

Mineral Industry Surveys

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TUNGSTEN IN DECEMBER 2002

On the basis of preliminary data, U.S. net production of tungsten metal powder and tungsten carbide powder produced from metal powder in 2002 was 24% higher than that produced in 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 2002 was 20% higher than that consumed in 2001. These materials were used to make alloys, cemented carbides, mill products, catalysts, and pigments.

Data for U.S. imports and exports for December 2002 will be published in a subsequent 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 (WO₃) content of 65%. The prices for January 1-31, 2002, are as follows:

Low—\$32/metric ton unit WO₃ (\$29/short ton unit WO₃)
High—\$47/metric ton unit WO₃ (\$43/short ton unit WO₃)

Notice

The U.S. Geological Survey (USGS) will no longer print paper copies of the *Mineral Industry Surveys* for mailing list distribution after release of the December 2002 report. The report will continue to be available on the USGS Web site at URL: <http://minerals.usgs.gov/minerals>.

If you would like to receive e-mail notification for future issues of the *Mineral Industry Surveys*, instructions are provided at <http://minerals.usgs.gov/minerals/pubs/listservices.html>.

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. Government 3/				Industry 6/	U.S. Government 3/
2001:									
December	W	253	W	31,200 e/	350	573	684	699	1,120 e/
January-December	W	2,680	XX	XX	5,660	9,520	8,960	XX	XX
2002:									
January	W	207	W	NA	342	759	781	686	NA
February	W	79	W	NA	341	811	788	693	NA
March	W	212	W	NA	270	750	772	640	NA
April	W	292	W	NA	421	743	776	667	NA
May	W	292	W	NA	393	1,040	949	650	NA
June	W	439	W	31,200	351	1,080	924	662	1,100
July	W	362	W	30,400	346	947	949	654	1,020
August	W	418	W	30,500	230	1,120	951	737	987
September	W	341	W	30,100	242	1,130	970	750	981
October	W	341	W	30,100	258	1,140	965	765	975
November	W	509	W	30,100	238	1,100	976	752	948
December	W	NA	W	30,100	234	1,160	941	749	947
Total	W	NA	XX	XX	3,670	11,800	10,700	XX	XX

e/ Estimated. 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:			
December	W	481	W
January-December 3/	W	7,020	XX
2002:			
January	W	621	W
February	W	814	118
March	W	653	W
April	W	830	W
May	W	798	W
June	W	893	103
July	W	804	215
August	W	857	W
September	W	891	132
October	W	852	139
November	W	858	116
December	W	W	W
Total	W	W	XX

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	November	December	Year to date	2001	November	December
Metal powder	5,190	768	789	7,720	367	455	441
Tungsten carbide powder (made from metal powder)	4,330	331	366	4,060	332	297	308
Total	9,520	1,100	1,160	11,800	699	752	749

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	November	December	Year to date
Steels	36	36	436
Superalloys	43	29	436
Other alloys (excludes steels and superalloys) 4/	W	W	W
Cemented carbides 5/	467	459	5,590
Mill products made from metal powder	W	W	W
Chemical uses	W	W	W
Miscellaneous and unspecified	431	418	4,280
Total	976	941	10,700

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.

5/ 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 1/

(Metric tons, tungsten content)

Period	tungsten	powder	powder	scrap	materials 2/	Total
Consumption:						
2001:						
December	22	145	473	39	6	684
January-December	334	2,350	5,680	524	73	8,960
2002:						
January	37	222	466	50	6	781
February	38	230	473	37	9	788
March	38	223	465	40	6	772
April	34	220	479	36	6	776
May	33	W	465	W	6	949
June	33	W	471	W	6	924
July	34	W	467	W	6	949
August	32	W	464	W	6	951
September	33	W	476	W	6	970
October	34	W	468	W	6	965
November	34	W	470	W	6	976
December	34	W	464	W	6	941
Total	415	W	5,630	W	76	10,700
Stocks:						
2001:						
December	37	33	596	43	9	717
2002:						
January	42	32	548	36	9	666
February	36	29	540	41	9	655
March	33	32	547	40	9	661
April	32	36	540	45	9	663
May	28	34	544	43	9	657
June	34	40	552	42	9	677
July	28	39	546	36	9	657
August	27	36	547	39	9	658
September	23	33	544	34	9	642
October	29	34	536	42	9	649
November	24	39	539	35	9	646
December	21	38	539	37	9	643

W Withheld to avoid disclosing company proprietary data; included in "Total."

1/ Includes estimates.

2/ Includes tungsten chemicals.

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
2001	2,680	2,720	352	947	932	2,120	9,750	XX
2002:								
September	341	130	30	44	40	131	717	6,820
October	341	244	15	24	104	94	822	7,640
November:								
Armenia	--	--	--	--	--	--	--	8
Australia	--	--	--	--	--	--	--	1
Austria	--	--	--	--	(3/)	1	1	40
Belgium	--	--	--	(3/)	--	(3/)	(3/)	3
Bolivia	37	--	--	--	--	--	37	450
Canada	361	--	--	(3/)	25	--	387	2,490
China	52	78	--	7	32	93	262	3,670
Czech Republic	--	--	--	--	--	--	--	(3/)
France	--	--	--	--	2	(3/)	2	13
Germany	--	17	--	8	(3/)	3	29	377
Hong Kong	--	--	--	--	--	1	1	100
Hungary	--	--	--	--	--	1	1	2
India	--	--	--	--	--	(3/)	(3/)	23
Indonesia	--	--	--	--	--	--	--	(3/)
Ireland	--	--	--	--	--	--	--	(3/)
Israel	--	--	--	7	24	1	32	214
Italy	--	--	--	--	--	(3/)	(3/)	1
Japan	--	31	--	1	(3/)	2	34	144
Korea, Republic of	--	--	--	14	5	--	19	109
Luxembourg	--	--	--	--	--	--	--	12
Malaysia	--	--	--	--	--	--	--	(3/)
Mexico	--	--	--	--	--	(3/)	(3/)	(3/)
Mongolia	13	--	--	--	--	--	13	25
Netherlands	--	--	--	--	--	(3/)	(3/)	(3/)
Pakistan	--	--	--	--	--	--	--	25
Peru	--	--	--	--	--	--	--	37
Portugal	39	--	--	--	--	--	39	481
Russia	--	--	--	(3/)	--	(3/)	(3/)	45
Rwanda	--	--	--	--	--	--	--	24
Singapore	--	--	--	--	--	--	--	20
South Africa	--	--	--	--	--	--	--	4
Spain	--	--	--	--	--	--	--	(3/)
Sweden	--	--	--	--	--	(3/)	(3/)	12
Switzerland	--	--	--	--	--	(3/)	(3/)	(3/)
Taiwan	--	--	--	--	--	--	--	2
Uganda	8	--	--	--	--	--	8	30
United Kingdom	--	--	--	20	--	1	21	155
Vietnam	--	--	--	--	--	--	--	18
Total	509	126	--	57	89	104	885	8,530
Total, year to date	3,490	2,220	407	588	828	996	8,530	XX

-- 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 November 2002 totaled 68 metric tons, tungsten content, to give a year-to-date total of 755 metric 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
2001	220	257	569	1,950	1,120	4,110	XX
2002:							
September	4	--	43	69	109	225	2,300
October	4	3	43	75	66	191	2,490
November:							
Australia	--	--	(4/)	1	--	1	19
Austria	--	--	--	--	--	--	3
Belgium	--	--	1	(4/)	--	1	27
Brazil	--	--	(4/)	1	(4/)	1	52
Canada	--	--	2	5	12	19	235
China 5/	--	--	--	--	1	1	32
Colombia	--	--	--	(4/)	(4/)	(4/)	4
Czech Republic	--	--	--	--	--	--	11
France	--	--	3	1	1	5	86
Germany	(4/)	--	19	5	4	28	632
Hong Kong	--	--	--	--	(4/)	(4/)	9
Hungary	--	--	--	--	(4/)	(4/)	5
India	--	--	--	(4/)	1	2	22
Indonesia	--	--	--	--	--	--	2
Ireland	--	--	--	2	(4/)	2	11
Israel	--	--	(4/)	--	2	2	51
Italy	--	--	4	--	(4/)	4	31
Japan	--	--	(4/)	(4/)	22	23	134
Korea, Republic of	--	--	(4/)	5	4	9	48
Luxembourg	--	--	--	--	--	--	6
Malaysia	--	--	--	--	--	--	10
Mexico	(4/)	--	--	--	13	13	162
Netherlands	--	--	--	--	(4/)	(4/)	123
New Zealand	--	--	--	--	1	1	6
Peru	--	--	1	--	--	1	2
Philippines	--	--	--	--	1	1	19
Singapore	--	--	1	(4/)	(4/)	1	15
South Africa	--	--	(4/)	5	--	5	8
Spain	--	--	(4/)	(4/)	2	2	16
Sweden	--	--	(4/)	47	(4/)	48	206
Switzerland	--	--	(4/)	--	--	(4/)	7
Taiwan	--	--	3	(4/)	21	24	136
Thailand	--	--	--	--	(4/)	(4/)	3
Turkey	--	--	--	(4/)	--	(4/)	2
Ukraine	--	--	--	--	--	--	1
United Kingdom	1	--	3	50	11	65	605
Other	--	--	(4/)	--	(4/)	(4/)	8
Total	1	--	38	124	97	261	2,750
Total, year to date	71	69	433	1,200	979	2,750	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 unwrought tungsten, including bars and rods obtained simply by sintering, wrought tungsten, ferrotungsten, and other tungstates. Tungsten content estimated in part.

4/ Less than 1/2 unit.

5/ Includes Macau.

Note: Estimated exports of waste and scrap in November 2002 totaled 24 metric tons, tungsten content, to give a year-to-date total of 350 metric tons, tungsten content.

Source: U.S. Census Bureau.