

# Mineral Industry Surveys

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## SILICON IN JANUARY 2013

Data for January 2013 indicate that domestic production and net shipments of total silicon materials (ferrosilicon plus silicon metal), on a gross-weight basis, were slightly higher and 12% higher, respectively, than those in December 2012. Ending stocks were slightly higher than those at the end of December. 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. Totals for both categories are listed on table 1.

Included in this Mineral Industry Surveys are U.S. spot market prices and U.S. foreign trade data for selected silicon-containing materials in January 2013.

TABLE 1  
 PRODUCTION, SHIPMENTS, AND STOCKS OF SILICON ALLOYS  
 AND METAL IN THE UNITED STATES<sup>1,2,3</sup>

(Metric tons, gross weight)

	Gross production <sup>4</sup>	Net shipments	Producers' stocks, end of period
2012:			
January–December	532,000	373,000	45,700
January	40,600	23,800	43,400
February	43,300	32,900	45,300
March	46,800	36,100	40,000
April	39,700	31,800	40,300
May	42,400	33,800	40,700
June	44,500	35,600	36,500
July	44,400	28,000	40,000
August	46,900	32,000	41,100
September	47,000	30,500	41,700
October	44,900	29,200	42,500
November	45,500	29,400	42,800
December	46,100	29,500	45,700
2013, January	46,800	33,200	46,400

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Includes ferrosilicon, miscellaneous silicon alloys, and silicon metal, excluding semiconductor and solar grades, except where noted.

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

<sup>4</sup>Ferrosilicon production includes material consumed in the production of miscellaneous silicon alloys.

TABLE 2  
 PRICES FOR FERROSILICON AND SILICON METAL IN JANUARY 2013

		High	Low	Average	Average low, mid, and high
Ferrosilicon:					
50% ferrosilicon <sup>1</sup>	cents per pound of contained silicon	100.00	97.00	XX	97.75–98.88–100.00
75% ferrosilicon <sup>2</sup>	do.	94.00	88.50	89.13	XX
Silicon metal, 553 grade <sup>3</sup>	cents per pound	127.00	119.00	121.75	XX

do. Ditto. XX Not applicable.

<sup>1</sup>Ryan's Notes, North American transaction price, duty paid, f.o.b. Pittsburgh, producing plant or Chicago/Pittsburg warehouse. Average price reported for price range.

<sup>2</sup>Platts Metals Week, in U.S. warehouse, U.S. origin and imported material. Average prices reported for all transactions during the month.

<sup>3</sup>Platts Metals Week, duty paid, delivered Midwest, U.S. spot and imported 553 grade silicon metal (minimum 98.50% silicon). Average price reported for all transactions during the month.

TABLE 3  
U.S. EXPORTS OF FERROSILICON AND SILICON METAL  
IN JANUARY 2013<sup>1,2</sup>

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value
<b>Ferrosilicon:</b>			
<b>More than 55% silicon:</b>			
Brazil	2	1	\$7,400
Canada	464	279	668,000
Germany	16	14	16,900
Japan	97	75	185,000
Mexico	224	143	497,000
Trinidad and Tobago	37	22	58,200
Total	841	534	1,430,000
<b>Other ferrosilicon:</b>			
Belgium	140	57	275,000
Brazil	38	19	45,200
Canada	142	71	387,000
Italy	33	17	87,600
Japan	18	9	44,800
Korea, Republic of	108	54	137,000
Mexico	79	40	221,000
Netherlands	39	17	20,700
Turkey	160	74	322,000
Total	757	357	1,540,000
Total ferrosilicon	1,600	891	2,970,000
<b>Metal:</b>			
<b>More than 99.99% silicon:</b>			
China	1,660	XX	47,900,000
Denmark	15	XX	612,000
Germany	51	XX	4,160,000
Italy	10	XX	822,000
Japan	456	XX	28,100,000
Korea, Republic of	168	XX	10,300,000
Malaysia	26	XX	3,060,000
Netherlands	6	XX	1,340,000
Taiwan	148	XX	7,730,000
United Kingdom	4	XX	557,000
Other (10 countries)	3	XX	275,000
Total	2,550	2,550 <sup>e</sup>	105,000,000
<b>99.00%–99.99% silicon:</b>			
Belgium	5	5	7,000
El Salvador	4	4	5,300
Korea, Republic of	309	228	909,000
Mexico	2	2	5,040
Ukraine	2	2	2,550
Total	322	240	929,000

See footnotes at end of table.

TABLE 3—Continued  
 U.S. EXPORTS OF FERROSILICON AND SILICON METAL  
 IN JANUARY 2013<sup>1, 2</sup>

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value
Metal—Continued:			
Other silicon:			
Australia	(3)	(3)	\$3,870
Canada	8	8	38,100
Chile	(3)	(3)	3,850
China	3	3	11,800
Dominican Republic	5	5	6,320
Finland	1	1	8,010
Israel	(3)	(3)	3,260
Mexico	6	6	11,900
South Africa	1	1	7,370
Taiwan	11	11	50,000
Total	36	35	144,000
Total silicon metal	2,900	2,820	106,000,000

<sup>6</sup>Estimated. XX Not applicable.

<sup>1</sup>Presentation of monthly data is based on the January quantity (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.

TABLE 4  
U.S. IMPORTS OF FERROSILICON AND SILICON METAL  
IN JANUARY 2013<sup>1,2</sup>

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value
<b>Ferrosilicon:</b>			
55%–80% silicon, more than 3% Ca:			
China	21	16	\$27,700
France	8	5	18,500
Total	29	21	46,200
55–80% silicon, Other:			
Canada	1,490	1,110	3,300,000
China	307	231	419,000
Egypt	346	256	394,000
France	28	18	64,100
Iceland	1,500	1,170	1,970,000
India	34	26	131,000
Norway	225	170	333,000
Russia	10,000	7,580	13,200,000
South Africa	18	12	41,000
United Kingdom	312	239	462,000
Other (1 country)	15	11	98,900
Total	14,300	10,800	20,400,000
<b>Magnesium ferrosilicon:</b>			
Argentina	19	5	55,500
Canada	1,130	505	2,180,000
China	174	80	349,000
India	127	32	763,000
Total	1,450	622	3,340,000
<b>Other ferrosilicon:</b>			
Canada	867	274	1,110,000
China	13,200	2,050	7,370,000
Germany	2	1	10,000
India	46	20	47,600
Poland	19	9	23,800
Venezuela	54	30	53,000
Total	14,200	2,390	8,610,000
Total ferrosilicon	30,000	13,800	32,400,000

See footnotes at end of table.

TABLE 4—Continued  
U.S. IMPORTS OF FERROSILICON AND SILICON METAL  
IN JANUARY 2013<sup>1,2</sup>

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value
<b>Metal:</b>			
<b>More than 99.99% silicon:</b>			
Bulgaria	(3)	XX	\$6,000
China	12	XX	158,000
Denmark	(3)	XX	88,600
Finland	2	XX	223,000
Germany	175	XX	8,860,000
Japan	6	XX	240,000
Korea, Republic of	54	XX	2,390,000
Malaysia	(3)	XX	23,800
Slovenia	5	XX	581,000
Taiwan	1	XX	125,000
Total	255	255 <sup>e</sup>	12,700,000
<b>99.00%–99.99% silicon:</b>			
Australia	1,970	1,960	5,190,000
Brazil	2,100	2,080	6,000,000
Canada	1,100	1,090	3,030,000
Japan	35	1	44,900
Norway	1,390	1,380	6,040,000
South Africa	4,590	4,550	12,700,000
Spain	60	59	161,000
Thailand	912	904	2,230,000
Total	12,200	12,000	35,400,000
<b>Other silicon:</b>			
Belgium	20	19	36,500
Brazil	368	363	923,000
Canada	1,640	1,620	4,830,000
China	21	20	46,600
Germany	1	1	16,200
Japan	26	24	159,000
Total	2,080	2,050	6,010,000
Total silicon metal	14,500	14,300	54,100,000

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

<sup>1</sup>Presentation of monthly data is based on the January quantity (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.