



# Mineral Industry Surveys

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## SILICON IN MAY 2011

Preliminary data for May 2011 indicate that domestic production and net shipments of total silicon materials (ferrosilicon plus silicon metal), on a gross-weight basis, were slightly lower and 13% lower, respectively, compared with those in April 2011, according to the U.S. Geological Survey. Ending stocks were 9% higher than those at the end of April. 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 April 2011 were 15% lower and 9% higher,

respectively, than those in March 2011. U.S. ferrosilicon and silicon metal exports in the first 4 months of 2011 were 39% higher and 61% higher, respectively, than those during the same period in 2010.

On a gross-weight basis, U.S. ferrosilicon and silicon metal imports in April 2011 were 65% lower and 15% lower, respectively, than those in March 2011. U.S. ferrosilicon and silicon metal imports in the first 4 months of 2011 were slightly higher and 31% higher, respectively, than those during the same period in 2010.

### Prices

Prices for silicon materials in May 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>
112.00–115.00	112.00–113.50–115.00

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

<u>Price Range</u>	<u>Average Price</u>
103.00–105.00	104.38

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

<u>Price Range</u>	<u>Average Price</u>
160.00–165.00	162.25

<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,
	May	Year to date <sup>4</sup>	May	Year to date <sup>4</sup>	May 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	38,900	192,000	28,900	154,000	33,900

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 APRIL 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>						
More than 55% silicon:						
Brazil	--	--	--	129	79	\$281,000
Canada	1,060	633	\$825,000	5,660	3,400	4,380,000
Colombia	14	10	34,800	27	20	69,300
Italy	40	30	76,800	380	292	757,000
Japan	--	--	--	386	301	812,000
Mexico	174	105	395,000	927	559	1,990,000
Netherlands	--	--	--	200	190	310,000
Singapore	6	4	14,100	26	17	63,800
Sweden	19	14	38,100	95	71	191,000
Turkey	--	--	--	20	15	56,800
Other (3 countries)	--	--	--	23	15	30,800
Total	1,310	796	1,380,000	7,880	4,960	8,930,000
<b>Other ferrosilicon:</b>						
Belgium	382	191	854,000	721	360	1,590,000
Canada	81	41	148,000	503	251	963,000
Colombia	24	11	62,100	66	31	144,000
Japan	445	215	709,000	833	400	1,590,000
Korea, Republic of	146	64	195,000	290	128	382,000
Mexico	68	34	128,000	370	128	631,000
Portugal	80	36	176,000	200	82	440,000
Spain	80	37	180,000	100	46	225,000
Turkey	240	109	588,000	468	217	1,120,000
United Kingdom	20	10	49,000	79	37	188,000
Other (7 countries)	37	18	88,600	130	64	319,000
Total	1,610	767	3,180,000	3,760	1,750	7,590,000
Total ferrosilicon	2,910	1,560	4,560,000	11,600	6,700	16,500,000

See footnotes at end of table.

TABLE 2—Continued  
 U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN APRIL 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	1,480	XX	\$73,100,000	5,970	XX	\$278,000,000
France	20	XX	886,000	147	XX	6,710,000
Germany	443	XX	16,100,000	2,080	XX	97,700,000
Hong Kong	1,160	XX	11,700,000	1,570	XX	24,700,000
Japan	1,040	XX	54,800,000	4,010	XX	213,000,000
Korea, Republic of	256	XX	15,600,000	980	XX	58,300,000
Norway	668	XX	32,500,000	2,070	XX	101,000,000
Singapore	341	XX	17,100,000	1,270	XX	65,200,000
Taiwan	363	XX	17,400,000	1,400	XX	62,900,000
Ukraine	90	XX	3,800,000	244	XX	10,500,000
Other (31 countries)	133	XX	11,900,000	437	XX	39,200,000
<b>Total</b>	<b>6,000</b>	<b>6,000<sup>e</sup></b>	<b>255,000,000</b>	<b>20,200</b>	<b>20,200<sup>e</sup></b>	<b>957,000,000</b>
<b>99.00% - 99.99% silicon:</b>						
Belgium	4	4	5,890	6	6	8,680
China	88	88	134,000	101	100	170,000
Colombia	--	--	--	12	12	35,000
Hong Kong	--	--	--	21	21	29,400
Italy	--	--	--	13	13	34,000
Japan	--	--	--	852	844	2,500,000
Mexico	--	--	--	27	27	54,200
Netherlands	3	3	3,950	237	235	692,000
Taiwan	8	8	10,800	8	8	10,800
United Kingdom	212	210	348,000	328	325	589,000
Other (1 country)	1	1	4,010	1	1	4,010
<b>Total</b>	<b>315</b>	<b>313</b>	<b>506,000</b>	<b>1,600</b>	<b>1,590</b>	<b>4,130,000</b>
<b>Other silicon:</b>						
Brazil	10	10	12,900	24	24	32,000
Canada	383	372	1,330,000	1,970	1,910	6,670,000
China	8	8	10,300	154	150	209,000
Hong Kong	296	288	391,000	787	765	1,270,000
Japan	598	574	2,110,000	1,720	1,650	6,060,000
Korea, Republic of	9	8	14,100	176	171	630,000
Mexico	42	41	65,400	46	44	81,000
Taiwan	97	95	225,000	192	186	451,000
United Arab Emirates	--	--	--	100	97	332,000
United Kingdom	78	76	184,000	78	76	184,000
Other (14 countries)	24	24	62,000	90	88	187,000
<b>Total</b>	<b>1,550</b>	<b>1,490</b>	<b>4,400,000</b>	<b>5,330</b>	<b>5,160</b>	<b>16,100,000</b>
<b>Total silicon metal</b>	<b>7,860</b>	<b>7,810</b>	<b>260,000,000</b>	<b>27,100</b>	<b>26,900</b>	<b>977,000,000</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 APRIL 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>						
Brazil	357	216	\$1,040,000	1,650	1,000	\$4,670,000
China	231	166	347,000	656	476	991,000
France	--	--	--	287	180	742,000
Spain	54	35	144,000	71	47	192,000
<b>Total</b>	<b>642</b>	<b>417</b>	<b>1,530,000</b>	<b>2,670</b>	<b>1,700</b>	<b>6,600,000</b>
<b>55% - 80% silicon, other:</b>						
Brazil	87	65	217,000	237	175	544,000
Canada	928	682	2,490,000	4,060	2,960	9,780,000
China	1,240	934	1,930,000	8,140	5,940	12,800,000
France	180	130	516,000	792	571	2,160,000
Germany	17	12	107,000	191	138	1,060,000
Hong Kong	--	--	--	190	144	370,000
Norway	108	82	178,000	545	414	697,000
Russia	1,280	969	2,040,000	20,400	15,500	32,600,000
South Africa	51	34	120,000	855	619	1,510,000
Venezuela	--	--	--	5,100	3,830	7,700,000
Other (3 countries)	53	36	203,000	124	88	484,000
<b>Total</b>	<b>3,940</b>	<b>2,940</b>	<b>7,800,000</b>	<b>40,600</b>	<b>30,300</b>	<b>69,700,000</b>
More than 90%, Denmark	--	--	--	8	7	8,970
<b>Magnesium ferrosilicon:</b>						
Argentina	98	54	280,000	259	117	709,000
Brazil	44	20	97,200	479	233	1,040,000
Canada	831	373	1,400,000	3,820	1,730	7,270,000
China	106	47	233,000	197	96	414,000
France	18	9	14,000	106	53	139,000
Germany	--	--	--	60	27	150,000
Iceland	27	12	59,000	620	282	1,330,000
Japan	15	7	85,900	15	7	85,900
Sweden	--	--	--	(3)	(3)	3,620
<b>Total</b>	<b>1,140</b>	<b>522</b>	<b>2,160,000</b>	<b>5,550</b>	<b>2,550</b>	<b>11,100,000</b>
<b>Other ferrosilicon:</b>						
Brazil	--	--	--	20	19	109,000
Canada	727	174	995,000	2,850	756	3,610,000
China	40	40	70,000	184	85	444,000
France	--	--	--	7	4	18,500
<b>Total</b>	<b>767</b>	<b>214</b>	<b>1,060,000</b>	<b>3,060</b>	<b>863</b>	<b>4,180,000</b>
<b>Total ferrosilicon</b>	<b>6,490</b>	<b>4,100</b>	<b>12,600,000</b>	<b>51,900</b>	<b>35,500</b>	<b>91,700,000</b>

See footnotes at end of table.

TABLE 3—Continued  
 U.S. IMPORTS FOR CONSUMPTION OF FERROSILICON AND SILICON METAL IN APRIL 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	22	XX	\$872,000	107	XX	\$3,800,000
China	3	XX	558,000	54	XX	3,940,000
Germany	290	XX	23,600,000	957	XX	70,100,000
Italy	10	XX	1,240,000	130	XX	9,460,000
Japan	27	XX	4,100,000	151	XX	17,800,000
Korea, Republic of	19	XX	1,570,000	161	XX	10,400,000
Norway	18	XX	858,000	89	XX	4,060,000
Russia	--	--	--	42	XX	3,800,000
Switzerland	(3)	XX	36,000	4	XX	278,000
Taiwan	16	XX	707,000	44	XX	2,660,000
Other (7 countries)	(3)	XX	142,000	5	XX	1,530,000
<b>Total</b>	<b>406</b>	<b>406<sup>e</sup></b>	<b>33,700,000</b>	<b>1,750</b>	<b>1,750<sup>e</sup></b>	<b>128,000,000</b>
<b>99.00% - 99.99% silicon:</b>						
Australia	883	877	3,030,000	3,390	3,370	11,500,000
Brazil	4,180	4,150	13,900,000	26,700	26,400	80,400,000
Canada	314	311	949,000	3,470	3,440	9,590,000
France	53	52	173,000	395	391	1,380,000
Laos	--	--	--	1,890	1,880	3,990,000
Norway	1,210	1,210	5,130,000	2,900	2,860	12,100,000
Philippines	--	--	--	197	196	643,000
South Africa	3,150	3,130	9,200,000	11,300	11,300	31,700,000
Spain	540	537	1,910,000	1,890	1,880	6,390,000
Thailand	540	537	1,460,000	2,340	2,330	6,290,000
Other (2 countries)	1	1	10,500	98	33	345,000
<b>Total</b>	<b>10,900</b>	<b>10,800</b>	<b>35,800,000</b>	<b>54,600</b>	<b>54,000</b>	<b>164,000,000</b>
<b>Other silicon:</b>						
Belgium	--	--	--	(3)	(3)	4,790
Brazil	1,250	1,230	4,130,000	5,360	5,240	16,100,000
Canada	1,710	1,670	4,360,000	5,130	5,020	12,100,000
China	60	59	154,000	300	296	764,000
France	1,060	1,040	3,410,000	1,590	1,560	4,680,000
Germany	20	20	52,400	95	91	134,000
Japan	97	69	300,000	192	114	477,000
Norway	314	308	1,000,000	1,120	1,080	1,990,000
Spain	--	--	--	6	(3)	6,930
United Kingdom	21	20	53,600	91	88	244,000
Other (2 countries)	(3)	(3)	2,100	(3)	(3)	6,570
<b>Total</b>	<b>4,530</b>	<b>4,410</b>	<b>13,500,000</b>	<b>13,900</b>	<b>13,500</b>	<b>36,500,000</b>
<b>Total silicon metal</b>	<b>15,800</b>	<b>15,600</b>	<b>82,900,000</b>	<b>70,200</b>	<b>69,300</b>	<b>329,000,000</b>

<sup>e</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.