

# Mineral Industry Surveys

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## SILICON IN MARCH 2007

Preliminary data for March 2007 indicate that domestic production of silicon ferroalloys, on a gross-weight basis, increased by 11% compared with that in February 2007, according to the U.S. Geological Survey. Net shipments were 3% higher compared with the revised amount [18,500 metric tons (t)] in February 2007. Ending stocks decreased by 2% compared with the revised amount (25,000 t) at the end of the prior month. Stocks included adjustments in inventory and in-plant consumption of ferrosilicon to produce magnesium ferrosilicon and other miscellaneous alloys. Production-related statistics for silicon metal were concealed to avoid disclosing company proprietary data.

Domestic production and shipments of ferrosilicon during the first quarter of 2007 were 2% less and 5% greater, respectively, than those of the fourth quarter of 2006. They were 3% and 11% higher, respectively, compared with those during the first

quarter of 2006. All domestic data for ferrosilicon have been combined to avoid disclosing company proprietary data.

Based on a gross-weight comparison of February 2007 export data (table 2) with those of January 2007, ferrosilicon exports decreased by 28%, owing primarily to a decrease in the “More than 55% silicon” ferrosilicon trade category. Silicon metal exports increased by 7%, owing to an increase in the “More than 99.99% silicon” silicon metal trade category.

Based on a gross-weight comparison of February 2007 import data (table 3) with those of the prior month, ferrosilicon imports more than doubled, owing primarily to an increase in the “55%-80% silicon, other” ferrosilicon trade category. Silicon metal imports decreased by 7% during the same period, primarily because of a decrease in the “99.00% - 99.99% silicon” metal trade category.

### Prices, 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>March 1</b>	<b>67.00-68.00</b>	<b>60.00-61.00</b>	<b>92.00-96.00</b>
<b>March 8</b>	<b>67.00-68.00</b>	<b>60.00-61.00</b>	<b>92.00-95.00</b>
<b>March 15</b>	<b>67.00-68.00</b>	<b>60.00-61.00</b>	<b>92.00-95.00</b>
<b>March 22</b>	<b>67.00-68.00</b>	<b>60.00-61.00</b>	<b>93.00-95.00</b>
<b>March 29</b>	<b>67.00-68.00</b>	<b>59.00-61.00</b>	<b>93.00-95.00</b>

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

<sup>2</sup>Source: Platts Metals Week, dealer import price.

TABLE 1  
U.S. PRODUCTION, SHIPMENTS, AND PRODUCER STOCKS OF SILICON ALLOYS AND METAL IN 2007<sup>1, 2, 3</sup>

(Metric tons)

Material	Gross production <sup>4</sup>		Net shipments		Stocks,
	March	Year to date	March	Year to date	March 31
Ferrosilicon, all grades <sup>5, 6</sup>	23,000	64,800	19,100	55,200	24,500
Silicon metal, excludes semiconductor grades	W	W	W	W	W

W Withheld to avoid disclosing company proprietary data.

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

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

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

<sup>6</sup>Includes miscellaneous silicon alloys.

TABLE 2  
U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN FEBRUARY 2007<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:						
Canada	266	159	\$307,000	838	503	\$889,000
Colombia	5	4	7,800	5	4	7,800
Italy	16	10	30,200	16	10	30,200
Malaysia	11	8	15,600	11	8	15,600
Mexico	137	82	152,000	253	152	308,000
Spain	--	--	--	16	10	20,300
Thailand	--	--	--	16	10	16,100
Total	436	264	513,000	1,160	697	1,290,000
<b>Other ferrosilicon:</b>						
Canada	206	103	201,000	459	229	459,000
Colombia	14	6	19,500	14	6	19,500
India	3	1	4,810	3	1	4,810
Indonesia	16	8	23,800	16	8	23,800
Italy	16	9	30,200	16	9	30,200
Mexico	63	32	81,800	119	60	151,000
Spain	--	--	--	16	8	23,800
Total	319	159	361,000	644	321	712,000
Total ferrosilicon	754	423	874,000	1,800	1,020	2,000,000

See footnotes at end of table.

TABLE 2--Continued  
 U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN FEBRUARY 2007<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	192	XX	\$18,200,000	382	XX	\$48,300,000
Germany	184	XX	14,300,000	393	XX	29,600,000
Italy	8	XX	859,000	16	XX	1,800,000
Japan	711	XX	62,000,000	1,240	XX	117,000,000
Korea, Republic of	95	XX	7,400,000	217	XX	17,500,000
Malaysia	13	XX	2,300,000	25	XX	3,880,000
Norway	354	XX	14,100,000	631	XX	25,300,000
Taiwan	73	XX	8,570,000	97	XX	11,300,000
Ukraine	--	XX	--	11	XX	739,000
United Kingdom	9	XX	1,340,000	21	XX	2,940,000
Other (23 countries)	15	XX	1,440,000	26	XX	2,530,000
<b>Total</b>	<b>1,650</b>	<b>1,650<sup>c</sup></b>	<b>130,000,000</b>	<b>3,060</b>	<b>3,060<sup>c</sup></b>	<b>261,000,000</b>
<b>99.00% - 99.99% silicon:</b>						
Brazil	80	80	211,000	146	145	381,000
China	16	15	41,100	28	28	77,100
Costa Rica	--	--	--	1	1	3,840
Mexico	1	1	2,630	1	1	2,630
Peru	--	--	--	3	3	4,500
Singapore	--	--	--	3	3	3,920
United Kingdom	3	3	3,790	3	3	3,790
Venezuela	3	3	3,300	3	3	3,300
<b>Total</b>	<b>102</b>	<b>101</b>	<b>262,000</b>	<b>187</b>	<b>185</b>	<b>481,000</b>
<b>Other silicon:</b>						
Canada	22	21	24,000	25	25	30,100
China	32	31	99,800	94	91	181,000
El Salvador	10	10	13,200	10	10	13,200
Germany	--	--	--	6	6	8,090
Japan	54	51	220,000	202	195	415,000
Mexico	(3)	(3)	11,400	7	7	33,300
Netherlands	26	26	116,000	65	63	308,000
Philippines	--	--	--	6	6	7,780
Russia	7	7	9,200	7	7	9,200
United Kingdom	--	--	--	10	10	21,200
Other (2 countries)	2	2	4,980	4	4	16,800
<b>Total</b>	<b>152</b>	<b>147</b>	<b>498,000</b>	<b>436</b>	<b>423</b>	<b>1,040,000</b>
<b>Total silicon metal</b>	<b>1,910</b>	<b>1,900</b>	<b>131,000,000</b>	<b>3,680</b>	<b>3,670</b>	<b>262,000,000</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 top 10 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.

TABLE 3  
U.S. IMPORTS FOR CONSUMPTION OF FERROSILICON AND SILICON METAL IN FEBRUARY 2007<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, over 3% Ca:</b>						
Brazil	--	--	--	95	58	\$124,000
China	40	23	\$52,800	137	78	185,000
France	86	55	141,000	105	62	173,000
Total	126	79	193,000	337	199	481,000
<b>55% - 80% silicon, Other:</b>						
Brazil	106	83	97,500	126	98	116,000
Canada	917	689	1,120,000	2,150	1,620	2,550,000
China	22,100	14,700	17,400,000	26,900	18,400	22,100,000
France	161	118	286,000	300	218	505,000
Germany	34	25	180,000	68	51	346,000
Iceland	129	98	129,000	334	249	329,000
Norway	129	94	198,000	348	254	538,000
Russia	4,930	3,700	4,360,000	9,680	7,260	8,120,000
Sri Lanka	--	--	--	19	14	34,400
Venezuela	5,000	3,750	4,060,000	9,880	7,410	7,870,000
Total	33,500	23,200	27,900,000	49,900	35,600	42,500,000
80% - 90% silicon, Germany	17	12	88,300	17	12	88,300
<b>Magnesium ferrosilicon:</b>						
Argentina	148	66	266,000	228	111	372,000
Brazil	803	358	702,000	1,520	693	1,330,000
Canada	1,070	501	1,030,000	1,870	872	1,850,000
China	--	--	--	19	14	18,500
France	11	6	17,700	11	6	17,700
Japan	64	21	137,000	79	27	173,000
Netherlands	--	--	--	54	25	52,700
Norway	109	50	106,000	187	86	181,000
Russia	--	--	--	1,400	630	672,000
Total	2,210	1,000	2,250,000	5,370	2,460	4,670,000
<b>Other ferrosilicon:</b>						
Canada	733	164	639,000	1,440	339	1,300,000
China	12,200	1,540	3,320,000	12,200	1,540	3,320,000
France	18	8	17,200	18	8	17,200
Russia	62	31	47,500	109	55	83,500
Total	13,000	1,740	4,020,000	13,700	1,940	4,720,000
Total ferrosilicon	48,800	26,100	34,400,000	69,300	40,200	52,500,000

See footnotes at end of table.

TABLE 3--Continued  
 U.S. IMPORTS FOR CONSUMPTION OF FERROSILICON AND SILICON METAL IN FEBRUARY 2007<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>						
British Virgin Islands	--	XX	--	1	XX	\$10,000
China	1	XX	\$283,000	2	XX	678,000
Germany	71	XX	6,720,000	154	XX	15,900,000
Italy	24	XX	2,050,000	53	XX	4,340,000
Japan	35	XX	3,820,000	65	XX	7,290,000
Korea, Republic of	7	XX	1,580,000	13	XX	3,150,000
Spain	1	XX	69,500	2	XX	75,800
Switzerland	--	XX	--	2	XX	254,000
Taiwan	6	XX	513,000	12	XX	845,000
Turkey	--	XX	--	13	XX	28,900
Other (3 countries)	(3)	XX	18,600	(3)	XX	62,100
<b>Total</b>	<b>145</b>	<b>145<sup>e</sup></b>	<b>15,100,000</b>	<b>317</b>	<b>317<sup>e</sup></b>	<b>32,600,000</b>
<b>99.00% - 99.99% silicon:</b>						
Australia	852	848	1,420,000	2,030	2,020	3,420,000
Brazil	2,740	2,720	4,350,000	7,190	7,140	11,400,000
Canada	1,400	1,390	2,480,000	3,440	3,420	5,990,000
Netherlands	312	310	567,000	312	310	567,000
Norway	912	884	2,200,000	1,230	1,200	2,770,000
Philippines	16	16	24,600	239	204	367,000
South Africa	2,850	2,830	4,320,000	4,590	4,520	6,860,000
<b>Total</b>	<b>9,080</b>	<b>9,000</b>	<b>15,300,000</b>	<b>19,000</b>	<b>18,800</b>	<b>31,400,000</b>
<b>Other silicon:</b>						
Brazil	906	893	1,710,000	1,270	1,250	2,250,000
Canada	252	234	444,000	1,000	970	1,620,000
China	5	5	17,600	10	10	35,100
Japan	50	(3) <sup>4</sup>	55,000	62	1	67,200
Norway	--	--	--	18	18	57,100
Philippines	56	55	89,800	83	80	128,000
Sweden	12	11	65,600	73	21	132,000
United Kingdom	80	78	138,000	80	78	138,000
<b>Total</b>	<b>1,360</b>	<b>1,280</b>	<b>2,520,000</b>	<b>2,600</b>	<b>2,430</b>	<b>4,440,000</b>
<b>Total silicon metal</b>	<b>10,600</b>	<b>10,400</b>	<b>32,900,000</b>	<b>21,900</b>	<b>21,500</b>	<b>68,500,000</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 top 10 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.

<sup>4</sup>All or part of these data have been referred to the U.S. Census Bureau for verification.

Source: U.S. Census Bureau.