

IRON OXIDE PIGMENTS STATISTICS¹

U.S. GEOLOGICAL SURVEY

[All values in metric tons (t) gross weight unless otherwise noted]

Last modification: November 13, 2012

| Year | Production | Imports | Exports | Apparent consumption | Unit value (\$/t) | Unit value (98\$/t) | World production |
|-------------|-------------------|----------------|----------------|-----------------------------|--------------------------|----------------------------|-------------------------|
| 1900 | 38,700 | 4,980 | NA | 44,000 | 17 | 330 | NA |
| 1901 | 30,600 | 5,100 | NA | 36,000 | 21 | 410 | NA |
| 1902 | 32,900 | 6,100 | NA | 39,000 | 23 | 430 | NA |
| 1903 | 34,700 | 6,310 | NA | 41,000 | 16 | 290 | NA |
| 1904 | 40,100 | 5,900 | NA | 46,000 | 14 | 250 | NA |
| 1905 | 37,300 | 6,790 | NA | 44,000 | 14 | 250 | NA |
| 1906 | 40,300 | 7,410 | NA | 48,000 | 14 | 250 | NA |
| 1907 | 40,300 | 7,980 | NA | 48,000 | 15 | 260 | NA |
| 1908 | 41,100 | 6,090 | NA | 47,000 | 13 | 230 | NA |
| 1909 | 31,300 | 8,720 | NA | 40,000 | 18 | 330 | NA |
| 1910 | 38,200 | 8,660 | NA | 47,000 | 16 | 280 | NA |
| 1911 | 34,800 | 7,830 | NA | 43,000 | 16 | 280 | NA |
| 1912 | 40,300 | 10,900 | NA | 51,000 | 15 | 250 | NA |
| 1913 | 44,000 | 11,400 | NA | 55,000 | 13 | 210 | NA |
| 1914 | 41,800 | 17,100 | NA | 59,000 | 15 | 240 | NA |
| 1915 | NA | NA | NA | 56,000 | 18 | 290 | NA |
| 1916 | NA | NA | NA | 58,000 | 20 | 300 | NA |
| 1917 | NA | NA | NA | 59,000 | 23 | 290 | NA |
| 1918 | NA | NA | NA | 60,000 | 25 | 270 | NA |
| 1919 | NA | NA | NA | 61,000 | 28 | 260 | NA |
| 1920 | NA | NA | NA | 63,000 | 31 | 250 | NA |
| 1921 | NA | NA | NA | 64,000 | 33 | 300 | NA |
| 1922 | NA | NA | NA | 65,000 | 36 | 350 | NA |
| 1923 | NA | NA | NA | 66,000 | 38 | 360 | NA |
| 1924 | NA | NA | NA | 68,000 | 41 | 390 | NA |
| 1925 | NA | NA | NA | 69,000 | 44 | 410 | NA |
| 1926 | NA | NA | NA | 70,000 | 46 | 420 | NA |
| 1927 | NA | NA | NA | 71,000 | 49 | 460 | NA |
| 1928 | NA | NA | NA | 73,000 | 51 | 490 | NA |
| 1929 | NA | NA | NA | 74,000 | 54 | 510 | NA |
| 1930 | NA | NA | NA | 75,000 | 56 | 550 | NA |
| 1931 | NA | NA | NA | 76,000 | 59 | 630 | NA |
| 1932 | NA | NA | NA | 78,000 | 62 | 740 | NA |
| 1933 | NA | NA | NA | 79,000 | 64 | 800 | NA |
| 1934 | NA | NA | NA | 80,000 | 67 | 820 | NA |
| 1935 | NA | NA | NA | 81,000 | 69 | 820 | NA |
| 1936 | NA | NA | NA | 83,000 | 72 | 840 | NA |
| 1937 | NA | NA | NA | 84,000 | 75 | 850 | NA |
| 1938 | NA | NA | NA | 85,000 | 77 | 890 | NA |
| 1939 | NA | 18,500 | 4,950 | 86,000 | 80 | 940 | NA |
| 1940 | NA | 14,000 | 4,720 | 88,000 | 82 | 950 | NA |
| 1941 | NA | 8,100 | 4,480 | 89,000 | 85 | 940 | NA |
| 1942 | 88,300 | 3,990 | 3,290 | 89,000 | 88 | 876 | NA |
| 1943 | 90,900 | 1,320 | 3,960 | 88,300 | 88 | 824 | NA |
| 1944 | 88,000 | 3,050 | 4,680 | 86,400 | 90 | 834 | NA |
| 1945 | 91,600 | 5,500 | 4,730 | 92,400 | 94 | 849 | NA |
| 1946 | 104,000 | 9,380 | 5,520 | 108,000 | 93 | 780 | NA |
| 1947 | 105,000 | 7,070 | 6,910 | 105,000 | 105 | 767 | NA |
| 1948 | 101,000 | 4,470 | 6,290 | 99,200 | 107 | 724 | NA |
| 1949 | 94,600 | 3,750 | 5,850 | 92,500 | 110 | 753 | NA |
| 1950 | 117,000 | 8,320 | 5,050 | 121,000 | 122 | 825 | NA |

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|-------------|-------------------|----------------|----------------|-----------------------------|--------------------------|----------------------------|-------------------------|
| 1951 | 115,000 | 12,700 | 4,220 | 123,000 | 126 | 790 | NA |
| 1952 | 95,500 | 7,980 | 3,510 | 99,900 | 135 | 830 | NA |
| 1953 | 98,300 | 9,980 | 3,810 | 105,000 | 139 | 849 | NA |
| 1954 | 88,900 | 9,710 | 3,270 | 95,300 | 150 | 909 | NA |
| 1955 | 105,000 | 12,700 | 4,260 | 113,000 | 159 | 967 | NA |
| 1956 | 103,000 | 11,900 | 4,630 | 111,000 | 159 | 953 | NA |
| 1957 | 95,200 | 11,900 | 3,360 | 104,000 | 166 | 963 | NA |
| 1958 | 89,300 | 10,600 | 3,540 | 96,300 | 170 | 959 | NA |
| 1959 | 107,000 | 13,400 | 3,900 | 116,000 | 171 | 958 | NA |
| 1960 | 96,200 | 13,200 | 3,900 | 105,000 | 177 | 975 | NA |
| 1961 | 96,600 | 9,530 | 2,900 | 103,000 | 183 | 998 | NA |
| 1962 | 103,000 | 11,900 | 3,450 | 111,000 | 184 | 993 | NA |
| 1963 | 108,000 | 12,400 | 3,810 | 116,000 | 188 | 1,000 | NA |
| 1964 | 108,000 | 14,800 | 4,630 | 119,000 | 201 | 1,060 | NA |
| 1965 | 116,000 | 16,200 | 4,260 | 128,000 | 195 | 1,010 | NA |
| 1966 | 119,000 | 22,300 | 4,350 | 137,000 | 199 | 1,000 | NA |
| 1967 | 116,000 | 21,200 | 2,810 | 134,000 | 219 | 1,070 | NA |
| 1968 | 120,000 | 27,200 | 2,720 | 145,000 | 238 | 1,110 | NA |
| 1969 | 130,000 | 29,900 | 3,630 | 156,000 | 232 | 1,030 | NA |
| 1970 | 113,000 | 29,700 | 4,170 | 138,000 | 238 | 1,000 | NA |
| 1971 | 116,000 | 33,100 | 3,610 | 146,000 | 249 | 1,000 | NA |
| 1972 | 138,000 | 42,900 | 3,870 | 177,000 | 255 | 994 | NA |
| 1973 | 135,000 | 46,400 | 8,970 | 172,000 | 306 | 1,120 | NA |
| 1974 | 134,000 | 49,200 | 8,770 | 174,000 | 421 | 1,390 | NA |
| 1975 | 95,100 | 25,400 | 7,970 | 113,000 | 460 | 1,390 | NA |
| 1976 | 123,000 | 45,500 | 5,270 | 163,000 | 480 | 1,380 | 286,000 |
| 1977 | 128,000 | 53,300 | 5,890 | 175,000 | 522 | 1,400 | 295,000 |
| 1978 | 138,000 | 64,000 | 6,410 | 196,000 | 526 | 1,320 | 292,000 |
| 1979 | 142,000 | 50,200 | 4,400 | 187,000 | 618 | 1,390 | 322,000 |
| 1980 | 114,000 | 35,800 | 4,580 | 145,000 | 682 | 1,350 | 254,000 |
| 1981 | 116,000 | 36,000 | 4,510 | 148,000 | 753 | 1,350 | 234,000 |
| 1982 | 95,200 | 23,500 | 8,220 | 110,000 | 826 | 1,400 | 225,000 |
| 1983 | 112,000 | 27,900 | 11,500 | 128,000 | 914 | 1,500 | 229,000 |
| 1984 | 118,000 | 34,700 | 29,400 | 123,000 | 947 | 1,490 | 258,000 |
| 1985 | 115,000 | 36,100 | 27,000 | 124,000 | 961 | 1,460 | 251,000 |
| 1986 | 116,000 | 33,400 | 26,200 | 124,000 | 987 | 1,470 | 229,000 |
| 1987 | 124,000 | 38,400 | 20,200 | 143,000 | 966 | 1,390 | 281,000 |
| 1988 | 127,000 | 38,900 | 22,000 | 144,000 | 975 | 1,340 | 281,000 |
| 1989 | 128,000 | 36,700 | 9,970 | 154,000 | 1,000 | 1,310 | 321,000 |
| 1990 | 125,000 | 34,100 | 9,540 | 150,000 | 1,110 | 1,380 | 258,000 |
| 1991 | 117,000 | 34,700 | 20,600 | 131,000 | 1,140 | 1,360 | 243,000 |
| 1992 | 121,000 | 45,100 | 21,100 | 145,000 | 1,120 | 1,300 | 244,000 |
| 1993 | 126,000 | 43,600 | 22,400 | 147,000 | 1,160 | 1,310 | 209,000 |
| 1994 | 139,000 | 51,400 | 21,300 | 169,000 | 1,070 | 1,180 | 239,000 |
| 1995 | 151,000 | 59,300 | 17,500 | 193,000 | 1,130 | 1,210 | 337,000 |
| 1996 | 163,000 | 59,600 | 16,000 | 207,000 | 1,150 | 1,190 | 403,000 |
| 1997 | 176,000 | 66,700 | 16,600 | 226,000 | 1,060 | 1,080 | 466,000 |
| 1998 | 180,000 | 63,800 | 14,600 | 229,000 | 1,050 | 1,050 | 533,000 |
| 1999 | 183,000 | 80,800 | 13,800 | 250,000 | 980 | 959 | 559,000 |
| 2000 | 154,000 | 91,300 | 9,640 | 236,000 | 892 | 844 | 511,000 |
| 2001 | 135,000 | 89,900 | 9,100 | 216,000 | 920 | 847 | 598,000 |

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|-------------|-------------------|----------------|----------------|-----------------------------|--------------------------|----------------------------|-------------------------|
| 2002 | 115,000 | 132,000 | 6,270 | 241,000 | 864 | 783 | 635,000 |
| 2003 | 90,000 | 140,000 | 4,500 | 226,000 | 807 | 715 | 810,000 |
| 2004 | 84,600 | 170,000 | 3,120 | 251,000 | 759 | 655 | NA |
| 2005 | 90,000 | 193,000 | 2,220 | 281,000 | 825 | 689 | NA |
| 2006 | 70,300 | 199,000 | 3,100 | 266,000 | 847 | 685 | NA |
| 2007 | 88,100 | 178,000 | 5,410 | 261,000 | 1,040 | 818 | NA |
| 2008 | 83,300 | 155,000 | 4,740 | 234,000 | 1,180 | 893 | NA |
| 2009 | 50,800 | 106,000 | 5,640 | 151,000 | 1,280 | 972 | NA |
| 2010 | 54,700 | 151,000 | 8,750 | 197,000 | 1,210 | 904 | NA |
| 2011 | 48,000 | 158,000 | 8,650 | 197,000 | 1,270 | 920 | NA |

NA Not available.

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Data are calculated, estimated, or reported. See notes for more information.

Iron Oxide Pigments Worksheet Notes

Data Sources

The sources of data for the iron oxide pigments worksheet are the mineral statistics publications of the U.S. Bureau of Mines and the U.S. Geological Survey—Minerals Yearbook (MYB) and its predecessor, Mineral Resources of the United States (MR). The years of publication and corresponding years of data coverage are listed in the References section below.

Production

Production statistics represent ocher, umber, sienna, and metallic paints from the MR for 1900–14. For 1942 to the most recent year, production statistics represent the category, finished products sold, from the MYB. Production statistics were not available for 1915–41.

Imports

Import statistics represent ocher, umber, and sienna imported for 1900–14. For 1939 to the most recent year, import statistics represent the sum of natural and synthetic pigments imported for consumption. Data are reported in the MYB. Import statistics were not available for 1915–38.

Exports

Export statistics represent the sum of natural and synthetic pigments. Statistics were not available for 1900–38. For 1939 to the most recent year, data are reported in the MYB.

Apparent Consumption

For 1900–14, apparent consumption was estimated as equal to production plus imports. For 1915–41, apparent consumption was estimated by linear regression using the data from 1900–14 (estimated previously), for those years (1900–41), two significant figures are reported for apparent consumption. Data for 1942 to the most recent year were estimated by a direct calculation from production, imports, and exports using the following formula.

$$\text{APPARENT CONSUMPTION} = \text{PRODUCTION} + \text{IMPORTS} - \text{EXPORTS}.$$

Unit Value

Unit value is defined as the value of 1 metric ton (t) of iron oxide pigments apparent consumption. Unit value was estimated with the weighted average of production and import tonnage and value for 1900–16 and 1942 to the most recent year; production and import data are reported in the MYB. For 1915–41, unit value was estimated by stepwise linear interpolation. Two significant figures were reported for these years.

Unit Value (98\$/t)

The Consumer Price Index conversion factor, with 1998 as the base year, is used to adjust unit value in current U.S. dollars to the unit value in constant 1998 U.S. dollars.

World Production

World production statistics represent the world mine production of natural iron oxide pigments. Data are not available for 1900–75. Data for 1976–2003 are reported in the MYB. Because unreported output from many countries is thought to be substantial, world production totals for 2004 to the most recent year are not reported.

References

U.S. Bureau of Mines, 1940–96, Minerals Yearbook, 1939–94.

U.S. Geological Survey, 1901–15, Mineral Resources of the United States, 1900–14.

U.S. Geological Survey, 1995–present, Minerals Yearbook, v. I. (Available via <http://minerals.usgs.gov/minerals/>.)

Recommended Citation Format:

U.S. Geological Survey, [year of last update, e.g., 2005], [Mineral commodity, e.g., Gold] statistics, *in* Kelly, T.D., and Matos, G.R., comps., Historical statistics for mineral and material commodities in the United States: U.S. Geological Survey Data Series 140, accessed [date], at <http://pubs.usgs.gov/ds/2005/140/>.

For more information, please contact:

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