

Mineral Industry Surveys

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SILICON IN JUNE 2014

Domestic production of total silicon materials was 43,700 metric tons (t) for June 2014, 11% more than that of May 2014 and 4% more than that of June 2013. Net shipments were 33,600 t, 11% more than those in May 2014 and slightly less than those in June 2013. Total production and net shipments during the first half of 2014 were 10% and 16% more, respectively, than those during the same period in 2013 (table 1). Individual production-related statistics were concealed to avoid disclosing company proprietary data.

Ending stocks were 29,900 t in June 2014, 6% less than those in May 2014 and 29% less than those in June 2013 (table 1). Stocks included adjustments in inventory and in-plant consumption of ferrosilicon to produce magnesium ferrosilicon and other miscellaneous alloys.

Included in this Mineral Industry Surveys are U.S. spot market prices and U.S. foreign trade data for selected silicon-containing materials in June 2014. All comparative statistics were calculated based on gross weight figures.

Industry News

Grupo FerroAtlantica, a subsidiary of Villar Mir Group, announced it intends to build a \$382 million silicon metal plant in Port Cartier, Quebec, Canada, following the announcement of a pending deal made with the Government of Quebec. The plant was expected to produce 100,000 metric tons per year of silicon metal, for use in aluminum alloys and solar panels, beginning in late 2016. The company intends to sell primarily to North American markets. The plant was expected to retain lowered transportation costs due to close proximity to the St. Lawrence

Seaway, as well as readily available production resources (CBC News, 2014).

China announced that approximately 2.34 million metric tons of ferroalloys capacity would be phased out in 2014, to include all furnaces operating below 6,300-kilovolt-ampere capacity and smelters not meeting required environmental standards (Metal Bulletin, 2014). Initial reviews indicate this could result in potential annual capacity losses of 449,000 t of silico-manganese, 250,000 t of ferrosilicon, 70,000 t of silicon metal, and 33,000 t of calcium silicon by the end of 2014. Metal-Pages (2014) reported that some producers were attempting to build bigger furnaces to maintain market shares during the phaseout process, increasing net capacity.

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References Cited

- CBC News, 2014, FerroAtlantica to build \$382M silicon metal plant in Quebec: CBC News, June 16. (Accessed August 21, 2014, at <http://www.cbc.ca/news/business/ferroatlantica-to-build-382m-silicon-metal-plant-in-quebec-1.2677459>.)
- Metal Bulletin, 2014, China to shut obsolete ferro-alloys capacity: Metal Bulletin Magazine, June, p. 10.
- Metal-Pages, 2014, China to shutter 2.5 million tpy ferro-alloys capacity in 2014: Metal Pages, July 21. (Accessed August 21, 2014, via <https://www.metal-pages.com>.)

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
2013: ^P			
January–December	468,000	331,000	33,700
January–June ^T	223,000	157,000	42,200
June	42,100	34,600	42,200
July	34,100	25,500	40,000
August	42,100	30,200	40,500
September	39,700	30,000	35,500
October	45,200	30,800	34,800
November	44,300	27,800	37,100
December	40,000	29,700	33,700
2014:			
January	42,600	32,000	31,400
February	39,700	27,500	33,000
March	42,700	32,200	34,400
April	37,600	25,900	34,000
May	39,400	30,400	31,800
June	43,700	33,600	29,900
January–June	246,000	182,000	29,900

^PPreliminary. ^TRevised.

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 JUNE 2014

	High	Low	Average	Average low, mid, and high
Ferrosilicon:				
50% ferrosilicon ¹				
cents per pound of contained silicon	110.00	106.00	XX	106.00–108.00–110.00
75% ferrosilicon ²				
do.	100.00	97.50	98.75	XX
Silicon metal, 553 grade ³				
cents per pound	145.00	138.00	140.75	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 JUNE 2014^{1,2}

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	January–June ³		
				Gross weight	Contained weight	Value
Ferrosilicon:						
More than 55% silicon:						
Austria	--	--	--	4	3	\$7,000
Belgium	--	--	--	20	15	27,600
Brazil	--	--	--	19	11	29,600
Canada	404	242	\$630,000	2,020	1,220	3,160,000
Colombia	--	--	--	33	24	86,400
France	--	--	--	20	15	26,600
Japan	108	84	20,500	518	407	691,000
Mexico	260	161	648,000	1,280	800	3,140,000
Turkey	--	--	--	5	4	11,700
United Kingdom	--	--	--	55	33	85,800
Other (2 countries)	--	--	--	6	3	13,200
Total	772	487	1,300,000	3,990	2,530	7,270,000
Other ferrosilicon:						
Belgium	20	10	38,200	319	149	615,000
Brazil	19	10	43,400	133	67	308,000
Canada	143	71	193,000	580	290	799,000
Colombia	--	--	--	24	11	59,900
Korea, Republic of	60	26	70,200	336	147	389,000
Mexico	67	34	183,000	460	227	1,180,000
Netherlands	40	17	18,800	260	113	152,000
Poland	41	8	91,400	122	30	269,000
Turkey	260	118	528,000	1,370	625	2,740,000
United Kingdom	20	10	13,500	360	175	456,000
Other (5 countries)	--	--	--	89	41	191,000
Total	670	305	1,180,000	4,060	1,880	7,160,000
Total ferrosilicon	1,440	792	2,480,000	8,040	4,400	14,400,000
Metal:						
More than 99.99% silicon:						
China	594	594	19,300,000	5,430	5,430	151,000,000
Germany	407	407	14,200,000	3,120	3,120	108,000,000
Hong Kong	52	52	1,540,000	420	420	11,900,000
Italy	17	17	997,000	141	141	8,420,000
Japan	439	439	21,000,000	4,350	4,350	233,000,000
Korea, Republic of	236	236	11,700,000	1,760	1,760	77,300,000
Malaysia	101	101	6,380,000	245	245	26,700,000
Norway	--	--	--	232	232	11,300,000
Singapore	312	312	5,680,000	1,050	1,050	18,300,000
Taiwan	701	701	24,000,000	3,270	3,270	100,000,000
Other (33 countries)	31	31	2,120,000	292	292	16,900,000
Total	2,890	2,890	107,000,000	20,300	20,300	763,000,000
99.00%–99.99% silicon:						
China	--	--	--	23	23	56,800
India	--	--	--	1	1	5,760
Japan	--	--	--	2	2	3,150
Mexico	4	4	10,300	31	30	84,300
Saudi Arabia	2	2	2,930	9	8	12,000
Taiwan	1	1	7,640	2	2	15,300
Turkey	--	--	--	9	9	12,600
Total	7	7	20,800	77	76	190,000
Other silicon:						
Austria	--	--	--	21	21	28,200
Belgium	34	33	45,900	86	84	104,000

See footnotes at end of table.

TABLE 3—Continued
U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN JUNE 2014^{1,2}

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	January–June ³		
				Gross weight	Contained weight	Value
Metal—Continued:						
Other silicon:						
Canada	32	31	\$77,200	757	735	\$2,080,000
China	3	3	4,090	33	32	43,100
Korea, Republic of	21	20	27,700	106	103	171,000
Kuwait	--	--	--	11	11	14,700
Mexico	341	331	1,100,000	477	463	1,500,000
South Africa	(4)	(4)	4,960	9	8	44,600
Taiwan	--	--	--	26	25	250,000
United Kingdom	1	1	8,150	26	25	65,200
Others (11 countries)	8	8	12,700	32	31	115,000
Total	441	428	1,280,000	1,580	1,540	4,420,000
Total silicon metal	3,340	3,330	108,000,000	22,000	21,900	768,000,000

-- Zero.

¹Presentation of monthly data is based on the "January–June" 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 JUNE 2014^{1,2}

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	January–June ³		
				Gross weight	Contained weight	Value
Ferrosilicon:						
55%–80% silicon, more than 3% Ca:						
Brazil	2	2	\$7,200	296	223	\$455,000
Canada	--	--	--	20	11	11,700
China	245	183	309,000	2,730	2,040	3,540,000
France	10	6	25,900	71	45	191,000
Germany	--	--	--	5	3	8,200
South Africa	54	37	115,000	270	183	569,000
Total	311	228	457,000	3,390	2,500	4,770,000
55%–80% silicon, other:						
Brazil	62	44	99,000	1,760	1,310	2,480,000
Canada	814	591	1,950,000	5,430	3,970	13,500,000
China	3,410	2,590	4,580,000	30,600	23,100	41,900,000
France	223	152	669,000	1,130	756	3,320,000
Iceland	470	366	645,000	6,280	4,770	9,150,000
India	102	80	187,000	465	365	953,000
Russia	8,600	6,580	12,600,000	51,500	39,400	75,100,000
South Africa	25	18	57,500	1,250	929	2,150,000
Spain	240	182	425,000	1,980	1,500	3,130,000
Venezuela	--	--	--	10,400	7,800	14,700,000
Other (5 countries)	114	83	448,000	988	718	3,260,000
Total	14,100	10,700	21,700,000	112,000	84,600	170,000,000
80%–90% ferrosilicon, Germany	--	--	--	1	1	2,650
Magnesium ferrosilicon:						
Argentina	184	86	190,000	511	239	580,000
Brazil	--	--	--	666	298	1,120,000
Canada	1,040	476	2,040,000	6,750	3,080	12,300,000
China	--	--	--	293	131	554,000
France	1	(4)	2,600	1	(4)	2,600
Germany	5	2	12,500	20	9	26,700
India	122	59	220,000	1,410	679	2,440,000
Norway	237	114	504,000	1,300	625	2,720,000
Total	1,590	737	2,970,000	11,000	5,060	19,700,000
Other ferrosilicon:						
Canada	1,090	392	1,320,000	6,500	2,330	7,640,000
China	20	11	45,500	250	137	450,000
Germany	1	(4)	4,370	14	5	63,000
Poland	--	--	--	38	17	60,700
Russia	--	--	--	14	7	22,000
Vietnam	50	37	70,200	199	151	280,000
Total	1,160	442	1,440,000	7,020	2,640	8,510,000
Total ferrosilicon	17,100	12,100	26,500,000	133,000	94,800	203,000,000
Metal:						
More than 99.99% silicon:						
Brazil	--	--	--	77	77	233,000
China	2	2	199,000	41	41	769,000
Germany	96	96	5,100,000	471	471	29,300,000
Italy	5	5	329,000	6	6	372,000
Japan	22	22	1,580,000	86	86	7,190,000
Korea, Republic of	6	6	273,000	13	13	957,000
Norway	(4)	(4)	29,000	4	4	248,000
Spain	(4)	(4)	4,120	2	2	25,000
Taiwan	5	5	140,000	43	43	1,170,000
Ukraine	--	--	--	1	1	59,900
Other (8 countries)	(4)	(4)	34,600	4	4	654,000

See footnotes at end of table.

TABLE 4—Continued
U.S. IMPORTS OF FERROSILICON AND SILICON METAL IN JUNE 2014^{1,2}

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	January–June ³		
				Gross weight	Contained weight	Value
Metal—Continued:						
Total	138	138	\$7,690,000	748	748	\$41,000,000
99.00%–99.99% silicon:						
Australia	1,370	1,360	3,720,000	8,610	8,560	23,200,000
Brazil	1,930	1,920	5,300,000	18,600	18,400	49,600,000
Canada	339	336	926,000	1,420	1,410	3,830,000
France	523	519	1,500,000	2,660	2,640	7,350,000
Japan	26	1	34,000	52	1	68,100
Malaysia	29	29	64,800	120	119	270,000
Norway	312	310	1,040,000	3,090	3,050	10,400,000
South Africa	1,990	1,970	5,560,000	18,800	18,600	50,000,000
Spain	--	--	--	1,220	1,210	3,250,000
Thailand	807	802	1,750,000	3,730	3,700	8,760,000
Other (4 countries)	1	1	8,030	41	40	115,000
Total	7,330	7,250	19,900,000	58,300	57,700	157,000,000
Other silicon:						
Australia	--	--	--	288	284	799,000
Belgium	--	--	--	21	21	47,100
Brazil	1,220	1,200	3,180,000	4,140	4,080	10,600,000
Canada	1,420	1,400	3,630,000	3,740	3,690	9,640,000
China	--	--	--	106	40	111,000
France	--	--	--	494	488	1,310,000
Malaysia	20	20	58,000	20	20	58,000
Norway	--	--	--	385	374	853,000
South Africa	--	--	--	40	40	96,600
United Kingdom	(4)	(4)	8,720	36	34	87,700
Other (2 countries)	(4)	(4)	3,450	7	(4)	28,100
Total	2,660	2,620	6,880,000	9,280	9,070	23,700,000
Total silicon metal	10,100	10,000	34,500,000	68,300	67,500	221,000,000

-- Zero.

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