

Mineral Industry Surveys

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TUNGSTEN IN NOVEMBER 2011

Total U.S. net production of intermediate tungsten products, including metal powder and tungsten carbide powder, was 6% lower during January through November 2011 than net production during the same period in 2010. Total U.S. reported consumption of ferrotungsten, tungsten metal powder, tungsten carbide powder, tungsten scrap, and other tungsten materials during January through November 2011 was 12% 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 October 2011 and full year 2010 totals by material are published in this issue.

Prices

Selected prices from Metal Bulletin for November 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—\$463/metric ton unit WO₃ (\$420/short ton unit WO₃)
High—\$474/metric ton unit WO₃ (\$430/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:									
November	(7)	236	W	17,000	(7)	700	865	804	171
December	(7)	214	W	17,000	(7)	680	876	669	171
January–December	4,840	2,740	W	17,000	5,800	8,310	10,800	669	171
2011:									
January	W	332	W	17,000	W	646	994	761	171
February	W	276	W	17,000	W	779	992	804	171
March	W	388	W	17,000	W	774	998	683	171
April	W	283	W	17,000	W	728 ⁷	1,080	599	171
May	W	469	W	15,900	690	718	1,050	593	171
June	W	259	W	15,900	1,130	735	1,280	637	171
July	W	432	W	15,900	629	580	966	673	171
August	W	277	W	15,800	577	454	950	667	160
September	W	181	W	15,800	W	605	945	644	160
October	W	283	W	15,800	W	611	944	728	125
November	W	304	W	15,800	W	537	940	641	125
January–November	W	3,490	W	15,800	W	7,170	11,100	641	125

¹Revised. 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. 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:			
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
May	W	841	W
June	W	895	W
July	W	W	W
August	W	W	W
September	W	W	W
October	W	W	W
November	W	W	W
January–November	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	
		October	November	January–November ⁴		October	November
Metal powder	4,100	271	212	3,070	341	352	307
Tungsten carbide powder	4,210	340	325	4,100	328	375	334
Total	8,310	611	540	7,170	669	728	641

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 previously published data.

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

(Metric tons, tungsten content)

End use	2011		
	October	November	January–November ⁴
Steels	6	6	64
Superalloys	W	W	W
Other alloys (excludes steels and superalloys) ⁵	W	W	W
Cemented carbides ⁶	575	572	6,340
Mill products made from metal powder	W	W	W
Chemical uses	W	W	W
Miscellaneous and unspecified	363	362	4,740
Total	944	940	11,100

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 previously published 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:						
November	9	W	493	W	6	865
December	10	W	491	W	6	876
January–December	119	W	5,890	W	75	10,800
2011:						
January	10	W	569	W	6	994
February	10	W	567	W	6	992
March	10	W	570	W	6	998
April	10	W	565	W	6	1,080
May	10	W	571	W	6	1,050
June	10	W	567	W	6	1,280
July	10	W	568	W	6	966
August	10	W	570	W	6	950
September	10	W	567	W	6	945
October	10	W	567	W	6	944
November	10	W	564	W	6	940
January–November	108	W	6,250	W	67	11,100
Stocks:						
2010:						
November	23	52	413	60	10	558
December	22	54	413	61	10	561
2011:						
January	22	51	413	67	10	562
February	22	52	413	63	10	560
March	22	50	414	54	10	549
April	22	46	413	61	10	552
May	22	43	413	65	10	553
June	22	41	413	70	10	556
July	21	40	413	67	10	551
August	22	37	413	63	10	546
September	23	36	413	62	10	543
October	22	34	413	57	10	536
November	21	34	413	55	10	534

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:								
August	277	156	--	120	187	322	1,060	8,410
September	181	144	8	115	167	301	915	9,330
October:								
Austria	--	--	--	(3)	--	5	6	128
Belgium	--	--	--	--	5	--	5	32
Bolivia	137	--	--	--	--	--	137	759
Brazil	14	--	--	--	--	(3)	14	38
Canada	--	--	--	10	27	(3)	37	465
China	--	185	--	23	29	219	456	4,660
Czech Republic	--	--	--	--	19	(3)	19	40
France	--	--	--	--	1	1	2	13
Germany	(3)	--	--	15	14	6	35	465
Hong Kong	--	--	--	--	--	(3)	(3)	15
Hungary	--	--	--	--	--	(3)	(3)	6
India	--	--	--	--	1	(3)	1	24
Israel	--	--	--	11	2	(3)	13	245
Japan	--	--	--	2	--	2	5	159
Korea, Republic of	--	--	--	15	--	--	15	292
Luxembourg	--	--	--	--	--	--	--	4
Mexico	--	--	--	7	--	(3)	7	12
Mongolia	--	--	--	--	--	--	--	230
Peru	41	--	--	--	--	--	41	367
Portugal	71	--	--	--	--	--	71	439
Russia	--	--	--	--	--	5	5	117
Rwanda	--	--	--	--	--	--	--	11
Singapore	--	--	--	(3)	--	1	1	21
Spain	20	--	--	--	--	--	20	399
Sweden	--	--	--	--	--	(3)	(3)	7
Thailand	--	--	--	--	--	--	--	76
Uganda	--	--	--	--	--	--	--	20
United Kingdom	--	--	--	--	--	1	1	27
Vietnam	--	--	--	--	12	--	12	1,150
Other	--	--	--	--	3	(3)	3	10
Total	283	185	--	84	111	240	903	10,200
January–October	3,180	1,820	196	1,140	1,440	2,450	10,200	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 October 2011 totaled 77 metric tons, tungsten content, to give a year-to-date total of 1,100 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:							
August	3	96	47	95	200	441	2,970
September	2	95	54	89	84	324	3,290
October:							
Australia	--	--	--	1	--	1	31
Austria	--	--	(4)	--	--	(4)	181
Belgium	--	--	(4)	(4)	(4)	1	126
Brazil	2	--	(4)	--	3	5	62
Canada	--	--	10	7	41	58	589
Chile	--	--	(4)	(4)	--	1	8
China	4	--	2	3	1	9	79
Costa Rica	--	--	--	--	(4)	(4)	11
Czech Republic	--	--	(4)	--	3	3	22
France	--	--	(4)	1	(4)	1	80
Germany	--	48	13	22	5	88	911
Hong Kong	--	--	--	(4)	--	(4)	9
Hungary	--	45	--	--	(4)	45	127
India	--	--	4	(4)	3	7	42
Indonesia	--	--	--	(4)	9	9	31
Israel	--	--	--	--	(4)	(4)	19
Italy	--	--	--	2	(4)	2	13
Japan	--	--	1	4	6	11	180
Korea, Republic of	--	--	(4)	(4)	(4)	1	22
Malaysia	--	--	--	--	2	2	10
Mexico	(4)	--	2	3	2	7	118
Netherlands	--	--	--	(4)	(4)	(4)	16
Peru	--	--	6	2	--	7	16
Philippines	--	--	--	1	--	1	14
Saudi Arabia	--	--	(4)	(4)	--	(4)	80
Singapore	--	--	4	(4)	2	6	60
South Africa	--	--	2	--	--	2	31
Sweden	--	--	--	36	(4)	36	44
Switzerland	--	19	--	2	--	21	199
Taiwan	--	--	2	12	(4)	14	102
Thailand	--	--	--	1	--	1	5
Turkey	--	--	--	--	--	--	11
United Kingdom	(4)	--	(4)	7	(4)	8	341
Venezuela	--	--	(4)	1	--	2	20
Vietnam	3	--	--	--	--	3	7
Other	--	--	1	2	1	4	31
Total	9	112	49	105	78	354	3,650
January–October	46	871	563	1,040	1,130	3,650	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 October 2011 totaled 183 metric tons, tungsten content, to give a year-to-date total of 2,040 metric tons, tungsten content.

Source: U.S. Census Bureau.