## TITANIUM SPONGE STATISTICS ${ }^{1}$

U.S. GEOLOGICAL SURVEY
[All values are in metric tons (t) titanium sponge unless otherwise noted]
Last modification: November 26, 2007

| Year | Production | Imports | Exports | Industry stocks | Government stocks | Government shipments | $\begin{array}{\|c\|} \hline \text { Apparent } \\ \text { consumption } \end{array}$ | Unit value $(\$ / \mathbf{t})$ | Unit value <br> $(98 \$ / t)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1941 |  |  |  |  |  |  |  | 11,600 | 129,000 |
| 1942 |  |  |  |  |  |  |  | 11,600 | 116,000 |
| 1943 |  |  |  |  |  |  |  | 11,600 | 109,000 |
| 1944 |  |  |  |  |  |  |  | 11,600 | 107,000 |
| 1945 |  |  |  |  |  |  |  | 11,600 | 105,000 |
| 1946 |  |  |  |  |  |  |  | 11,600 | 97,000 |
| 1947 |  |  |  |  |  |  |  | 14,300 | 105,000 |
| 1948 | 9 |  |  |  |  |  | 9 | 12,100 | 81,800 |
| 1949 | 23 |  |  |  |  |  | 23 | 11,000 | 75,300 |
| 1950 | 68 |  |  |  |  |  | 68 | 11,000 | 74,400 |
| 1951 | 449 |  |  |  |  |  | 450 | 11,000 | 69,000 |
| 1952 | 975 |  |  |  | 275 |  | 980 | 11,000 | 67,700 |
| 1953 | 2,030 |  |  |  | 27 |  | 2,000 | 11,000 | 67,200 |
| 1954 | 4,870 | 175 |  |  | 2,630 |  | 2,270 | 9,920 | 60,100 |
| 1955 | 6,710 | 514 |  | 775 | 6,030 |  | 3,610 | 7,610 | 46,300 |
| 1956 | 13,200 | 1,860 |  | 2,720 | 8,450 |  | 9,920 | 6,060 | 36,300 |
| 1957 | 15,600 | 3,200 |  | 2,540 | 18,000 |  | 7,460 | 4,960 | 28,800 |
| 1958 | 4,160 | 1,880 |  | 907 | 20,400 |  | 3,760 | 4,010 | 22,600 |
| 1959 | 3,540 | 1,420 |  | 998 | 20,400 |  | 3,590 | 3,530 | 19,800 |
| 1960 | 4,820 | 2,020 |  | 907 | 20,400 |  | 4,980 | 3,530 | 19,400 |
| 1961 | 6,100 | 2,260 |  | 1,090 | 20,400 |  | 6,340 | 3,530 | 19,200 |
| 1962 | 6,110 | 839 |  | 1,180 | 20,400 |  | 6,470 | 3,530 | 19,100 |
| 1963 | 7,150 | 1,330 |  | 998 | 20,300 |  | 8,040 | 3,530 | 18,800 |
| 1964 |  | 1,850 |  | 726 | 28,400 |  | 10,100 | 2,910 | 15,300 |
| 1965 |  | 2,840 |  | 816 | 28,400 |  | 11,000 | 2,910 | 15,100 |
| 1966 |  | 4,740 |  | 726 | 27,700 |  | 17,900 | 2,910 | 14,600 |
| 1967 |  | 6,510 |  | 2,630 | 27,700 |  | 18,200 | 2,910 | 14,200 |
| 1968 |  | 3,040 |  | 2,360 | 27,700 |  | 12,900 | 2,910 | 13,600 |
| 1969 |  | 5,210 |  | 1,730 | 27,900 |  | 18,300 | 2,910 | 12,900 |
| 1970 |  | 5,380 |  | 2,280 | 31,800 |  | 14,900 | 2,910 | 12,200 |
| 1971 | 9,050 | 2,540 |  | 2,470 | 31,800 |  | 11,000 | 2,910 | 11,700 |
| 1972 | 9,150 | 3,460 |  | 1,650 | 31,800 |  | 11,900 | 2,910 | 11,300 |
| 1973 | 13,700 | 4,690 |  | 1,760 | 29,500 |  | 18,300 | 3,130 | 11,500 |
| 1974 | 16,100 | 6,320 |  | 3,470 | 28,200 |  | 24,400 | 4,960 | 16,400 |
| 1975 | 15,300 | 3,800 |  | 5,140 | 28,800 |  | 16,000 | 5,950 | 18,000 |
| 1976 | 9,050 | 1,610 |  | 3,280 | 29,300 |  | 12,100 | 5,950 | 17,000 |
| 1977 |  | 2,170 |  | 3,220 | 29,300 |  | 14,700 | 6,570 | 17,700 |
| 1978 |  | 1,340 | 88 | 2,400 | 29,300 |  | 18,000 | 7,230 | 18,100 |
| 1979 | 19,100 | 2,260 | 163 | 1,950 | 29,300 |  | 21,700 | 8,770 | 19,700 |
| 1980 | 20,400 | 4,330 | 103 | 2,160 | 29,300 |  | 24,400 | 15,500 | 30,700 |
| 1981 | 24,000 | 5,890 | 53 | 3,380 | 29,300 |  | 28,700 | 16,900 | 30,300 |
| 1982 | 14,200 | 1,230 | 33 | 3,040 | 29,300 |  | 15,700 | 12,200 | 20,600 |
| 1983 | 12,700 | 1,090 | 35 | 2,840 | 29,300 |  | 14,600 | 12,600 | 20,600 |
| 1984 | 22,100 | 2,420 | 155 | 2,860 | 29,500 |  | 22,400 | 9,110 | 14,300 |
| 1985 | 21,100 | 1,560 | 46 | 4,310 | 33,400 |  | 19,600 | 8,270 | 12,500 |
| 1986 | 15,800 | 1,480 | 63 | 2,890 | 33,400 |  | 17,700 | 9,040 | 13,400 |
| 1987 | 17,800 | 924 | 85 | 2,270 | 33,400 |  | 18,000 | 9,040 | 13,000 |
| 1988 | 22,300 | 1,360 | 80 | 2,440 | 33,400 |  | 21,000 | 9,920 | 13,700 |
| 1989 | 25,200 | 903 | 136 | 2,110 | 33,400 |  | 24,900 | 11,100 | 14,600 |
| 1990 | 24,700 | 1,090 | 331 | 3,270 | 33,400 |  | 23,200 | 10,500 | 13,100 |
| 1991 | 13,400 | 612 | 418 | 2,850 | 33,400 |  | 13,400 | 10,500 | 12,600 |
| 1992 |  | 684 | 178 | 1,930 | 33,400 |  | 14,200 | 8,270 | 9,610 |

## TITANIUM SPONGE STATISTICS ${ }^{1}$

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

| Year | Production | Imports | Exports | Industry <br> stocks | Government <br> stocks | Government <br> shipments | Apparent <br> consumption | Unit value <br> $\mathbf{( \$ / t )}$ | Unit value <br> $\mathbf{( 9 8 \$ / t )}$ |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 1993 |  | 2,160 | 104 | 2,910 | 33,400 |  | 15,100 | 8,270 | 9,330 |
| 1994 |  | 6,470 | 126 | 5,570 | 33,400 |  | 18,800 | 9,660 | 10,600 |
| 1995 |  | 7,560 | 225 | 5,270 | 33,400 |  | 21,600 | 9,660 | 10,300 |
| 1996 |  | 10,100 | 528 | 4,390 | 33,200 |  | 28,400 | 9,660 | 10,000 |
| 1997 |  | 16,100 | 976 | 7,020 | 33,100 | 227 | 31,300 | 9,660 | 9,810 |
| 1998 |  | 10,900 | 348 | 10,600 | 31,700 | 1,380 | 28,200 | 9,660 | 9,660 |
| 1999 |  | 6,000 | 807 | 7,970 | 31,200 | 515 | 18,100 | 9,370 | 9,170 |
| 2000 |  | 7,240 | 1,930 | 5,010 | 26,300 | 4,870 | 18,200 | 8,710 | 8,240 |
| 2001 |  | 13,300 | 2,170 | 6,340 | 18,600 | 7,640 | 26,200 | 7,890 | 7,260 |
| 2002 |  | 10,700 | 2,810 | 11,700 | 13,200 | 5,400 | 17,300 | 8,020 | 7,270 |
| 2003 |  | 9,590 | 4,990 | 8,180 | 6,420 | 6,820 | 17,100 | 7,360 | 6,520 |
| 2004 |  | 11,900 | 2,410 | 7,660 | 2,510 | 3,940 | 21,200 | 11,000 | 9,490 |
| 2005 |  | 15,800 | 1,910 | 4,330 |  | 2,510 | 26,100 | 17,300 | 20,700 |
| 2006 |  | 24,400 | 1,380 | 8,240 |  |  |  | 28,400 | 20,600 |

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

## TITANIUM SCRAP STATISTICS ${ }^{1}$

U.S. GEOLOGICAL SURVEY
[All values are in metric tons (t) titanium scrap unless otherwise noted]
Last modification: November 26, 2007

| Year | Imports | Exports | Industry stocks | Apparent consumption | Unit value $(\$ / \mathbf{t})$ | Unit value (98\$/t) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1955 |  |  |  | 1,230 |  |  |
| 1956 |  |  |  | 1,840 |  |  |
| 1957 |  |  |  | 1,580 |  |  |
| 1958 |  |  |  | 1,210 |  |  |
| 1959 |  |  |  | 1,530 |  |  |
| 1960 |  |  |  | 2,290 |  |  |
| 1961 |  |  |  | 2,270 |  |  |
| 1962 |  |  |  | 2,870 |  |  |
| 1963 |  |  |  | 2,120 |  |  |
| 1964 |  |  |  | 2,610 |  |  |
| 1965 |  |  |  | 3,000 |  |  |
| 1966 |  |  |  | 4,410 |  |  |
| 1967 |  |  |  | 5,280 |  |  |
| 1968 |  |  |  | 4,270 |  |  |
| 1969 |  |  |  | 6,860 |  |  |
| 1970 | 555 |  |  | 6,570 |  |  |
| 1971 | 200 |  |  | 5,580 |  |  |
| 1972 | 381 |  | 3,900 | 7,080 |  |  |
| 1973 | 1,330 |  | 4,030 | 9,110 |  |  |
| 1974 | 2,610 |  | 5,010 | 9,620 |  |  |
| 1975 | 795 |  | 5,560 | 7,540 |  |  |
| 1976 | 1,690 |  | 5,230 | 8,360 | 1,640 | 4,700 |
| 1977 | 4,080 |  | 6,140 | 9,880 | 1,610 | 4,330 |
| 1978 | 3,440 | 4,950 | 5,850 | 11,200 | 2,370 | 5,930 |
| 1979 | 5,570 | 4,510 | 6,110 | 12,700 | 4,000 | 8,980 |
| 1980 | 3,750 | 2,990 | 7,840 | 14,000 | 7,580 | 15,000 |
| 1981 | 3,440 | 2,980 | 9,510 | 13,400 | 5,700 | 10,200 |
| 1982 | 1,160 | 3,890 | 10,000 | 7,740 | 3,150 | 5,320 |
| 1983 | 1,430 | 4,880 | 11,500 | 9,500 | 3,130 | 5,120 |
| 1984 | 1,680 | 3,730 | 11,300 | 14,100 | 3,400 | 5,330 |
| 1985 | 1,940 | 6,130 | 10,600 | 13,400 | 3,140 | 4,760 |
| 1986 | 2,160 | 5,810 | 10,500 | 15,000 | 2,750 | 4,090 |
| 1987 | 2,220 | 5,080 | 9,210 | 16,400 | 2,970 | 4,260 |
| 1988 | 4,240 | 5,990 | 8,600 | 18,100 | 5,400 | 7,440 |
| 1989 | 5,310 | 5,470 | 8,030 | 17,600 | 7,890 | 10,400 |
| 1990 | 3,040 | 5,490 | 8,540 | 15,000 | 5,780 | 7,210 |
| 1991 | 2,670 | 4,570 | 7,910 | 11,400 | 3,190 | 3,820 |
| 1992 | 6,260 | 2,770 | 8,890 | 14,800 | 3,110 | 3,610 |
| 1993 | 5,510 | 3,890 | 8,130 | 15,300 | 3,280 | 3,700 |
| 1994 | 5,830 | 4,120 | 7,930 | 15,700 | 3,250 | 3,570 |
| 1995 | 11,100 | 3,420 | 9,430 | 20,500 | 3,910 | 4,180 |
| 1996 | 16,370 | 3,410 | 15,900 | 26,300 | 5,020 | 5,220 |
| 1997 | 10,650 | 5,500 | 15,200 | 26,300 | 4,610 | 4,680 |
| 1998 | 9,770 | 7,010 | 13,600 | 28,600 | 3,540 | 3,540 |
| 1999 | 6,870 | 8,130 | 9,450 | 21,900 | 2,850 | 2,790 |
| 2000 | 7,550 | 5,060 | 5,150 | 18,500 | 3,190 | 3,020 |
| 2001 | 11,600 | 7,500 | 4,920 | 17,000 | 3,520 | 3,270 |
| 2002 | 6,270 | 6,000 | 3,760 | 11,600 | 2,840 | 2,570 |
| 2003 | 5,550 | 5,320 | 4,320 | 14,300 | 3,550 | 3,140 |
| 2004 | 8,830 | 9,780 | 7,030 | 18,500 | 6,070 | 5,240 |
| 2005 | 12,400 | 20,600 | 6,900 | 25,800 | 13,100 | 15,700 |

## TITANIUM SCRAP STATISTICS ${ }^{1}$

U.S. GEOLOGICAL SURVEY
[All values are in metric tons (t) titanium scrap unless otherwise noted]
Last modification: November 26, 2007

| Year | Imports | Exports | Industry <br> stocks | Apparent <br> consumption | Unit <br> value <br> $\mathbf{( \$ / t )}$ | Unit value <br> $\mathbf{( 9 8 \$ / \mathbf { t } )}$ |
| :---: | :---: | :---: | ---: | ---: | ---: | :---: |
| 2006 | 12,800 | 10,800 | 8,940 | 25,000 | 15,600 | 19,300 |

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

## Titanium Metal Worksheet Notes

## Data Sources

Sources for the titanium metal worksheet are the mineral statistics publications of the U.S. Bureau of Mines and the U.S. Geological Survey-Minerals Yearbook (MYB), and the Mineral Commodity Summaries (MCS). Other data sources include Metal Prices in the United States through 1998 (MP98), compiled and published by the U.S. Geological Survey in 1999. 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 either were not available or were withheld because they were proprietary.

## Titanium Sponge

## Production

Data represent titanium sponge metal production. Data are not available for the years prior to 1948 and are withheld for the years 1964-70, 1977-78, and 1992-2006. Data are from the MYB.

## Imports

Data represent imports of titanium sponge metal. Data are not available prior to 1954. Data are from the MYB.

## Exports

Data represent exports of titanium sponge metal. Data are not available prior to 1978. Data are from the MYB.

## Stocks

Data represent yearend industry stocks of titanium sponge metal. Data are from the MYB.

## Government Stocks

Data represent total yearend inventory of government stocks of titanium sponge metal. Data are not available prior to 1952. Data are from the MYB.

## Government Shipments

Data represent shipments of titanium sponge metal from government stocks. Data are not available prior to 1997. Data are from the MCS.

## Apparent Consumption

Apparent consumption data are not published. Consumption data are not available prior to 1948. Data for the years 1948-53 are estimated using titanium sponge metal production. Titanium sponge metal apparent consumption data for the years 1954-2006 are estimated using the "Reported Sponge Metal Consumption" data published in the MYB.

## Unit Value (\$/t)

Unit value is defined as the value of 1 metric ton ( $t$ ) apparent consumption of titanium sponge metal. Unit value data were estimated with the yearend market price for titanium sponge metal for the years 1941-2006. Data are from the MYB and MP98.

## 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.

## Titanium Scrap

## Imports

Data represent imports of titanium scrap and waste. Data are not available prior to 1970. Data are from the MYB.

## Exports

Data represent exports of titanium scrap and waste. Data are not available prior to 1978. Data are from MYB.

## Stocks

Data represent yearend titanium scrap industry stocks. Data are from the MYB.

## Apparent Consumption

Apparent consumption data are not published. Consumption data are not available prior to 1955. The "Reported Scrap Consumption" data as published in the MYB are used to estimate titanium scrap metal apparent consumption. Data represent scrap consumed to produce titanium metal products.

## Unit Value (\$/t)

Unit value is defined as the value of 1 metric ton ( $t$ ) apparent consumption of titanium scrap. Unit value data were estimated with the scrap import value. 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, 1950-96, Minerals Yearbook, 1948-94.
U.S. Geological Survey, 1997-2007, Mineral Commodity Summaries, 1997-2007.
U.S. Geological Survey, 1997-2007, Minerals Yearbook, v. I, 1995-2006.
U.S. Geological Survey, 1999, Metal Prices in the United States through 1998.
U.S. Geological Survey and U.S. Bureau of Mines, 1996, Mineral Commodity Summaries, 1996.

## 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].)

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