

# Mineral Industry Surveys

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## TUNGSTEN IN AUGUST 2001

U.S. net production of tungsten metal powder and tungsten carbide powder produced from metal powder during January through August 2001 was 10% higher 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 August 2001 was slightly 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 August 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 (WO<sub>3</sub>) content of 65%. The prices for September 1 to 30, 2001, are as follows:

Low—\$58/metric ton unit WO<sub>3</sub> (\$53/short ton unit WO<sub>3</sub>)  
High—\$70/metric ton unit WO<sub>3</sub> (\$64/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. Government 3/				Industry 6/	U.S. Government 3/
2000: p/									
August	W	136	W	33,900	433	761	665	1,150	2,280
September	W	97	W	33,500	380	857	746	1,120	2,250
October	W	342	W	33,500	448	778	718	1,080	2,180
November	W	97	W	33,500	444	814	684	1,140	2,180
December	W	190	W	33,400	413	761	667	1,160	2,110
January-December	W	2,370	XX	XX	5,040	9,780 7/	8,600	XX	XX
2001:									
January	W	151	W	33,400	476 r/	907	785	W	2,050
February	W	112	W	33,200	483	838	730	W	1,840
March	W	92	W	32,600	488 r/	859	708	W	1,740
April	W	179	W	32,500	501	945	739	W	1,710
May	W	302	W	32,300	468	924	699	1,060	1,610
June	W	288	W	32,300	552 r/	953	656	1,020	1,540
July	W	275	W	32,300	522 r/	862 r/	665	917 r/	1,490
August	W	NA	W	32,100	489	915	652	872	1,440
Total	W	NA	XX	XX	3,980	7,200	5,630	XX	XX

p/ Preliminary. 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.

7/ Revised after the Mineral Industry Surveys Tungsten 2000 Annual Review was published.

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:			
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	890	151
April	W	943	W
May	W	W	94
June	W	872	75
July	W	853 r/	100
August	W	W	W
Total 3/	W	4,460	XX

r/ Revised. 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/ 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	Net production 2/				Stocks at end of period		
	2000	2001		Year to date	2001		
		July r/	August		July r/	August	
Metal powder	5,290 3/	435	499	3,640	621	436	410
Tungsten carbide powder (made from metal powder)	4,490	427	416	3,570	538	481	462
Total 4/	9,780 3/	862	915	7,200	1,160	917	872

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/ Revised after the Mineral Industry Surveys Tungsten 2000 Annual Review was published.

4/ Data for cast and crystalline tungsten carbide powder and tungsten chemicals are withheld to avoid disclosing company proprietary data.

TABLE 4  
U.S. REPORTED CONSUMPTION OF TUNGSTEN, BY END USE IN 2001 1/ 2/ 3/

(Metric tons, tungsten content)

End use	July	August	Year to date
Steels	45	45	356
Superalloys	35	29	240
Other alloys (excludes steels and superalloys) 4/	W	W	W
Cemented carbides 5/	487	479	3,920
Mill products made from metal powder	W	W	W
Chemical uses	W	W	W
Miscellaneous and unspecified	98	98	1,120
Total	665	652	5,630

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/ 2/ 3/

(Metric tons, tungsten content)

Period	Ferro- tungsten	Tungsten metal powder	Tungsten carbide powder	Tungsten scrap	Other tungsten materials 4/	Total
<b>Consumption:</b>						
2000: p/						
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
February	38	W	493	29	W	730
March	46	124	497	32	8	708
April	37	W	476	32	W	739
May	43	112	497	38	8	699
June	42	98	484	23	8	656
July	43	90	486	38	8	665
August	43	92	482	27	8	652
January-August	337	1,050	3,930	250	65	5,630
<b>Stocks:</b>						
2000: p/						
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	43	11	491
February	32	18	404	40	11	506
March	26	13	401	34	11	485
April	23	16	403	29	11	482
May	27	17	399	29	11	484
June	17	14	403	36	11	482
July	39	14	407	30	11	502
August	32	13	398	37	11	491

p/ Preliminary. 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.

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	Ferrotungsten	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:								
May	302	246	43	70	101	153	915	3,850
June	288	201	15	32	54	237	827	4,680
July:								
Austria	--	--	--	--	4	6	10	55
Belgium	--	--	--	--	2	(3/)	2	10
Bolivia	39	--	--	--	--	--	39	269
Brazil	--	--	--	--	--	(3/)	(3/)	(3/)
Canada	--	--	--	--	21	1	23	296
China	157	206	81	36	11	113	604	3,410
Czech Republic	--	--	--	--	--	--	--	1
France	--	--	--	--	(3/)	(3/)	(3/)	6
Germany	--	(3/)	--	6	6	24	35	290
Hong Kong	13	--	--	--	--	(3/)	13	165
Hungary	--	--	--	--	--	(3/)	(3/)	4
India	--	--	--	--	--	(3/)	(3/)	16
Ireland	--	--	--	--	--	--	--	(3/)
Israel	--	--	--	2	7	1	10	108
Italy	--	--	--	--	--	(3/)	(3/)	(3/)
Japan	--	--	--	--	--	15	15	69
Korea, Republic of	--	--	--	7	5	--	12	29
Luxembourg	--	--	--	--	--	--	--	16
Malaysia	--	--	--	--	--	(3/)	(3/)	(3/)
Mexico	--	--	--	--	--	(3/)	(3/)	(3/)
Mongolia	--	--	--	--	--	--	--	12
Netherlands	--	--	--	3	--	(3/)	3	3
Peru	9	--	--	--	--	--	9	9
Portugal	48	--	--	--	--	--	48	268
Russia	--	36	--	--	--	67	102	398
Rwanda	--	--	--	--	--	--	--	12
Singapore	--	--	--	--	--	(3/)	(3/)	3
Spain	--	--	--	--	--	(3/)	(3/)	(3/)
Sweden	--	--	--	--	1	--	1	2
Switzerland	--	--	--	--	--	(3/)	(3/)	1
Taiwan	--	--	--	--	--	(3/)	(3/)	1
Thailand	--	--	--	--	--	--	--	40
Uganda	8	--	--	--	--	(3/)	8	24
United Kingdom	--	--	--	--	--	1	1	96
Total	275	242	81	54	55	229	936	5,610
Total, year to date	1,400	1,620	250	566	596	1,180	5,610	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 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 July 2001 totaled 64 metric tons, tungsten content, to give a year-to-date total of 642 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:							
May	7	59	54	270	77	467	1,970
June	20	1	66	251	69	407	2,370
July:							
Australia	--	--	1	2	1	4	11
Austria	--	--	--	--	--	--	9
Belgium	--	--	--	(4/)	(4/)	(4/)	14
Brazil	--	--	(4/)	(4/)	1	1	22
Canada	--	--	5	14	4	23	159
Chile	--	--	(4/)	--	--	(4/)	(4/)
China	--	--	--	--	--	--	14
Colombia	--	--	--	--	1	1	4
Czech Republic	--	--	--	--	--	--	33
Denmark	--	--	--	--	--	--	1
Ecuador	--	--	--	--	(4/)	(4/)	5
France	--	--	1	3	(4/)	5	140
Germany	6	--	38	29	26	98	614
Hong Kong	--	--	--	(4/)	(4/)	(4/)	5
Hungary	--	--	--	--	(4/)	(4/)	8
India	--	--	(4/)	1	1	2	16
Indonesia	--	--	--	--	2	2	3
Ireland	--	--	--	1	--	1	4
Israel	--	--	(4/)	(4/)	(4/)	1	16
Italy	1	--	(4/)	(4/)	1	2	12
Japan	--	--	1	3	3	7	65
Korea, Republic of	--	2	(4/)	2	(4/)	4	16
Malaysia	--	--	--	--	--	--	(4/)
Mexico	--	--	--	(4/)	5	5	48
Netherlands	--	--	--	--	2	2	415
Philippines	--	--	--	--	--	--	2
Singapore	--	--	(4/)	(4/)	1	1	5
South Africa	--	--	--	--	(4/)	(4/)	17
Spain	--	1	(4/)	--	1	2	16
Sweden	2	--	--	47	--	48	277
Switzerland	--	--	(4/)	--	(4/)	(4/)	6
Taiwan	--	--	1	(4/)	(4/)	1	15
Turkey	--	--	--	--	--	--	1
United Arab Emirates	--	--	--	--	(4/)	(4/)	1
United Kingdom	1	--	1	38	1	41	643
Other	--	--	(4/)	(4/)	(4/)	(4/)	5
Total	9	2	50	142	47	251	2,620
Total, year to date	79	141	388	1,340	678	2,620	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 July 2001 totaled 58 metric tons, tungsten content, to give a year-to-date estimated total of 597 tons, tungsten content.

Source: U.S. Census Bureau.