

Mineral Industry Surveys

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TUNGSTEN IN MAY 2001

U.S. net production of tungsten metal powder and tungsten carbide powder produced from metal powder during January through May 2001 was slightly lower than that 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 May 2001 was approximately equal to 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 May 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 June 1 to 30, 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)

		Con	centrate			Intermediate products			
	Reported	Imports	Stocks, en	d of period	Reported		Reported	Stocks, end	d 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/	_								
May	W	336	W	33,900	349	836	728	1,200	2,320
June	W	169	W	33,900	406	824	701	1,240	2,320
July	W	196	W	33,900	413	779	745	1,160	2,290
August	W	136	W	33,900	433	688	665	1,150	2,280
September	W	97	W	33,500	380	784	746	1,120	2,250
October	W	342	W	33,500	448	748	718	1,080	2,180
November	W	97	W	33,500	444	784	684	1,140	2,180
December	W	190	W	33,400	413	731	667	1,160	2,110
January-December	W	2,370	XX	XX	5,040	9,470	8,600	XX	XX
2001:	_								
January	W	151	W	33,400	477	840	785 r	/ W	2,050
February	W	112	W	33,200	483	772	731 r	/ W	1,840
March	W	92	W	32,600	489	792	708 r	/ W	1,740
April	W	179	W	32,500	533	r/ 806	690 r	/ W	1,710
May	W	NA	W	32,300	500	786	705	W	1,610
Total	W	NA	XX	XX	2,480	4,000	3,620	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)

Period	Production	Consumption	Stocks, end of period 2/
2000: p/			
May	W	671	W
June	W	W	68
July	W	W	W
August	W	944	212
September	W	696	W
October	W	841	146
November	W	822	121
December	W	749	W
January-December 3/	1,270	7,590	XX
2001:			
January	W	905	W
February	W	W	W
March	W	877	141
April	W	878	W
May	W	W	W
Total 3/	W	2,660	XX

p/ Preliminary. 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.

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

$\label{eq:table 3} \text{U.S. PRODUCTION AND STOCKS OF TUNGSTEN PRODUCTS } 1/$

(Metric tons, tungsten content)

		Net produ	iction 2/				
		2001		Stocks at end of period			
	Year		2001				
Product	2000 p/	April	May	to date	2000 p/	April	May
Metal powder	4,980	321	291	1,690	621	550	538
Tungsten carbide powder							
(made from metal powder)	4,490	485	495	2,310	538	W	W
Total 3/	9,470	806	786	4,000	1,160	W	W

- p/ Preliminary. W 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/ 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 IN 2001 1/2/3/

(Metric tons, tungsten content)

End use	April	May	Year to date
Steels	40	45	220
Superalloys	35 r/	33	150
Other alloys (excludes steels and superalloys) 4/	W	W	W
Cemented carbides 5/	475	496	2,480
Mill products made from metal powder	W	W	W
Chemical uses	W	W	W
Miscellaneous and unspecified	140 r/	130	773
Total	690 r/	705	3,620

r/ Revised. W Withheld to avoid disclosing company proprietary data; included with

- 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.

[&]quot;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.

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

(Metric tons, tungsten content)

Period	Ferro- tungsten	Tungsten metal powder	Tungsten carbide powder	Tungsten scrap	Other tungsten materials 4/	Total
Consumption:						
2000: p/	=					
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	8	718
November	36	129	476	34	8	684
December	40	110	479	30	8	667
January-December	476	1,770	5,850	387	105	8,600
2001:	-					
January	45	W	516	32	W	785 r/
February	38	W	493	30	W	731 r/
March	- 46	124 r/	497	33	8	708 r/
April	37	136 r/	476	32 r/	8	690 r/
May	43	122	497	35	8	705
January-May	209	728	2,480	161	41	3,620
Stocks:	-					
2000: p/	-					
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	14	412	38	11	513
October	46	16	414	37	11	526
November	41	23	405	40	11	520
December	36	20	406	40	11	514
2001:	-					
January	29	16	391 r/	34	11	482 r/
February	32	18	404 r/	31	11	497 r/
March	26	13 r/	401 r/	25	11	477 r/
April	23	16	403 r/	29 r/	11	481 r/
May	27	17	399	29	11	483

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			Total
Period and country	concen-	Ammonium	Ferro-	Metal	carbide			year to
of origin	trates	tungstates	tungsten	powder	powder	Other 2/	Total	date
2000 p/	2,370	2,270	470	593	1,000	2,480	9,190	XX
2001:								
February	112	255		62	83	108	620	1,410
March	92	285	(3/)	122	90	170	759	2,170
April:								
Austria					4	6	10	30
Belgium				(3/)		(3/)	1	2
Bolivia	80						80	140
Canada				(3/)	38	(3/)	39	186
China	73	160	54	79	38	65	469	1,720
Czech Republic								1
France					1	(3/)	1	4
Germany	4	14		6	12	9	44	180
Hong Kong				4	(3/)	3	8	115
Hungary						1	1	3
India						(3/)	(3/)	16
Israel					(3/)	2	2	33
Japan				12		1	13	34
Korea, Republic of				7	1		9	10
Luxembourg					5		5	11
Malaysia						(3/)	(3/)	(3/)
Mexico						(3/)	(3/)	(3/)
Mongolia								12
Netherlands						(3/)	(3/)	1
Portugal	9						9	144
Russia		28			2	10	40	178
Rwanda	12						12	12
Singapore						1	1	2
Spain						(3/)	(3/)	(3/)
Sweden						(3/)	(3/)	(3/)
Switzerland					(3/)	(3/)	(3/)	1
Taiwan						(3/)	(3/)	1
Thailand						(3/)	(3/)	27
Uganda						(3/)	(3/)	8
United Kingdom				20		(3/)	20	61
Total	179	201	54	129	101	100	764	2,930
Total, year to date	534	928	112	410	386	564	2,930	XX

p/ Preliminary. XX Not applicable. -- Zero.

Note: Imports of waste and scrap in April 2001 totaled 119 metric tons, tungsten content, to give a year-to-date total of 294 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.

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

(Metric tons, tungsten content)

	Ores and			Tungsten			Total
Period and country	concen-	Ammonium	Metal	carbide			year to
of destination	trates 2/	tungstates	powder 2/	powder	Other 3/	Total	date
2000 p/	70	53	467	969	483	2,040	XX
2001:							
February	33	6	45	140	136	361	620
March	5_	58	66	204	259	592	1,210
April:							
Australia			1	(4/)	(4/)	2	4
Belgium				1	(4/)	2	10
Brazil			2	(4/)	(4/)	2	15
Canada			3	13	4	20	95
China			(4/)	1	1	1	12
Czech Republic							33
Denmark				(4/)		(4/)	2
France			1	21	2	23	99
Germany			41	19	21	81	287
Hong Kong			(4/)		(4/)	(4/)	(4/)
Hungary					2	2	. 4
India				(4/)	2	2	9
Indonesia				` <u>-</u>			1
Ireland				1		1	3
Israel					(4/)	(4/)	1
Italy	₁		(4/)	1	(4/)	3	8
Japan			ĺ	5	1	6	39
Korea, Republic of			(4/)	(4/)	(4/)	1	5
Malaysia							(4/)
Mexico			(4/)		4	4	21
Netherlands		7	(4/)		1	8	362
New Zealand							(4/)
Philippines							ĺ
Singapore			1	(4/)	1	2	4
South Africa							1
Spain			(4/)		(4/)	(4/)	9
Sweden				21	6	27	153
Switzerland			1	1	(4/)	1	2
Taiwan	(4/)		1		(4/)	1	8
Turkey							(4/)
United Kingdom			3	90	1	96	306
Venezuela				(4/)		(4/)	2
Other	_		(4/)	1	4	4	5
Total		7	56	173	49	288	1,500
Total, year to date		78	217	675	486	1,500	1,500 XX

p/ Preliminary. XX Not applicable. -- Zero.

Note: Estimated exports of waste and scrap in April 2001 totaled 54 metric tons, tungsten content, to give a year-to-date estimated total of 364 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/} 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.