



Mineral Industry Surveys

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TUNGSTEN IN MAY 2003

U.S. net production of intermediate tungsten products, including metal powder and tungsten carbide powder produced from metal powder, was about 6% higher during January through May 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 May 2003 was 15% 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 May 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 (WO_3) content of 65%. The prices for June 1-30, 2003, are as follows:

Low—\$42/metric ton unit WO_3 (\$38/short ton unit WO_3)
High—\$50/metric ton unit WO_3 (\$45/short ton unit WO_3)

TABLE 1
U.S. SALIENT TUNGSTEN STATISTICS¹

(Metric tons, tungsten content)

Period	Concentrate				Reported scrap consumption	Intermediate products			
	Reported consumption	Imports for consumption	Stocks, end of period			Net production ⁴	Reported consumption ⁵	Stocks, end of period	
			Industry ²	U.S. Government ³			Industry ⁶	U.S. Government ³	
2002:									
May	W	292	W	NA	402 ^r	1,130 ^r	855	643 ^r	NA
June	W	439	W	31,200	347 ^r	1,160 ^r	824	697 ^r	1,100
July	W	362	W	30,400	355 ^r	1,030 ^r	847	654	1,020
August	W	418	W	30,500	233 ^r	1,030 ^r	854	737	987
September	W	341	W	30,100	429 ^r	1,080 ^r	810	742	981
October	W	341	W	30,100	382 ^r	1,170 ^r	836	705	975
November	W	509	W	30,100	346 ^r	1,160 ^r	816	733	948
December	W	600	W	30,100	360 ^r	949 ^r	750	666 ^r	947
January-December	W	4,090	XX	XX	4,270 ^r	12,000 ^r	9,300	XX	XX
2003:									
January	W	250	W	29,800	362 ^r	829 ^r	788 ^r	674 ^r	927
February	W	253	W	29,800	403 ^r	793 ^r	750 ^r	718 ^r	927
March	W	474	W	29,800	476 ^r	951 ^r	777 ^r	779 ^r	913
April	W	377	W	29,800	402 ^r	953 ^r	863 ^r	795 ^r	894
May	W	NA	W	29,600	300	997	901	752	808
Total	W	NA	XX	XX	1,940	4,520	4,080	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:			
May	W	W	119 ^r
June	W	904 ^r	173 ^r
July	W	720 ^r	212
August	W	774 ^r	97
September	W	800 ^r	102
October	W	798	109
November	W	804	85
December	W	W	68 ^r
Total	W	8,860	XX
2003:			
January	W	776 ^r	W
February	W	750 ^r	61 ^r
March	W	851 ^r	73 ^r
April	W	W	44 ^r
May	W	731	38
Total ³	W	3,110	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	April ^f	May	Year to date	2002 ^f	April ^f	May
Metal powder	7,970	701	818	3,300	427	517	488
Tungsten carbide powder (made from metal powder)	4,070	252	179	1,220	239	278	264
Total	12,000	953	997	4,520	666	795	752

^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		
	April	May	Year to date
Steels	23	23	112
Superalloys	29 ^f	25	135
Other alloys (excludes steels and superalloys) ⁴	W	W	W
Cemented carbides ⁵	404 ^f	404	2,000
Mill products made from metal powder	W	W	W
Chemical uses	W	W	W
Miscellaneous and unspecified	406 ^f	448	1,840
Total	863 ^f	901	4,080

^fRevised. 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:						
May	21	W	406	W	6	855
June	21	W	405	W	6	824
July	22	W	400	W	6	847
August	21	W	402	W	6	854
September	22	W	400	W	6	810
October	22	W	403	W	6	836
November	22	W	403	W	6	816
December	23	W	405	W	6	750
Total	274	W	4,840	W	76	9,300
2003:						
January	21	W	400	W	6	788 ^r
February	23	W	395	W	6	750 ^r
March	21	W	396	W	6	777 ^r
April	23	W	404	W	6	863 ^r
May	22	W	404	W	6	901
Total	110	W	2,000	W	30	4,080
Stocks:						
2002:						
May	25	22	306	30	9	391
June	31	28	317	29	9	413
July	25	27	298	22	9	379
August	24	24	311	25	9	393
September	20	20	275	20	9	344
October	26	22	273	26	9	356
November	21	27	278	22	9	356
December	18	26	293	23	9	368
2003:						
January	25	24	295	19	9	372
February	20	22	292	20	9	362
March	20	20	285	27 ^r	9	361 ^r
April	15	24	288	22 ^r	9	358 ^r
May	29	26	292	14	9	370

^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	Ferrotungsten	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:								
February	253	111	30	74	111	95	672	1,360
March	474	132	22	72	114	51	866	2,230
April:								
Austria	--	--	--	--	5	2	7	11
Belgium	--	--	--	(3)	--	--	(3)	2
Bolivia	36	--	--	--	--	--	36	98
Canada	284	--	--	7	21	--	312	1,140
China	--	48	--	51	58	49	206	1,050
Czech Republic	--	--	--	--	--	--	--	(3)
France	--	--	--	(3)	2	(3)	2	3
Germany	--	19	--	12	11	8	50	137
Hong Kong	--	--	--	--	--	1	1	2
Hungary	--	--	--	--	--	--	--	1
India	--	--	--	--	--	1	1	2
Ireland	--	--	--	--	--	--	--	1
Israel	--	--	--	34	10	1	45	170
Italy	--	--	--	--	--	(3)	(3)	(3)
Japan	--	46	--	(3)	--	4	50	75
Korea, Republic of	--	--	--	7	12	(3)	20	38
Luxembourg	--	--	--	--	2	--	2	4
Mexico	--	--	--	(3)	--	--	(3)	(3)
Mongolia	--	--	--	--	--	--	--	(3)
Netherlands	--	--	--	--	--	1	1	1
Peru	9	--	--	--	--	--	9	21
Portugal	48	--	--	--	--	--	48	172
Russia	--	--	--	--	(3)	(3)	(3)	1
Rwanda	--	--	--	--	--	--	--	44
Singapore	--	--	--	--	--	--	--	1
Spain	--	--	--	--	--	(3)	(3)	(3)
Sweden	--	--	--	5	--	(3)	5	5
Switzerland	--	--	--	--	--	(3)	(3)	(3)
Taiwan	--	--	--	--	--	(3)	(3)	15
United Kingdom	--	--	--	--	(3)	(3)	(3)	21
Total	377	113	--	119	120	69	798	3,020
Total, year to date	1,350	575	82	297	448	271	3,020	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 April 2003 totaled 85 metric tons, tungsten content, to give a year-to-date total of 466 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:							
February	1	1	70	248	116	436	717
March	2	--	67	111	122	303	1,020
April:							
Australia	--	--	(4)	--	--	(4)	2
Belgium	--	--	--	1	(4)	2	8
Brazil	--	--	1	1	15	16	21
Canada	--	--	2	6	21	30	83
Chile	--	--	--	--	--	--	1
China	--	--	--	--	1	1	14
Colombia	--	--	--	--	(4)	(4)	1
Czech Republic	--	--	--	--	(4)	(4)	1
Egypt	--	--	--	--	(4)	(4)	1
France	--	--	1	11	41	53	128
Germany	--	--	26	124	18	168	556
Hong Kong	--	--	--	--	(4)	(4)	2
Hungary	--	--	(4)	--	--	(4)	(4)
India	(4)	--	(4)	(4)	1	1	11
Indonesia	--	--	--	--	--	--	1
Ireland	(4)	--	--	1	--	1	7
Israel	--	--	8	--	1	9	52
Italy	--	--	3	1	1	5	26
Japan	--	--	1	1	10	12	36
Korea, Republic of	--	--	(4)	2	1	3	11
Luxembourg	--	--	--	(4)	--	(4)	6
Malaysia	--	--	--	--	--	--	5
Mexico	--	--	1	(4)	27	28	99
Netherlands	--	--	--	1	19	19	19
New Zealand	--	--	--	--	1	1	2
Philippines	--	--	--	--	1	1	6
Poland	--	--	--	--	(4)	(4)	2
Singapore	--	--	(4)	(4)	(4)	1	7
Slovakia	--	--	--	--	--	--	4
South Africa	--	--	--	5	--	5	36
Spain	--	1	(4)	--	2	3	11
Sweden	--	--	39	25	(4)	64	103
Switzerland	--	--	(4)	3	(4)	3	4
Taiwan	--	--	3	(4)	37	40	93
United Kingdom	(4)	--	3	48	2	53	182
Other	--	--	--	--	(4)	(4)	1
Total	(4)	1	91	229	199	521	1,540
Total, year to date	4	2	251	769	515	1,540	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 April 2003 totaled 61 metric tons, tungsten content, to give a year-to-date total of 130 metric tons, tungsten content.

Source: U.S. Census Bureau.