

# Mineral Industry Surveys

---

**For information, contact:**

Kim B. Shedd, Tungsten Commodity Specialist  
U.S. Geological Survey  
989 National Center  
Reston, VA 20192  
Telephone: (703) 648-4974, Fax: (703) 648-7757  
E-mail: kshedd@usgs.gov

Amy C. Tolcin (Data)  
Telephone: (703) 648-7978  
Fax: (703) 648-7975  
E-mail: atolcin@usgs.gov

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

## TUNGSTEN IN OCTOBER 2005

U.S. net production of intermediate tungsten products, including metal powder and tungsten carbide powder, was 8% higher during January through October 2005 than net production during the same period in 2004, according to the U.S. Geological Survey.

Total U.S. reported consumption of ferrotungsten, tungsten metal powder, tungsten carbide powder, tungsten scrap, and other tungsten materials during January through October 2005 was slightly higher than that consumed during the same period in 2004. These materials were used to make alloys, cemented carbides, mill products, catalysts, and pigments.

Data for U.S. imports and exports for January through September 2005 are published in this issue.

### Update

Prices for tungsten ore concentrates, in dollars per metric ton unit from Metal Bulletin, are listed below. Prices in dollars per short ton unit were converted from metric ton unit prices and rounded to the nearest dollar. These prices represent combined prices for wolframite and scheelite ore concentrates with a minimum tungsten trioxide (WO<sub>3</sub>) content of 65%. The prices for November 1-30, 2005, are as follows:

Low—\$130/metric ton unit WO<sub>3</sub> (\$118/short ton unit WO<sub>3</sub>)

High—\$160/metric ton unit WO<sub>3</sub> (\$145/short ton unit WO<sub>3</sub>)

TABLE 1  
U.S. SALIENT TUNGSTEN STATISTICS<sup>1</sup>

(Metric tons, tungsten content)

Period	Concentrate				Reported scrap consumption	Intermediate products			
	Reported consump- tion	Imports for consumption	Stocks, end of period Industry <sup>2</sup>	U.S. Gov- ernment <sup>3</sup>		Net production <sup>4</sup>	Reported consump- tion <sup>5</sup>	Stocks, end of period Industry <sup>6</sup>	U.S. Gov- ernment <sup>3</sup>
2004:									
October	W	218	W	28,400	325	613	948	835	724
November	W	227	W	28,400	275	525	865	794	685
December	W	166	W	28,400	346	534	878	787	685
January-December	W	2,310	XX	XX	3,890	7,400	11,000	XX	XX
2005:									
January	W	171	W	28,400	416	717	961	862	685
February	W	202	W	28,400	415	537	876	757	685
March	W	193	W	27,300	291	707	834	699	685
April	W	230	W	27,200	312	637	907	715	611
May	W	118	W	27,200	433	727	1,030	774	564
June	W	140	W	27,200	376	742	925	770	564
July	W	122	W	27,100	313	542	829	747	564
August	W	135	W	26,700	506	746	1,040	834	546
September	W	73	W	26,700	433	742	1,040	918	518
October	W	NA	W	26,500	410	754	1,040	960	403
Total	W	NA	XX	XX	3,900	6,850	9,490	XX	XX

NA Not available. W Withheld to avoid disclosing company proprietary data. XX Not applicable.

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

<sup>2</sup>Reported by consumers.

<sup>3</sup>Data from Defense National Stockpile Center. Includes material committed for sale pending shipment.

<sup>4</sup>Net production of tungsten metal powder and tungsten carbide powder.

<sup>5</sup>Includes estimates and scrap.

<sup>6</sup>Data for tungsten metal powder and tungsten carbide powder reported by producers.

TABLE 2  
U.S. PRODUCTION, CONSUMPTION, AND STOCKS OF  
AMMONIUM PARATUNGSTATE, BY MONTH<sup>1</sup>

(Metric tons, tungsten content)

Period	Production	Consumption	Stocks, end of period <sup>2</sup>
2004:			
October	W	786	35
November	W	658	37
December	W	587	W
January-December	W	8,790	XX
2005:			
January	W	953	W
February	W	929	W
March	W	979	W
April	W	828	59
May	W	814	110
June	W	864	W
July	W	652	103
August	W	810	118
September	W	765	W
October	W	756	219
Total	W	8,350	XX

W Withheld to avoid disclosing company proprietary data. XX Not applicable.

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

<sup>2</sup>Producers and consumers.

TABLE 3  
U.S. PRODUCTION AND STOCKS OF TUNGSTEN PRODUCTS<sup>1</sup>

(Metric tons, tungsten content)

Product <sup>3</sup>	Net production <sup>2</sup>				Stocks at end of period		
	2005				2005		
	2004	September	October	Year to date	2004	September	October
Metal powder	3,020	279	323	2,850	438	440	461
Tungsten carbide powder	4,370	463	431	4,010	349	477	499
Total	7,400	742	754	6,850	787	918 <sup>r</sup>	960

<sup>r</sup>Revised.

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

<sup>2</sup>Receipts plus gross production less quantity used to make other products in table.

<sup>3</sup>Data for cast and crystalline tungsten carbide powder and tungsten chemicals are withheld to avoid disclosing company proprietary data; not included in "Total."

TABLE 4  
U.S. REPORTED CONSUMPTION OF TUNGSTEN, BY END USE<sup>1,2,3</sup>

(Metric tons, tungsten content)

End use	2005		
	September	October	Year to date
Steels	19	19	200
Superalloys	W	W	W
Other alloys (excludes steels and superalloys) <sup>4</sup>	W	W	W
Cemented carbides <sup>5</sup>	506	501	5,030
Mill products made from metal powder	W	W	W
Chemical uses	W	W	W
Miscellaneous and unspecified	517 <sup>r</sup>	522	4,270
Total	1,040	1,040	9,490

<sup>r</sup>Revised. W Withheld to avoid disclosing company proprietary data; included with Miscellaneous and unspecified.

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

<sup>2</sup>Does not include materials used in making primary tungsten products.

<sup>3</sup>Includes estimates.

<sup>4</sup>Includes welding and hard-facing rods and materials, wear- and corrosion-resistant alloys, and nonferrous alloys.

<sup>5</sup>Includes diamond tool matrices, cemented and sintered carbides, and cast carbide dies or parts.

TABLE 5  
U.S. REPORTED CONSUMPTION AND CONSUMER STOCKS OF TUNGSTEN MATERIALS<sup>1</sup>

(Metric tons, tungsten content)

Period	Ferro- tungsten	Tungsten metal powder	Tungsten carbide powder	Tungsten scrap	Other tungsten materials <sup>2</sup>	Total
<b>Consumption:</b>						
2004:						
October	20	W	505	W	6	948
November	20	W	506	W	6	865
December	19	W	508	W	6	878
January-December	232	W	6,110	W	73	11,000
2005:						
January	20	W	507	W	6	961
February	19	W	517	W	6	876
March	20	W	511	W	6	834
April	20	W	511	W	6	907
May	20	W	505	W	6	1,030
June	20	W	516	W	6	925
July	19	W	506 <sup>r</sup>	W	6	829
August	19	W	515	W	6	1,040
September	19	W	515	W	6	1,040
October	19	W	510	W	6	1,040
Total	195	W	5,110	W	61	9,490
<b>Stocks:</b>						
2004:						
October	23	30	374	25	9	460
November	21	28	324	30	9	412
December	20	27	308	19	9	382
2005:						
January	27	28	346	20	9	430
February	26	27	347	16	9	424
March	44	25	348	20	9	446
April	22	28	349	24	9	431
May	20	27	358	26	9	439
June	27	28	364	27	9	455
July	26	28	366	19	9	447
August	25	32	353	19	9	437
September	24	29	364	19	9	446
October	23	26	369	19	9	446

<sup>r</sup>Revised. W Withheld to avoid disclosing company proprietary data; included in "Total."

<sup>1</sup>Includes estimates.

<sup>2</sup>Includes tungsten chemicals.

TABLE 6  
U.S. IMPORTS FOR CONSUMPTION OF TUNGSTEN, BY COUNTRY<sup>1</sup>

(Metric tons, tungsten content)

Period and country of origin	Ores and concentrates	Ammonium tungstates	Ferrotungsten	Metal powder	Tungsten carbide powder	Other <sup>2</sup>	Total	Total, year to date
2004	2,310	2,090	392	1,490	1,750	1,360	9,400	XX
2005:								
July	122	98	--	177	89	254	742	5,590
August	135	176	11	182	106	117	728	6,320
September:								
Australia	--	--	--	--	--	(3)	(3)	(3)
Austria	--	--	--	--	--	3	3	28
Belgium	--	--	--	(3)	--	1	1	16
Boliva	--	--	--	--	--	--	--	286
Brazil	--	--	--	(3)	--	--	(3)	28
Bulgaria	--	--	--	--	--	(3)	(3)	(3)
Canada	--	--	--	10	41	--	51	576
China	--	186	15	18	102	87	408	3,660
Congo (Kinshasa)	--	--	--	--	--	--	--	17
Costa Rica	--	--	--	--	--	(3)	(3)	(3)
Czech Republic	--	--	--	--	--	(3)	(3)	1
France	--	--	--	--	2	2	4	15
Germany	--	--	--	16	(3)	3	20	448
Hong Kong	--	--	--	--	--	1	1	105
Hungary	--	--	--	--	--	(3)	(3)	4
India	--	--	--	--	--	(3)	(3)	13
Ireland	--	--	--	--	--	--	--	2
Israel	--	--	--	20	13	(3)	33	401
Italy	--	--	--	--	--	--	--	(3)
Japan	--	--	--	(3)	(3)	2	2	52
Korea, Republic of	--	--	--	14	1	(3)	15	104
Liechtenstein	--	--	--	--	--	(3)	(3)	(3)
Luxembourg	--	--	--	--	--	--	--	(3)
Malaysia	--	--	--	--	--	--	--	(3)
Mexico	--	--	--	--	--	--	--	16
Mongolia	7	--	--	--	--	--	7	7
Netherlands	--	--	--	--	--	(3)	(3)	(3)
New Zealand	--	--	--	--	--	--	--	(3)
Peru	--	--	--	--	--	--	--	(3)
Poland	--	--	--	--	--	--	--	(3)
Portugal	52	--	--	--	--	--	52	578
Russia	--	--	--	--	--	72	72	338
Rwanda	15	--	--	--	--	--	15	130
Singapore	--	--	--	--	--	4	4	16
South Africa	--	--	--	--	--	3	3	12
Spain	--	--	--	--	--	(3)	(3)	1
Sweden	--	--	--	(3)	--	(3)	(3)	1
Switzerland	--	--	--	--	--	--	--	2
Taiwan	--	--	--	--	--	(3)	(3)	(3)
Thailand	--	--	--	--	--	--	--	130
Ukraine	--	--	--	--	--	--	--	(3)
United Kingdom	--	--	--	--	(3)	(3)	(3)	7
Vietnam	--	--	--	--	--	--	--	19
Total	73	186	15	79	160	179	693	7,010
Total, year to date	1,380	1,500	308	1,260	1,310	1,240	7,010	XX

XX Not applicable. -- Zero.

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

<sup>2</sup>Includes other unwrought tungsten, wrought tungsten, calcium and other tungstates, tungsten oxides, tungsten chlorides, other tungsten compounds, ash and residues containing mainly tungsten, and other mixtures of inorganic compounds containing tungsten. Tungsten content estimated in part.

<sup>3</sup>Less than ½ unit.

Note: Imports of waste and scrap in September 2005 totaled 89 metric tons, tungsten content, to give a year-to-date total of 1,590 metric tons, tungsten content.

Source: U.S. Census Bureau.

TABLE 7  
U.S. EXPORTS OF TUNGSTEN, BY COUNTRY<sup>1</sup>

(Metric tons, tungsten content)

Period and country of destination	Ores and concentrates <sup>2</sup>	Ammonium tungstates	Metal powder <sup>2</sup>	Tungsten carbide powder	Other <sup>3</sup>	Total	Total, year to date
2004	43	125	433	1,440	1,210	3,240	XX
2005:							
July	--	84	56	127	178	444	3,070
August	(4)	351	38	101	115	604	3,670
September:							
Argentina	--	--	--	--	--	--	1
Australia	--	--	(4)	2	(4)	2	32
Austria	--	--	--	--	--	--	5
Belgium	--	--	--	(4)	(4)	(4)	3
Brazil	--	--	--	--	1	1	29
Canada	--	--	6	7	8	20	644
Chile	--	--	--	--	(4)	(4)	2
China	1	--	(4)	--	(4)	2	392
Colombia	--	--	--	--	(4)	(4)	5
Czech Republic	--	--	--	--	1	1	39
Denmark	--	--	--	(4)	--	(4)	5
France	--	--	2	7	1	9	101
Germany	--	48	20	27	15	111	856
Hungary	--	--	--	--	1	1	16
Iceland	--	--	--	--	--	--	7
India	--	--	--	(4)	(4)	(4)	26
Indonesia	--	--	--	--	(4)	(4)	1
Ireland	--	--	--	1	1	2	12
Israel	--	--	(4)	--	(4)	1	33
Italy	--	--	3	(4)	(4)	3	32
Japan	--	--	1	(4)	14	14	176
Korea, Republic of	--	--	1	(4)	3	3	28
Luxembourg	--	--	--	(4)	--	(4)	1
Malaysia	--	--	--	(4)	7	7	19
Martinique	--	--	--	--	--	--	4
Mexico	--	--	(4)	(4)	5	5	80
Netherlands	7	--	(4)	--	--	8	36
Norway	--	--	--	--	(4)	(4)	2
Peru	--	--	(4)	(4)	--	(4)	4
Philippines	--	--	--	--	1	1	4
Russia	--	--	--	--	--	--	3
Saudi Arabia	--	--	--	--	(4)	(4)	1
Singapore	--	--	1	(4)	(4)	2	28
South Africa	--	--	(4)	30	--	31	94
Spain	--	--	(4)	(4)	(4)	(4)	47
Sweden	--	--	--	--	3	3	208
Switzerland	--	--	(4)	--	(4)	(4)	11
Taiwan	--	--	1	--	10	11	299
Thailand	--	--	--	--	--	--	3
Turkey	--	--	(4)	(4)	--	1	4
United Arab Emirates	--	--	--	--	--	--	1
United Kingdom	--	--	2	21	33	56	593
Venezuela	--	--	5	--	(4)	5	38
Yemen	--	--	--	--	--	--	41
Yugoslavia	--	--	--	(4)	--	(4)	5
Other	--	--	(4)	(4)	2	2	6
Total	8	48	42	97	106	302	3,980
Total, year to date	37	613	551	1,180	1,590	3,980	XX

XX Not applicable. -- Zero.

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

<sup>2</sup>Tungsten content estimated from reported gross weight.

<sup>3</sup>Includes unwrought tungsten, including bars and rods obtained simply by sintering, wrought tungsten, ferrotungsten, and other tungstates. Tungsten content estimated in part.

<sup>4</sup>Less than ½ unit.

Note: Estimated exports of waste and scrap in September 2005 totaled 16 metric tons, tungsten content, to give a year-to-date total of 621 metric tons, tungsten content.

Source: U.S. Census Bureau.