## TITANIUM DIOXIDE PIGMENT STATISTICS ${ }^{1}$

U.S. GEOLOGICAL SURVEY
[All values are in metric tons ( $\mathbf{t}$ ) titanium dioxide pigment unless otherwise noted]
Last modification: November 26, 2007

| Year | Production | Shipments | Imports | Exports | Stocks | Apparent consumption | $\begin{array}{c\|} \hline \text { Unit value } \\ (\$ / t) \\ \hline \end{array}$ | $\begin{aligned} & \hline \text { Unit value } \\ & (98 \$ / t) \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1939 |  |  |  | 3,920 |  |  | 178 | 2,090 |
| 1940 |  |  |  | 4,500 |  |  | 193 | 2,240 |
| 1941 |  |  |  | 7,100 |  |  | 227 | 2,510 |
| 1942 |  |  |  | 8,050 |  |  | 212 | 2,120 |
| 1943 |  |  |  | 8,860 |  |  | 207 | 1,950 |
| 1944 |  |  |  | 9,910 |  |  | 187 | 1,730 |
| 1945 |  |  |  | 11,600 |  |  | 199 | 1,800 |
| 1946 |  |  |  | 14,800 |  |  | 209 | 1,750 |
| 1947 |  |  |  | 19,200 |  |  | 270 | 1,970 |
| 1948 |  |  |  | 24,300 |  |  | 293 | 1,980 |
| 1949 |  |  |  | 26,900 |  |  | 303 | 2,070 |
| 1950 | 419,000 | 420,000 |  | 29,600 |  | 389,000 | 297 | 2,010 |
| 1951 | 441,000 | 419,000 |  | 35,600 |  | 405,000 | 373 | 2,340 |
| 1952 | 423,000 | 372,000 |  | 32,300 |  | 391,000 | 331 | 2,030 |
| 1953 | 446,000 | 440,000 |  | 36,100 |  | 410,000 | 325 | 1,980 |
| 1954 | 458,000 | 461,000 |  | 57,900 |  | 400,000 | 402 | 2,440 |
| 1955 | 505,000 | 522,000 |  | 49,300 |  | 456,000 | 372 | 2,260 |
| 1956 | 592,000 | 564,000 | 508 | 58,800 |  | 534,000 | 428 | 2,560 |
| 1957 | 553,000 | 484,000 | 36 | 48,000 |  | 505,000 | 410 | 2,380 |
| 1958 | 500,000 | 527,000 | 643 | 33,600 |  | 467,000 | 338 | 1,910 |
| 1959 | 612,000 | 583,000 | 2,600 | 32,900 |  | 582,000 | 321 | 1,800 |
| 1960 | 548,000 | 563,000 | 5,610 | 30,500 |  | 523,000 | 328 | 1,800 |
| 1961 | 583,000 | 570,000 | 8,190 | 28,200 |  | 563,000 | 327 | 1,780 |
| 1962 | 609,000 | 598,000 | 15,100 | 26,400 |  | 598,000 | 327 | 1,770 |
| 1963 | 600,000 | 610,000 | 22,900 | 24,200 |  | 599,000 | 332 | 1,770 |
| 1964 | 640,000 | 629,000 | 36,900 | 26,600 |  | 650,000 | 311 | 1,640 |
| 1965 | 655,000 | 651,000 | 45,000 | 24,400 |  | 676,000 | 297 | 1,540 |
| 1966 | 669,000 | 669,000 | 43,500 | 24,400 |  | 688,000 | 312 | 1,570 |
| 1967 | 658,000 | 650,000 | 42,400 | 23,500 |  | 677,000 | 306 | 1,490 |
| 1968 | 691,000 | 700,000 | 48,400 | 27,400 |  | 712,000 | 300 | 1,410 |
| 1969 | 730,000 | 719,000 |  | 22,200 |  | 708,000 | 338 | 1,500 |
| 1970 | 714,000 | 702,000 | 54,600 | 23,800 |  | 641,000 | 335 | 1,410 |
| 1971 | 733,000 | 740,000 | 38,900 | 24,300 |  | 667,000 | 386 | 1,550 |
| 1972 | 744,000 | 778,000 | 78,400 | 9,380 |  | 692,000 | 521 | 2,030 |
| 1973 | 835,000 | 845,000 | 54,800 | 18,800 |  | 767,000 | 744 | 2,730 |
| 1974 | 831,000 | 801,000 | 31,700 | 27,600 |  | 666,000 | 892 | 2,950 |
| 1975 | 632,000 | 604,000 | 23,500 | 14,300 | 97,000 | 495,000 | 844 | 2,560 |
| 1976 | 741,000 | 740,000 | 62,400 | 18,700 | 103,000 | 625,000 | 869 | 2,490 |
| 1977 | 709,000 | 719,000 | 104,000 | 14,800 |  | 647,000 | 852 | 2,290 |
| 1978 | 717,000 | 648,000 | 107,000 | 35,700 |  | 662,000 | 959 | 2,400 |
| 1979 | 754,000 | 687,000 | 95,200 | 46,700 | 49,000 | 692,000 | 1,050 | 2,350 |
| 1980 | 660,000 | 664,000 | 88,500 | 41,500 | 75,500 | 623,000 | 1,200 | 2,370 |
| 1981 | 691,000 | 706,000 | 113,000 | 56,600 | 92,700 | 673,000 | 1,340 | 2,410 |
| 1982 | 598,000 | 641,000 | 126,000 | 67,200 | 78,900 | 628,000 | 1,450 | 2,440 |
| 1983 | 690,000 | 738,000 | 159,000 | 84,800 | 70,300 | 718,000 | 1,290 | 2,110 |
| 1984 | 757,000 | 821,000 | 176,000 | 98,200 | 75,800 | 775,000 | 1,350 | 2,110 |
| 1985 | 783,000 | 862,000 | 178,000 | 93,600 | 51,500 | 831,000 | 1,480 | 2,240 |
| 1986 | 844,000 | 984,000 | 184,000 | 105,000 | 69,800 | 845,000 | 1,550 | 2,310 |
| 1987 | 879,000 | 1,040,000 | 174,000 | 121,000 | 47,500 | 904,000 | 1,630 | 2,340 |
| 1988 | 927,000 | 1,100,000 | 185,000 | 123,000 | 49,700 | 921,000 | 1,780 | 2,450 |
| 1989 | 1,010,000 | 1,130,000 | 166,000 | 212,000 | 63,200 | 885,000 | 2,090 | 2,740 |
| 1990 | 979,000 | 1,120,000 | 148,000 | 202,000 | 61,700 | 925,000 | 2,150 | 2,690 |

## TITANIUM DIOXIDE PIGMENT STATISTICS ${ }^{1}$

## U.S. GEOLOGICAL SURVEY

[All values are in metric tons (t) titanium dioxide pigment unless otherwise noted]
Last modification: November 26, 2007

| Year | Production | Shipments | Imports | Exports | Stocks | Apparent <br> consumption | Unit value <br> $\mathbf{( \$ / t )}$ | Unit value <br> $\mathbf{( 9 8 \$ / t )}$ |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 1991 | 992,000 | $1,120,000$ | 166,000 | 212,000 | 72,100 | 936,000 | 2,120 | 2,540 |
| 1992 | $1,140,000$ | $1,260,000$ | 169,000 | 270,000 | 108,000 | $1,000,000$ | 2,010 | 2,330 |
| 1993 | $1,160,000$ | $1,290,000$ | 172,000 | 290,000 | 123,000 | $1,030,000$ | 1,920 | 2,170 |
| 1994 | $1,250,000$ | $1,370,000$ | 176,000 | 352,000 | 106,000 | $1,110,000$ | 1,850 | 2,040 |
| 1995 | $1,250,000$ | $1,330,000$ | 183,000 | 342,000 | 120,000 | $1,080,000$ | 1,910 | 2,040 |
| 1996 | $1,230,000$ | $1,330,000$ | 167,000 | 332,000 | 107,000 | $1,080,000$ | 1,890 | 1,970 |
| 1997 | $1,340,000$ | $1,360,000$ | 194,000 | 405,000 | 108,000 | $1,130,000$ | 1,760 | 1,790 |
| 1998 | $1,330,000$ | $1,380,000$ | 200,000 | 398,000 | 96,900 | $1,140,000$ | 1,840 | 1,840 |
| 1999 | $1,350,000$ | $1,430,000$ | 225,000 | 384,000 | 137,000 | $1,160,000$ | 1,890 | 1,850 |
| 2000 | $1,400,000$ | $1,470,000$ | 218,000 | 464,000 | 141,000 | $1,150,000$ | 1,880 | 1,780 |
| 2001 | $1,330,000$ | $1,370,000$ | 209,000 | 415,000 | 159,000 | $1,100,000$ | 1,890 | 1,740 |
| 2002 | $1,410,000$ | $1,530,000$ | 231,000 | 540,000 | 137,000 | $1,160,000$ | 1,800 | 1,630 |
| 2003 | $1,420,000$ | $1,350,000$ | 241,000 | 584,000 | 156,000 | $1,070,000$ | 1,830 | 1,620 |
| 2004 | $1,540,000$ | $1,700,000$ | 264,000 | 635,000 |  | $1,170,000$ | 1,780 | 1,530 |
| 2005 | $1,310,000$ | $1,420,000$ | 341,000 | 524,000 |  | $1,130,000$ | 2,180 | 1,820 |
| 2006 | $1,400,000$ | $1,400,000$ | 288,000 | 581,000 |  | $1,110,000$ | 2,150 | 1,740 |

${ }^{\mathbf{1}}$ Compiled by D.A. Buckingham and J. Gambogi.
Data are calculated, estimated, or reported. See notes for more information.

## Titanium Dioxide Pigment Worksheet Notes

## Data Sources

Sources for the titanium dioxide $\left(\mathrm{TiO}_{2}\right)$ pigment worksheet are the mineral statistics publications of the U.S. Bureau of Mines and the U.S. Geological Survey-Minerals Yearbook (MYB). In addition, some data are from the U.S. Census Bureau (USCB). The years of publication and corresponding years of data coverage are listed in the References section below. Blank cells in the worksheet indicate that data were not available.

## Production

Production data are reported in gross weight $\mathrm{TiO}_{2}$ pigment. Data are not available prior to 1950. Data for the years 1950-79 are estimated based on USCB production data reported in $\mathrm{TiO}_{2}$ content. Data for the years 1980-2006 are from the MYB.

## Shipments

Shipments data are reported in gross weight $\mathrm{TiO}_{2}$ pigment. Data are not available prior to 1950. Data for the years 1950-79 are estimated, based on USCB production data reported in $\mathrm{TiO}_{2}$ content. Data for the years 1980-2006 are from the MYB.

## Imports

Import data are reported in gross weight $\mathrm{TiO}_{2}$ pigment. Data are not available prior to 1956 and for the year 1969. Data are from the MYB.

## Exports

Export data are reported in gross weight $\mathrm{TiO}_{2}$ pigment. Data are not available prior to 1939. Data are from the MYB.

## Stocks

Data are total industry stocks, reported in gross weight $\mathrm{TiO}_{2}$ pigment. Data are not available prior to 1967. Data for the years 196778 are estimated, based on USCB production data reported in $\mathrm{TiO}_{2}$ content. Data for the years 1979-2003 are from the MYB. Data for 2004-06 are not available.

## Apparent Consumption

Consumption data are reported in gross weight $\mathrm{TiO}_{2}$ pigment. Data are insufficient to permit an estimation of apparent consumption prior to the year 1950. Apparent consumption data are estimated for the years 1950-69 using the following equation:
APPARENT CONSUMPTION = PRODUCTION + IMPORTS - EXPORTS.

Apparent consumption data, for the years 1970-2006 using the following equation:

$$
\text { APPARENT CONSUMPTION = PRODUCTION + IMPORTS - EXPORTS } \pm \text { (STOCK CHANGES). }
$$

Data for 2004 excludes stock changes. Data are from the MYB.

## Unit Value (\$/t)

Unit value is defined as the value of 1 metric ton ( t ) gross weight apparent consumption of $\mathrm{TiO}_{2}$ pigment. For the years 1939-77, titanium pigment unit value data are based on the exports value data. For the years 1978-2006, $\mathrm{TiO}_{2}$ pigment unit value data are based on the shipments value data. Data are from the MYB.

## 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.

## References

U.S. Bureau of Mines, 1934-96, Minerals Yearbook, 1932-94.
U.S. Geological Survey, 1997-2007, Minerals Yearbook, v. I, 1995-2006.

## 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, available online at http://pubs.usgs.gov/ds/2005/140/. (Accessed [date].)

## For more information, please contact:

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