



Mineral Industry Surveys

For information, contact:

John F. Papp, Chromium Commodity Specialist
U.S. Geological Survey
989 National Center
Reston, VA 20192
Telephone: (703) 648-4963, Fax: (703) 648-7757
E-mail: jpapp@usgs.gov

Mahbood Mahdavi (Data)
Telephone: (703) 648-7993
Fax: (703) 648-7975
E-mail: mmahdavi@usgs.gov

Internet: <http://minerals.usgs.gov/minerals>

CHROMIUM IN APRIL 2012

On the basis of gross weight, consumption of chromium ferroalloys and metal in April 2012 increased slightly compared with consumption in March 2012. Consumption in April 2012 increased slightly compared with consumption in April 2011.

Included in this Mineral Industry Surveys are U.S. salient chromium statistics, U.S. Government stockpile inventory of

chromium materials in April 2012, consumption by end use and consumer stocks of chromium ferroalloys and metal at the end of April 2012, and U.S. foreign trade data for selected chromium-containing materials in April 2012.

TABLE 1
U.S. SALIENT CHROMIUM STATISTICS¹

(Metric tons, gross weight)

| | 2011 | 2012 | | | |
|---|-----------------------------------|---------------------|---------------------|---------|-------------------|
| | January– December ² | February | March | April | January– April |
| Production, stainless steel ³ | 2,070,000 | 166,000 | 163,000 | 173,000 | 672,000 |
| Components of U.S. supply: | | | | | |
| Stainless steel scrap receipts | 866,000 | 73,200 | 71,900 | 72,500 | 290,000 |
| Stainless steel scrap consumption | 1,300,000 | 112,000 | 108,000 | 110,000 | 443,000 |
| Imports for consumption: | | | | | |
| Chromite ore | 191,000 | 4,650 | 38,800 | 5,000 | 88,900 |
| Ferrochromium: | | | | | |
| More than 4% carbon | 462,000 | 36,900 | 46,600 | 30,100 | 169,000 |
| More than 3% but not more than 4% carbon | 1,510 | 40 | -- | -- | 140 |
| More than 0.5% but not more than 3% carbon | 393 | -- | 215 | -- | 417 |
| Not more than 0.5% carbon | 53,700 | 3,930 | 4,220 | 3,790 | 16,800 |
| Ferrochromium silicon | 20,000 | 5,150 | 1,390 | 3,200 | 10,100 |
| Total ferroalloy imports | 538,000 | 46,000 | 52,500 | 37,100 | 196,000 |
| Chromium metal ⁴ | 13,600 | 1,440 | 1,570 | 1,270 | 5,510 |
| Stainless steel | 605,000 | 43,400 | 52,200 | 49,800 | 193,000 |
| Stainless steel scrap | 169,000 | 20,600 | 13,700 | 11,000 | 65,500 |
| Distribution of U.S. supply: | | | | | |
| Consumption, industry, chromium ferroalloys and metal | 421,000 | 36,000 | 36,600 | 37,200 | 146,000 |
| Exports: | | | | | |
| Chromite ore | 5,250 | 571 | 455 | 1,290 | 3,120 |
| Chromium ferroalloys: | | | | | |
| High-carbon ferrochromium | 4,260 | 81 | 363 | 448 | 1,220 |
| Low-carbon ferrochromium | 1,030 | 50 | 29 | 31 | 145 |
| Ferrochromium silicon | 28 | -- | -- | -- | 14 |
| Total ferroalloy exports | 5,330 | 131 | 391 | 479 | 1,380 |
| Chromium metal | 557 | 35 | 42 | 53 | 154 |
| Stainless steel | 558,000 | 50,000 | 54,500 | 51,500 | 202,000 |
| Stainless steel scrap | 656,000 | 38,700 | 48,200 | 49,500 | 173,000 |
| Stocks at end of period: | | | | | |
| Consumer, industry, chromium ferroalloys and metal | 8,920 ^r | 10,300 ^r | 10,000 ^r | 9,920 | 9,920 |
| Government stockpile: | | | | | |
| Chromium ferroalloys | 150,000 | 148,000 | 148,000 | 147,000 | 147,000 |
| Chromium metal | 4,230 | 4,230 | 4,230 | 4,090 | 4,090 |

^rRevised. -- Zero.

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

²May include revised data that are not broken out by specific month(s).

³Data on stainless steel production reported by American Iron and Steel Institute; monthly, quarterly, and year-to-date production of stainless and heat-resisting raw steel.

⁴Includes waste and scrap and other.

TABLE 2
U.S. REPORTED CONSUMPTION AND STOCKS OF CHROMIUM PRODUCTS^{1,2}

(Metric tons, gross weight unless otherwise noted)

| | 2012 | | |
|------------------------------------|----------------------------|---------------|--------------------------------|
| | March | April | January– April ³ |
| Consumption by end use: | | | |
| Steel: | | | |
| Carbon steel | 320 ^r | 348 | 1,320 |
| High-strength low-alloy steel | 263 | 301 | 998 |
| Stainless and heat-resisting steel | 31,800 | 32,400 | 126,000 |
| Unspecified steel ⁴ | 3,620 ^r | 3,620 | 14,900 |
| Superalloys | 489 ^r | 475 | 1,910 |
| Other alloys and uses ⁵ | 106 | 111 | 435 |
| Total | 36,600 | 37,200 | 146,000 |
| Total, chromium content | 21,200 | 21,400 | 84,500 |
| Consumption by material: | | | |
| Low-carbon ferrochromium | 2,410 ^r | 2,440 | 9,720 |
| High-carbon ferrochromium | 31,600 | 32,200 | 126,000 |
| Ferrochromium silicon | W | W | W |
| Chromium metal | 268 | 256 | 1,020 |
| Chromite ore | W | W | W |
| Chromium-aluminum alloy | W | W | W |
| Other chromium materials | W | W | W |
| Total | 36,600 | 37,200 | 146,000 |
| Total, chromium content | 21,200 | 21,400 | 84,500 |
| Consumer stocks: | | | |
| Low-carbon ferrochromium | 1,750 | 1,700 | 1,700 |
| High-carbon ferrochromium | 7,500 ^r | 7,420 | 7,420 |
| Ferrochromium silicon | W | W | W |
| Chromium metal | 140 | 147 | 147 |
| Chromium-aluminum alloy | W | W | W |
| Other chromium materials | W | W | W |
| Total | 10,000 ^r | 9,920 | 9,920 |
| Total, chromium content | 5,970 ^r | 5,860 | 5,860 |

^rRevised. W Withheld to avoid disclosing company proprietary data; included in "Total."

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

²Includes estimates.

³May include revised data that are not broken out by specific month(s).

⁴Includes electrical, full alloy, tool, and unspecified steel end uses.

⁵Includes cast irons, welding and alloy hard-facing rods and materials, wear- and corrosion-resistant alloys, and aluminum, copper, magnetic, nickel, and other alloys.

TABLE 3
U.S. GOVERNMENT STOCKPILE INVENTORY OF
CHROMIUM MATERIALS^{1,2}

(Metric tons)

| Period | Chromium ferroalloys | | Chromium metal |
|-----------|----------------------------|---------------------------|----------------|
| | High-carbon ferro-chromium | Low-carbon ferro-chromium | |
| 2011: | | | |
| April | 95,400 | 57,400 | 4,390 |
| May | 94,100 | 56,200 | 4,290 |
| June | 94,100 | 56,200 | 4,290 |
| July | 94,100 | 55,700 | 4,270 |
| August | 94,100 | 55,600 | 4,270 |
| September | 95,200 | 55,100 | 4,240 |
| October | 95,200 | 54,900 | 4,240 |
| November | 95,200 | 54,600 | 4,230 |
| December | 95,200 | 54,300 | 4,230 |
| 2012: | | | |
| January | 95,200 | 54,100 | 4,230 |
| February | 95,200 | 53,200 | 4,230 |
| March | 95,200 | 53,000 | 4,230 |
| April | 95,200 | 52,200 | 4,090 |

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

²These Government stocks are reported by the Defense Logistics Agency, DLA Strategic Materials in Inventory of Stockpile Materials D-1, which reports uncommitted inventory. Uncommitted inventory is that inventory for which there is no sales contract. Committed inventory is that inventory for which there is a sales contract, however, the material has not yet been shipped. For chromium materials, the D-1 report includes chromium materials that (1) meet specifications and are held in excess of goal and (2) do not meet specifications and are held in excess of goal. The D-1 report excludes chromium materials that are committed and awaiting shipment.

Source: Defense Logistics Agency, DLA Strategic Materials.

TABLE 4
U.S. EXPORTS OF CHROMITE ORE, CHROMIUM FERROALLOYS, AND METAL¹

| Period | Chromite ore | | Chromium ferroalloys ² | | | Chromium metal ³ | |
|-------------------------------|-------------------------------|----------------------|-----------------------------------|-----------------------------------|----------------------|-------------------------------|----------------------|
| | Gross weight (metric tons) | Value (thousands) | Gross weight (metric tons) | Chromium content (metric tons) | Value (thousands) | Gross weight (metric tons) | Value (thousands) |
| 2011: | | | | | | | |
| April | 618 | \$411 | 444 | 236 | \$733 | 80 | \$1,560 |
| May | 318 | 182 | 831 | 363 | 1,050 | 49 | 1,050 |
| June | 216 | 161 | 693 | 297 | 803 | 38 | 978 |
| July | 375 | 250 | 294 | 112 | 517 | 38 | 1,120 |
| August | 846 | 513 | 287 | 159 | 396 | 31 | 937 |
| September | 739 | 491 | 554 | 281 | 793 | 66 | 1,150 |
| October | 370 | 273 | 143 | 72 | 212 | 73 | 1,820 |
| November | 615 | 394 | 377 | 151 | 496 | 31 | 805 |
| December | 477 | 333 | 307 | 165 | 515 | 44 | 1,250 |
| January–December ⁴ | 5,250 | 3,520 | 5,330 | 2,500 | 7,670 | 557 | 13,800 |
| 2012: | | | | | | | |
| January | 803 | 475 | 374 | 199 | 417 | 24 | 891 |
| February | 571 | 345 | 131 | 65 | 244 | 35 | 1,060 |
| March | 455 | 292 | 391 | 210 | 561 | 42 | 1,150 |
| April | 1,290 | 1,090 | 479 | 277 | 641 | 53 | 1,210 |
| January–April | 3,120 | 2,200 | 1,380 | 750 | 1,860 | 154 | 4,310 |

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

²Includes low- and high-carbon ferrochromium and ferrochromium silicon.

³Includes chromium metal, waste and scrap, and unwrought powders.

⁴May include revised data that are not broken out by specific month(s).

Source: U.S. Census Bureau.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF CHROMITE ORE, FERROCHROMIUM, AND CHROMIUM METAL¹

(Metric tons)

| | 2011 | 2012 | | |
|--|-----------------------------------|--------------|--------------|-------------------|
| | January– December ² | March | April | January– April |
| Chromite ore: | | | | |
| Not more than 40% chromic oxide: | | | | |
| Gross weight | 151 | -- | -- | -- |
| Chromic oxide content | 78 | -- | -- | -- |
| More than 40% but less than 46% chromic oxide: | | | | |
| Gross weight | 27,900 | 1,500 | -- | 3,000 |
| Chromic oxide content | 12,600 | 666 | -- | 1,350 |
| 46% or more chromic oxide: | | | | |
| Gross weight | 163,000 | 37,300 | 5,000 | 85,900 |
| Chromic oxide content | 90,000 | 17,500 | 2,300 | 41,400 |
| Total, all grades: | | | | |
| Gross weight | 191,000 | 38,800 | 5,000 | 890,000 |
| Chromic oxide content | 103,000 | 18,200 | 2,300 | 42,800 |
| Ferrocromium: | | | | |
| Low-carbon: ³ | | | | |
| Not more than 0.5% carbon: | | | | |
| Gross weight | 53,700 | 4,220 | 3,790 | 16,800 |
| Chromium content | 37,100 | 2,890 | 2,660 | 11,600 |
| More than 0.5% but not more than 3% carbon: | | | | |
| Gross weight | 393 | 215 | -- | 417 |
| Chromium content | 224 | 129 | -- | 245 |
| Total, low-carbon: | | | | |
| Gross weight | 54,100 | 4,430 | 3,790 | 17,200 |
| Chromium content | 37,400 | 3,020 | 2,660 | 11,800 |
| Medium-carbon: ⁴ | | | | |
| Gross weight | 1,510 | -- | -- | 140 |
| Chromium content | 855 | -- | -- | 76 |
| High-carbon: ⁵ | | | | |
| Gross weight | 462,000 | 46,600 | 30,100 | 169,000 |
| Chromium content | 265,000 | 24,900 | 19,900 | 99,600 |
| Total, all grades: | | | | |
| Gross weight | 518,000 | 51,100 | 33,900 | 186,000 |
| Chromium content | 304,000 | 27,900 | 22,600 | 111,000 |
| Chromium metal: | | | | |
| Unwrought powders | 2,720 | 237 | 275 | 1,000 |
| Waste and scrap | 574 | 55 | 61 | 195 |
| Other than waste and scrap and unwrought powders | 10,300 | 1,280 | 935 | 4,310 |
| Total, all grades | 13,600 | 1,570 | 1,270 | 5,510 |

-- Zero.

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

²May include revised data that are not broken out by specific month(s).

³Ferrocromium containing not more than 3% carbon.

⁴Ferrocromium containing more than 3% carbon but not more than 4% carbon.

⁵Ferrocromium containing more than 4% carbon.

Source: U.S. Census Bureau.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF FERROCHROMIUM IN 2012, BY GRADE AND COUNTRY¹

| Grade and country | April | | | January–April ² | | |
|--|-------------------------------|-----------------------------------|-----------------------------------|-------------------------------|-----------------------------------|-----------------------------------|
| | Gross weight (metric tons) | Chromium content (metric tons) | Value ³ (thousands) | Gross weight (metric tons) | Chromium content (metric tons) | Value ³ (thousands) |
| High-carbon ferrochromium:⁴ | | | | | | |
| Albania | 512 | 341 | \$793 | 1,500 | 961 | \$2,110 |
| India | 476 | 289 | \$593 | 5,250 | 3,190 | 6,490 |
| Kazakhstan | 12,800 | 8,920 | 18,200 | 32,000 | 22,200 | 44,000 |
| Russia | 3,540 | 2,360 | 4,870 | 17,000 | 11,100 | 24,100 |
| South Africa | 3,920 | 2,130 | 3,800 | 68,000 | 33,700 | 64,000 |
| Spain | 20 | 13 | 33 | 20 | 13 | 33 |
| Sweden | 820 | 551 | 1,500 | 6,430 | 4,330 | 12,200 |
| Turkey | 8,020 | 5,320 | 12,700 | 19,800 | 13,100 | 32,000 |
| Zimbabwe | -- | -- | -- | 18,700 | 11,000 | 23,400 |
| Total | 30,100 | 19,900 | 42,500 | 169,000 | 99,600 | 208,000 |
| Medium-carbon ferrochromium:⁵ | | | | | | |
| Belgium | -- | -- | -- | 40 | 22 | 22 |
| Russia | -- | -- | -- | 100 | 54 | 54 |
| Total | -- | -- | -- | 140 | 76 | 76 |
| Low-carbon ferrochromium:⁶ | | | | | | |
| More than 0.5% but not more than 3% carbon: | | | | | | |
| Russia | -- | -- | -- | 115 | 79 | 336 |
| South Africa | -- | -- | -- | 302 | 166 | 610 |
| Total | -- | -- | -- | 417 | 245 | 946 |
| Not more than 0.5% carbon: | | | | | | |
| Belgium | -- | -- | -- | 35 | 23 | 128 |
| Brazil | -- | -- | -- | 40 | 13 | 135 |
| China | -- | -- | -- | 20 | 12 | 98 |
| Germany | 620 | 433 | 2,840 | 2,660 | 1,820 | 11,600 |
| Japan | 120 | 84 | 596 | 419 | 293 | 2,110 |
| Kazakhstan | 1,180 | 836 | 3,070 | 1,760 | 1,250 | 4,630 |
| Russia | 1,330 | 937 | 3,800 | 10,700 | 7,360 | 33,100 |
| South Africa | 500 | 338 | 1,530 | 500 | 338 | 1,530 |
| Turkey | 40 | 29 | 141 | 649 | 462 | 2,190 |
| Total | 3,790 | 2,660 | 12,000 | 16,800 | 11,600 | 55,500 |
| All grades: | | | | | | |
| Albania | 512 | 341 | 793 | 1,500 | 961 | 2,110 |
| Belgium | -- | -- | -- | 75 | 46 | 151 |
| Brazil | -- | -- | -- | 40 | 13 | 135 |
| China | -- | -- | -- | 20 | 12 | 98 |
| Germany | 620 | 433 | 2,840 | 2,660 | 1,820 | 11,600 |
| India | 476 | 289 | 593 | 5,250 | 3,190 | 6,490 |
| Japan | 120 | 84 | 596 | 419 | 293 | 2,110 |
| Kazakhstan | 14,000 | 9,750 | 21,200 | 33,700 | 23,500 | 48,600 |
| Russia | 4,870 | 3,300 | 8,670 | 27,900 | 18,600 | 57,600 |
| South Africa | 4,420 | 2,470 | 5,330 | 68,800 | 34,200 | 66,100 |
| Spain | 20 | 13 | 33 | 20 | 13 | 33 |
| Sweden | 820 | 551 | 1,500 | 6,430 | 4,330 | 12,200 |
| Turkey | 8,060 | 5,350 | 12,900 | 20,500 | 13,500 | 34,200 |
| Zimbabwe | -- | -- | -- | 18,700 | 11,000 | 23,400 |
| Total | 33,900 | 22,600 | 54,500 | 186,000 | 111,000 | 265,000 |

-- Zero.

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

²May include revised data that are not broken out by specific month(s).

³Customs import value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the merchandise into the United States.

⁴Ferrochromium containing more than 4% carbon.

⁵Ferrochromium containing more than 3% but not more than 4% carbon.

⁶Ferrochromium containing not more than 3% carbon.

Source: U.S. Census Bureau.

TABLE 7
U.S. IMPORTS FOR CONSUMPTION OF CHROMIUM METAL IN 2012, BY GRADE AND BY COUNTRY¹

| Grade and country | April | | January–April ² | |
|---|-------------------------------|-----------------------------------|-------------------------------|-----------------------------------|
| | Gross weight (metric tons) | Value ³ (thousands) | Gross weight (metric tons) | Value ³ (thousands) |
| Unwrought powders: | | | | |
| China | 20 | \$426 | 256 | \$4,070 |
| France | 86 | 1,470 | 291 | 4,960 |
| Germany | -- | -- | 2 | 87 |
| Japan | -- | -- | 2 | 33 |
| Russia | 100 | 1,070 | 221 | 2,390 |
| United Kingdom | 68 | 1,130 | 230 | 2,970 |
| Total | 275 | 4,100 | 1,000 | 14,500 |
| Waste and scrap: | | | | |
| Japan | -- | -- | 2 | 22 |
| Mexico | 61 | 167 | 186 | 560 |
| Singapore | -- | -- | 7 | 267 |
| Total | 61 | 167 | 195 | 849 |
| Other than waste and scrap and unwrought powders: | | | | |
| China | 206 | 2,900 | 462 | 6,440 |
| France | 163 | 2,760 | 890 | 14,500 |
| Germany | (4) | 80 | 9 | 324 |
| Japan | 1 | 89 | 2 | 168 |
| Liechtenstein | (4) | 11 | (4) | 17 |
| Russia | 357 | 4,700 | 1,700 | 23,600 |
| Spain | 11 | 115 | 28 | 308 |
| Switzerland | -- | -- | (4) | 14 |
| United Kingdom | 196 | 2,950 | 1,220 | 17,100 |
| Total | 935 | 13,600 | 4,310 | 62,500 |
| All grades: | | | | |
| China | 227 | 3,330 | 718 | 10,500 |
| France | 250 | 4,230 | 1,180 | 19,500 |
| Germany | (4) | 80 | 11 | 412 |
| Japan | 1 | 89 | 7 | 223 |
| Liechtenstein | (4) | 11 | (4) | 17 |
| Mexico | 61 | 167 | 186 | 560 |
| Russia | 457 | 5,770 | 1,920 | 26,000 |
| Singapore | -- | -- | 7 | 267 |
| Spain | 11 | 115 | 28 | 308 |
| Switzerland | -- | -- | (4) | 14 |
| United Kingdom | 264 | 4,080 | 1,450 | 20,000 |
| Total | 1,270 | 17,900 | 5,510 | 77,800 |

-- Zero.

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

²May include revised data that are not broken out by specific month(s).

³Customs import value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the merchandise into the United States.

⁴Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 8
U.S. STAINLESS STEEL TRADE, BY PRODUCT, IN 2012¹

| Stainless steel product | April | | January–April | |
|----------------------------------|-------------------------------|-----------------------------------|-------------------------------|-----------------------------------|
| | Gross weight (metric tons) | Value ² (thousands) | Gross weight (metric tons) | Value ² (thousands) |
| Exports: | | | | |
| Ingot | 8,920 | \$13,900 | 33,700 | \$60,400 |
| Flat-rolled (width > 600 mm) | 26,100 | 88,300 | 101,000 | 342,000 |
| Flat-rolled (width < 600 mm) | 7,020 | 29,800 | 29,500 | 122,000 |
| Bars and rods in irregular coils | 861 | 3,250 | 2,440 | 9,800 |
| Other bars and rods | 4,020 | 33,100 | 16,000 | 130,000 |
| Wire | 1,110 | 7,920 | 4,530 | 33,200 |
| Tubes, pipes, hollow profiles | 3,480 | 31,200 | 15,300 | 136,000 |
| Total | 51,500 | 208,000 | 202,000 | 833,000 |
| Stainless steel scrap | 49,500 | 67,000 | 173,000 | 247,000 |
| Grand total | 101,000 | 275,000 | 375,000 | 1,080,000 |
| Imports: | | | | |
| Ingot | 10,600 | 37,000 | 43,900 | 150,000 |
| Flat-rolled (width > 600 mm) | 24,500 | 75,200 | 86,600 | 264,000 |
| Flat-rolled (width < 600 mm) | 3,620 | 15,600 | 13,400 | 58,600 |
| Bars and rods in irregular coils | 2,260 | 9,620 | 9,120 | 37,200 |
| Other bars and rods | 159 | 1,400 | 984 | 6,510 |
| Wire | 403 | 2,610 | 1,200 | 9,390 |
| Tubes, pipes, hollow profiles | 8,180 | 64,700 | 38,000 | 293,000 |
| Total | 49,800 | 206,000 | 193,000 | 819,000 |
| Stainless steel scrap | 11,000 | 19,900 | 65,500 | 113,000 |
| Grand total | 60,800 | 226,000 | 259,000 | 932,000 |

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

²Export value is free alongside ship. Import value is Customs import value, which generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the merchandise into the United States.

Source: U.S. Census Bureau.