

Mineral Industry Surveys

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TUNGSTEN IN APRIL 2011

The following comparisons are based on preliminary data. Total U.S. net production of intermediate tungsten products, including metal powder and tungsten carbide powder, was 17% higher during January through April 2011 than net production during the same period in 2010, 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 during January through April 2011 was 4% higher than consumption during the same period in 2010. These materials were used to make alloys, cemented carbides, mill products, and other products, such as catalysts and pigments.

Data for U.S. imports and exports of tungsten for January through March 2011 and full year 2010 totals by material are published in this issue.

Prices

Selected prices from Metal Bulletin for April 2011 are listed below. U.S. ammonium paratungstate prices in dollars per metric ton unit were converted from short-ton-unit prices and rounded to the nearest dollar. Prices for tungsten ore concentrates represent combined prices for wolframite and scheelite concentrates with a minimum tungsten trioxide (WO₃) content of 65%. Concentrate prices in dollars per short ton unit were converted from metric-ton-unit prices and rounded to the nearest dollar.

Ammonium paratungstate, U.S. free market:

Low—\$336/metric ton unit WO₃ (\$305/short ton unit WO₃)
High—\$341/metric ton unit WO₃ (\$309/short ton unit WO₃)

Concentrates:

Low—\$140/metric ton unit WO₃ (\$127/short ton unit WO₃)
High—\$160/metric ton unit WO₃ (\$145/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
2010:									
April	W	279	W	17,700	369 ^r	638	886	676	169
May	W	160	W	17,700	429 ^r	743	869	745	169
June	W	246	W	17,700	413 ^r	756	924	708	169
July	W	221	W	17,000	(7)	667	894	689	169
August	W	366	W	17,000	(7)	788	900	704	169
September	W	172	W	17,000	504 ^r	752	864	762	171
October	W	246	W	17,000	363 ^r	728	819	828	171
November	W	236	W	17,000	(7)	700	830	804	171
December	W	214	W	17,000	(7)	680	841 ^r	669	171
January–December	W	2,740	W	17,000	5,770 ^r	8,310	10,400	669	171
2011:									
January	W	332	W	17,000	W	646	883	761	171
February	W	276	W	17,000	W	779	881	804	171
March	W	388	W	17,000	W	774	886 ^r	683	171
April	W	NA	W	17,000	W	732	916	599	171
January–April	W	NA	W	17,000	3,370	2,930	3,570	599	171

¹Revised. NA Not available. W Withheld to avoid disclosing company proprietary data.

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

²Reported by consumers.

³Data from the Defense Logistics Agency, DLA Strategic Materials (formerly Defense National Stockpile Center). Data are uncommitted material only

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.

⁷Withheld to avoid disclosing company proprietary data; included in "January–December."

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
2010:			
April	W	929	W
May	W	777	W
June	W	952	147
July	W	(3)	130
August	W	(3)	W
September	W	1,010	122
October	W	848	112
November	W	(3)	W
December	W	(3)	62
January–December	W	10,300	62
2011:			
January	W	W	W
February	W	W	W
March	W	W	W
April	W	W	W
January–April	W	W	W

W Withheld to avoid disclosing company proprietary data.

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

²Producers and consumers.

³Withheld to avoid disclosing company proprietary data; included in "January–December."

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

(Metric tons, tungsten content)

Product ³	Net production ²				Stocks at end of period		
	2010	2011			2010	2011	
		March	April	January–April ⁴		March	April
Metal powder	4,100	349	380	1,390	341	349	303
Tungsten carbide powder	4,210	425	352	1,540	328	334	296
Total	8,310	774	732	2,930	669	683	599

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

²Receipts plus gross 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."

⁴May include revisions, to prior months' data.

TABLE 4
U.S. REPORTED CONSUMPTION OF TUNGSTEN, BY END USE^{1, 2, 3}

(Metric tons, tungsten content)

End use	2011		
	March	April	January–April ⁴
Steels	21	21	83
Superalloys	W	W	W
Other alloys (excludes steels and superalloys) ⁵	W	W	W
Cemented carbides ⁶	472	467	1,880
Mill products made from metal powder	W	W	W
Chemical uses	W	W	W
Miscellaneous and unspecified	393 ^r	428	1,600
Total	886 ^r	916	3,570

^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.

⁴May include revisions, to prior months' data.

⁵Includes welding and hard-facing rods and materials, wear- and corrosion-resistant alloys, and nonferrous alloys.

⁶Includes 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:						
2010:						
April	20	W	461	W	6	886
May	21	W	459	W	6 ^r	869
June	20	W	462	W	6 ^r	924
July	20	W	461	W	6 ^r	894
August	20	W	462	W	6 ^r	900
September	20	W	461	W	6 ^r	864
October	20	W	463	W	6 ^r	819
November	20	W	463	W	6 ^r	830
December	20	W	460	W	6 ^r	841 ^r
January–December	242	W	5,530	W	74 ^r	10,400
2011:						
January	20	W	463	W	6 ^r	883
February	20	W	461	W	6 ^r	881
March	20	W	464	W	6 ^r	886 ^r
April	20	W	458	W	6	916
January–April	81	W	1,850	W	25	3,570
Stocks:						
2010:						
April	15	25	415	64 ^r	10	528 ^r
May	15	24	415	71 ^r	10 ^r	534 ^r
June	15	28	415	65 ^r	10 ^r	532 ^r
July	15	29	414	63 ^r	10 ^r	530 ^r
August	16	28	413	64 ^r	10 ^r	530 ^r
September	16	26	413	53 ^r	10	518 ^r
October	17	26	413	53 ^r	10 ^r	519 ^r
November	16	25	413	57 ^r	10 ^r	522 ^r
December	16	26	413	59 ^r	10 ^r	524 ^r
2011:						
January	16	25	413	64 ^r	10 ^r	527 ^r
February	16	27	413	61 ^r	10 ^r	527 ^r
March	15	27	414	51 ^r	10 ^r	517
April	16	25	413	59	10	523

^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
2010	2,740	2,510	357	1,340	1,610	2,430	11,000	XX
2011:								
January	332	221	35	101	119	289	1,100	1,100
February	276	93	83	119	152	191	914	2,010
March:								
Austria	--	--	--	--	--	8	8	24
Bolivia	93	--	--	--	--	--	93	172
Brazil	10	--	--	--	--	(3)	11	11
Canada	--	--	--	8	21	(3)	29	120
China	--	144	16	11	51	114	337	1,270
France	--	--	--	--	(3)	(3)	1	6
Germany	--	3	--	24	11	4	42	133
India	--	--	--	--	--	2	2	4
Israel	--	--	--	6	12	(3)	18	54
Japan	--	--	--	16	31	2	49	98
Korea, Republic of	--	--	--	35	2	--	37	112
Mongolia	70	--	--	--	--	--	70	151
Peru	27	--	--	--	--	--	27	110
Portugal	63	--	--	--	--	--	63	166
Rwanda	11	--	--	--	--	--	11	11
Singapore	--	--	--	--	--	2	2	6
Spain	49	--	--	--	--	--	49	118
Thailand	--	--	--	--	--	--	--	13
Vietnam	64	--	--	--	--	--	64	334
Other	--	--	--	--	3	3	6	13
Total	388	147	16	100	132	136	919	2,930
January–March	997	461	134	319	403	616	2,930	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 ½ unit.

Note: Imports of waste and scrap in March 2011 totaled 119 metric tons, tungsten content, to give a year-to-date total of 247 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
2010	276	538	803	1,220	875	3,710	XX
2011:							
January	3	124	31	62	172	391	391
February	3	45	34	86	81	250	641
March:							
Australia	--	--	(4)	--	(4)	(4)	11
Austria	--	--	14	29	--	43	72
Belgium	--	--	--	(4)	2	2	124
Brazil	3	--	2	9	1	14	20
Canada	--	--	12	9	43	63	144
China	--	--	4	4	(4)	7	24
Costa Rica	--	--	--	--	2	2	4
Czech Republic	--	--	(4)	--	(4)	(4)	5
Germany	--	38	9	23	6	76	251
India	--	--	1	--	1	1	8
Indonesia	--	--	(4)	(4)	4	5	6
Israel	--	--	--	10	(4)	10	12
Japan	--	--	1	(4)	46	47	67
Malaysia	--	--	(4)	(4)	(4)	(4)	4
Mexico	--	--	(4)	(4)	11	12	32
Netherlands	--	--	--	--	(4)	(4)	10
Peru	--	--	(4)	1	--	1	3
Saudi Arabia	--	--	2	5	1	8	8
Singapore	--	--	1	1	4	6	15
South Africa	--	--	3	1	(4)	3	5
Switzerland	--	51	(4)	--	(4)	51	73
Taiwan	--	(4)	1	7	3	11	17
United Kingdom	--	--	1	23	1	24	93
Venezuela	--	--	(4)	1	(4)	1	4
Other	--	--	5	3	1	10	27
Total	3	88	56	126	125	398	1,040
January–March	9	257	121	274	378	1,040	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 ½ unit.

Note: Estimated exports of waste and scrap in March 2011 totaled 156 metric tons, tungsten content, to give a year-to-date total of 563 metric tons, tungsten content.

Source: U.S. Census Bureau.