

Mineral Industry Surveys

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SILICON IN AUGUST 2007

Preliminary data for August 2007 indicate that domestic production and net shipments of silicon ferroalloys, on a gross-weight basis, increased by 17% and decreased by 9%, respectively, compared with those in July 2007, according to the U.S. Geological Survey. Ending stocks increased by 8% compared with those at the end of July. 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.

Data for U.S. imports and exports for January through July 2007 are published in this issue.

Prices, cents per pound, silicon content

| | <u>50% Ferrosilicon¹</u> | <u>75% Ferrosilicon²</u> | <u>Silicon Metal²</u> |
|------------------|-------------------------------------|-------------------------------------|----------------------------------|
| August 2 | 78.00-82.00 | 67.00-70.00 | 105.00-110.00 |
| August 9 | 75.00-78.00 | 66.00-69.00 | 105.00-110.00 |
| August 16 | 75.00-78.00 | 66.00-69.00 | 108.00-110.00 |
| August 23 | 75.00-78.00 | 66.00-69.00 | 110.00-117.00 |
| August 30 | 75.00-78.00 | 66.00-70.00 | 117.00-125.00 |

¹Source: Ryan's Notes, North American transaction price.

²Source: Platts Metals Week, dealer import price.

TABLE 1
U.S. PRODUCTION, SHIPMENTS, AND PRODUCER STOCKS OF SILICON ALLOYS AND METAL IN 2007^{1,2,3}

(Metric tons)

| Material | Gross production ⁴ | | Net shipments | | Stocks, |
|--|-------------------------------|---------------------------|---------------|---------------------------|-----------|
| | August | Year to date ⁵ | August | Year to date ⁵ | August 31 |
| Ferrosilicon, all grades ^{6,7} | 23,900 | 182,000 | 17,300 | 154,000 | 22,500 |
| Silicon metal, excludes semiconductor grades | W | W | W | W | W |

W Withheld to avoid disclosing company proprietary data.

¹Data are rounded to no more than three significant digits.

²Includes U.S. Geological Survey estimates.

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

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

⁵Includes revisions to previous months' data.

⁶Ferrosilicon categories were aggregated to avoid disclosing company proprietary data.

⁷Includes miscellaneous silicon alloys.

TABLE 2
U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN JULY 2007^{1,2}

(Metric tons, unless otherwise specified)

| Country | Gross weight | Contained weight | Value | Year to date | | |
|-------------------------------|--------------|------------------|----------------|--------------|------------------|------------------|
| | | | | Gross weight | Contained weight | Value |
| Ferrosilicon: | | | | | | |
| More than 55% silicon: | | | | | | |
| Canada | 395 | 237 | \$501,000 | 3,730 | 2,240 | \$4,370,000 |
| Colombia | 28 | 18 | 41,500 | 44 | 30 | 64,900 |
| Italy | -- | -- | -- | 16 | 10 | 30,200 |
| Malaysia | -- | -- | -- | 34 | 26 | 51,500 |
| Mexico | 76 | 46 | 109,000 | 705 | 427 | 872,000 |
| Spain | -- | -- | -- | 16 | 10 | 20,300 |
| Thailand | -- | -- | -- | 16 | 10 | 16,100 |
| United Kingdom | -- | -- | -- | 12 | 11 ³ | 33,900 |
| Total | 500 | 302 | 651,000 | 4,580 | 2,760 | 5,460,000 |
| Other ferrosilicon: | | | | | | |
| Belgium | -- | -- | -- | 17 | 8 | 19,600 |
| Canada | 179 | 89 | 177,000 | 1,440 | 719 | 1,550,000 |
| China | -- | -- | -- | 9 | 5 | 15,100 |
| Colombia | 11 | 5 | 15,600 | 52 | 24 | 74,300 |
| Germany | 11 | 2 | 10,400 | 11 | 4 | 10,400 |
| Indonesia | -- | -- | -- | 16 | 8 | 23,800 |
| Italy | -- | -- | -- | 33 | 18 | 60,500 |
| Mexico | 72 | 36 | 102,000 | 397 | 200 | 502,000 |
| Peru | -- | -- | -- | 15 | 8 | 28,800 |
| Spain | -- | -- | -- | 16 | 8 | 23,800 |
| Other (4 countries) | 11 | 6 | 18,000 | 17 | 8 | 27,100 |
| Total | 284 | 139 | 324,000 | 2,020 | 1,010 | 2,330,000 |
| Total ferrosilicon | 784 | 440 | 975,000 | 6,600 | 3,770 | 7,800,000 |

See footnotes at end of table.

TABLE 2--Continued
 U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN JULY 2007^{1,2}

(Metric tons, unless otherwise specified)

| Country | Gross weight | Contained weight | Value | Year to date | | |
|----------------------------------|--------------|--------------------------|--------------------|---------------|---------------------------|--------------------|
| | | | | Gross weight | Contained weight | Value |
| Metal: | | | | | | |
| More than 99.99% silicon: | | | | | | |
| China | 177 | XX | \$25,200,000 | 1,540 | XX | \$170,000,000 |
| Denmark | 4 | XX | 565,000 | 37 | XX | 4,730,000 |
| Germany | 217 | XX | 15,300,000 | 1,370 | XX | 100,000,000 |
| Japan | 651 | XX | 58,600,000 | 4,790 | XX | 429,000,000 |
| Korea, Republic of | 82 | XX | 7,220,000 | 719 | XX | 61,500,000 |
| Malaysia | 8 | XX | 1,310,000 | 83 | XX | 13,100,000 |
| Norway | 256 | XX | 14,100,000 | 2,040 | XX | 104,000,000 |
| Taiwan | 72 | XX | 5,370,000 | 516 | XX | 52,500,000 |
| Ukraine | 26 | XX | 1,810,000 | 95 | XX | 7,510,000 |
| United Kingdom | 7 | XX | 917,000 | 69 | XX | 9,540,000 |
| Other (36 countries) | 61 | XX | 7,960,000 | 200 | XX | 25,900,000 |
| Total | 1,560 | 1,560^e | 138,000,000 | 11,500 | 11,500^e | 979,000,000 |
| 99.00% - 99.99% silicon: | | | | | | |
| Brazil | 82 | 81 | 198,000 | 678 | 672 | 1,720,000 |
| China | 280 | 278 | 824,000 | 767 | 761 | 2,250,000 |
| France | -- | -- | -- | 6 | 6 | 8,500 |
| Germany | -- | -- | -- | 36 | 36 | 51,000 |
| Ireland | -- | -- | -- | 11 | 11 | 15,000 |
| Japan | 5 | 5 | 6,950 | 17 | 17 | 24,500 |
| Singapore | -- | -- | -- | 13 | 12 | 17,700 |
| Switzerland | -- | -- | -- | 21 | 21 | 30,300 |
| Taiwan | -- | -- | -- | 16 | 16 | 22,900 |
| United Kingdom | -- | -- | -- | 7 | 7 | 9,690 |
| Other (6 countries) | 11 | 11 | 19,500 | 27 | 27 | 48,500 |
| Total | 379 | 375 | 1,050,000 | 1,600 | 1,590 | 4,200,000 |
| Other silicon: | | | | | | |
| Belgium | 1 | 1 | 9,560 | 17 | 17 | 67,600 |
| Canada | 34 | 33 | 38,400 | 269 | 262 | 287,000 |
| China | 43 | 42 | 56,500 | 541 | 526 | 928,000 |
| Germany | 9 | 9 | 11,600 | 37 | 36 | 57,100 |
| Hong Kong | -- | -- | -- | 42 | 41 | 55,500 |
| Japan | 239 | 232 | 895,000 | 707 | 683 | 3,890,000 |
| Korea, Republic of | 2 | 2 | 4,480 | 649 | 630 | 858,000 |
| Mexico | 2 | 2 | 9,500 | 19 | 19 | 87,300 |
| Netherlands | 78 | 76 | 327,000 | 488 | 474 | 2,330,000 |
| Taiwan | 13 | 13 | 29,300 | 38 | 37 | 79,200 |
| Other (14 countries) | 71 | 69 | 95,800 | 149 | 145 | 249,000 |
| Total | 493 | 479 | 1,480,000 | 2,960 | 2,870 | 8,890,000 |
| Total silicon metal | 2,430 | 2,410 | 141,000,000 | 16,000 | 15,900 | 992,000,000 |

^eEstimated. XX Not applicable. -- Zero.

¹Countries listed are the 10 leading exporters in terms of year-to-date quantities (gross weight).

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

³All or part of these data have been referred to the U.S. Census Bureau for verification.

Source: U.S. Census Bureau.

TABLE 3
U.S. IMPORTS FOR CONSUMPTION OF FERROSILICON AND SILICON METAL IN JULY 2007^{1,2}

(Metric tons, unless otherwise specified)

| Country | Gross weight | Contained weight | Value | Year to date | | |
|--------------------------------|---------------|------------------|-------------------|----------------|------------------|--------------------|
| | | | | Gross weight | Contained weight | Value |
| Ferrosilicon: | | | | | | |
| 55% - 80% silicon, over 3% Ca: | | | | | | |
| Brazil | 57 | 35 | \$82,200 | 95 | 58 | \$124,000 |
| Canada | 13 | 9 | 11,200 | 13 | 9 | 11,200 |
| China | 3,460 | 2,600 | 3,040,000 | 255 | 152 | 343,000 |
| France | 141 | 89 | 227,000 | 501 | 312 | 797,000 |
| Sweden | -- | -- | -- | 4 | 2 | 11,300 |
| Total | 3,670 | 2,730 | 3,360,000 | 868 | 534 | 1,290,000 |
| 55% - 80% silicon, Other: | | | | | | |
| Brazil | 547 | 411 | 591,000 | 2,720 | 2,060 | 2,700,000 |
| Canada | 1,380 | 985 | 1,500,000 | 7,410 | 5,520 | 9,090,000 |
| China | 10,800 | 8,170 | 9,450,000 | 74,000 | 53,900 | 62,100,000 |
| France | 243 | 167 | 530,000 | 1,280 | 900 | 2,500,000 |
| Germany | 48 | 35 | 253,000 | 272 | 205 | 1,370,000 |
| Iceland | 19 | 14 | 19,500 | 476 | 355 | 468,000 |
| India | 37 | 27 | 59,900 | 71 | 51 | 97,400 |
| Norway | 248 | 183 | 356,000 | 1,430 | 1,050 | 2,040,000 |
| Russia | 3,780 | 2,870 | 4,360,000 | 32,400 | 24,000 | 29,400,000 |
| Venezuela | -- | -- | -- | 24,400 | 18,300 | 19,900,000 |
| Other (3 countries) | -- | -- | -- | 124 | 86 | 465,000 |
| Total | 17,100 | 12,900 | 17,100,000 | 145,000 | 106,000 | 130,000,000 |
| 80% - 90% silicon, Germany | -- | -- | -- | 34 | 25 | 184,000 |
| More than 90% silicon, China | -- | -- | -- | 3,000 | 2,750 | 2,390,000 |
| Magnesium ferrosilicon: | | | | | | |
| Argentina | 147 | 61 | 288,000 | 970 | 423 | 1,800,000 |
| Brazil | -- | -- | -- | 1,560 | 712 | 1,370,000 |
| Canada | 840 | 390 | 900,000 | 6,130 | 2,850 | 6,390,000 |
| China | 285 | 129 | 212,000 | 766 | 343 | 771,000 |
| France | -- | -- | -- | 83 | 39 | 114,000 |
| Japan | -- | -- | -- | 126 | 46 | 275,000 |
| Netherlands | -- | -- | -- | 54 | 25 | 52,700 |
| Norway | 155 | 71 | 164,000 | 1,760 | 815 | 1,670,000 |
| Russia | -- | -- | -- | 1,400 | 630 | 672,000 |
| South Africa | -- | -- | -- | 37 | 17 | 46,900 |
| Other (2 countries) | 34 | 22 | 49,300 | 69 | 40 | 116,000 |
| Total | 1,460 | 675 | 1,610,000 | 13,000 | 5,940 | 13,300,000 |
| Other ferrosilicon: | | | | | | |
| Canada | 623 | 168 | 581,000 | 4,610 | 1,110 | 4,230,000 |
| China | -- | -- | -- | 12,200 | 1,540 | 3,320,000 |
| France | 18 | 8 | 17,200 | 72 | 33 | 67,000 |
| Russia | -- | -- | -- | 241 | 117 | 208,000 |
| Total | 641 | 177 | 598,000 | 17,100 | 2,800 | 7,830,000 |
| Total ferrosilicon | 22,900 | 16,400 | 22,700,000 | 179,000 | 119,000 | 155,000,000 |

See footnotes at end of table.

TABLE 3--Continued
U.S. IMPORTS FOR CONSUMPTION OF FERROSILICON AND SILICON METAL IN JULY 2007^{1,2}

(Metric tons, unless otherwise specified)

| Country | Gross weight | Contained weight | Value | Year to date | | |
|----------------------------------|---------------|------------------------|-------------------|---------------|--------------------------|--------------------|
| | | | | Gross weight | Contained weight | Value |
| Metal: | | | | | | |
| More than 99.99% silicon: | | | | | | |
| Brazil | -- | XX | -- | 4 | XX | \$281,000 |
| Canada | 2 | XX | \$76,000 | 25 | XX | 607,000 |
| China | 7 | XX | 961,000 | 46 | XX | 3,150,000 |
| Germany | 128 | XX | 13,900,000 | 716 | XX | 70,500,000 |
| Italy | 26 | XX | 2,220,000 | 174 | XX | 15,500,000 |
| Japan | 34 | XX | 6,490,000 | 298 | XX | 41,800,000 |
| Korea, Republic of | -- | XX | -- | 27 | XX | 5,820,000 |
| Poland | 1 | XX | 137,000 | 7 | XX | 327,000 |
| Taiwan | -- | XX | -- | 20 | XX | 1,470,000 |
| Turkey | -- | XX | -- | 13 | XX | 28,900 |
| Other (13 countries) | 1 | XX | 267,000 | 17 | XX | 2,180,000 |
| Total | 199 | 199^c | 24,100,000 | 1,350 | 1,350^c | 142,000,000 |
| 99.00% - 99.99% silicon: | | | | | | |
| Australia | 732 | 727 | 1,310,000 | 8,270 | 8,220 | 14,300,000 |
| Brazil | 2,070 | 2,060 | 3,750,000 | 26,600 | 26,400 | 45,200,000 |
| Canada | 2,330 | 2,310 | 4,290,000 | 11,900 | 11,800 | 21,000,000 |
| China | -- | -- | -- | 5 | 3 | 18,300 |
| Netherlands | -- | -- | -- | 312 | 310 | 567,000 |
| Norway | 315 | 314 | 868,000 | 4,360 | 4,310 | 11,400,000 |
| Philippines | 26 | 26 | 41,100 | 718 | 679 | 1,120,000 |
| South Africa | 3,350 | 3,320 | 5,790,000 | 21,300 | 21,100 | 35,300,000 |
| Spain | 350 | 348 | 703,000 | 350 | 348 | 703,000 |
| United Kingdom | 19 | 19 | 34,400 | 19 | 19 | 34,400 |
| Total | 9,190 | 9,120 | 16,800,000 | 73,800 | 73,100 | 130,000,000 |
| Other silicon: | | | | | | |
| Brazil | -- | -- | -- | 1,280 | 1,260 | 2,280,000 |
| Canada | 513 | 503 | 909,000 | 3,290 | 3,210 | 5,770,000 |
| China | -- | -- | -- | 17 | 14 ³ | 68,200 |
| Japan | 10 | 1 ³ | 11,300 | 83 | 2 | 90,400 |
| Korea, Republic of | 14 | 13 | 40,400 | 14 | 13 | 40,400 |
| Norway | 43 | 24 ³ | 122,000 | 61 | 42 | 179,000 |
| Philippines | 64 | 63 | 99,700 | 285 | 278 | 436,000 |
| Sweden | -- | -- | -- | 216 | 62 ³ | 395,000 |
| Taiwan | 1 | 1 | 82,500 | 1 | 1 | 82,500 |
| United Kingdom | 39 | 39 | 69,200 | 278 | 272 | 488,000 |
| Other (2 countries) | -- | -- | -- | (4) | (4) | 4,940 |
| Total | 684 | 644 | 1,330,000 | 5,520 | 5,150 | 9,840,000 |
| Total silicon metal | 10,100 | 9,970 | 42,200,000 | 80,600 | 79,600 | 281,000,000 |

^cEstimated. XX Not applicable. -- Zero.

¹Countries listed are the 10 leading importers in terms of year-to-date quantities (gross weight).

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

³All or part of these data have been referred to the U.S. Census Bureau for verification.

⁴Less than ½ unit.

Source: U.S. Census Bureau.