

Mineral Industry Surveys

For information, contact:

Lisa A. Corathers, Silicon Commodity Specialist
U.S. Geological Survey
989 National Center
Reston, VA 20192
Telephone: (703) 648-4973, Fax: (703) 648-7757
E-mail: lcorathers@usgs.gov

Lisa D. Miller (Data)
Telephone: (703) 648-7973
Fax: (703) 648-7975
E-mail: millerl@usgs.gov

Internet: <http://minerals.usgs.gov/minerals>

SILICON IN AUGUST 2003

In August 2003, domestic production of silicon ferroalloys plus metal, excluding silvery pig iron, was estimated to have decreased by about 10% compared with that of the previous month, according to the U.S. Geological Survey. Domestic shipments increased by 22% while producer stocks decreased by 12% compared with those for July 2003. All domestic data for ferrosilicon have been combined to avoid disclosing company proprietary data.

The July 2003 trade data included in this report indicated that silicon metal imports, on a gross weight basis, were more than double those of June 2003, owing primarily to a significant increase in the trade category "silicon metal, 99.00% - 99.99% silicon." Ferrosilicon imports, on a gross weight basis, decreased by 36% compared with those of June, owing primarily to a significant decrease in the trade category "ferrosilicon, 55% - 80% silicon, other." On a gross weight basis, ferrosilicon exports decreased by 30% compared with those of June, with a significant decrease in the trade category "ferrosilicon, other." Silicon metal exports decreased by 6% compared with those in June, owing to a significant decrease in the trade category "silicon metal, other."

Update

On September 23, Walter Industries, Inc., agreed to sell its ferroalloys subsidiary, Applied Industrial Minerals Corporation (AIMCOR), to Oxbow Carbon & Minerals LLC for \$127.7 million. The companies expect the sale to close in the fourth quarter of 2003 (Walter Industries, Inc., 2003§¹).

Also in September, Russian Aluminum put its Bratsk, Russia, silicon and ferrosilicon smelter up for sale. The plant is

comprised of one silicon metal furnace and three ferrosilicon furnaces. Silicon metal production was limited to that containing 1% iron, most of which was sold to U.S. secondary aluminum producers via resellers. The company decided to sell the plant after 1) losing its U.S. market because of recently imposed U.S. duties on Russian silicon metal imports; and 2) European buyers' lack of interest in purchasing 1% ferrosilicon (Ryan's Notes, 2003a).

Globe Metallurgical Inc. closed its Niagara Falls, NY, silicon ferroalloys smelter in late September. The plant will be shut down indefinitely (Ryan's Notes, 2003b). Also in late September, Globe reached a settlement with silicon metal and ferroalloy producer Fesil Group to sell its 39.9% ownership in Fesil for \$4.5 million. As part of the settlement, Globe agreed to transfer its 1.2% ownership in Fesil Group's parent company, GfM Fesil, headquartered in Duisburg, Germany, back to GfM Fesil (Ryan's Notes, 2003a). Globe's Springfield, OR, silicon smelter and associated assets were auctioned on September 30 to MI Capital for \$1.5 million (Ryan's Notes, 2003c).

References Cited

- Ryan's Notes, 2003a, Bratsk silicon smelter up for sale: Ryan's Notes, v. 9, no. 39, September 29, p. 2-3.
Ryan's Notes, 2003b, Globe confirms shutdown of Niagara Falls: Ryan's Notes, v. 9, no. 38, September 22, p. 2.
Ryan's Notes, 2003c, Rima plots silicon expansion; higher prices booked for 2003: Ryan's Notes, v. 9, no. 40, October 6, p. 1.

Internet Reference Cited

- Walter Industries, Inc., 2003 (September 23), Walter Industries agrees to sell AIMCOR Subsidiary to Oxbow Carbon & Minerals for \$127.7 million, accessed October 9, 2003, at URL <http://www.walterind.com>.

¹A reference that includes a section mark (§) is found in the Internet Reference Cited section.

Prices, cents per pound, silicon content

	<u>50% Ferrosilicon¹</u>	<u>75% Ferrosilicon²</u>	<u>Silicon Metal²</u>
August 7	46.0-48.0	45.0-46.0	60.0-61.0
August 14	46.0-48.0	44.5-45.5	60.0-61.0
August 21	46.0-48.0	44.5-45.5	60.0-61.0
August 28	46.0-48.0	44.5-45.5	60.0-61.0

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 2003^{1, 2, 3}

(Metric tons)

Material	Gross production ⁴		Net shipments		Stocks, August 31
	August	Year to date ⁵	August	Year to date ⁵	
Ferrosilicon:					
All grades ^{6, 7}	13,100	133,000	14,400	112,000	26,400
Silicon metal:					
Excludes semiconductor grades	11,100	87,400	11,900	82,200	4,890

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 JULY 2003^{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	127	76	\$116,000	2,220	1,330	\$1,800,000
Malaysia	--	--	--	22	17	36,500
Mexico	131	78	141,000	811	495	878,000
Total	258	154	257,000	3,050	1,840	2,720,000
Other ferrosilicon:						
Australia	--	--	--	19	10	25,300
Brazil	--	--	--	100	45	128,000
Canada	168	84	132,000	1,750	875	1,400,000
France	--	--	--	18	9	15,000
Germany	--	--	--	9	3	11,700
Italy	--	--	--	32	17	52,600
Korea, Republic of	17	9	21,400	495	247	530,000
Mexico	44	22	38,700	866	433	787,000
Spain	6	3	5,400	9	5	8,630
Taiwan	--	--	--	1	1	6,190
Total	235	118	198,000	3,300	1,640	2,960,000
Total ferrosilicon	493	272	455,000	6,350	3,490	5,680,000
Metal:						
More than 99.99% silicon:						
China	46	XX	1,220,000	537	XX	15,700,000
France	14	XX	336,000	78	XX	1,880,000
Germany	67	XX	2,060,000	421	XX	13,600,000
Japan	367	XX	15,300,000	2,430	XX	108,000,000
Korea, Republic of	44	XX	1,990,000	401	XX	15,100,000
Malaysia	9	XX	1,400,000	44	XX	7,460,000
Norway	30	XX	889,000	516	XX	13,000,000
Taiwan	1	XX	41,900	88	XX	3,060,000
Ukraine	12	XX	319,000	52 ³	XX	1,440,000
United Kingdom	10	XX	1,520,000	131	XX	11,700,000
Other (36 countries)	29	XX	1,720,000	221	XX	14,200,000
Total	629	629 ^e	26,800,000	4,920	4,920 ^e	205,000,000

See footnotes at end of table.

TABLE 2--Continued
 U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN JULY 2003^{1,2}

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	Year to date		
				Gross weight	Contained weight	Value
Metal--Continued:						
99.00% - 99.99% silicon:						
Belgium	--	--	--	4	4	\$5,180
Brazil	109	108	\$207,000	286	284	581,000
Colombia	30	29	41,800	69	68	96,900
Denmark	--	--	--	7	7	9,270
Jamaica	--	--	--	9	9	15,300
Japan	2	2	7,740	15	14	39,700
Mexico	11	10	14,800	71	71	106,000
Norway	--	--	--	246	244	352,000
Singapore	--	--	--	7	7	9,020
Venezuela	--	--	--	39	38	56,200
Other (10 countries)	16	15	40,000	32	31	83,600
Total	166	165	311,000	784	777	1,350,000
Other silicon:						
Canada	3	3	7,950	2,020	1,960	2,160,000
China	--	--	--	42	41	55,200
Germany	--	--	--	42	41	55,500
Hong Kong	57	55	75,100	84	81	185,000
Japan	181	176	239,000	954	927	1,430,000
Korea, Republic of	--	--	--	188	182	248,000
Mexico	60	59	207,000	181	175	635,000
Netherlands	35	34	272,000	427	410	2,270,000
Taiwan	--	--	--	46	45	82,600
United Kingdom	45	44	50,700	407	395	471,000
Other (15 countries)	127	123	181,000	204	198	370,000
Total	509	494	1,030,000	4,600	4,460	7,960,000
Total silicon metal	1,310	1,290	28,100,000	10,300	10,200	214,000,000

⁶Estimated. 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.

Source: U.S. Census Bureau.

TABLE 3
U.S. IMPORTS FOR CONSUMPTION OF FERROSILICON AND SILICON METAL IN JULY 2003^{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:						
Argentina	22	14	\$30,500	640	317	\$614,000
Brazil	200	144	135,000	940	704	706,000
Canada	--	--	--	41	30	16,400
China	--	--	--	19	3	14,200
France	18	10	24,200	72	43	96,900
Germany	6	4	6,000	6	4	6,000
Mexico	--	--	--	13	9	48,000
Total	246	172	196,000	1,730	1,110	1,500,000
55% - 80% silicon, Other:						
Brazil	182	137	109,000	5,520	4,230	3,160,000
Canada	1,170	873	811,000	8,900	6,690	5,970,000
China	2,040	1,530	1,170,000	17,300	13,000	9,180,000
Iceland	--	--	--	6,530	4,900	3,910,000
Kazakhstan	--	--	--	17,600	13,500	12,400,000
Norway	569	419	688,000	3,450	2,550	4,180,000
Russia	6,730	4,980	4,280,000	13,700	9,780	8,070,000
South Africa	--	--	--	2,440	1,850	1,340,000
Ukraine	--	--	--	6,260	4,720	3,670,000
Venezuela	3,090	2,320	2,270,000	22,400	18,900 ³	15,400,000
Other (5 countries)	397	281	833,000	3,320	2,320	5,240,000
Total	14,200	10,500	10,200,000	107,000	82,400	72,500,000
80% - 90% silicon:						
Canada	--	--	--	38	30	16,800
South Africa	--	--	--	9	7	3,350
Total	--	--	--	47	38	20,100
Magnesium ferrosilicon:						
Argentina	320	143	224,000	1,410	634	973,000
Brazil	210	96	124,000	2,900	1,300	1,760,000
Canada	259	123	211,000	1,880	895	1,560,000
China	877	410	621,000	3,450	1,560	2,350,000
France	--	--	--	80	29	90,500
Germany	--	--	--	8	4	11,500
Japan	15	8	32,400	321	148	389,000
Netherlands	102	48	62,400	102	48	62,400
Norway	1,080	500	887,000	8,660	3,990	7,010,000
Total	2,870	1,330	2,160,000	18,800	8,600	14,200,000
Other ferrosilicon:						
Brazil	20	3	25,700	335	161	208,000
Canada	673	205	415,000	4,470	1,470	2,780,000
China	--	--	--	79	35	78,800
France	--	--	--	22	12	50,600
Russia	384	176	351,000	1,540	1,120	943,000
Ukraine	5	3	3,480	5	3	3,480
Total	1,080	386	795,000	6,460	2,790	4,060,000
Total ferrosilicon	18,400	12,400	13,300,000	134,000	95,000	92,300,000

See footnotes at end of table.

TABLE 3--Continued
U.S. IMPORTS FOR CONSUMPTION OF FERROSILICON AND SILICON METAL IN JULY 2003^{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:						
Belgium	--	XX	--	12	XX	\$48,000
China	(4)	XX	\$9,340	35	XX	399,000
Finland	--	XX	--	9	XX	29,100
Germany	23	XX	2,080,000	191	XX	23,800,000
India	--	XX	--	14	XX	18,900
Italy	29	XX	1,640,000	205	XX	9,730,000
Japan	63	XX	2,060,000	291	XX	8,730,000
Korea, Republic of	17	XX	106,000	85	XX	600,000
Poland	--	XX	--	4	XX	17,300
Spain	1	XX	5,100	4	XX	22,500
Other (7 countries)	5	XX	99,700	11	XX	763,000
Total	137	137^e	6,000,000	862	862^e	44,100,000
99.00% - 99.99% silicon:						
Argentina	280	278	265,000	440	437	417,000
Australia	121	120	132,000	3,270	3,000 ³	3,470,000
Brazil	4,170	4,140	4,890,000	32,200	32,000	38,100,000
Canada	2,140	2,120	2,510,000	9,220	9,150	10,900,000
China	5	(4)	2,700	269	263	240,000
Kazakhstan	--	--	--	420	416	422,000
Korea, Republic of	--	--	--	120	119	96,000
Malaysia	--	--	--	300	297	309,000
Norway	400	397	768,000	4,150	4,010	7,210,000
South Africa	3,870	3,840	4,530,000	18,800	18,700	21,500,000
Other (7 countries)	11	10	71,200	183	157	402,000
Total	11,000	10,900	13,200,000	69,400	68,500	83,100,000
Other silicon:						
Brazil	804	797	816,000	1,390	1,370	1,410,000
Canada	268	262	327,000	1,440	1,400	1,340,000
China	--	--	--	2,440	2,400	2,160,000
Germany	--	--	--	163	160	161,000
Kazakhstan	--	--	--	240	233	190,000
Norway	--	--	--	1,100	1,080	1,110,000
South Africa	862	847	832,000	5,480	5,390	5,260,000
Ukraine	34	34	32,000	629	619	590,000
United Arab Emirates	--	--	--	319	314	264,000
United Kingdom	--	--	--	561	546	592,000
Other (9 countries)	40	39	32,000	631	484	690,000
Total	2,010	1,980	2,040,000	14,400	14,000	13,800,000
Total silicon metal	13,100	13,000	21,200,000	84,600	83,400	141,000,000

^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.