

# Mineral Industry Surveys

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## TUNGSTEN IN FEBRUARY 2002

U.S. net production of intermediate tungsten products, including metal powder and tungsten carbide powder produced from hydrogen-reduced metal powder, was 9% lower during January through February 2002 than net production during the same period 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 January through February 2002 was 4% lower than that during the same period in 2001. These materials were used to make alloys, cemented carbides, mill products, catalysts, and pigments.

Data for U.S. imports and exports for February 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 March 1 to 31, 2002, are as follows:

Low—\$25/metric ton unit WO<sub>3</sub> (\$23/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/									
February	W	112	W	33,200	494 r/	838	727	W	1,840
March	W	92	W	32,600	499 r/	859	704	W	1,740
April	W	179	W	32,500	605 r/	985	735	W	1,710
May	W	302	W	32,300	461 r/	866	695	1,030	1,610
June	W	288	W	32,300	488 r/	904	650	1,040	1,540
July	W	275	W	32,300	544 r/	735	723	909	1,490
August	W	247	W	32,100	510 r/	788	654	856	1,440
September	W	246	W	32,100	402 r/	796	701	818	1,410
October	W	389	W	NA	449 r/	637	709	709	NA
November	W	149	W	NA	372 r/	744	703	720	NA
December	W	253	W	NA	350 r/	614	602	745	NA
January-December	W	2,680	XX	XX	5,660 r/	9,670	8,380	XX	XX
2002:									
January	W	207	W	NA	397 r/	789	724 r/	729	NA
February	W	NA	W	NA	391	794	732	719	NA
Total	W	NA	XX	XX	788	1,580	1,460	XX	XX

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/			
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
February	W	681	91
Total	W	1,330	XX

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		
	2001 p/	2002		Year to date	2001 p/	2002	
		January	February			January	February
Metal powder	5,280	460	460	920	375	334	317
Tungsten carbide powder (made from metal powder)	4,390	329	334	663	370	395	402
Total	9,670	789	794	1,580	745	729	719

p/ Preliminary.

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	January	February	Year to date
Steels	43 r/	42	84
Superalloys	33	27	61
Other alloys (excludes steels and superalloys) 4/	W	W	W
Cemented carbides 5/	479	483	962
Mill products made from metal powder	W	W	W
Chemical uses	W	W	W
Miscellaneous and unspecified	169	179	349
Total	724 r/	732	1,460

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.

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

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/						
February	32	22	377	41 r/	11	483
March	26	17	374	34	11	462
April	23	19 r/	376	30 r/	11	459
May	27	20 r/	372	30 r/	11	461
June	17	14	376	36	11	455
July	39	14	380	30	11	475
August	32	13	371	37	11	463
September	39	14	373	30	11	466
October	44	17	365	32	11	470
November	43	16	367	37	11	474
December	40	16	371	34	11	473
2002:						
January	42	16	375	27	11	470
February	36	13	367	33	11	460

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
2001 p/	2,680	2,720	352	947	932	2,120	9,750
2002:							
January:							
Austria	--	--	--	--	9	1	10
Belgium	--	--	--	(3/)	--	--	(3/)
Bolivia	63	--	--	--	--	--	63
Canada	--	--	--	--	22	--	22
China	50	296	14	32	7	128	526
France	--	--	--	--	--	1	1
Germany	--	--	--	4	8	4	16
Hong Kong	--	--	--	--	--	(3/)	(3/)
Hungary	--	--	--	--	--	(3/)	(3/)
India	22	--	--	--	--	(3/)	22
Israel	--	--	--	--	17	2	18
Italy	--	--	--	--	(3/)	--	(3/)
Japan	--	--	--	4	(3/)	1	5
Korea, Republic of	--	--	--	(3/)	2	--	3
Malaysia	--	--	--	--	--	(3/)	(3/)
Netherlands	--	--	--	--	--	(3/)	(3/)
Peru	5	--	--	--	--	--	5
Portugal	68	--	--	--	--	--	68
Russia	--	--	--	--	--	(3/)	(3/)
Singapore	--	--	--	--	--	(3/)	(3/)
Spain	--	--	--	--	--	(3/)	(3/)
Sweden	--	--	--	5	--	(3/)	5
Switzerland	--	--	--	--	--	(3/)	(3/)
Taiwan	--	--	--	--	--	(3/)	(3/)
United Kingdom	--	--	--	--	(3/)	(3/)	(3/)
Total	207	296	14	45	65	138	765

p/ Preliminary. -- 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 January 2002 totaled 41 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
2001 p/	220	257	569	1,950	1,120	4,110
2002:						
January:						
Austria	2	--	--	--	--	2
Australia	--	--	1	(4/)	1	2
Belgium	--	--	--	(4/)	--	(4/)
Brazil	--	--	(4/)	--	1	1
Canada	--	--	1	15	9	25
China	--	--	--	--	1	1
Colombia	--	--	(4/)	(4/)	1	1
Czech Republic	--	--	2	1	--	3
Egypt	--	--	--	(4/)	--	(4/)
Finland	--	--	--	(4/)	--	(4/)
France	--	--	1	2	1	4
Germany	7	--	36	7	42	92
Hong Kong	--	--	(4/)	--	--	(4/)
Hungary	--	--	--	--	2	2
India	--	--	--	(4/)	(4/)	(4/)
Indonesia	--	--	(4/)	--	1	1
Ireland	--	--	--	1	(4/)	1
Israel	--	--	--	--	2	2
Italy	--	--	(4/)	1	1	2
Japan	1	--	2	1	1	5
Korea, Republic of	--	--	(4/)	2	4	6
Kuwait	--	--	--	(4/)	--	(4/)
Macao	--	--	--	--	(4/)	(4/)
Mexico	--	--	1	(4/)	6	7
Netherlands	2	--	--	(4/)	62	65
New Zealand	--	--	(4/)	--	--	(4/)
Nigeria	--	--	--	(4/)	--	(4/)
Peru	--	--	(4/)	--	--	(4/)
Singapore	--	--	(4/)	(4/)	1	1
South Africa	--	--	2	--	--	2
Spain	--	--	--	(4/)	--	(4/)
Sweden	--	--	--	14	1	15
Switzerland	--	--	(4/)	--	(4/)	(4/)
Taiwan	--	--	4	--	7	11
Turkey	--	--	--	1	--	1
United Arab Emirates	--	--	--	(4/)	--	(4/)
United Kingdom	4	--	3	53	28	88
Total	15	--	55	101	171	342

p/ Preliminary. -- 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.

Note: Estimated exports of waste and scrap in January 2002 totaled 33 metric tons, tungsten content.

Source: U.S. Census Bureau.