

# Mineral Industry Surveys

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**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

Heather A. Geissler (Data)  
Telephone: (703) 648-7978  
Fax: (703) 648-7975

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

## TUNGSTEN IN JANUARY 2002

January 2002 U.S. net production of tungsten metal powder and tungsten carbide powder produced from metal powder was approximately the same as the average monthly production during 2001, 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 in January 2002 was slightly lower than the average monthly consumption in 2001. These materials were used to make alloys, cemented carbides, mill products, catalysts, and pigments.

Data for U.S. imports and exports for January 2002 will be published in a subsequent issue.

**Note**

All data in this report have been rounded to no more than

three significant digits. Totals and percentages were calculated by using unrounded data.

**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 February 1 to 28, 2002, are as follows:

Low—\$28/metric ton unit WO<sub>3</sub> (\$25/short ton unit WO<sub>3</sub>)  
High—\$45/metric ton unit WO<sub>3</sub> (\$41/short ton unit WO<sub>3</sub>)

TABLE 1  
U.S. SALIENT TUNGSTEN STATISTICS 1/

(Metric tons, tungsten content)

Period	Concentrate				Intermediate products				
	Reported consumption	Imports for consumption	Stocks, end of period		Reported scrap consumption	Net production 4/	Reported consumption 5/	Stocks, end of period	
			Industry 2/	U.S. Gov-ernment 3/				Industry 6/	U.S. Gov-ernment 3/
2001: p/									
January	W	151	W	33,400	479	907	781 r/	W	2,050
February	W	112	W	33,200	483	838	727 r/	W	1,840
March	W	92	W	32,600	488	859	704 r/	W	1,740
April	W	179	W	32,500	594	985	735 r/	W	1,710
May	W	302	W	32,300	450	866	695 r/	1,030	1,610
June	W	288	W	32,300	477	904	650 r/	1,040	1,540
July	W	275	W	32,300	533	735	723 r/	909	1,490
August	W	247	W	32,100	499	788	654 r/	856	1,440
September	W	246	W	32,100	391	796	701 r/	818	1,410
October	W	389	W	NA	438	637	709 r/	709	NA
November	W	149	W	NA	361	744	702 r/	720	NA
December	W	253	W	NA	342	614 r/	601 r/	745 r/	NA
January-December	W	2,680	XX	XX	5,540	9,670 r/	8,380 r/	XX	XX
2002:									
January	W	NA	W	NA	395	789	722	729	NA

p/ Preliminary. r/ Revised. NA Not available. W Withheld to avoid disclosing company proprietary data. XX Not applicable.

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

2/ Reported by consumers.

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

4/ Net production of tungsten metal powder and tungsten carbide powder.

5/ Includes estimates and scrap.

6/ 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 1/

(Metric tons, tungsten content)

Period	Production	Consumption	Stocks, end of period 2/
2001: p/			
January	W	905	W
February	W	W	W
March	W	890	151
April	W	927	W
May	W	W	119
June	W	913	88
July	W	726	100
August	W	843	119
September	W	632	95
October	W	782	95
November	W	656	W
December	W	598	W
Total 3/	W	7,870	XX
2002:			
January	W	646	W

p/ Preliminary. W Withheld to avoid disclosing company proprietary data.

XX Not applicable.

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

2/ Producers and consumers.

3/ Does not include withheld data.

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

(Metric tons, tungsten content)

Product 3/	Net production 2/			Stocks at end of period	
	2002			2002	
	2001 r/ p/	January	Year to date	2001 r/ p/	January
Metal powder	5,280	460	460	375	334
Tungsten carbide powder (made from metal powder)	4,390	329	329	370	395
Total	9,670	789	789	745	729

p/ Preliminary. r/ Revised.

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

2/ Gross production less quantity used to make other products in table.

3/ 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 1/ 2/ 3/

(Metric tons, tungsten content)

End use	2001		2002
	December	Year to date p/	January
Steels	37	516	41
Superalloys	26	372	33
Other alloys (excludes steels and superalloys) 4/	W	W	W
Cemented carbides 5/	449 r/	5,770 r/	479
Mill products made from metal powder	W	W	W
Chemical uses	W	W	W
Miscellaneous and unspecified	89 r/	1,720 r/	169
Total	601 r/	8,380 r/	722

p/ Preliminary. r/ Revised. W Withheld to avoid disclosing company proprietary data; included with "Miscellaneous and unspecified."

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

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

3/ Includes estimates.

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

TABLE 5  
U.S. REPORTED CONSUMER STOCKS OF TUNGSTEN MATERIALS 1/

(Metric tons, tungsten content)

Period	Ferro- tungsten	Tungsten metal powder	Tungsten carbide powder	Tungsten scrap	Other tungsten materials 2/	Total
2001: p/						
January	28	20 r/	364 r/	43	11	467 r/
February	32	22 r/	377 r/	40	11	483 r/
March	26	17 r/	374 r/	34	11	462 r/
April	23	20 r/	376 r/	29	11	459 r/
May	27	21 r/	372 r/	29	11	461 r/
June	17	14	376 r/	36	11	455 r/
July	39	14	380 r/	30	11	475 r/
August	32	13	371 r/	37	11	463 r/
September	39	14	373 r/	30	11	466 r/
October	44	17	365 r/	32	11	470 r/
November	43	16	367 r/	37	11	474 r/
December	40	16	371 r/	34	11	473 r/
2002:						
January	42	16	375	27	11	470

p/ Preliminary. r/ Revised.

1/ Includes estimates.

2/ Includes tungsten chemicals.

3/ Data based on monthly reports.

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

(Metric tons, tungsten content)

Period and country of origin	Ores and concentrates	Ammonium tungstates	Ferro-tungsten	Metal powder	Tungsten carbide powder	Other 2/	Total	Total year to date
2000	2,370	2,270	470	593	1,000	2,480	9,190	XX
2001:								
October	389	185	13	112	85	97	882	8,160
November	149	186	--	25	65	317	742	8,910
December:								
Australia	--	--	--	--	--	(3/)	(3/)	(3/)
Austria	--	--	--	--	--	3	3	84
Belgium	--	--	--	--	--	(3/)	(3/)	11
Bolivia	102	--	--	--	--	--	102	610
Brazil	--	--	--	--	--	--	--	6
Canada	--	--	--	(3/)	16	--	16	424
China	85	302	30	46	12	116	591	6,170
Czech Republic	--	--	--	--	--	--	--	8
France	--	--	--	--	1	1	1	12
Germany	--	--	--	21	1	3	25	421
Hong Kong	--	--	--	--	--	(3/)	(3/)	273
Hungary	--	--	--	--	--	--	--	6
India	--	--	--	--	--	(3/)	(3/)	17
Ireland	--	--	--	--	--	--	--	(3/)
Israel	--	--	--	4	4	1	9	191
Italy	--	--	--	--	--	--	--	1
Japan	--	--	--	2	--	1	3	131
Korea, Republic of	--	--	--	10	--	(3/)	10	62
Luxembourg	--	--	--	--	--	--	--	16
Malaysia	--	--	--	--	--	(3/)	(3/)	(3/)
Mexico	--	--	--	--	--	--	--	2
Mongolia	12	--	--	--	--	--	12	62
Netherlands	--	--	--	(3/)	--	(3/)	(3/)	4
Pakistan	--	--	--	--	--	--	--	14
Peru	5	--	--	--	--	--	5	48
Portugal	49	--	--	--	--	--	49	488
Russia	--	--	--	--	--	(3/)	(3/)	416
Rwanda	--	--	--	--	--	--	--	12
Singapore	--	--	--	--	--	--	--	3
Spain	--	--	--	--	--	--	--	(3/)
Sweden	--	--	--	--	--	--	--	3
Switzerland	--	--	--	--	--	(3/)	(3/)	1
Taiwan	--	--	--	--	--	(3/)	(3/)	1
Thailand	--	--	--	--	--	--	--	40
Uganda	--	--	--	--	--	--	--	39
United Kingdom	--	--	--	20	(3/)	(3/)	20	181
Venezuela	--	--	--	--	--	--	--	(3/)
Total	253	302	30	103	34	126	848	9,750
Total, year to date	2,680	2,720	352	947	932	2,120	9,750	XX

XX Not applicable. -- Zero.

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

2/ 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.

3/ Less than 1/2 unit.

Note: Imports of waste and scrap in December 2001 totaled 144 metric tons, tungsten content, to give a year-to-date total of 1,077 tons, tungsten content.

Source: U.S. Census Bureau.

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

(Metric tons, tungsten content)

Period and country of destination	Ores and concentrates 2/	Ammonium tungstates	Metal powder 2/	Tungsten carbide powder	Other 3/	Total	Total year to date
2000	70	53	467	969	483	2,040	XX
2001:							
October	10	58	37	82	90	277	3,530
November	66	--	26	101	40	233	3,760
December:							
Australia	--	--	(4/)	9	(4/)	9	31
Austria	--	--	--	--	--	--	10
Belgium	--	--	--	--	(4/)	(4/)	18
Brazil	--	--	3	(4/)	(4/)	3	31
Canada	--	--	4	11	3	18	267
Chile	--	--	(4/)	--	--	(4/)	1
China	--	--	(4/)	--	(4/)	(4/)	19
Colombia	--	--	--	--	(4/)	(4/)	7
Czech Republic	--	--	--	--	--	--	51
Denmark	--	--	--	--	3	3	4
Ecuador	--	--	--	--	--	--	5
France	--	--	1	5	(4/)	6	159
Germany	--	21	15	20	4	60	971
Hong Kong	(4/)	--	(4/)	--	(4/)	(4/)	6
Hungary	--	--	--	--	3	3	17
India	--	--	(4/)	(4/)	1	2	25
Indonesia	--	--	--	--	(4/)	(4/)	4
Ireland	--	--	--	1	(4/)	1	5
Israel	--	--	2	--	(4/)	2	21
Italy	1	--	--	(4/)	1	2	17
Japan	--	--	1	(4/)	(4/)	1	88
Korea, Republic of	--	--	(4/)	4	(4/)	4	24
Malaysia	--	--	--	--	(4/)	(4/)	1
Mexico	--	--	--	--	2	2	68
Netherlands	7	--	8	--	171	186	739
Philippines	--	--	--	--	--	--	3
Russia	--	--	--	--	--	--	85
Singapore	--	--	(4/)	(4/)	(4/)	(4/)	9
South Africa	--	--	--	--	--	--	17
Spain	--	--	(4/)	--	1	1	25
Sweden	2	--	--	11	--	13	448
Switzerland	--	--	(4/)	--	(4/)	(4/)	13
Taiwan	--	--	1	(4/)	(4/)	1	22
Turkey	--	--	--	--	--	--	2
United Arab Emirates	--	--	--	--	--	--	1
United Kingdom	6	--	2	19	1	27	885
Other	--	--	1	--	(4/)	1	8
Total	15	21	38	81	192	347	4,110
Total, year to date	220	257	569	1,950	1,120	4,110	XX

XX Not applicable. -- Zero.

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

2/ Tungsten content estimated from reported gross weight.

3/ Includes wrought tungsten, ferrotungsten, and other tungstates. Tungsten content estimated in part.

4/ Less than 1/2 unit.

Note: Estimated exports of waste and scrap in December 2001 totaled 77 metric tons, tungsten content, to give a year-to-date estimated total of 972 tons, tungsten content.

Source: U.S. Census Bureau.