



Mineral Industry Surveys

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TUNGSTEN IN APRIL 2003

U.S. net production of intermediate tungsten products, including metal powder and tungsten carbide powder produced from metal powder, was 7% lower during January through April 2003 than net production during the same period in 2002, 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 April 2003 was 26% higher than that consumed during the same period in 2002. These materials were used to make alloys, cemented carbides, mill products, catalysts, and pigments.

Data for U.S. imports and exports for April 2003 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 May 1-31, 2003, are as follows:

Low—\$42/metric ton unit WO₃ (\$38/short ton unit WO₃)
High—\$50/metric ton unit WO₃ (\$45/short ton unit WO₃)

TABLE 1
U.S. SALIENT TUNGSTEN STATISTICS¹

(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
2002:									
April	W	292	W	NA	411	743	667	667	NA
May	W	292	W	NA	382	1,040	855	650	NA
June	W	439	W	31,200	327	1,080	824	662	1,100
July	W	362	W	30,400	334	931	847	654	1,020
August	W	418	W	30,500	218	1,110	854	737	987
September	W	341	W	30,100	408	983 ^r	810 ^r	742 ^r	981
October	W	341	W	30,100	362	1,060 ^r	836 ^r	705 ^r	975
November	W	509	W	30,100	326	1,060 ^r	816 ^r	733 ^r	948
December	W	600	W	30,100	340	858 ^r	750 ^r	671 ^r	947
January-December	W	4,090	XX	XX	4,030	11,200 ^r	9,300 ^r	XX	XX
2003:									
January	W	250	W	29,800	280 ^r	693 ^r	849 ^r	685 ^r	927
February	W	253	W	29,800	277 ^r	714 ^r	853 ^r	695 ^r	927
March	W	474	W	29,800	282 ^r	710 ^r	844 ^r	676 ^r	913
April	W	NA	W	29,800	271	723	863	694	894
Total	W	NA	XX	XX	1,110	2,840	3,410	XX	XX

^rRevised. NA Not available. W Withheld to avoid disclosing company proprietary data. XX Not applicable.

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

²Reported by consumers.

³Data from Defense National Stockpile Center. Includes material committed for sale pending shipment.

⁴Net production of tungsten metal powder and tungsten carbide powder.

⁵Includes estimates and scrap.

⁶Data for tungsten metal powder and tungsten carbide powder reported by producers.

TABLE 2
U.S. PRODUCTION, CONSUMPTION, AND STOCKS OF
AMMONIUM PARATUNGSTATE, BY MONTH¹

(Metric tons, tungsten content)

Period	Production	Consumption	Stocks, end of period ²
2002:			
April	W	830	W
May	W	798	W
June	W	907 ^r	103
July	W	740	212
August	W	794	97
September	W	820 ^r	102
October	W	798 ^r	109
November	W	W	85 ^r
December	W	W	86 ^r
Total	W	W	XX
2003:			
January	W	440 ^r	73
February	W	416 ^r	75 ^r
March	W	370	67 ^r
April	W	346	65
Total ³	W	1,570	XX

^rRevised. W Withheld to avoid disclosing company proprietary data.

XX Not applicable.

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

²Producers and consumers.

³Does not include withheld data.

TABLE 3
U.S. PRODUCTION AND STOCKS OF TUNGSTEN PRODUCTS¹

(Metric tons, tungsten content)

Product ³	Net production ²				Stocks at end of period		
	2003				2003		
	2002 ^f	March ^f	April	Year to date	2002 ^f	March ^f	April
Metal powder	7,140	503	507	1,990	434	445	453
Tungsten carbide powder (made from metal powder)	4,050	207	216	846	237	231	241
Total	11,200	710	723	2,840	671	676	694

^fRevised.

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

²Gross production less quantity used to make other products in table.

³Data 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	2003		
	March	April	Year to date
Steels	22	23	89
Superalloys	24	27	108
Other alloys (excludes steels and superalloys) ⁴	W	W	W
Cemented carbides ⁵	392 ^r	405	1,590
Mill products made from metal powder	W	W	W
Chemical uses	W	W	W
Miscellaneous and unspecified	406	407	1,620
Total	844 ^r	863	3,410

^rRevised. W Withheld to avoid disclosing company proprietary data; included with "Miscellaneous and unspecified."

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

²Does not include materials used in making primary tungsten products.

³Includes estimates.

⁴Includes welding and hard-facing rods and materials, wear- and corrosion-resistant alloys, and nonferrous alloys.

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

TABLE 5
U.S. REPORTED CONSUMPTION AND CONSUMER STOCKS OF TUNGSTEN MATERIALS¹

(Metric tons, tungsten content)

Period	Ferro- tungsten	Tungsten metal powder	Tungsten carbide powder	Tungsten scrap	Other tungsten materials ²	Total
Consumption:						
2002:						
April	22 ^r	207 ^r	406 ^r	26 ^r	6	667 ^r
May	21 ^r	W	406 ^r	W	6	855 ^r
June	21 ^r	W	405 ^r	W	6	824 ^r
July	22 ^r	W	400 ^r	W	6	847 ^r
August	21 ^r	W	402 ^r	W	6	854 ^r
September	22 ^r	W	400 ^r	W	6	810 ^r
October	22 ^r	W	403 ^r	W	6	836 ^r
November	22 ^r	W	403 ^r	W	6	816 ^r
December	23 ^r	W	405 ^r	W	6	750 ^r
Total	274 ^r	W	4,840 ^r	W	76	9,300 ^r
2003:						
January	21 ^r	W	400 ^r	W	6	849 ^r
February	23 ^r	W	395 ^r	W	6	853 ^r
March	21	W	396	W	6	844
April	23	W	404	W	6	863
Total	88	W	1,600	W	24	3,410
Stocks:						
2002:						
April	30 ^r	24 ^r	270 ^r	32 ^r	9	364 ^r
May	25 ^r	22 ^r	306 ^r	30 ^r	9	391 ^r
June	31 ^r	28 ^r	317 ^r	29 ^r	9	413 ^r
July	25 ^r	27 ^r	298 ^r	22 ^r	9	379 ^r
August	24 ^r	24 ^r	311 ^r	25 ^r	9	393 ^r
September	20 ^r	20 ^r	275 ^r	20 ^r	9	344 ^r
October	26 ^r	22 ^r	273 ^r	26 ^r	9	356 ^r
November	21 ^r	27 ^r	278 ^r	22 ^r	9	356 ^r
December	18 ^r	26 ^r	293 ^r	23 ^r	9	368 ^r
2003:						
January	25 ^r	24 ^r	295 ^r	19 ^r	9	372 ^r
February	20 ^r	22 ^r	292 ^r	20 ^r	9	362 ^r
March	20	20	285	28	9	362
April	15	24	288	23	9	359

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

¹Includes estimates.

²Includes tungsten chemicals.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF TUNGSTEN, BY COUNTRY¹

(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
2002	4,090	2,400	480	642	901	1,180	9,690	XX
2003:								
January	250	220	29	32	102	57	691	691
February	253	111	30	74	111	95	672	1,360
March:								
Austria	--	--	--	--	(3)	1	1	4
Belgium	--	--	--	(3)	--	--	(3)	2
Bolivia	26	--	--	--	--	--	26	62
Canada	353	--	--	--	39	(3)	392	827
China	--	132	22	35	34	33	256	843
Czech Republic	--	--	--	--	--	--	--	(3)
France	--	--	--	--	(3)	(3)	(3)	1
Germany	--	--	--	14	13	7	34	87
Hong Kong	--	--	--	--	--	(3)	(3)	1
Hungary	--	--	--	--	--	(3)	(3)	1
India	--	--	--	--	--	(3)	(3)	1
Ireland	--	--	--	--	--	--	--	1
Israel	--	--	--	17	27	1	45	125
Italy	--	--	--	--	--	(3)	(3)	(3)
Japan	--	--	--	1	(3)	7	8	25
Korea, Republic of	--	--	--	5	1	(3)	6	18
Luxembourg	--	--	--	--	--	--	--	2
Mexico	--	--	--	--	--	(3)	(3)	(3)
Mongolia	--	--	--	--	--	--	--	(3)
Netherlands	--	--	--	--	--	(3)	(3)	(3)
Peru	--	--	--	--	--	--	--	12
Portugal	76	--	--	--	--	--	76	124
Russia	--	--	--	--	--	(3)	(3)	1
Rwanda	20	--	--	--	--	--	20	44
Singapore	--	--	--	--	--	(3)	(3)	1
Spain	--	--	--	--	--	(3)	(3)	(3)
Sweden	--	--	--	--	--	(3)	(3)	(3)
Switzerland	--	--	--	--	--	(3)	(3)	(3)
Taiwan	--	--	--	--	--	(3)	(3)	15
United Kingdom	(3)	--	--	--	--	(3)	(3)	21
Total	474	132	22	72	114	51	866	2,230
Total, year to date	977	462	82	178	328	202	2,230	XX

XX Not applicable. -- Zero.

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

²Includes 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.

³Less than 1/2 unit.

Note: Imports of waste and scrap in March 2003 totaled 178 metric tons, tungsten content, to give a year-to-date total of 381 metric tons, tungsten content.

Source: U.S. Census Bureau.

TABLE 7
U.S. EXPORTS OF TUNGSTEN, BY COUNTRY¹

(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
2002	94	69	496	1,250	1,050	2,960	XX
2003:							
January	1	--	23	179	78	281	281
February	1	1	70	248	116	436	717
March:							
Australia	--	--	(4)	1	(4)	1	1
Belgium	--	--	(4)	3	(4)	4	6
Brazil	--	--	3	1	(4)	3	4
Canada	--	--	3	4	12	18	53
Chile	--	--	--	--	--	--	1
China	--	--	--	(4)	9	9	13
Colombia	--	--	--	(4)	--	(4)	(4)
Czech Republic	--	--	--	--	(4)	(4)	1
Egypt	--	--	--	--	--	--	1
France	(4)	--	2	5	31	39	75
Germany	(4)	--	19	31	7	57	388
Hong Kong	--	--	--	--	--	--	2
Hungary	--	--	--	--	(4)	(4)	(4)
India	--	--	--	--	1	1	10
Indonesia	(4)	--	--	--	--	(4)	1
Ireland	--	--	--	1	(4)	1	6
Israel	--	--	9	--	3	11	43
Italy	--	--	3	1	3	7	21
Japan	(4)	--	2	3	6	11	24
Korea, Republic of	--	--	--	3	(4)	3	8
Luxembourg	--	--	--	5	--	5	5
Malaysia	--	--	--	(4)	(4)	(4)	5
Mexico	(4)	--	(4)	--	18	19	71
Netherlands	--	--	--	--	(4)	(4)	(4)
New Zealand	--	--	(4)	--	1	1	1
Philippines	--	--	--	--	4	4	5
Poland	--	--	--	--	(4)	(4)	2
Singapore	--	--	1	(4)	(4)	2	6
Slovakia	--	--	--	--	(4)	(4)	4
South Africa	--	--	(4)	10	--	10	31
Spain	--	--	(4)	--	2	2	8
Sweden	--	--	3	22	1	26	39
Switzerland	--	--	(4)	--	(4)	(4)	1
Taiwan	1	--	8	--	18	26	53
United Kingdom	(4)	--	13	23	4	39	129
Other	(4)	--	(4)	--	(4)	(4)	1
Total	2	--	67	111	122	303	1,020
Total, year to date	4	1	160	539	315	1,020	XX

XX Not applicable. -- Zero.

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

²Tungsten content estimated from reported gross weight.

³Includes unwrought tungsten, including bars and rods obtained simply by sintering, wrought tungsten, ferrotungsten, and other tungstates. Tungsten content estimated in part.

⁴Less than 1/2 unit.

Note: Estimated exports of waste and scrap in March 2003 totaled 28 metric tons, tungsten content, to give a year-to-date total of 69 metric tons, tungsten content.

Source: U.S. Census Bureau.