

# Mineral Industry Surveys

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## SILICON IN JULY 2011

Preliminary data for July 2011 indicate that domestic production and net shipments of total silicon materials (ferrosilicon plus silicon metal), on a gross-weight basis, were slightly higher and 9% lower, respectively, compared with those in June 2011. Ending stocks were 6% higher than those at the end of June. Stocks included adjustments in inventory and in-plant consumption of ferrosilicon to produce magnesium ferrosilicon and other miscellaneous alloys.

Production-related statistics for the individual categories of ferrosilicon and silicon metal were concealed to avoid disclosing company proprietary data. A total for both categories is found on table 1.

On a gross-weight basis, U.S. ferrosilicon and silicon metal exports in June 2011 were 53% higher and 22% higher,

respectively, than those in May 2011. U.S. ferrosilicon and silicon metal exports in the first 6 months of 2011 were 32% higher and 50% higher, respectively, than those during the same period in 2010.

On a gross-weight basis, U.S. ferrosilicon and silicon metal imports in June 2011 were 30% lower and 40% higher, respectively, than those in May 2011. U.S. ferrosilicon and silicon metal imports in the first 6 months of 2011 were 10% lower and 28% higher, respectively, than those during the same period in 2010.

### Prices

Prices for silicon materials in July 2011, in cents per pound, silicon content, are listed below.

### 50% Ferrosilicon prices<sup>1</sup>

<u>Price Range</u>	<u>Average Low, Mid, and High Prices</u>
110.00–112.00	110.00–111.00–112.00

### 75% Ferrosilicon prices<sup>2</sup>

<u>Price Range</u>	<u>Average Price</u>
102.00–105.00	103.63

### Silicon metal prices<sup>2</sup>

<u>Price Range</u>	<u>Average Price</u>
155.00–158.00	156.50

<sup>1</sup>Source: Ryan's Notes, North American transaction price. Average prices reported for the price range.

<sup>2</sup>Source: Platts Metals Week, dealer import price. Average price reported for all transactions during the month.

TABLE 1  
U.S. PRODUCTION, SHIPMENTS, AND PRODUCER STOCKS OF SILICON ALLOYS AND METAL IN 2011<sup>1,2</sup>

(Metric tons)

Material	Gross production <sup>3</sup>		Net shipments		Stocks,
	July	Year to date <sup>4</sup>	July	Year to date <sup>4</sup>	July 31
Ferrosilicon, all grades <sup>5</sup>	W	W	W	W	W
Silicon metal, excludes semiconductor grades	W	W	W	W	W
Total silicon materials	39,100	270,000	29,600	216,000	36,100

W Withheld to avoid disclosing company proprietary data; included in "Total."

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

<sup>2</sup>Includes U.S. Geological Survey estimates.

<sup>3</sup>Includes in-plant consumption, as in production of magnesium ferrosilicon and other miscellaneous alloys.

<sup>4</sup>May include revisions to previously published data.

<sup>5</sup>Includes miscellaneous silicon alloys and other silicon products.

TABLE 2  
U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN JUNE 2011<sup>1,2</sup>

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	Year to date		
				Gross weight	Contained weight	Value
<b>Ferrosilicon:</b>						
<b>More than 55% silicon:</b>						
Brazil	3	2	\$10,300	138	85	\$312,000
Canada	2,070	1,240	887,000	8,930	5,360	6,210,000
Colombia	--	--	--	27	20	69,300
Italy	--	--	--	380	292	757,000
Japan	181	142	380,000	567	443	1,190,000
Mexico	150	91	330,000	1,300	785	2,840,000
Netherlands	--	--	--	200	190	310,000
Singapore	--	--	--	28	19	71,100
Sweden	--	--	--	95	71	191,000
Turkey	--	--	--	60	44	172,000
Other (5 countries)	--	--	--	53	37	85,800
<b>Total</b>	<b>2,400</b>	<b>1,480</b>	<b>1,610,000</b>	<b>11,800</b>	<b>7,340</b>	<b>12,200,000</b>
<b>Other ferrosilicon:</b>						
Belgium	--	--	--	721	360	1,590,000
Canada	83	41	178,000	713	357	1,390,000
Italy	40	18	90,800	93	44	225,000
Japan	100	49	146,000	933	449	1,740,000
Korea, Republic of	--	--	--	290	128	382,000
Mexico	295	93	507,000	769	270	1,350,000
Portugal	--	--	--	200	82	440,000
Spain	--	--	--	180	82	405,000
Turkey	228	104	510,000	916	418	2,150,000
United Kingdom	--	--	--	79	37	188,000
Other (9 countries)	64	31	133,000	264	128	588,000
<b>Total</b>	<b>809</b>	<b>337</b>	<b>1,560,000</b>	<b>5,160</b>	<b>2,360</b>	<b>10,400,000</b>
<b>Total ferrosilicon</b>	<b>3,210</b>	<b>1,810</b>	<b>3,170,000</b>	<b>16,900</b>	<b>9,700</b>	<b>22,700,000</b>

See footnotes at end of table.

TABLE 2—Continued  
 U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN JUNE 2011<sup>1, 2</sup>

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	Year to date		
				Gross weight	Contained weight	Value
<b>Metal:</b>						
<b>More than 99.99% silicon:</b>						
China	1,430	XX	\$59,700,000	8,830	XX	\$403,000,000
Germany	355	XX	14,900,000	2,880	XX	135,000,000
Hong Kong	19	XX	666,000	1,680	XX	28,600,000
Japan	1,050	XX	55,200,000	6,220	XX	327,000,000
Korea, Republic of	162	XX	10,800,000	1,320	XX	80,300,000
Malaysia	52	XX	5,500,000	217	XX	20,900,000
Norway	722	XX	35,300,000	3,250	XX	159,000,000
Singapore	300	XX	15,100,000	1,830	XX	93,100,000
Taiwan	353	XX	15,200,000	2,110	XX	95,000,000
Ukraine	108	XX	4,440,000	457	XX	19,800,000
Other (39 countries)	140	XX	10,300,000	654	XX	48,900,000
<b>Total</b>	<b>4,690</b>	<b>4,690<sup>e</sup></b>	<b>227,000,000</b>	<b>29,500</b>	<b>29,500<sup>e</sup></b>	<b>1,410,000,000</b>
<b>99.00% –99.99% silicon:</b>						
Argentina	--	--	--	15	15	43,300
Belgium	--	--	--	41	41	68,600
China	--	--	--	101	100	170,000
Hong Kong	--	--	--	21	21	29,400
Italy	--	--	--	13	13	34,000
Japan	307	304	902,000	1,490	1,480	4,380,000
Korea, Republic of	369	366	1,080,000	369	366	1,080,000
Mexico	--	--	--	29	29	60,100
Netherlands	379	375	977,000	615	610	1,670,000
United Kingdom	265	263	758,000	707	701	1,640,000
Other (8 countries)	2	2	2,600	32	31	66,100
<b>Total</b>	<b>1,320</b>	<b>1,310</b>	<b>3,720,000</b>	<b>3,430</b>	<b>3,400</b>	<b>9,240,000</b>
<b>Other silicon:</b>						
Brazil	6	6	7,670	37	36	48,600
Canada	691	671	2,120,000	3,110	3,020	10,300,000
China	20	20	133,000	215	209	442,000
Hong Kong	--	--	--	805	782	1,320,000
Japan	461	443	1,410,000	2,650	2,550	9,120,000
Korea, Republic of	273	265	360,000	449	436	990,000
Mexico	3	3	9,170	49	48	97,300
Taiwan	--	--	--	212	206	539,000
United Arab Emirates	--	--	--	100	97	332,000
United Kingdom	--	--	--	97	94	233,000
Other (17 countries)	22	21	118,000	118	115	330,000
<b>Total</b>	<b>1,480</b>	<b>1,430</b>	<b>4,160,000</b>	<b>7,840</b>	<b>7,590</b>	<b>23,800,000</b>
<b>Total silicon metal</b>	<b>7,490</b>	<b>7,430</b>	<b>235,000,000</b>	<b>40,700</b>	<b>40,400</b>	<b>1,440,000,000</b>

<sup>e</sup>Estimated. XX Not applicable. -- Zero.

<sup>1</sup>Countries listed are the leading exporters in terms of year-to-date quantities (gross weight).

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

Source: U.S. Census Bureau.

TABLE 3  
U.S. IMPORTS FOR CONSUMPTION OF FERROSILICON AND SILICON METAL IN JUNE 2011<sup>1,2</sup>

(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, more than 3% Ca:</b>						
Belgium	--	--	--	23	14	\$85,300
Brazil	315	191	\$898,000	2,410	1,460	6,990,000
China	277	199	416,000	1,230	887	1,850,000
France	--	--	--	293	184	757,000
India	--	--	--	18	13	40,800
Spain	--	--	--	71	47	192,000
<b>Total</b>	<b>592</b>	<b>390</b>	<b>1,310,000</b>	<b>4,040</b>	<b>2,600</b>	<b>9,910,000</b>
<b>55%–80% silicon, other:</b>						
Brazil	65	49	100,000	302	224	645,000
Canada	1,100	810	2,950,000	6,120	4,470	15,300,000
China	6,050	4,580	9,260,000	20,800	15,500	32,500,000
France	540	399	945,000	1,480	1,080	3,520,000
Germany	50	36	308,000	342	247	2,010,000
Norway	--	--	--	653	496	814,000
Russia	2,000	1,520	3,190,000	33,300	25,300	53,100,000
South Africa	75	43	92,400	1,100	774	1,850,000
Venezuela	4,090	3,390	6,720,000	9,190	7,220	14,400,000
Vietnam	201	144	282,000	201	144	282,000
Other (4 countries)	16	10	109,000	357	261	1,080,000
<b>Total</b>	<b>14,200</b>	<b>11,000</b>	<b>24,000,000</b>	<b>73,900</b>	<b>55,700</b>	<b>126,000,000</b>
80%–90% silicon, Germany	158	128	312,000	171	138	388,000
More than 90% silicon, Denmark	--	--	--	8	7	8,970
<b>Magnesium ferrosilicon:</b>						
Argentina	135	77	414,000	409	202	1,160,000
Brazil	109	48	232,000	696	331	1,500,000
Canada	1,140	521	2,370,000	5,850	2,660	11,500,000
China	114	52	199,000	385	184	745,000
France	36	18	53,900	142	71	193,000
Germany	3	2	47,800	81	38	218,000
Iceland	--	--	--	620	282	1,330,000
Japan	--	--	--	15	7	85,900
Korea, Republic of	--	--	--	133	60	277,000
Sweden	--	--	--	(3)	(3)	3,620
<b>Total</b>	<b>1,540</b>	<b>718</b>	<b>3,320,000</b>	<b>8,330</b>	<b>3,830</b>	<b>17,000,000</b>
<b>Other ferrosilicon:</b>						
Brazil	2	1	15,300	22	20	124,000
Canada	742	163	974,000	4,420	1,130	5,670,000
China	40	20	58,700	2,970	519	2,760,000
France	--	--	--	10	5	29,300
Poland	--	--	--	19	10	33,800
<b>Total</b>	<b>784</b>	<b>184</b>	<b>1,050,000</b>	<b>7,440</b>	<b>1,680</b>	<b>8,610,000</b>
<b>Total ferrosilicon</b>	<b>17,300</b>	<b>12,400</b>	<b>29,900,000</b>	<b>93,800</b>	<b>64,000</b>	<b>161,000,000</b>

See footnotes at end of table.

TABLE 3—Continued  
 U.S. IMPORTS FOR CONSUMPTION OF FERROSILICON AND SILICON METAL IN JUNE 2011<sup>1,2</sup>

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	Year to date		
				Gross weight	Contained weight	Value
<b>Metal:</b>						
<b>More than 99.99% silicon:</b>						
Canada	42	XX	\$1,100,000	221	XX	\$6,890,000
China	23	XX	1,120,000	103	XX	6,650,000
Denmark	1	XX	296,000	6	XX	1,930,000
Germany	188	XX	16,100,000	1,460	XX	109,000,000
Italy	33	XX	2,100,000	178	XX	13,100,000
Japan	29	XX	2,430,000	205	XX	23,000,000
Korea, Republic of	1	XX	85,700	165	XX	10,700,000
Norway	36	XX	1,710,000	142	XX	6,610,000
Russia	9	XX	835,000	61	XX	5,460,000
Taiwan	3	XX	239,000	69	XX	3,700,000
Other (10 countries)	6	XX	63,600	15	XX	844,000
<b>Total</b>	<b>369</b>	<b>369<sup>c</sup></b>	<b>26,100,000</b>	<b>2,630</b>	<b>2,630<sup>c</sup></b>	<b>188,000,000</b>
<b>99.00%–99.99% silicon:</b>						
Australia	734	730	2,510,000	4,760	4,730	16,100,000
Brazil	5,020	4,980	16,900,000	36,000	35,600	111,000,000
Canada	255	253	834,000	4,180	4,150	11,900,000
France	825	818	2,860,000	1,390	1,380	4,810,000
Laos	--	--	--	1,890	1,880	3,990,000
Norway	875	868	3,820,000	4,900	4,840	20,700,000
Philippines	74	73	245,000	271	269	888,000
South Africa	2,860	2,840	9,810,000	16,600	16,500	49,700,000
Spain	1,040	1,030	3,540,000	3,470	3,450	11,900,000
Thailand	990	985	2,670,000	3,690	3,670	9,930,000
Other (3 countries)	86	73	261,000	303	118	847,000
<b>Total</b>	<b>12,800</b>	<b>12,700</b>	<b>43,500,000</b>	<b>77,400</b>	<b>76,600</b>	<b>242,000,000</b>
<b>Other silicon:</b>						
Australia	--	--	--	192	189	689,000
Brazil	4,410	4,300	13,800,000	11,100	10,800	32,600,000
Canada	874	861	2,110,000	7,430	7,280	17,700,000
China	22	1	24,000	322	297	788,000
France	965	941	2,900,000	3,000	2,940	9,070,000
Germany	--	--	--	230	221	281,000
Japan	17	(3)	19,000	232	125	554,000
Norway	304	293	415,000	1,480	1,430	2,560,000
Russia	120	119	384,000	120	119	384,000
United Kingdom	17	16	48,600	108	105	292,000
Other (5 countries)	19	19	50,900	104	96	333,000
<b>Total</b>	<b>6,750</b>	<b>6,550</b>	<b>19,700,000</b>	<b>24,300</b>	<b>23,600</b>	<b>65,200,000</b>
<b>Total silicon metal</b>	<b>19,900</b>	<b>19,600</b>	<b>89,300,000</b>	<b>104,000</b>	<b>103,000</b>	<b>495,000,000</b>

<sup>c</sup>Estimated. XX Not applicable. -- Zero.

<sup>1</sup>Presentation of monthly data is based on the year-to-date quantities (gross weight) of the leading countries.

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

<sup>3</sup>Less than ½ unit.

Source: U.S. Census Bureau.