

Mineral Industry Surveys

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SILICON IN MAY 2017

Domestic production of silicon materials was 46,600 metric tons (t) in May 2017, a 14% increase from April 2017 production and 12% more than May 2016 production (fig. 1, table 1). Net shipments were 30,500 t, a 20% increase from shipments in April 2017 and an 11% increase from shipments in May 2016. Total production and net shipments during the first 5 months of 2017 were essentially unchanged and slightly less, respectively, than those during the same period in 2016 (table 1).

Ending stocks were 45,400 t in May 2017, essentially unchanged from those in April 2017 and slightly less than those in May 2016 (table 1). Adjustments in stocks included in-plant consumption of ferrosilicon to produce magnesium ferrosilicon and other alloys.

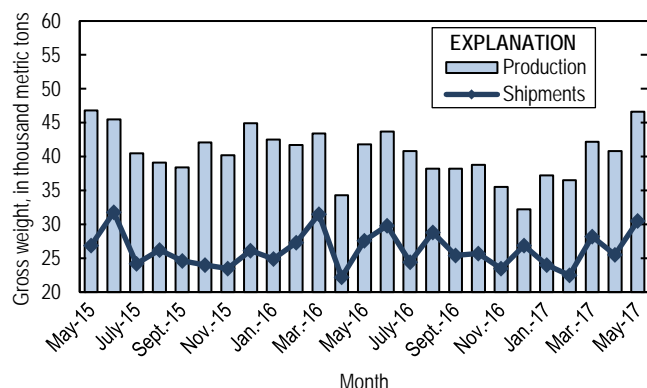


Figure 1. Monthly domestic production of total silicon materials and net shipments from May 2015 through May 2017 (may include revisions to previously published data). Source: U.S. Geological Survey.

The average U.S. spot price for silicon metal was 108.5 cents per pound in May 2017, a 3% increase from the average price in

April 2017, and a 24% increase from the May 2016 price. The average U.S. spot prices for ferrosilicon, 50% and 75% grades, were the same and 5% more, respectively, than the average prices in April 2017 and were 11% and 14% greater, respectively, than their average prices in May 2016 (fig. 2).

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

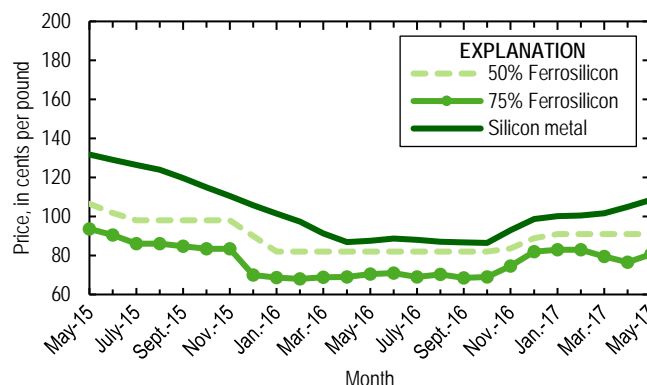


Figure 2. Average monthly spot prices for silicon metal and ferrosilicon 50% and 75% grades, contained silicon, from May 2015 through May 2017. Source: CRU Ryan's Notes and Platts Metals Week.

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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: ^p			
January–December	471,000	318,000	37,100
January–May	204,000	133,000	46,200
May	41,800	27,600	46,200
June	43,700	29,800	45,600
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 ^f	36,500	22,500	40,800
March ^f	42,200	28,200	41,800
April ^f	40,800	25,500	45,200
May	46,600	30,500	45,400
January–May	203,000	131,000	45,400

^pPreliminary. ^fRevised.

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 MAY 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.	78.00	80.70	83.00	XX
Silicon metal, 553 grade ³	cents per pound	106.00	108.50	110.00	XX

do. Ditto. XX Not applicable.

¹CRU Ryan's Notes, North American transaction price, duty paid, f.o.b. Pittsburgh, producing plant or Chicago/Pittsburgh warehouse. Average price reported for price range.

²Platts Metals Week, in U.S. warehouse, U.S. origin and imported material. Average prices reported for all transactions during the month.

³Platts Metals Week, 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 MAY 2017^{1,2}

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	January–May ³		
				Gross weight	Contained weight	Value
Ferrosilicon:						
More than 55% silicon:						
Belgium	--	--	--	289	160	\$128,000
Brazil	5	3	\$14,300	37	22	68,200
Canada	131	79	191,000	992	595	1,330,000
Colombia	2	1	3,900	2	1	3,900
Germany	3	2	4,000	8	5	15,100
Japan	20	12	33,200	20	12	33,200
Mexico	280	168	681,000	1,620	970	3,160,000
Netherlands	--	--	--	567	408	461,000
Turkey	--	--	--	12	7	18,500
United Kingdom	--	--	--	20	13	18,000
Other (1 country)	1	1	4,770	1	1	4,770
Total	443	266	932,000	3,560	2,200	5,240,000
Other ferrosilicon:						
Belgium	56	24	44,400	378	171	388,000
Brazil	31	16	76,000	146	70	266,000
Canada	27	14	34,600	780	390	415,000
France	20	9	31,800	100	46	159,000
Indonesia	--	--	--	60	22	91,600
Korea, Republic of	5	3	7,750	225	99	241,000
Mexico	320	160	660,000	1,980	919	3,650,000
Poland	17	9	39,500	58	29	118,000
Turkey	--	--	--	61	31	90,700
United Kingdom	100	46	159,000	346	161	553,000
Other (3 countries)	--	--	--	64	31	106,000
Total	577	280	1,050,000	4,200	1,970	6,080,000
Total ferrosilicon	1,020	546	1,990,000	7,770	4,160	11,300,000
Metal:						
More than 99.99% silicon:						
China	649	649	9,800,000	2,220	2,220	32,500,000
Germany	471	471	14,700,000	1,910	1,910	53,000,000
Hong Kong	33	33	203,000	897	897	7,910,000
Japan	1,150	1,150	35,500,000	7,250	7,250	230,000,000
Korea, Republic of	712	712	21,200,000	2,250	2,250	71,700,000
Malaysia	18	18	2,820,000	380	380	19,400,000
Philippines	--	--	--	83	83	1,210,000
Russia	16	16	233,000	46	46	698,000
Singapore	83	83	1,250,000	737	737	17,700,000
Taiwan	1,110	1,110	15,400,000	8,940	8,940	130,000,000
Other (32 countries)	55	55	2,110,000	275	275	8,370,000
Total	4,300	4,300	103,000,000	25,000	25,000	572,000,000
99.00%–99.99% silicon:						
China	--	--	--	203	203	206,000
Dominican Republic	--	--	--	5	5	6,640
Israel	--	--	--	26	26	37,200
Japan	--	--	--	12	12	17,000
Mexico	2	2	5,940	7	7	20,900
Netherlands	--	--	--	461	457	348,000
Peru	10	10	14,400	10	10	14,400
Spain	--	--	--	5	5	7,500

See footnotes at end of table.

TABLE 3—Continued
U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN MAY 2017^{1,2}

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	January–May ³		
				Gross weight	Contained weight	Value
Metal—Continued:						
99.00%–99.99% silicon:						
Thailand	--	--	--	12	12	\$17,500
United Kingdom	142	141	\$154,000	281	278	301,000
Other (1 country)	--	--	--	(4)	(4)	3,320
Total	154	153	175,000	1,020	1,020	980,000
Other silicon:						
Belgium	1	1	8,470	509	496	578,000
Canada	59	58	145,000	210	204	412,000
China	--	--	--	44	43	58,700
Germany	(4)	(4)	4,890	13	13	26,700
Hong Kong	10	9	98,900	10	9	98,900
Korea, Republic of	--	--	--	7	7	9,660
Mexico	5	5	14,900	24	24	65,400
Netherlands	--	--	--	157	154	119,000
South Africa	1	1	17,300	37	36	84,100
United Kingdom	2	2	20,700	69	67	145,000
Other (4 countries)	--	--	--	4	4	29,900
Total	78	76	310,000	1,090	1,060	1,630,000
Total silicon metal	4,530	4,520	104,000,000	27,100	27,100	575,000,000

-- Zero.

¹Presentation of monthly data is based on the "January–May" 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 MAY 2017^{1,2}

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	January–May ³		
				Gross weight	Contained weight	Value
Ferrosilicon:						
55%–80% silicon, more than 3% Ca:						
Brazil	66	50	\$66,000	1,410	955	\$1,780,000
China	--	--	--	60	45	67,300
France	54	32	142,000	216	130	588,000
South Africa	90	63	165,000	159	110	316,000
Total	210	145	374,000	1,840	1,240	2,750,000
55%–80% silicon, other:						
Brazil	381	290	438,000	2,630	1,980	2,920,000
Canada	1,040	755	2,430,000	5,780	4,210	12,100,000
China	773	589	850,000	1,700	1,290	1,850,000
France	126	83	351,000	578	391	1,640,000
Iceland	1,110	882	1,280,000	7,560	5,800	8,220,000
Kazakhstan	492	372	433,000	8,630	6,570	10,200,000
Malaysia	851	629	891,000	4,490	3,330	4,650,000
Norway	--	--	--	1,010	763	1,120,000
Russia	--	--	--	24,800	19,100	26,800,000
South Africa	65	46	125,000	343	252	824,000
Other (10 countries)	312	227	685,000	1,370	1,000	3,000,000
Total	5,160	3,870	7,480,000	58,900	44,600	73,300,000
80%–90% ferrosilicon, Germany	--	--	--	13	11	17,000
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	57	26	55,800	251	99	283,000
Canada	1,190	539	2,110,000	5,410	2,460	9,660,000
China	91	43	112,000	102	48	128,000
France	--	--	--	10	5	42,500
Germany	6	3	14,300	73	30	201,000
India	177	58	227,000	768	238	991,000
Norway	--	--	--	55	26	96,700
Total	1,520	669	2,520,000	6,670	2,910	11,400,000
Other ferrosilicon:						
Canada	2,020	684	1,730,000	7,330	2,550	6,110,000
China	61	31	65,900	5,320	911	1,520,000
Germany	1	(4)	3,810	42	17	136,000
Japan	--	--	--	7	3	11,600
Russia	22	11	33,400	71	34	111,000
Slovakia	20	3	25,800	78	18	104,000
South Africa	4	2	5,460	11	5	15,500
Trinidad and Tobago	--	--	--	89	14	34,800
Total	2,130	730	1,860,000	12,900	3,550	8,040,000
Total ferrosilicon	9,010	5,420	12,200,000	81,800	53,700	96,000,000
Metal:						
More than 99.99% silicon:						
Brazil	1,020	1,020	2,440,000	4,340	4,340	10,400,000
China	9	9	840,000	42	42	4,460,000
Denmark	--	--	--	1	1	200,000
Germany	52	52	3,240,000	267	267	15,300,000

See footnotes at end of table.

TABLE 4—Continued
U.S. IMPORTS OF FERROSILICON AND SILICON METAL IN MAY 2017^{1,2}

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	January–May ³		
				Gross weight	Contained weight	Value
Metal—Continued:						
More than 99.99% silicon:						
Japan	1	1	\$284,000	79	79	\$4,210,000
Norway	--	--	--	38	38	155,000
Spain	--	--	--	2	2	13,900
Sweden	--	--	--	1	1	37,100
Taiwan	40	40	1,170,000	196	196	5,270,000
Ukraine	(4)	(4)	19,100	(4)	(4)	52,300
Other (4 countries)	(4)	(4)	15,600	(4)	(4)	73,500
Total	1,120	1,120	8,020,000	4,970	4,970	40,200,000
99.00%–99.99% silicon:						
Australia	2,600	2,580	5,550,000	8,600	8,540	18,000,000
Bosnia and Herzegovina	288	286	521,000	983	978	1,620,000
Brazil	322	319	789,000	7,440	7,390	16,800,000
Canada	2,130	2,120	5,640,000	10,300	10,200	26,700,000
France	--	--	--	626	620	985,000
Kazakhstan	615	610	1,090,000	3,750	3,720	6,750,000
Malaysia	--	--	--	114	113	177,000
Norway	576	572	1,270,000	2,430	2,410	5,480,000
South Africa	--	--	--	550	545	1,040,000
Thailand	312	309	583,000	1,320	1,300	2,400,000
Other (4 countries)	17	17	30,600	118	117	209,000
Total	6,860	6,810	15,500,000	36,200	35,900	80,200,000
Other silicon:						
Australia	308	299	725,000	1,180	1,150	2,210,000
Brazil	299	295	775,000	5,660	5,560	12,600,000
Canada	20	19	14,100	753	734	1,880,000
China	--	--	--	108	104	130,000
Iceland	240	237	404,000	384	378	609,000
Japan	10	9	18,600	139	134	207,000
Kazakhstan	561	548	969,000	561	548	969,000
Norway	809	792	1,350,000	3,860	3,760	6,160,000
South Africa	--	--	--	423	412	624,000
United Kingdom	26	25	49,000	104	101	212,000
Other (4 countries)	70	68	111,000	71	68	139,000
Total	2,340	2,290	4,420,000	13,200	12,900	25,700,000
Total silicon metal	10,300	10,200	27,900,000	54,400	53,900	146,000,000

-- Zero.

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