

Mineral Industry Surveys

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SILICON IN MARCH 2016

Domestic production of silicon materials was 45,600 metric tons (t) in March 2016, a 10% increase from February 2016 production and a 3% decrease from March 2015 production (fig. 1, table 1). Net shipments were 28,500 t, a 4% increase from shipments in February 2016 and a slight decrease from shipments in March 2015 (table 1).

Ending stocks were 47,600 t in March 2016, 6% less than those in February 2016 and 16% more than those in March 2015 (table 1). Adjustments in stocks included in-plant consumption of ferrosilicon to produce magnesium ferrosilicon and other miscellaneous alloys.

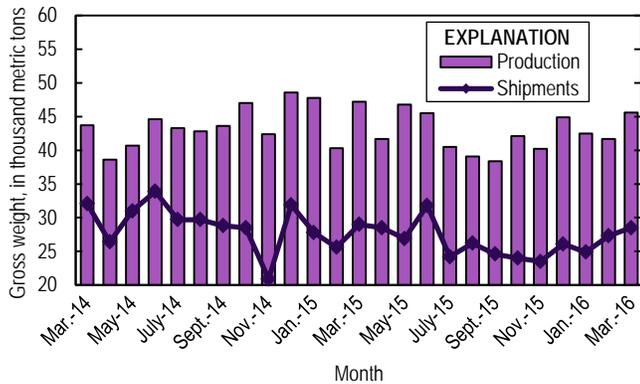


Figure 1. Monthly domestic gross production of total silicon materials and net shipments from March 2014 through March 2016 (may include revisions to previously published data). Source: U.S. Geological Survey.

U.S. imports of ferrosilicon and silicon metal were 31,400 t in March 2016, 56% more than those in February 2016 and 13% less than those in March 2015 (fig. 2, table 4).

The average U.S. spot price for silicon metal was 91.30 cents per pound in March 2016, 6% less than the average price in February 2016, and 34% less than the March 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 February 2016 and were 23% and 27% less, respectively, than their average prices in March 2015 (fig. 3).

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

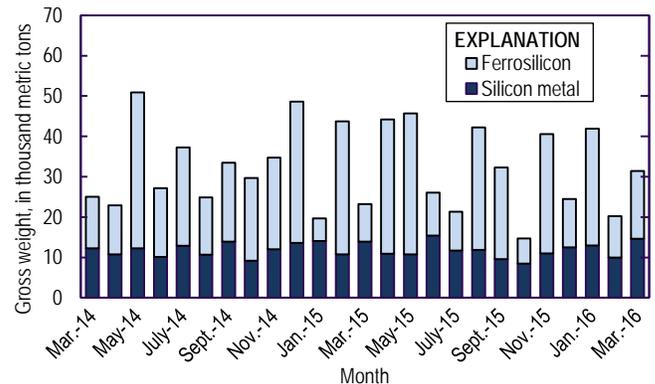


Figure 2. Monthly U.S. imports of ferrosilicon and silicon metal from March 2014 through March 2016. Source: U.S. Census Bureau.

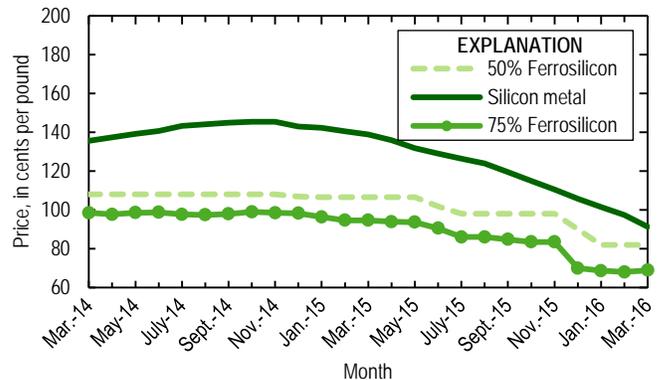


Figure 3. Average monthly prices for silicon metal and ferrosilicon 50% and 75% grades, contained silicon, from March 2014 through March 2016. Source: CRU Ryan's Notes and Platts Metals Week.

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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–March ^f	135,000	82,400	41,000
March	47,200	29,000	41,000
April	41,700	28,500	39,700
May	46,800	26,900	44,000
June	45,500	31,800	41,000
July	40,500	24,200	41,600
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 ^r	50,800 ^r
March	45,600	28,500	47,600
January–March	130,000	80,700	47,600

^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 MARCH 2016

	Low	Average	High	Average low, mid, and high
Ferrosilicon:				
50% ferrosilicon ¹	80.00	XX	84.00	80.00–82.00–84.00
75% ferrosilicon ²	67.00	68.90	70.00	XX
Silicon metal, 553 grade ³	86.00	91.30	97.00	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 MARCH 2016^{1,2}

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	January–March ³		
				Gross weight	Contained weight	Value
Ferrosilicon:						
More than 55% silicon:						
Brazil	12	7	\$18,500	12	7	\$18,500
Canada	158	95	246,000	384	230	599,000
Mexico	436	262	1,010,000	1070	641	2,450,000
Singapore	--	--	--	9	6	19,900
Total	606	363	1,280,000	1,470	884	3,090,000
Other ferrosilicon:						
Belgium	100	47	149,000	100	47	149,000
Brazil	--	--	--	39	20	86,800
Canada	222	111	280,000	465	233	537,000
Korea, Republic of	60	27	66,000	180	80	198,000
Mexico	296	146	646,000	631	310	1,350,000
Netherlands	60	25	30,800	120	51	61,600
Poland	34	17	83,200	34	17	83,200
Thailand	40	18	76,000	40	18	76,000
Turkey	200	91	308,000	479	218	753,000
United Kingdom	20	9	31,800	100	46	165,000
Other (4 countries)	40	18	66,300	63	29	99,200
Total	1,070	509	1,740,000	2,250	1,070	3,560,000
Total ferrosilicon	1,680	872	3,010,000	3,720	1,950	6,650,000
Metal:						
More than 99.99% silicon:						
China	1	1	92,700	333	333	12,100,000
Hong Kong	197	197	1,910,000	774	774	7,240,000
Italy	16	16	400,000	99	99	2,960,000
Japan	1,250	1,250	57,000,000	3,160	3,160	153,000,000
Jordan	--	--	--	60	60	3,420,000
Korea, Republic of	238	238	10,300,000	782	782	27,300,000
Malaysia	90	90	4,020,000	111	111	7,370,000
Norway	43	43	478,000	213	213	3,750,000
Singapore	46	46	1,450,000	118	118	2,340,000
Taiwan	1,350	1,350	16,200,000	2,920	2,920	38,000,000
Other (22 countries)	14	14	1,250,000	101	101	7,610,000
Total	3,250	3,250	93,100,000	8,670	8,670	266,000,000
99.00%–99.99% silicon:						
China	--	--	--	3	3	3,590
Germany	159	157	405,000	317	315	809,000
Mexico	1	1	2,950	4	4	11,600
United Kingdom	--	--	--	6	6	8,640
Total	160	158	408,000	330	327	833,000
Other silicon:						
Belgium	110	107	133,000	259	252	298,000
Canada	64	62	169,000	251	243	510,000
China	--	--	--	10	10	13,000
Germany	8	7	10,100	27	26	47,400
Hong Kong	--	--	--	26	25	98,700
Israel	--	--	--	8	8	10,800
Korea, Republic of	1	1	10,000	15	14	28,400
Mexico	1	1	2,780	6	6	39,000
South Africa	17	16	21,900	26	26	38,700

See footnotes at end of table.

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

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	January–March ³		
				Gross weight	Contained weight	Value
Metal—Continued:						
Other silicon:						
United Kingdom	8	8	\$11,000	26	25	\$33,800
Other (3 countries)	2	2	22,100	2	2	25,200
Total	211	205	380,000	656	637	1,140,000
Total silicon metal	3,620	3,610	93,900,000	9,660	9,630	268,000,000

-- Zero.

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

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	January–March ³		
				Gross weight	Contained weight	Value
Ferrosilicon:						
55%–80% silicon, more than 3% Ca:						
Brazil	324	249	\$314,000	1,540	1,160	\$1,550,000
China	--	--	--	914	693	803,000
France	72	44	191,000	144	88	400,000
South Africa	72	50	161,000	180	124	361,000
Vietnam	--	--	--	79	59	77,000
Total	468	343	666,000	2,850	2,130	3,190,000
55%–80% silicon, other:						
Brazil	4,630	3,500	4,150,000	7,140	5,380	6,320,000
Canada	1,360	994	2,740,000	4,000	2,940	7,740,000
China	505	380	452,000	1,190	892	1,130,000
France	54	34	154,000	233	153	629,000
Iceland	1,990	1,520	1,770,000	4,640	3,540	4,180,000
Malaysia	233	174	243,000	342	256	373,000
Norway	243	187	255,000	1,740	1,350	1,530,000
Russia	--	--	--	16,400	12,500	15,600,000
Spain	--	--	--	288	218	358,000
Venezuela	4,640	3,480	4,020,000	8,940	6,700	8,390,000
Other (4 countries)	141	99	466,000	251	177	827,000
Total	13,800	10,400	14,300,000	45,100	34,100	47,100,000
80%–90% ferrosilicon, Germany	21	17	20,200	21	17	20,200
More than 90% ferrosilicon:						
Brazil	221	203	230,000	515	470	504,000
China	--	--	--	16	13	19,400
Total	221	203	230,000	531	483	524,000
Magnesium ferrosilicon:						
Argentina	38	17	39,600	139	60	165,000
Canada	1,130	508	2,080,000	3,680	1,660	6,910,000
China	6	3	9,120	44	20	71,200
France	--	--	--	26	11	63,100
Germany	13	6	12,500	41	19	37,300
Norway	109	53	237,000	319	151	677,000
Total	1,300	587	2,380,000	4,250	1,920	7,920,000
Other ferrosilicon:						
Canada	914	343	981,000	2,760	1,030	2,950,000
China	26	11	33,600	267	114	320,000
Germany	13	5	41,600	14	6	43,900
India	--	--	--	9	2	38,100
Italy	20	3	26,500	20	3	26,500
Russia	10	5	14,600	20	10	30,900
Total	981	367	1,100,000	3,080	1,160	3,400,000
Total ferrosilicon	16,800	11,900	18,700,000	55,900	39,800	62,200,000
Metal:						
More than 99.99% silicon:						
Brazil	75	75	250,000	1,260	1,260	4,180,000
China	5	5	361,000	33	33	1,020,000
Germany	149	149	4,850,000	546	546	15,400,000
Japan	2	2	360,000	6	6	1,210,000
Korea, Republic of	56	56	799,000	185	185	4,480,000
Norway	1	1	67,800	1	1	67,800
Poland	--	--	--	11	11	29,800
Taiwan	13	13	293,000	37	37	818,000
Ukraine	2	2	67,300	2	2	102,000

See footnotes at end of table.

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

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	January–March ³		
				Gross weight	Contained weight	Value
Metal—Continued:						
More than 99.99% silicon:						
United Kingdom	(4)	(4)	\$8,400	14	14	\$79,500
Other (5 countries)	(4)	(4)	112,000	2	2	548,000
Total	304	304	7,170,000	2,090	2,090	28,000,000
99.00%–99.99% silicon:						
Australia	2,300	2,280	4,930,000	5,310	5,270	12,000,000
Brazil	2,710	2,690	7,080,000	3,240	3,210	8,470,000
Canada	1,560	1,550	4,090,000	4,750	4,710	12,400,000
Kazakhstan	618	615	1,260,000	2,740	2,730	5,890,000
Korea, Republic of	--	--	--	19	19	40,600
Laos	1,080	1,070	2,550,000	1,080	1,070	2,550,000
Malaysia	134	134	264,000	402	400	820,000
Norway	264	262	752,000	1,090	1,080	3,230,000
South Africa	2,940	2,910	6,670,000	10,600	10,500	26,600,000
Thailand	48	48	80,600	48	48	80,600
Other (1 country)	--	--	--	12	(4)	15,800
Total	11,700	11,600	27,700,000	29,300	29,000	72,100,000
Other silicon:						
Australia	--	--	--	72	71	204,000
Bhutan	622	614	1,230,000	1,140	1,130	2,330,000
Brazil	1,180	1,160	3,050,000	2,410	2,380	6,540,000
Canada	406	397	933,000	655	643	1,510,000
China	--	--	--	82	80	108,000
Japan	40	38	43,400	41	39	57,200
Kazakhstan	--	--	--	298	286	659,000
Norway	333	327	570,000	1,290	1,260	2,240,000
Sweden	--	--	--	81	78	88,300
Thailand	--	--	--	61	61	162,000
Other (7 countries)	36	35	75,900	97	95	199,000
Total	2,610	2,570	5,910,000	6,230	6,120	14,100,000
Total silicon metal	14,600	14,400	40,700,000	37,600	37,200	114,000,000

-- Zero.

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