. The average U.S. spot prices for ferrosilicon, 50% and 75% grades, were the same and 3% less, respectively, than the average prices in June 2017 and were 11% and 13% greater, respectively, than their average prices in July 2016 (fig. 2).

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

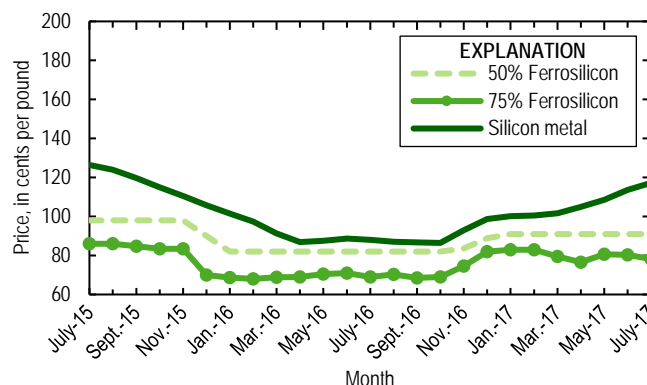


Figure 2. Average monthly spot prices for silicon metal and ferrosilicon 50% and 75% grades, contained silicon, from July 2015 through July 2017. Source: CRU Ryan's Notes and Platts Metals Week.

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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:			
January–December	471,000	318,000	37,100
January–July	288,000	188,000	48,700
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	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 ^r	42,500 ^r	28,900 ^r
July	42,100	33,800	21,400
January–July	289,000	207,000	21,400

^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals

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 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.	73.00	78.13	80.00	XX
Silicon metal, 553 grade ³	cents per pound	114.00	117.25	121.00	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 2017^{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:						
Belgium	--	--	--	289	160	\$128,000
Brazil	6	4	\$15,600	43	26	83,700
Canada	300	180	380,000	2,010	1,210	2,770,000
Colombia	8	5	21,600	10	6	25,500
Japan	--	--	--	20	12	33,200
Mexico	232	140	508,000	2,020	1,210	4,070,000
Netherlands	--	--	--	567	408	461,000
South Africa	--	--	--	237	142	104,000
Turkey	--	--	--	12	7	18,500
United Kingdom	--	--	--	20	13	18,000
Other (2 countries)	--	--	--	9	6	19,800
Total	547	328	925,000	5,240	3,200	7,740,000
Other ferrosilicon:						
Belgium	116	53	166,000	548	249	579,000
Brazil	38	19	76,000	222	108	418,000
Canada	--	--	--	823	412	433,000
France	--	--	--	100	46	159,000
Japan	--	--	--	98	49	163,000
Korea, Republic of	40	17	43,200	305	134	327,000
Mexico	627	237	1,160,000	2,780	1,240	5,170,000
Poland	--	--	--	75	37	158,000
Turkey	20	10	30,600	82	41	121,000
United Kingdom	80	36	121,000	446	206	705,000
Other (4 countries)	24	11	43,800	111	45	179,000
Total	945	384	1,640,000	5,590	2,570	8,410,000
Total ferrosilicon	1,490	712	2,570,000	10,800	5,770	16,100,000
Metal:						
More than 99.99% silicon:						
China	431	431	3,660,000	2,980	2,980	41,700,000
Germany	130	130	2,890,000	2,350	2,350	64,700,000
Hong Kong	181	181	1,240,000	1,190	1,190	9,570,000
Japan	1,690	1,690	56,300,000	10,100	10,100	320,000,000
Korea, Republic of	771	771	29,600,000	3,430	3,430	116,000,000
Malaysia	20	20	3,270,000	418	418	25,300,000
Philippines	317	317	13,300,000	400	400	14,500,000
Russia	20	20	146,000	66	66	844,000
Singapore	192	192	6,990,000	1,040	1,040	26,200,000
Taiwan	1,010	1,010	14,200,000	11,200	11,200	158,000,000
Other (35 countries)	44	44	1,820,000	330	330	11,100,000
Total	4,810	4,810	133,000,000	33,500	33,500	789,000,000
99.00%–99.99% silicon:						
Belgium	--	--	--	79	79	85,500
China	--	--	--	203	203	206,000
Dominican Republic	3	3	4,840	8	8	11,500
Israel	--	--	--	26	26	37,200
Japan	--	--	--	12	12	17,000
Mexico	1	1	2,970	9	9	26,900
Netherlands	--	--	--	461	457	348,000
Peru	--	--	--	10	10	14,400
Thailand	3	3	4,200	15	15	21,700
United Kingdom	61	60	66,100	402	399	433,000

See footnotes at end of table.

TABLE 3—Continued
U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN JULY 2017^{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:						
99.00%–99.99% silicon:						
Other (4 countries)	4	4	\$6,180	10	10	\$17,000
Total	73	72	84,300	1,240	1,230	1,220,000
Other silicon:						
Belgium	100	98	113,000	628	613	712,000
Canada	113	110	311,000	365	354	839,000
China	5	5	7,100	59	57	82,300
Germany	--	--	--	13	13	26,700
Hong Kong	--	--	--	10	9	98,900
Korea, Republic of	--	--	--	7	7	9,660
Mexico	1	1	5,210	38	37	101,000
Netherlands	--	--	--	157	154	119,000
South Africa	13	13	17,700	72	70	130,000
United Kingdom	2	2	21,300	152	147	305,000
Other (6 countries)	3	3	21,300	8	8	60,900
Total	238	232	496,000	1,510	1,470	2,490,000
Total silicon metal	5,120	5,110	134,000,000	36,300	36,200	793,000,000

-- Zero.

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

Source: U.S. Census Bureau.

TABLE 4
U.S. IMPORTS OF FERROSILICON AND SILICON METAL IN JULY 2017^{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	--	--	--	1,480	1,010	\$1,840,000
China	666	499	\$722,000	725	544	789,000
France	90	54	245,000	324	194	880,000
South Africa	36	25	65,800	213	148	409,000
Total	792	579	1,030,000	2,740	1,890	3,920,000
55%–80% silicon, other:						
Brazil	54	40	56,200	2,850	2,140	3,140,000
Canada	764	552	1,670,000	7,540	5,480	15,900,000
China	5,530	4,170	6,310,000	10,100	7,630	11,100,000
France	72	47	200,000	740	500	2,100,000
Iceland	1,350	1,060	1,600,000	10,300	7,960	11,400,000
Kazakhstan	1,530	1,160	1,350,000	12,600	9,540	14,200,000
Malaysia	105	72	93,300	4,700	3,480	4,860,000
Norway	--	--	--	1,010	763	1,120,000
Russia	21,400	16,400	25,300,000	46,800	35,900	52,900,000
South Africa	194	124	419,000	753	516	1,850,000
Other (10 countries)	216	160	627,000	1,710	1,250	4,030,000
Total	31,200	23,700	37,600,000	99,100	75,200	123,000,000
80%–90% ferrosilicon, Germany	--	--	--	27	22	68,500
More than 90% ferrosilicon:						
Brazil	--	--	--	1,440	1,330	453,000
China	--	--	--	52	47	15,800
Total	--	--	--	1,490	1,370	468,000
Magnesium ferrosilicon:						
Argentina	95	43	94,600	404	165	452,000
Canada	796	364	1,440,000	7,340	3,340	13,100,000
China	--	--	--	141	66	185,000
France	--	--	--	10	5	42,500
Germany	4	2	8,280	77	32	210,000
India	178	52	218,000	1,310	433	1,550,000
Norway	--	--	--	55	26	96,700
Total	1,070	460	1,760,000	9,340	4,070	15,600,000
Other ferrosilicon:						
Canada	1,040	371	866,000	10,300	3,570	8,370,000
China	93	37	172,000	5,490	982	1,830,000
Germany	--	--	--	42	17	136,000
India	24	11	13,400	24	11	13,400
Japan	--	--	--	7	3	11,600
Russia	3	1	3,670	78	38	122,000
Slovakia	20	3	29,500	117	23	162,000
South Africa	--	--	--	11	5	15,500
Trinidad and Tobago	--	--	--	89	14	34,800
Total	1,180	423	1,080,000	16,200	4,660	10,700,000
Total ferrosilicon	34,200	25,200	41,500,000	129,000	87,200	153,000,000
Metal:						
More than 99.99% silicon:						
Brazil	644	644	1,530,000	5,790	5,790	13,900,000
China	6	6	714,000	53	53	6,060,000
Denmark	(4)	(4)	65,700	1	1	397,000
Germany	99	99	4,650,000	439	439	23,500,000
Japan	41	41	1,470,000	147	147	6,780,000

See footnotes at end of table.

TABLE 4—Continued
U.S. IMPORTS OF FERROSILICON AND SILICON METAL IN JULY 2017^{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:						
Norway	--	--	--	57	57	\$236,000
Spain	--	--	--	2	2	18,000
Sweden	--	--	--	1	1	37,100
Taiwan	41	41	\$1,240,000	290	290	8,000,000
Ukraine	(4)	(4)	11,700	3	3	191,000
Other (6 countries)	(4)	(4)	40,700	(4)	(4)	159,000
Total	830	830	9,730,000	6,780	6,780	59,300,000
99.00%–99.99% silicon:						
Australia	3,870	3,850	8,490,000	13,900	13,800	29,400,000
Bosnia and Herzegovina	144	143	314,000	1,130	1,120	1,930,000
Brazil	1,600	1,590	4,170,000	9,770	9,690	22,800,000
Canada	2,600	2,580	6,570,000	14,600	14,500	38,300,000
France	--	--	--	626	620	985,000
Kazakhstan	1,580	1,560	2,840,000	7,560	7,500	13,700,000
Malaysia	--	--	--	114	113	177,000
Norway	307	305	693,000	3,340	3,320	7,510,000
South Africa	--	--	--	550	545	1,040,000
Thailand	759	752	1,580,000	2,580	2,560	4,970,000
Other (4 countries)	26	26	50,800	159	157	287,000
Total	10,900	10,800	24,700,000	54,300	53,900	121,000,000
Other silicon:						
Australia	192	189	411,000	1,450	1,410	2,780,000
Brazil	324	310	621,000	6,690	6,560	15,000,000
Canada	110	106	190,000	863	840	2,070,000
France	160	156	281,000	160	156	281,000
Iceland	--	--	--	703	690	1,140,000
Japan	20	19	21,900	236	227	321,000
Kazakhstan	181	174	272,000	1,240	1,210	2,100,000
Norway	684	671	1,190,000	4,560	4,440	7,360,000
South Africa	--	--	--	423	412	624,000
United Kingdom	(4)	(4)	9,550	123	120	262,000
Other (6 countries)	6	6	16,700	205	197	307,000
Total	1,680	1,630	3,010,000	16,600	16,300	32,300,000
Total silicon metal	13,400	13,300	37,400,000	77,700	77,000	213,000,000

-- Zero.

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