

Mineral Industry Surveys

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SILICON IN JUNE 2004

In June 2004, domestic production and shipments of silicon ferroalloys plus metal, excluding silvery pig iron, increased by 14% and 5%, respectively, compared with that in May 2004, according to the U.S. Geological Survey. Domestic stocks of silicon ferroalloys plus metal were about the same as those in the previous month. Domestic production of ferrosilicon and silicon metal during the second quarter of 2004 was about the same compared with the revised first quarter 2004 [80,200 metric tons (t)], while domestic shipments were 4% lower than the revised first quarter 2004 (73,500 t). Domestic production and shipments of ferrosilicon and silicon metal during the first half of 2004 were 10% and 9% lower, respectively, compared with the revised first half 2003 [78,000 t (production) and 158,00 t (shipments)]. All domestic data for ferrosilicon have been combined to avoid disclosing company proprietary data.

The ensuing discussion is based on a comparison of the May 2004 trade data, which are included in this report, to those of the prior month, on a gross weight basis. Ferrosilicon exports decreased by 32%, owing to decreases in both ferrosilicon trade categories. Silicon metal exports increased by 17%, owing to increases in all silicon metal trade categories. Ferrosilicon and silicon metal imports decreased 40% and 4%, respectively. The decrease in ferrosilicon imports was due primarily to a significant decrease in the 55%-80% silicon, other, trade category, while the decrease in silicon metal imports was due primarily to a decrease in the 99.00%-99.99% silicon trade category.

Prices, cents per pound, silicon content

	<u>50% Ferrosilicon¹</u>	<u>75% Ferrosilicon²</u>	<u>Silicon Metal²</u>
June 3	64.00-67.00	65.00-67.00	85.0-87.0
June 10	63.00-65.00	63.00-65.00	85.0-87.0
June 17	55.00-60.00	59.00-63.00	85.0-87.0
June 24	54.00-59.00	58.00-62.00	88.0-90.0

¹Source: Ryan's Notes, North American transaction price.

²Source: Platts Metals Week, dealer import price.

TABLE 1
U.S. PRODUCTION, SHIPMENTS, AND PRODUCER STOCKS OF SILICON ALLOYS AND METAL IN 2004^{1, 2, 3}

(Metric tons)

Material	Gross production ⁴		Net shipments		Stocks, June 30
	June	Year to date ⁵	June	Year to date ⁵	
Ferrosilicon, all grades ^{6, 7}	14,100	85,300	12,000	71,200	14,600
Silicon metal, excludes semiconductor grades	12,100	75,400	10,600	73,100	4,550

¹Data are rounded to no more than three significant digits.

²Includes U.S. Geological Survey estimates.

³Data for silvery pig iron (less than 25% silicon) withheld to avoid disclosing company proprietary data.

⁴Includes in-plant consumption, as in production of magnesium ferrosilicon and other miscellaneous alloys.

⁵Includes revisions to previous months' data.

⁶Ferrosilicon categories were aggregated to avoid disclosing company proprietary data.

⁷Includes miscellaneous silicon alloys.

TABLE 2
U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN MAY 2004^{1, 2}

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	Year to date		
				Gross weight	Contained weight	Value
Ferrosilicon:						
More than 55% silicon:						
Canada	423	254	\$422,000	2,190	1,310	\$1,840,000
Colombia	8	6	12,000	8	6	12,000
Dominican Republic	--	--	--	19	14	38,700
Japan	--	--	--	1	(3)	2,780
Malaysia	11	8	17,500	11	8	17,500
Mexico	125	75	145,000	716	433	820,000
United Kingdom	--	--	--	2	1	2,690
Total	567	343	597,000	2,940	1,770	2,740,000
Other ferrosilicon:						
Canada	250	125	263,000	1,350	675	1,410,000
France	--	--	--	13	6	10,000
India	--	--	--	(3)	(3)	5,010
Indonesia	--	--	--	4	1	3,670
Mexico	171	86	177,000	745	372	760,000
Spain	--	--	--	12	6	10,800
Taiwan	--	--	--	1	1	6,340
Total	421	210	439,000	2,130	1,060	2,200,000
Total ferrosilicon	988	554	1,040,000	5,070	2,840	4,940,000

See footnotes at end of table.

TABLE 2--Continued
 U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN MAY 2004^{1,2}

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	Year to date		
				Gross weight	Contained weight	Value
Metal:						
More than 99.99% silicon:						
China	147	XX	\$4,160,000	704	XX	\$18,500,000
Denmark	7	XX	509,000	53	XX	3,510,000
France	24	XX	831,000	145	XX	3,720,000
Germany	89	XX	2,580,000	360	XX	10,900,000
Italy	13	XX	980,000	56	XX	3,780,000
Japan	306	XX	12,800,000	1,790	XX	78,700,000
Korea, Republic of	50	XX	2,100,000	291	XX	12,500,000
Norway	68	XX	1,740,000	210	XX	5,310,000
Taiwan	30	XX	1,250,000	99	XX	3,950,000
United Kingdom	22	XX	1,780,000	81	XX	7,460,000
Other (29 countries)	49	XX	3,700,000	211	XX	13,400,000
Total	806	806 ^e	32,400,000	4,000	4,000 ^e	162,000,000
99.00% - 99.99% silicon:						
Brazil	198	195	445,000	308	304	762,000
China	7	7	12,400	13	12	24,500
Colombia	--	--	--	85	84	120,000
France	--	--	--	8	8	17,400
Hong Kong	--	--	--	4	4	5,400
Italy	--	--	--	4	4	12,700
Japan	5	5	16,300	32	32	80,500
Korea, Republic of	--	--	--	4	4	12,900
Mexico	29	29	41,400	44	44	62,200
Panama	--	--	--	4	4	6,020
Other (2 countries)	--	--	--	5	5	10,700
Total	239	236	515,000	512	506	1,110,000
Other silicon:						
Canada	37	36	33,600	152	148	172,000
Hong Kong	18	17	177,000	22	21	221,000
Indonesia	8	8	10,700	20	20	26,600
Japan	413	400	740,000	559	542	1,200,000
Latvia	--	--	--	81	79	107,000
Mexico	19	18	32,200	159	155	400,000
Netherlands	73	70	378,000	338	324	2,260,000
Norway	--	--	--	478	464	631,000
Taiwan	(3)	(3)	4,310	164	159	220,000
United Kingdom	--	--	--	154	150	348,000
Other (10 countries)	28	27	81,900	37	35	118,000
Total	595	577	1,460,000	2,160	2,100	5,700,000
Total silicon metal	1,640	1,620	34,400,000	6,670	6,600	169,000,000

^eEstimated. XX Not applicable. -- Zero.

¹Presentation of monthly data is based on the year-to-date quantities (gross weight) of the top 10 countries.

²Data are rounded to no more than three significant digits; may not add to totals shown.

³Less than 1/2 unit.

Source: U.S. Census Bureau.

TABLE 3
U.S. IMPORTS FOR CONSUMPTION OF FERROSILICON AND SILICON METAL IN MAY 2004^{1,2}

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	Year to date		
				Gross weight	Contained weight	Value
Ferrosilicon:						
55% - 80% silicon, over 3% Ca:						
Brazil	233	178	\$235,000	344	245	\$354,000
France	--	--	--	53	32	72,100
Total	233	178	235,000	397	277	426,000
55% - 80% silicon, Other:						
Brazil	42	32	31,300	367	260	291,000
Canada	1,240	937	912,000	5,770	4,350	4,250,000
China	3,730	2,820	2,920,000	27,100	20,800	17,600,000
France	554	380	938,000	1,680	1,130	2,880,000
Iceland	1,500	1,120	835,000	8,500	6,380	5,520,000
Kazakhstan	--	--	--	7,980	6,100	6,720,000
Norway	647	485	817,000	3,480	2,590	4,150,000
Russia	--	--	--	10,700	7,970	9,090,000
South Africa	--	--	--	1,300	991	872,000
Venezuela	4,420	3,410	3,750,000	19,200	14,800	14,600,000
Other (6 countries)	498	373	609,000	854	613	1,630,000
Total	12,600	9,560	10,800,000	87,000	65,900	67,600,000
80% - 90% silicon:						
Brazil	--	--	--	5	4	3,230
Canada	--	--	--	18	14	9,430
Total	--	--	--	23	19	12,700
More than 90% silicon, Italy	21	147 ³	48,700	21	147	48,700
Italy						
Magnesium ferrosilicon:						
Argentina	396	180	310,000	1,420	655	1,110,000
Brazil	202	89	165,000	1,080	482	819,000
Canada	18	9	17,900	151	73	127,000
China	1,050	473	727,000	2,800	1,270	1,960,000
France	--	--	--	20	10	22,100
India	--	--	--	155	89	167,000
Japan	31	13	65,400	151	70	268,000
Netherlands	--	--	--	109	51	84,900
Norway	1,420	666	1,150,000	6,320	2,900	5,010,000
New Zealand	--	--	--	41	19	26,700
Other (2 countries)	15	8	31,200	16	9	41,700
Total	3,130	1,440	2,460,000	12,200	5,620	9,640,000
Other ferrosilicon:						
Brazil	20	3	26,000	350	121	374,000
Canada	1,410	469	786,000	4,720	1,450	3,110,000
China	4	2	4,400	68	35	113,000
France	--	--	--	22	12	50,500
India	--	--	--	19	14	23,900
Italy	--	--	--	4	2	3,670
Russia	--	--	--	4	2	3,270
Ukraine	--	--	--	5	3	4,030
Venezuela	--	--	--	4	2	3,270
Total	1,430	474	817,000	5,200	1,640	3,690,000
Total ferrosilicon	17,400	11,800	14,400,000	105,000	73,600	81,400,000

See footnotes at end of table.

TABLE 3--Continued
 U.S. IMPORTS FOR CONSUMPTION OF FERROSILICON AND SILICON METAL IN MAY 2004^{1,2}

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	Year to date		
				Gross weight	Contained weight	Value
Metal:						
More than 99.99% silicon:						
Denmark	(4)	XX	\$16,600	1	XX	\$205,000
Germany	33	XX	4,130,000	178	XX	20,700,000
India	17	XX	108,000	17	XX	108,000
Italy	37	XX	1,740,000	174	XX	7,540,000
Japan	30	XX	2,080,000	141	XX	7,620,000
Korea, Republic of	(4)	XX	10,100	16	XX	176,000
Mexico	--	XX	--	16	XX	111,000
Poland	8	XX	25,800	8	XX	25,800
Spain	--	XX	--	3	XX	12,000
Taiwan	3	XX	112,000	27	XX	238,000
Other (4 countries)	(4)	XX	3,600	(4)	XX	52,000
Total	129	129 ^e	8,220,000	582	582 ^e	36,800,000
99.00% - 99.99% silicon:						
Australia	253	252	355,000	1,170	1,170	1,620,000
Brazil	3,600	3,570	4,280,000	23,500	23,300	27,600,000
Canada	1,620	1,610	2,240,000	9,290	9,230	12,400,000
China	20	20	23,900	20	20	23,900
France	579	85 ³	889,000	1,510	1,010	2,310,000
Germany	--	--	--	(4)	(4)	3,630
Netherlands	--	--	--	12	12	5,150,000
Norway	520	517	1,020,000	2,600	2,580	37,600
South Africa	4,440	4,410	5,330,000	13,100	12,700	15,400,000
Sweden	--	--	--	17	17	121,000
Total	11,000	10,500	14,100,000	51,200	50,100	64,700,000
Other silicon:						
Belgium	53	30	79,000	171	85	234,000
Brazil	1,440	1,420	1,840,000	4,470	4,400	5,630,000
Canada	134	82	173,000	1,290	1,180	1,700,000
China	159	157	199,000	1,220	1,200	1,300,000
France	168	166	216,000	963	939	1,230,000
Germany	20	20	27,000	120	117	470,000
Korea, Republic of	--	--	--	21	(4)	22,800
South Africa	194	188	220,000	1,590	1,550	1,590,000
Ukraine	36	35	41,600	662	646	719,000
United Kingdom	59	58	91,600	190	187	302,000
Other (2 countries)	--	--	--	2	2	11,400
Total	2,260	2,150	2,890,000	10,700	10,300	13,200,000
Total silicon metal	13,400	12,800	25,300,000	62,500	61,000	115,000,000

^eEstimated. XX Not applicable. -- Zero.

¹Presentation of monthly data is based on the year-to-date quantities (gross weight) of the top 10 countries.

²Data are rounded to no more than three significant digits; may not add to totals shown.

³All or part of these data have been referred to the U.S. Census Bureau for verification.

⁴Less than 1/2 unit.

Source: U.S. Census Bureau.