

# Mineral Industry Surveys

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## SILICON IN JUNE 2002

In June, domestic shipments and production of silicon ferroalloys plus metal, excluding silvery pig iron, were estimated to have increased by about 15% and 2%, respectively, compared with the corresponding figures for the previous month, according to the U.S. Geological Survey. Total producer stocks were estimated to have decreased by about 12%. All data for ferrosilicon have been combined to avoid disclosing company proprietary data.

The May trade data included in this report indicated that the volume of silicon metal imports increased by 42% compared with that of April 2002, owing primarily to a substantial increase of silicon metal imports in the trade category "99.00%-99.99% silicon." Total ferrosilicon imports, on a gross weight basis, increased by about 48% from those in the previous month, owing primarily to a substantial increase of ferrosilicon imports in the trade category "55%-80% silicon, other." On a gross weight basis, the volume of total ferrosilicon exports decreased by about 3%, while silicon metal exports increased by 30% compared to those April 2002. The trade data for June were unavailable at the time of publication and will be included in a subsequent report.

On June 6, the U.S. International Trade Commission (ITC) conducted a hearing to determine whether countervailing and antidumping duties should be reimposed on ferrosilicon imports from Brazil, China, Kazakhstan, Russia, Ukraine, and Venezuela. In 1999, the ITC ruled to eliminate all penalty duties on ferrosilicon imports from these countries imposed in 1994. In February 2002, the U.S. Court of International Trade (CIT) remanded the 1999 ruling back to the ITC because the Commission had not accorded domestic ferrosilicon producers an opportunity to participate in a hearing on the matter (Elkem Metals Co. v. United States, No. 99-10-00628, CIT Slip Opinion 2002-18). **Update:** On August 6, all five commissioners of the ITC unanimously determined that the U.S. ferrosilicon industry was not materially injured or threatened with material injury by reasons of the subject

imports (U.S. International Trade Commission, 2002<sup>§1</sup>). The ITC will transmit its determinations on remand to the CIT by September 13, after which time all parties in the case will be allowed to brief the court. It is not known when the CIT will make a decision in the case (Platts Metals Week, 2002).

American Colloid Co.'s Metalcasting Products Group (AMCOL International Corp.) purchased FNG Industries Inc., a producer of ferrosilicon and carbon/silicon bricks and briquettes, located in New Haven, WV (American Metal Market, 2002a).

Elkem ASA announced plans to invest more than \$9.2 million to rebuild the No. 5 furnace at its Bremanger silicon metal smelter in Norway owing to improved market conditions. The company also plans to revamp the No. 9 furnace at its Fiskaa silicon metal smelter in Norway (American Metal Market, 2002b).

### References Cited

- American Metal Market, 2002a, Amcol group buys ferrosilicon maker: American Metal Market, v. 110, no. 74-3, p. 5.  
American Metal Market, 2002b, Elkem slates \$9.2M to rebuild silicon furnace: American Metal Market, v. 110, no. 74-3, p. 5.  
Platts Metal Week, 2002, US rules FeSi imports not injuring producers: Platts Metal Week, August 12, p. 1.

### Internet Reference Cited

- U.S. International Trade Commission, 2002 (August 6), ITC determines on remand that ferrosilicon from Brazil, China, Kazakhstan, Russia, Ukraine, and Venezuela does not injure U.S. industry—News Release 02-067, accessed August 19, 2002, at URL <http://www.usitc.gov>.

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<sup>1</sup>A reference that includes a section twist (§) is found in the Internet Reference Cited section.

Price, cents per pound, silicon content

	<u>50% Ferrosilicon<sup>1</sup></u>	<u>75% Ferrosilicon<sup>2</sup></u>	<u>Silicon Metal<sup>2</sup></u>
<b>June 5</b>	<b>37.0-40.0</b>	<b>30.0-31.5</b>	<b>50.0-52.0</b>
<b>June 12</b>	<b>37.0-40.0</b>	<b>30.0-31.5</b>	<b>50.0-52.0</b>
<b>June 19</b>	<b>40.0-42.0</b>	<b>30.0-33.0</b>	<b>51.0-53.0</b>
<b>June 26</b>	<b>40.0-42.0</b>	<b>30.0-33.0</b>	<b>51.5-54.0</b>

<sup>1</sup>Source: Ryan's Notes, North American transaction price.

<sup>2</sup>Source: Platt's Metals Week, dealer import price.

TABLE 1  
U.S. PRODUCTION, SHIPMENTS, AND PRODUCER STOCKS OF SILICON ALLOYS AND METAL IN 2002 1/ 2/ 3/

(Metric tons)

Material	Gross production 4/		Net shipments		Stocks, June 30
	June	Year to date	June	Year to date	
<b>Ferrosilicon:</b>					
All grades 5/ 6/	21,900	133,000	18,300	103,000	48,400
<b>Silicon metal:</b>					
Excludes semiconductor grades	9,530	58,700	8,790	51,800	6,080

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

2/ Includes U.S. Geological Survey estimates.

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

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

5/ Ferrosilicon categories were aggregated to avoid disclosing company proprietary data.

6/ Includes miscellaneous silicon alloys.

TABLE 2  
U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN MAY 2002 1/ 2/

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	Year to date		
				Gross weight	Contained weight	Value
<b>Ferrosilicon:</b>						
More than 55% silicon:						
Canada	589	353	\$390,000	1,910	1,150	\$1,320,000
Malaysia	--	--	--	16	13	27,400
Mexico	141	96	105,000	236	153	209,000
Total	730	449	495,000	2,170	1,310	1,550,000
Other ferrosilicon:						
Australia	--	--	--	141	57	174,000
Canada	389	195	247,000	2,020	1,010	1,260,000
China	--	--	--	48	24	13,100
Ghana	--	--	--	17	6	6,470
India	8	4	6,000	23	11	13,800
Italy	--	--	--	33	17	52,600
Japan	--	--	--	336	30	717,000
Korea, Republic of	48	24	64,900	599	299	878,000
Malaysia	18	8	21,000	72	32	85,500
Mexico	30	15	36,500	223	111	266,000
Other (6 countries)	11	6	14,900	59	32	90,400
Total	504	252	390,000	3,570	1,630	3,550,000
Total ferrosilicon	1,230	701	885,000	5,740	2,950	5,110,000
<b>Metal:</b>						
More than 99.99% silicon:						
China	17	XX	456,000	180	XX	5,100,000
France	7	XX	329,000	36	XX	1,020,000
Germany	22	XX	884,000	132	XX	5,860,000
Italy	19	XX	1,090,000	50	XX	3,850,000
Japan	243	XX	11,800,000	1,210	XX	60,100,000
Korea, Republic of	32	XX	1,260,000	200	XX	7,950,000
Malaysia	14	XX	2,430,000	36	XX	7,040,000
Norway	43	XX	1,150,000	187	XX	4,650,000
Taiwan	16	XX	486,000	45	XX	1,490,000
Ukraine	14	XX	356,000	47	XX	1,180,000
Other (35 countries)	29	XX	2,460,000	131	XX	10,500,000
Total	457	457 e/	22,700,000	2,250	2,250 e/	109,000,000

See footnotes at end of table.

TABLE 2--Continued  
U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN MAY 2002 1/ 2/

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	Year to date		
				Gross weight	Contained weight	Value
<b>Metal--Continued:</b>						
<b>99.00% - 99.99% silicon:</b>						
Belgium	--	--	--	23	22	\$32,000
Brazil	--	--	--	40	39	55,900
Denmark	11	11	\$15,900	68	68	96,400
Japan	7	7	10,100	17	17	42,400
Korea, Republic of	--	--	--	20	20	28,600
Mexico	29	28	56,200	132	131	228,000
Nauru	51 3/	51 3/	72,000 3/	51	51	72,000
Netherlands Antilles	25	25	35,300	56	56	79,600
Norway	26	25	36,000	147	146	207,000
Sweden	--	--	--	19	19	26,500
Other (6 countries)	9	9	26,700	44	43	95,800
<b>Total</b>	<b>158</b>	<b>157</b>	<b>252,000</b>	<b>617</b>	<b>612</b>	<b>965,000</b>
<b>Other silicon:</b>						
Canada	81	78	107,000	551	535	690,000
Germany	105	102	138,000	182	177	241,000
Hong Kong	--	--	--	123	119	167,000
Japan	137	133	180,000	345	335	455,000
Korea, Republic of	51	49	67,200	205	199	374,000
Malaysia	21	20	27,300	52	51	68,700
Mexico	83	80	142,000	495	480	950,000
Philippines	119	116	481,000	130	126	495,000
Taiwan	110	107	152,000	178	173	241,000
United Kingdom	--	--	--	91	88	218,000
Other (15 countries)	28	27	165,000	206	200	446,000
<b>Total</b>	<b>734</b>	<b>713</b>	<b>1,460,000</b>	<b>2,560</b>	<b>2,480</b>	<b>4,350,000</b>
<b>Total silicon metal</b>	<b>1,350</b>	<b>1,330</b>	<b>24,400,000</b>	<b>5,430</b>	<b>5,350</b>	<b>114,000,000</b>

e/ Estimated. XX Not applicable. -- Zero.

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

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

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

Source: U.S. Census Bureau.

TABLE 3  
U.S. IMPORTS FOR CONSUMPTION OF FERROSILICON AND SILICON METAL IN MAY 2002 1/ 2/

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	Year to date		
				Gross weight	Contained weight	Value
<b>Ferrosilicon:</b>						
<b>55% - 80% silicon, over 3% Ca:</b>						
Argentina	--	--	--	28	17	\$39,700
Brazil	93	43	\$95,200	273	131	285,000
Canada	21	15	6,580	21	15	6,580
Germany	--	--	--	40	12	40,500
Norway	--	--	--	6	4	10,500
United Kingdom	--	--	--	11	7	58,100
<b>Total</b>	<b>113</b>	<b>58</b>	<b>102,000</b>	<b>377</b>	<b>186</b>	<b>441,000</b>
<b>55% - 80% silicon, Other:</b>						
Brazil	87	65	82,500	319	239	257,000
Canada	809	599	510,000	3,250	2,440	2,080,000
China	--	--	--	920	690	460,000
France	293	194	482,000	1,170	764	2,070,000
Iceland	5,950	4,450	2,700,000	12,300	9,190	5,560,000
Kazakhstan	--	--	--	13,500	10,300	5,180,000
Norway	188	143	235,000	1,490	1,120	2,000,000
South Africa	1,310	980	605,000	3,240	2,360	1,470,000
Ukraine	--	--	--	6,110	4,580	2,680,000
Venezuela	8,250	6,190	4,430,000	19,200	14,400	10,300,000
Other (4 countries)	55	39	183,000	443	173	809,000
<b>Total</b>	<b>16,900</b>	<b>12,700</b>	<b>9,220,000</b>	<b>61,900</b>	<b>46,300</b>	<b>32,800,000</b>

See footnotes at end of table.

TABLE 3--Continued  
 U.S. IMPORTS FOR CONSUMPTION OF FERROSILICON AND SILICON METAL IN MAY 2002 1/ 2/

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	Year to date		
				Gross weight	Contained weight	Value
<b>Ferrosilicon--Continued:</b>						
<b>More than 90% silicon:</b>						
China	--	--	--	44	2,380	\$220,000
<b>Magnesium ferrosilicon:</b>						
Argentina	--	--	--	465	194	298,000
Brazil	339	154	\$247,000	1,420	645	947,000
Canada	235	112	241,000	364	175	338,000
China	781	360	524,000	2,630	1,220	1,810,000
Germany	1	1	4,450	1	1	6,730
Japan	47	24	103,000	93	47	201,000
Norway	674	310	550,000	3,960	1,820	3,240,000
Slovenia	--	--	--	4	1	6,480
Ukraine	--	--	--	18	9	7,970
<b>Total</b>	<b>2,080</b>	<b>961</b>	<b>1,670,000</b>	<b>8,950</b>	<b>4,120</b>	<b>6,850,000</b>
<b>Other ferrosilicon:</b>						
Canada	907	316	602,000	4,630	1,660	3,440,000
China	--	--	--	20	10	42,400
France	--	--	--	4	1	9,060
Norway	--	--	--	23	4	18,100
Ukraine	22	11	11,200	119	58	54,700
<b>Total</b>	<b>929</b>	<b>326</b>	<b>613,000</b>	<b>4,790</b>	<b>1,740</b>	<b>3,570,000</b>
<b>Total ferrosilicon</b>	<b>20,100</b>	<b>14,000</b>	<b>11,600,000</b>	<b>76,100</b>	<b>54,700</b>	<b>43,900,000</b>
<b>Metal:</b>						
<b>More than 99.99% silicon:</b>						
China	4	XX	46,300	9	XX	160,000
Denmark	(3/)	XX	27,900	1	XX	248,000
Germany	40	XX	4,450,000	157	XX	22,600,000
Italy	18	XX	741,000	163	XX	6,380,000
Japan	37	XX	1,170,000	209	XX	6,570,000
Korea, Republic of	6	XX	268,000	52	XX	801,000
Poland	3	XX	9,790	3	XX	12,600
Spain	2	XX	5,170	7	XX	21,400
Taiwan	(3/)	XX	6,550	4	XX	83,100
United Kingdom	--	XX	--	1	XX	63,900
Other (6 countries)	1	XX	46,900	2	XX	168,000
<b>Total</b>	<b>110</b>	<b>110 e/</b>	<b>6,770,000</b>	<b>606</b>	<b>606 e/</b>	<b>37,100,000</b>
<b>99.00% - 99.99% silicon:</b>						
Argentina	1,340	1,330	1,270,000	2,500	2,480	2,370,000
Brazil	4,190	4,160	5,340,000	12,200	12,100	15,300,000
Canada	1,090	1,080	1,310,000	4,410	4,370	5,310,000
China	--	--	--	100	99	81,100
Norway	915	909	1,140,000	2,320	2,300	3,310,000
Russia	3,090	3,060	3,160,000	8,960	8,880	9,650,000
South Africa	2,210	2,200	2,630,000	8,230	8,170	9,240,000
Spain	60	60	60,300	1,480	1,470	1,420,000
Sweden	--	--	--	21	21	144,000
Ukraine	--	--	--	42	41	32,100
Other (2 countries)	5	4	15,100	5	4	17,100
<b>Total</b>	<b>12,900</b>	<b>12,800</b>	<b>14,900,000</b>	<b>40,300</b>	<b>40,000</b>	<b>46,900,000</b>

See footnotes at end of table.

TABLE 3--Continued  
 U.S. IMPORTS FOR CONSUMPTION OF FERROSILICON AND SILICON METAL IN MAY 2002 1/ 2/

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	Year to date		
				Gross weight	Contained weight	Value
<b>Metal:</b>						
<b>Other silicon:</b>						
Belgium	--	--	--	44	4	\$47,500
Canada	--	--	--	803	787	963,000
China	580	571	\$406,000	1,780	1,750	1,230,000
Germany	40	39	33,500	40	39	33,500
Italy	--	--	--	25	15	48,400
Norway	1,500	1,480	1,290,000	2,550	2,500	2,230,000
Russia	4,190	4,120	3,400,000	12,800	12,600	10,400,000
South Africa	554	545	538,000	3,980	3,910	3,730,000
Ukraine	--	--	--	21	21	16,100
United Arab Emirates	119	117	96,400	278	274	237,000
Other (4 countries)	--	--	--	11	1	18,800
<b>Total</b>	<b>6,980</b>	<b>6,870</b>	<b>5,760,000</b>	<b>22,300</b>	<b>21,900</b>	<b>19,000,000</b>
<b>Total silicon metal</b>	<b>20,000</b>	<b>19,800</b>	<b>27,500,000</b>	<b>63,200</b>	<b>62,400</b>	<b>103,000,000</b>

e/ Estimated. XX Not applicable. -- Zero.

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

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

3/ Less than 1/2 unit.

Source: U.S. Census Bureau.