

# Mineral Industry Surveys

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## SILICON IN OCTOBER 2007

Preliminary data for October 2007 indicate that domestic production and net shipments of silicon ferroalloys, on a gross-weight basis, decreased by 4% and increased by 7%, respectively, compared with those in September 2007, according to the U.S. Geological Survey. Ending stocks decreased by 5% compared with those at the end of September. 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.

U.S. trade data for September 2007 are published in this issue.

**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>October 4</b>  | <b>76.00-78.00</b>                  | <b>65.00-67.00</b>                  | <b>125.00-135.00</b>             |
| <b>October 11</b> | <b>76.00-78.00</b>                  | <b>65.00-67.00</b>                  | <b>125.00-135.00</b>             |
| <b>October 18</b> | <b>76.00-78.00</b>                  | <b>65.00-67.00</b>                  | <b>135.00-140.00</b>             |
| <b>October 25</b> | <b>76.00-78.00</b>                  | <b>65.00-67.00</b>                  | <b>140.00-150.00</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,    |
|--|-------------------------------|---------------------------|---------------|---------------------------|------------|
|  | October                       | Year to date <sup>5</sup> | October       | Year to date <sup>5</sup> | October 31 |
| Ferrosilicon, all grades <sup>6,7</sup>      | 21,100                        | 225,000                   | 18,200        | 189,000                   | 21,700     |
| 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>May include revised data.

<sup>6</sup>Ferrosilicon categories were aggregated to avoid disclosing company proprietary data.

<sup>7</sup>Includes miscellaneous silicon alloys and other silicon products.

\* Correction posted on September 29, 2008

TABLE 2 \*  
U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN SEPTEMBER 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>More than 55% silicon:</b> |              |                  |           |              |                  |             |
| Canada                        | 427          | 256              | \$459,000 | 4,460        | 2,680            | \$5,230,000 |
| Colombia                      | --           | --               | --        | 53           | 36               | 77,000      |
| Italy                         | --           | --               | --        | 16           | 10               | 30,200      |
| Malaysia                      | --           | --               | --        | 34           | 26               | 51,500      |
| Mexico                        | 78           | 48               | 94,000    | 893          | 542              | 1,070,000   |
| Spain                         | --           | --               | --        | 16           | 10               | 20,300      |
| Thailand                      | --           | --               | --        | 16           | 10               | 16,100      |
| United Kingdom                | --           | --               | --        | 12           | 11               | 33,900      |
| Total                         | 505          | 305              | 553,000   | 5,500        | 3,320            | 6,530,000   |
| <b>Other ferrosilicon:</b>    |              |                  |           |              |                  |             |
| Belgium                       | --           | --               | --        | 17           | 8                | 19,600      |
| Canada                        | 66           | 33               | 104,000   | 1,620        | 811              | 1,820,000   |
| Colombia                      | --           | --               | --        | 63           | 29               | 89,900      |
| Dominican Republic            | --           | --               | --        | 18           | 9                | 48,200      |
| Germany                       | --           | --               | --        | 11           | 2                | 10,400      |
| Indonesia                     | --           | --               | --        | 16           | 8                | 23,800      |
| Italy                         | 17           | 9                | 30,200    | 50           | 27               | 90,700      |
| Mexico                        | 51           | 25               | 69,300    | 527          | 265              | 675,000     |
| Peru                          | --           | --               | --        | 15           | 8                | 28,800      |
| Spain                         | --           | --               | --        | 16           | 8                | 23,800      |
| Other (7 countries)           | --           | --               | --        | 30           | 15               | 50,600      |
| Total                         | 133          | 67               | 203,000   | 2,390        | 1,190            | 2,880,000   |
| Total ferrosilicon            | 638          | 372              | 756,000   | 7,880        | 4,510            | 9,410,000   |

See footnotes at end of table.

TABLE 2--Continued \*  
U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN SEPTEMBER 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>             |              |                    |              |              |                     |               |
| More than 99.99% silicon: |              |                    |              |              |                     |               |
| China                     | 187          | XX                 | \$29,300,000 | 1,990        | XX                  | \$224,000,000 |
| Germany                   | 162          | XX                 | 15,700,000   | 1,760        | XX                  | 131,000,000   |
| Italy                     | 5            | XX                 | 408,000      | 47           | XX                  | 6,130,000     |
| Japan                     | 828          | XX                 | 74,500,000   | 6,590        | XX                  | 588,000,000   |
| Korea, Republic of        | 85           | XX                 | 7,220,000    | 893          | XX                  | 76,300,000    |
| Malaysia                  | 14           | XX                 | 2,800,000    | 110          | XX                  | 18,200,000    |
| Norway                    | 174          | XX                 | 19,800,000   | 2,500        | XX                  | 141,000,000   |
| Taiwan                    | 52           | XX                 | 5,320,000    | 679          | XX                  | 66,000,000    |
| Ukraine                   | 26           | XX                 | 2,090,000    | 147          | XX                  | 11,400,000    |
| United Kingdom            | 10           | XX                 | 1,760,000    | 87           | XX                  | 12,500,000    |
| Other (40 countries)      | 21           | XX                 | 1,990,000    | 249          | XX                  | 30,300,000    |
| Total                     | 1,570        | 1,570 <sup>c</sup> | 161,000,000  | 15,000       | 15,000 <sup>c</sup> | 1,310,000,000 |
| 99.00% - 99.99% silicon:  |              |                    |              |              |                     |               |
| Belgium                   | 10           | 10                 | 14,100       | 10           | 10                  | 14,100        |
| Brazil                    | --           | --                 | --           | 678          | 672                 | 1,720,000     |
| China                     | 2            | 2                  | 3,090        | 1,010        | 1,010               | 2,980,000     |
| Germany                   | --           | --                 | --           | 36           | 36                  | 51,000        |
| Ireland                   | --           | --                 | --           | 11           | 11                  | 15,000        |
| Japan                     | --           | --                 | --           | 17           | 17                  | 24,500        |
| Mexico                    | --           | --                 | --           | 14           | 14                  | 22,900        |
| Singapore                 | --           | --                 | --           | 29           | 29                  | 40,900        |
| Switzerland               | --           | --                 | --           | 21           | 21                  | 30,300        |
| Taiwan                    | --           | --                 | --           | 16           | 16                  | 22,900        |
| Other (9 countries)       | (3)          | (3)                | 2,960        | 34           | 34                  | 56,800        |
| Total                     | 13           | 13                 | 20,100       | 1,880        | 1,870               | 4,970,000     |
| Other silicon:            |              |                    |              |              |                     |               |
| Canada                    | 16           | 16                 | 18,100       | 286          | 277                 | 305,000       |
| China                     | 79           | 76                 | 897,000      | 653          | 634                 | 1,880,000     |
| France                    | --           | --                 | --           | 37           | 36                  | 49,000        |
| Germany                   | --           | --                 | --           | 37           | 36                  | 57,100        |
| Hong Kong                 | --           | --                 | --           | 42           | 41                  | 55,500        |
| Japan                     | 150          | 145                | 197,000      | 958          | 927                 | 4,220,000     |
| Korea, Republic of        | --           | --                 | --           | 649          | 630                 | 858,000       |
| Netherlands               | 26           | 25                 | 307,000      | 662          | 642                 | 2,970,000     |
| Taiwan                    | 2            | 2                  | 17,400       | 89           | 86                  | 664,000       |
| United Kingdom            | 1            | 1                  | 12,100       | 37           | 36                  | 70,100        |
| Other (16 countries)      | 15           | 14                 | 57,900       | 154          | 150                 | 408,000       |
| Total                     | 289          | 280                | 1,510,000    | 3,600        | 3,500               | 11,500,000    |
| Total silicon metal       | 1,870        | 1,860              | 162,000,000  | 20,500       | 20,400              | 1,320,000,000 |

<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.

\* Correction posted on September 29, 2008

TABLE 3\*  
U.S. IMPORTS FOR CONSUMPTION OF FERROSILICON AND SILICON METAL IN SEPTEMBER 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>           |              |                  |            |              |                  |             |
| 55% - 80% silicon, over 3% Ca: |              |                  |            |              |                  |             |
| Brazil                         | --           | --               | --         | 152          | 92               | \$200,000   |
| Canada                         | 55           | 32               | \$25,800   | 68           | 41               | 36,800      |
| China                          | 88           | 67               | 86,700     | 3,810        | 2,810            | 3,420,000   |
| France                         | 90           | 56               | 137,000    | 947          | 592              | 1,480,000   |
| Sweden                         | --           | --               | --         | 4            | 2                | 11,300      |
| Total                          | 233          | 154              | 249,000    | 4,980        | 3,540            | 5,150,000   |
| 55% - 80% silicon, Other:      |              |                  |            |              |                  |             |
| Brazil                         | 365          | 285              | 373,000    | 4,050        | 3,070            | 3,980,000   |
| Canada                         | 1,300        | 959              | 1,600,000  | 10,200       | 7,560            | 12,500,000  |
| China                          | 25,000       | 18,800           | 24,300,000 | 110,000      | 80,900           | 95,900,000  |
| France                         | 142          | 97               | 284,000    | 1,550        | 1,080            | 2,980,000   |
| Germany                        | 69           | 49               | 344,000    | 360          | 268              | 1,780,000   |
| Iceland                        | 8            | 6                | 9,190      | 503          | 375              | 494,000     |
| India                          | --           | --               | --         | 88           | 63               | 112,000     |
| Norway                         | 105          | 77               | 172,000    | 1,760        | 1,290            | 2,500,000   |
| Russia                         | 4,660        | 3,540            | 4,830,000  | 40,100       | 29,800           | 37,500,000  |
| Venezuela                      | 4,200        | 3,150            | 3,740,000  | 35,100       | 26,400           | 29,300,000  |
| Other (4 countries)            | 4            | 3                | 5,980      | 157          | 109              | 591,000     |
| Total                          | 35,800       | 27,000           | 35,600,000 | 204,000      | 151,000          | 188,000,000 |
| 80%-90% silicon, Germany       | --           | --               | --         | 34           | 25               | 184,000     |
| More than 90% silicon, China   | --           | --               | --         | 3,000        | 2,750            | 2,390,000   |
| <b>Magnesium Ferrosilicon:</b> |              |                  |            |              |                  |             |
| Argentina                      | 38           | 8                | 60,700     | 1,120        | 473              | 2,080,000   |
| Brazil                         | 217          | 97               | 180,000    | 1,780        | 809              | 1,550,000   |
| Canada                         | 991          | 462              | 1,050,000  | 7,960        | 3,700            | 8,300,000   |
| China                          | --           | --               | --         | 804          | 360              | 845,000     |
| France                         | 18           | 8                | 26,600     | 119          | 56               | 155,000     |
| Germany                        | --           | --               | --         | 60           | 29               | 106,000     |
| Japan                          | 15           | 7                | 36,200     | 142          | 53               | 311,000     |
| Netherlands                    | --           | --               | --         | 54           | 25               | 52,700      |
| Norway                         | 53           | 25               | 54,800     | 1,890        | 875              | 1,810,000   |
| Russia                         | --           | --               | --         | 1,400        | 630              | 672,000     |
| Other (2 countries)            | --           | --               | --         | 71           | 40               | 96,200      |
| Total                          | 1,330        | 606              | 1,410,000  | 15,400       | 7,050            | 16,000,000  |
| <b>Other Ferrosilicon:</b>     |              |                  |            |              |                  |             |
| Canada                         | 550          | 138              | 517,000    | 5,660        | 1,370            | 5,200,000   |
| China                          | 8,850        | 1,220            | 2,760,000  | 21,000       | 2,760            | 6,090,000   |
| France                         | 2            | 1                | 8,550      | 92           | 43               | 92,700      |
| Russia                         | --           | --               | --         | 241          | 117              | 208,000     |
| Total                          | 9,410        | 1,360            | 3,290,000  | 27,000       | 4,290            | 11,600,000  |
| Total ferrosilicon             | 46,800       | 29,100           | 40,600,000 | 254,000      | 169,000          | 223,000,000 |

See footnotes at end of table

TABLE 3--Continued\*  
U.S. IMPORTS FOR CONSUMPTION OF FERROSILICON AND SILICON METAL IN SEPTEMBER 2007<sup>1,2</sup>

(Metric tons, unless otherwise specified)

|                           | Gross weight | Contained weight | Value      | Year to date |                    |             |
|---------------------------|--------------|------------------|------------|--------------|--------------------|-------------|
|                           |              |                  |            | Gross weight | Contained weight   | Value       |
| <b>Metal:</b>             |              |                  |            |              |                    |             |
| More than 99.99% silicon: |              |                  |            |              |                    |             |
| Canada                    | --           | XX               | --         | 28           | XX                 | \$741,000   |
| China                     | 7            | XX               | \$619,000  | 68           | XX                 | 4,680,000   |
| Germany                   | 125          | XX               | 15,700,000 | 953          | XX                 | 101,000,000 |
| Italy                     | 13           | XX               | 1,100,000  | 208          | XX                 | 18,500,000  |
| Japan                     | 53           | XX               | 5,940,000  | 399          | XX                 | 54,000,000  |
| Korea, Republic of        | 3            | XX               | 943,000    | 32           | XX                 | 7,150,000   |
| Poland                    | 6            | XX               | 263,000    | 13           | XX                 | 590,000     |
| Taiwan                    | -3           | XX               | 45,100     | 20           | XX                 | 1,520,000   |
| Turkey                    | --           | XX               | --         | 13           | XX                 | 28,900      |
| Ukraine                   | 1            | XX               | 266,000    | 5            | XX                 | 846,000     |
| Other (14 countries)      | 1            | XX               | 114,000    | 20           | XX                 | 2,430,000   |
| Total                     | 209          | 209 <sup>c</sup> | 25,000,000 | 1,760        | 1,760 <sup>c</sup> | 191,000,000 |
| 99.00% - 99.99% silicon:  |              |                  |            |              |                    |             |
| Australia                 | 1,110        | 1,100            | 1,920,000  | 11,300       | 11,200             | 19,500,000  |
| Brazil                    | 3,230        | 3,210            | 5,950,000  | 34,100       | 33,800             | 59,000,000  |
| Canada                    | 2,340        | 2,320            | 4,540,000  | 15,700       | 15,500             | 28,300,000  |
| Japan                     | 9            | 1                | 11700.00   | 9.00         | 1.00               | 11,700      |
| Netherlands               | --           | --               | --         | 312          | 310                | 567,000     |
| Norway                    | 888          | 882              | 2,430,000  | 5,850        | 5,790              | 15,500,000  |
| Philippines               | 17           | 17               | 27,500     | 785          | 746                | 1,230,000   |
| South Africa              | 2,850        | 2,820            | 5,220,000  | 30,400       | 30,100             | 51,600,000  |
| Spain                     | 350          | 348              | 704,000    | 1,050        | 1,040              | 2,120,000   |
| United Kingdom            | --           | --               | --         | 50           | 49                 | 88,300      |
| Other                     | --           | --               | --         | 5            | 3                  | 18,300      |
| Total                     | 10,800       | 10,700           | 20,800,000 | 99,400       | 98,600             | 178,000,000 |
| Other silicon:            |              |                  |            |              |                    |             |
| Brazil                    | --           | --               | --         | 1,620        | 1,580              | 2,990,000   |
| Canada                    | 718          | 705              | 1,320,000  | 4,320        | 4,220              | 7,670,000   |
| China                     | --           | --               | --         | 17           | 14 <sup>4</sup>    | 70,300      |
| Japan                     | 1            | 1                | 4,350      | 84           | 2                  | 94,700      |
| Korea, Republic of        | --           | --               | --         | 14           | 13                 | 40,400      |
| Norway                    | --           | --               | --         | 61           | 42                 | 179,000     |
| Philippines               | --           | --               | --         | 323          | 316                | 491,000     |
| South Africa              | --           | --               | --         | 40           | 39                 | 77,600      |
| Sweden                    | --           | --               | --         | 216          | 62 <sup>4</sup>    | 395,000     |
| United Kingdom            | 20           | 19               | 35,900     | 326          | 320                | 576,000     |
| Other (4 countries)       | -3           | -3               | 2,000      | 1            | 1                  | 89,500      |
| Total                     | 739          | 725              | 1,360,000  | 7,020        | 6,620              | 12,700,000  |
| Total silicon metal       | 11,700       | 11,600           | 47,200,000 | 108,000      | 107,000            | 382,000,000 |

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

<sup>1</sup>Countries listed are the 10 leading importers 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.

<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.

\* Correction posted on September 29, 2008