

Mineral Industry Surveys

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SILICON IN AUGUST 2016

Domestic production of silicon materials was 35,300 metric tons (t) in August 2016, a 14% decrease from July 2016 production and a 10% decrease from August 2015 production (fig. 1, table 1). Net shipments were 26,500 t, a 9% increase from shipments in July 2016 and a slight increase from shipments in August 2015. Total production and net shipments during the first 8 months of 2016 were 7% less and 3% less, respectively, than those during the same period in 2015 (table 1).

Ending stocks were 41,000 t in August 2016, a 16% decrease from those in July 2016 and 5% more than those in August 2015 (table 1). Adjustments in stocks included in-plant consumption of ferrosilicon to produce magnesium ferrosilicon and other alloys.

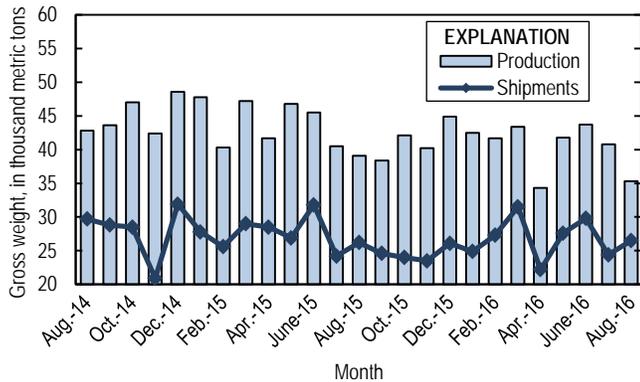


Figure 1. Monthly domestic production of total silicon materials and net shipments from August 2014 through August 2016 (may include revisions to previously published data). Source: U.S. Geological Survey.

The average U.S. spot price for silicon metal was 87.6 cents per pound in August 2016, a slight decrease from the average price in July 2016, and 29% less than the August 2015 price. The average U.S. spot prices for ferrosilicon, 50% and 75% grades, were the same and slightly more, respectively, than the average prices in August 2016 and were 16% and 20% less, respectively, than their average prices in August 2015 (fig. 2).

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

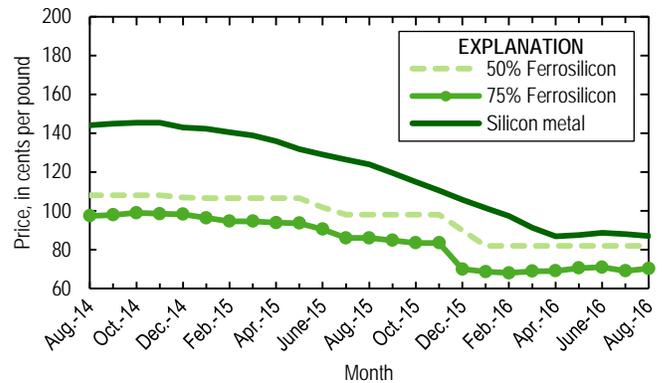


Figure 2. Average monthly prices for silicon metal and ferrosilicon 50% and 75% grades, contained silicon, from August 2014 through August 2016. Source: CRU Ryan's Notes and Platts Metals Week.

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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
2015: ^p			
January–December	514,000	318,000	45,100
January–August	349,000 ^r	220,000	38,900 ^r
August	39,100	26,200	38,900
September	38,400	24,600	37,800
October	42,100	24,000	40,400
November	40,200	23,500	43,100
December	44,900	26,100	45,100
2016:			
January	42,500	24,900	48,900
February	41,700	27,300	50,800
March	43,400	31,500	45,100
April	34,300	22,200	45,800
May	41,800	27,600	46,200
June	43,700	29,800	45,600
July	40,800	24,400	48,700
August	35,300	26,500	41,000
January–August	323,000	214,000	41,000

^pPreliminary. ^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 2016

		Low	Average	High	Average low, mid, and high
Ferrosilicon:					
50% ferrosilicon ¹	cents per pound of contained silicon	80.00	XX	84.00	80.00–82.00–84.00
75% ferrosilicon ²	do.	68.00	70.30	72.00	XX
Silicon metal, 553 grade ³	cents per pound	86.00	87.60	89.00	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 AUGUST 2016^{1,2}

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	January–August ³		
				Gross weight	Contained weight	Value
Ferrosilicon:						
More than 55% silicon:						
Brazil	9	6	\$14,800	30	18	\$56,400
Canada	92	55	144,000	1,030	617	1,600,000
Colombia	--	--	--	8	6	23,800
France	--	--	--	120	84	75,100
Hong Kong	--	--	--	4	2	6,000
Mexico	79	47	154,000	1,930	1,160	4,290,000
Singapore	--	--	--	9	6	19,900
Turkey	--	--	--	18	12	21,400
United Kingdom	--	--	--	223	162	176,000
Total	181	108	313,000	3,370	2,060	6,270,000
Other ferrosilicon:						
Belgium	20	9	29,100	300	138	449,000
Brazil	20	10	39,900	213	91	489,000
Canada	151	75	181,000	1,240	618	1,370,000
Korea, Republic of	60	26	63,300	480	212	515,000
Luxembourg	60	28	98,000	140	64	219,000
Mexico	321	160	655,000	1,910	943	4,150,000
Netherlands	60	27	90,000	300	129	213,000
Thailand	--	--	--	200	90	380,000
Turkey	80	37	126,000	898	410	1,440,000
United Kingdom	--	--	--	140	64	233,000
Other (12 countries)	59	27	108,000	460	217	831,000
Total	830	400	1,390,000	6,280	2,980	10,300,000
Total ferrosilicon	1,010	508	1,700,000	9,640	5,040	16,600,000
Metal:						
More than 99.99% silicon:						
China	169	169	3,030,000	1,780	1,780	47,700,000
Germany	173	173	3,400,000	829	829	17,900,000
Hong Kong	481	481	3,460,000	3,390	3,390	24,700,000
Italy	--	--	--	235	235	7,220,000
Japan	1,760	1,760	75,600,000	9,140	9,140	447,000,000
Korea, Republic of	242	242	5,340,000	2,210	2,210	68,800,000
Malaysia	25	25	2,870,000	378	378	25,100,000
Norway	63	63	1,180,000	493	493	10,200,000
Taiwan	1,870	1,870	24,200,000	10,200	10,200	146,000,000
United Kingdom	83	83	1,570,000	296	296	9,460,000
Other (33 countries)	23	23	555,000	442	442	12,300,000
Total	4,890	4,890	121,000,000	29,400	29,400	816,000,000
99.00%–99.99% silicon:						
Austria	--	--	--	20	20	28,400
Brazil	20	20	49,700	22	22	54,600
China	--	--	--	3	3	3,590
Germany	--	--	--	323	320	817,000
Israel	--	--	--	8	8	11,700
Mexico	2	2	5,760	13	13	35,600
Netherlands	7	7	9,500	287	285	473,000
Singapore	18	18	25,100	18	18	25,100
Taiwan	--	--	--	2	2	2,780
United Kingdom	--	--	--	6	6	8,640
Other (2 countries)	--	--	--	3	3	7,010
Total	47	47	90,000	705	699	1,470,000

See footnotes at end of table.

TABLE 3—Continued
U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN AUGUST 2016^{1,2}

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	January–August ³		
				Gross weight	Contained weight	Value
Metal—Continued:						
Other silicon:						
Belgium	209	203	\$214,000	1,000	972	\$1,160,000
Canada	24	24	70,100	370	359	821,000
China	--	--	--	80	77	127,000
Germany	--	--	--	41	40	69,500
Hong Kong	--	--	--	26	25	98,700
Israel	16	16	21,100	35	34	76,900
Mexico	9	8	14,400	204	198	319,000
South Africa	9	8	11,400	60	58	121,000
Taiwan	--	--	--	24	24	226,000
United Kingdom	1	1	9,880	133	129	238,000
Other (10 countries)	28	27	42,100	64	62	163,000
Total	296	287	383,000	2,040	1,980	3,420,000
Total silicon metal	5,230	5,220	122,000,000	32,200	32,100	821,000,000

-- Zero.

¹Presentation of monthly data is based on the "January–August" 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 AUGUST 2016^{1,2}

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	January–August ³		
				Gross weight	Contained weight	Value
Ferrosilicon:						
55%–80% silicon, more than 3% Ca:						
Argentina	154	117	\$139,000	154	117	\$139,000
Brazil	243	185	252,000	4,110	3,110	4,090,000
China	1	1	2,380	1,120	844	1,030,000
France	54	34	163,000	499	306	1,450,000
South Africa	180	126	441,000	1,080	755	2,560,000
Vietnam	--	--	--	79	59	77,000
Total	632	463	997,000	7,040	5,190	9,360,000
55%–80% silicon, other:						
Brazil	718	540	1,080,000	25,900	19,500	23,700,000
Canada	1,050	763	2,250,000	9,110	6,680	18,400,000
China	718	546	719,000	7,470	5,260	7,110,000
France	90	66	264,000	953	654	2,690,000
Iceland	2,290	1,730	2,160,000	13,200	10,000	12,100,000
Ireland	--	--	--	1,500	1,120	1,280,000
Netherlands	--	--	--	14,800	11,400	13,700,000
Norway	--	--	--	4,550	3,490	4,380,000
Russia	310	232	301,000	18,100	13,800	17,200,000
Venezuela	--	--	--	19,500	14,600	19,000,000
Other (7 countries)	120	87	323,000	1,740	1,270	3,810,000
Total	5,290	3,960	7,090,000	117,000	87,800	123,000,000
80%–90% ferrosilicon, Germany	--	--	--	87	72	117,000
More than 90% ferrosilicon:						
Brazil	--	--	--	845	773	851,000
China	--	--	--	40	35	26,700
Total	--	--	--	885	808	877,000
Magnesium ferrosilicon:						
Argentina	--	--	--	984	455	407,000
Canada	1,120	506	2,060,000	9,360	4,230	17,500,000
China	53	24	75,100	176	81	266,000
France	--	--	--	47	19	125,000
Germany	--	--	--	96	41	132,000
India	82	35	186,000	291	92	503,000
Norway	54	25	124,000	765	360	1,440,000
Total	1,310	590	2,440,000	11,700	5,280	20,400,000
Other ferrosilicon:						
Australia	--	--	--	6	1	5,670
Canada	774	269	839,000	6,860	2,440	7,410,000
China	5,250	851	1,430,000	5,920	1,140	2,330,000
Germany	--	--	--	66	27	184,000
India	10	3	39,600	88	35	148,000
Italy	--	--	--	20	3	26,500
New Zealand	--	--	--	3	1	2,560
Russia	--	--	--	59	28	89,400
Singapore	--	--	--	86	38	46,700
Slovakia	--	--	--	19	9	26,200
Total	6,030	1,120	2,310,000	13,100	3,730	10,300,000
Total ferrosilicon	13,300	6,140	12,800,000	150,000	103,000	164,000,000
Metal:						
More than 99.99% silicon:						
Brazil	131	131	436,000	1,470	1,470	5,380,000
China	10	10	1,110,000	73	73	4,540,000
Germany	103	103	4,120,000	1,040	1,040	35,800,000

See footnotes at end of table.

TABLE 4—Continued
U.S. IMPORTS OF FERROSILICON AND SILICON METAL IN AUGUST 2016^{1,2}

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	January–August ³		
				Gross weight	Contained weight	Value
Metal—Continued:						
More than 99.99% silicon:						
Japan	1	1	\$298,000	56	56	\$4,510,000
Korea, Republic of	(4)	(4)	18,600	207	207	4,870,000
Norway	--	--	--	20	20	150,000
Poland	6	6	9,990	17	17	39,800
Taiwan	18	18	435,000	119	119	2,730,000
Ukraine	2	2	83,800	4	4	204,000
United Kingdom	--	--	--	14	14	81,500
Other (9 countries)	1	1	127,000	9	9	1,500,000
Total	272	272	6,640,000	3,030	3,030	59,800,000
99.00%–99.99% silicon:						
Australia	2,010	1,990	3,820,000	12,100	12,000	25,200,000
Brazil	2,750	2,730	6,500,000	13,400	13,300	32,200,000
Canada	1,530	1,520	4,060,000	13,500	13,400	36,100,000
France	--	--	--	900	894	2,420,000
Kazakhstan	618	614	959,000	6,000	5,960	11,200,000
Laos	--	--	--	2,520	2,500	5,770,000
Malaysia	--	--	--	650	647	1,240,000
Norway	792	786	2,260,000	3,970	3,950	11,400,000
South Africa	220	218	657,000	16,400	16,300	39,700,000
Spain	--	--	--	100	99	300,000
Other (6 countries)	(4)	(4)	9,790	172	159	352,000
Total	7,910	7,860	18,300,000	69,700	69,200	166,000,000
Other silicon:						
Australia	--	--	--	144	142	325,000
Bhutan	--	--	--	1,840	1,810	3,590,000
Brazil	590	580	984,000	6,700	6,560	16,000,000
Canada	39	38	67,500	1,640	1,600	3,750,000
China	1	1	3,420	251	244	331,000
Germany	306	294	334,000	306	294	351,000
Kazakhstan	87	85	326,000	765	730	1,670,000
Norway	655	639	942,000	4,440	4,350	6,900,000
South Africa	260	250	776,000	884	852	2,790,000
United Kingdom	19	18	39,700	106	103	232,000
Other (9 countries)	(4)	(4)	5,710	377	367	649,000
Total	1,960	1,910	3,480,000	17,400	17,000	36,600,000
Total silicon metal	10,100	10,000	28,400,000	90,200	89,300	262,000,000

-- Zero.

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