

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

Jason T. Collins (Data) Telephone: (703) 648-7978 Fax: (703) 648-7975

MINES FaxBack: (703) 648-4999 Internet: http://minerals.usgs.gov/minerals

TUNGSTEN IN FEBRUARY 2001

U.S. net production of intermediate tungsten products, including metal powder and tungsten carbide powder produced from hydrogen-reduced metal powder, was slightly higher during January through February 2001 than net production during the same period in 2000, 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 2001 was 4% lower than that during the same period in 2000. These materials were used to make alloys, cemented carbides, mill products, catalysts, and pigments.

Data for U.S. imports and exports for February 2001 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 (WO₃) content of 65%. The prices for March 1 to 31, 2001, are as follows:

Low—\$67/metric ton unit WO₃ (\$61/short ton unit WO₃) High—\$74/metric ton unit WO₃ (\$67/short ton unit WO₃)

TABLE 1 U.S. SALIENT TUNGSTEN STATISTICS 1/

(Metric tons, tungsten content)

	Concentrate					Intermediate products			
	Reported	Imports	Stocks, end	of period	Reported		Reported	Stocks, end	of period
	consump-	for		U.S. Gov-	scrap	Net	consump-		U.S. Gov-
Period	tion	consumption	Industry 2/	ernment 3/	consumption	production 4/	tion 5/	Industry 6/	ernment 3/
2000: p/									
February	W	56	W	34,600	440 r/	777	690	984	2,650
March	W	209	W	34,600	461 r/	906	753	997	2,600
April	W	277	W	34,600	385 r/	849	746	1,090	2,480
May	W	336	W	33,900	349 r/	836	728	1,200	2,320
June	W	169	W	33,900	407 r/	824	701	1,240	2,320
July	W	196	W	33,900	413 r/	779	745	1,160	2,290
August	W	136	W	33,900	433 r/	688	665	1,150	2,280
September	W	97	W	33,500	381 r/	784	746	1,120	2,250
October	W	342	W	33,500	449 r/	748 r/	718 r/	/ 1,080 r/	2,180
November	W	97	W	33,500	444 r/	784 r/	684 r/	/ 1,140 r/	2,180
December	W	190	W	33,400	413 r/	731 r/	667 r/	/ 1,160 r/	2,110
January-December	W	2,370	XX	XX	5,050 r/	9,470 r/	8,600 r/	/ XX	XX
2001:									
January	W	151	W	33,400	477 r/	840 r/	704 r/	/ W	2,050
February	W	NA	W	33,200	483	772	677	W	1,840
Total	W	NA	XX	XX	960	1,610	1,380	XX	XX

- p/ Preliminary. r/ Revised. NA Not available. W Withheld to avoid disclosing company proprietary data; not included in total. 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)

			Stocks,
			end of
Period	Production	Consumption	period 2/
2000: p/			
February	W	695	237
March	727 r/	729	W
April	W	797	192
May	W	671	W
June	W	W	68 r/
July	W	W	W
August	W	944	212
September	W	696	W
October	W	841	146
November	W	822 r/	121
December	W	749 r/	W
January-December 3/	1,270	7,590 r/	XX
2001:			
January	W	905 r/	W
February	W	W	W

p/ Preliminary. r/ Revised. W Withheld to avoid disclosing company proprietary data; not included in "Total." XX Not applicable.

- 2/ Producers and consumers.
- 3/ Does not include withheld data.

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

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

(Metric tons, tungsten content)

		Net pro	oduction 2/				
		2001			Stocks at end of period		
		Year		2001)1	
Product	2000 p/	January r/	February	to date	2000 p/	January	February
Metal powder	4,980 r/	404	355	759	621 r/	634 r/	539
Tungsten carbide powder							
(made from metal powder)	4,490 r/	436	417	853	538 r/	W	W
Total 3/	9,470 r/	840	772	1,610	1,160 r/	W	W

p/ Preliminary. r/ Revised. W Withheld to avoid disclosing company proprietary data; not included in total.

TABLE 4 U.S. REPORTED CONSUMPTION OF TUNGSTEN, BY END USE IN 2001 1/ 2/ 3/ $^{\prime}$

(Metric tons, tungsten content)

End use	January	February	Year to date
Steels	47	40	87
Superalloys	28	29	57
Other alloys (excludes steels and superalloys) 4/	W	W	W
Cemented carbides 5/	502 r/	479	982
Mill products made from metal powder	108	109	217
Chemical uses	W	W	W
Miscellaneous and unspecified	18	18	39
Total	704 r/	677	1,380

 $[\]ensuremath{\mathrm{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/} 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."

^{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 bit matrices, cemented and sintered carbides, and cast carbide dies or parts.

TABLE 5 U.S. REPORTED CONSUMPTION AND CONSUMER STOCKS OF TUNGSTEN MATERIALS 1/ 2/ 3/ $^{\prime}$

(Metric tons, tungsten content)

Period	Ferro- tungsten	Tungsten metal powder	Tungsten carbide powder	Tungsten scrap	Other tungsten materials 4/	Total
Consumption:						
2000: p/						
February	42	120	489	31	9	690
March	52	152	507	34	8	753
April	41	178	481	35	11	746
May	41	145	495	38	9	728
June	37	126	496	32	10	701
July	36	W	483	28	W	745
August	37	106	485	29	8	665
September	36	W	498	32	W	746
October	36	164	476	34 r	/ 8	718 r/
November	36	129	476	34	8	684
December	40	110 r/	479	30	8	667 r/
January-December	476	1,770 r/	5,850	387 r	/ 105	8,600 r/
2001:						
January	45	115	504 r/	32	8	704 r/
February	39	119	481	30	8	677
January-February	84	234	985	62	16	1,380
Stocks:						
2000: p/						
February	27	14	415	27	11	495
March	38	16	413	31	14	512
April	37	16	418	33	11	515
May	29	17	418	29	13	506
June	52	17	415	25	16	524
July	48	13	409	26	11	508
August	44	14	420	29	11	518
September	38 r/	14	412	38	11	513 r/
October	46 r/	16	414	37	11	526 r/
November	41 r/	23	405	40	11	520 r/
December	36 r/	20 r/	406	40	11	514 r/
2001:						
January	34	W	405 r/	34	W	500
February	37	17	418	31	11	515

p/ Preliminary. r/ Revised. W Withheld to avoid disclosing company proprietary data; included in total.

^{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 tungsten chemicals.

$\label{eq:table 6} \text{U.S. IMPORTS FOR CONSUMPTION OF TUNGSTEN, BY COUNTRY } 1/$

(Metric tons, tungsten content)

	Ores and				Tungsten		
Period and country	concen-	Ammonium	Ferro-	Metal	carbide		
of origin	trates	tungstates	tungsten	powder	powder	Other 2/	Total
2000 p/	2,370	2,270	470	593	1,000	2,480	9,190
2001:							
January:							
Austria						4	4
Belgium				(3/)		(3/)	(3/)
Bolivia	24						24
Canada					61		61
China		66	42	66	23	132	389
France					1	(3/)	1
Germany		40		5	5	6	55
Hong Kong		80					80
Hungary						1	1
India			15				15
Israel				2	12	2	16
Japan				3	3	1	7
Korea, Republic of				1		(3/)	1
Luxembourg					6		6
Mexico						(3/)	(3/)
Netherlands						(3/)	(3/)
Portugal							57
Russia						39	39
Singapore						1	1
Spain						(3/)	(3/)
Sweden						(3/)	(3/)
Switzerland						(3/)	(3/)
Taiwan						(3/)	(3/)
Thailand						(3/)	12
United Kingdom				20		(3/)	20
Total		186	58	98	111	187	791

p/ Preliminary. -- Zero.

Note: Imports of waste and scrap in January 2001 totaled 28 metric tons, tungsten content.

Source: U.S. Census Bureau.

^{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 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.

$\label{eq:table 7} \textbf{U.S. EXPORTS OF TUNGSTEN, BY COUNTRY 1/}$

(Metric tons, tungsten content)

	Ores and			Tungsten		
Period and country	concen-	Ammonium	Metal	carbide		
of destination	trates 2/	tungstates	powder 2/	powder	Other 3/	Total
2000 p/	70	53	467	969	483	2,040
2001:	_ =====					
January:	_					
Australia			(4/)		(4/)	(4/)
Belgium				2	(4/)	2
Brazil			2	(4/)	1	3
Canada			2	11	5	19
China					(4/)	(4/)
France			1	37	1	39
Germany	(4/)		39	14	21	75
Hong Kong			(4/)			(4/)
India			(4/)	(4/)	1	1
Ireland				(4/)	(4/)	(4/)
Israel			1		(4/)	1
Italy			1	(4/)	1	2
Japan			1	10	2	14
Korea, Republic of			(4/)	(4/)	(4/)	2
Mexico				(4/)	3	3
Netherlands	(4/)	7		(4/)	1	8
New Zealand			(4/)			(4/)
Philippines					1	1
Singapore			(4/)	(4/)	(4/)	1
South Africa			(4/)	1		1
Spain			(4/)		2	2
Sweden	(4/)			32	(4/)	33
Switzerland	(4/)		(4/)		(4/)	(4/)
Taiwan			(4/)		(4/)	1
United Kingdom	_		2	48	1	52
Venezuela				(4/)		(4/)
Other			(4/)	(4/)	(4/)	(4/)
Total		7	50	157	42	258

p/ Preliminary. -- Zero.

Note: Estimated exports of waste and scrap in January 2001 totaled 136 metric tons, tungsten content.

Source: U.S. Census Bureau.

^{1/} Data are rounded to no more than three significant digits.

^{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.