

Mineral Industry Surveys

For information, contact:

Kim B. Shedd, Tungsten Commodity Specialist
U.S. Geological Survey
989 National Center
Reston, VA 20192
Telephone: (703) 648-4974, Fax: (703) 648-7757
E-mail: ksheddd@usgs.gov

Robin Kaiser (Data)
Telephone: (703) 648-7948
Fax: (703) 648-7792
E-mail: rkaiser@usgs.gov

Internet: <http://minerals.usgs.gov/minerals>

TUNGSTEN IN OCTOBER 2011

Total U.S. net production of intermediate tungsten products, including metal powder and tungsten carbide powder, was 4% lower during January through October 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 October 2011 was 13% 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 September 2011 and full year 2010 totals by material are published in this issue.

Prices

Selected prices from Metal Bulletin for October 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—\$491/metric ton unit WO₃ (\$445/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				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
2010:									
October	(7)	246	W	17,000	366	728	854	828	171
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	(8)	646	994	761	171
February	W	276	W	17,000	(8)	779	992	804	171
March	W	388	W	17,000	(8)	774	998	683	171
April	W	283	W	17,000	(8)	732	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 ^r	454 ^r	950	667 ^r	160
September	W	181	W	15,800	(8)	605	945	644 ^r	160
October	W	283	W	15,800	(8)	611	944	728	125
January–October	W	3,180	W	15,800	7,520	6,640	10,200	728	125

^rRevised. 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."

⁸Withheld to avoid disclosing company proprietary data; included in "January–October."

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:			
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
May	W	841	W
June	W	895	W
July	W	W	W
August	W	W	W
September	W	W	W
October	W	W	W
January–October	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	
		September	October	January–October ⁴		September [†]	October
Metal powder	4,100	251	271	2,860	341	296	352
Tungsten carbide powder	4,210	354	340	3,770	328	348	375
Total	8,310	605	611	6,640	669	644	728

[†]Revised.

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		
	September	October	January–October ⁴
Steels	6	6	58
Superalloys	W	W	W
Other alloys (excludes steels and superalloys) ⁵	W	W	W
Cemented carbides ⁶	575	575	5,760
Mill products made from metal powder	W	W	W
Chemical uses	W	W	W
Miscellaneous and unspecified	364	363	4,380
Total	945	944	10,200

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:						
October	10	W	493	W	6	854
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
January–October	98	W	5,680	W	61	10,200
Stocks:						
2010:						
October	23	51	413	56	10	553
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

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
2010	2,740	2,510	357	1,340	1,610	2,430	11,000	XX
2011:								
July	432	106	8	132	125	231	1,030	7,350
August	277	156	--	120	187	322	1,060	8,410
September:								
Austria	--	--	--	(3)	1	13	13	123
Belgium	--	--	--	--	8	--	8	27
Bolivia	91	--	--	--	--	--	91	622
Brazil	--	--	--	--	--	--	--	24
Canada	--	--	--	20	25	(3)	45	428
China	--	144	8	17	96	238	503	4,200
Czech Republic	--	--	--	--	--	(3)	(3)	21
France	--	--	--	--	(3)	(3)	1	12
Germany	--	--	--	19	15	2	36	430
Hong Kong	--	--	--	--	--	--	--	15
Hungary	--	--	--	--	--	1	1	5
India	--	--	--	--	--	2	2	23
Israel	--	--	--	17	4	(3)	21	231
Japan	--	--	--	15	--	1	17	154
Korea, Republic of	--	--	--	22	1	--	23	277
Luxembourg	--	--	--	--	--	--	--	4
Mexico	--	--	--	--	--	--	--	6
Mongolia	--	--	--	--	--	--	--	230
Peru	27	--	--	--	--	--	27	326
Portugal	10	--	--	--	--	--	10	368
Russia	--	--	--	--	--	38	38	113
Rwanda	--	--	--	--	--	--	--	11
Singapore	--	--	--	3	--	3	6	20
Spain	39	--	--	--	--	--	39	378
Sweden	--	--	--	--	--	(3)	(3)	7
Thailand	13	--	--	--	--	--	13	76
Uganda	--	--	--	--	--	--	--	20
United Kingdom	--	--	--	--	--	(3)	(3)	26
Vietnam	--	--	--	--	16	--	16	1,140
Other	--	--	--	--	3	2	5	7
Total	181	144	8	115	167	301	915	9,330
January–September	2,900	1,630	196	1,060	1,330	2,210	9,330	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 September 2011 totaled 136 metric tons, tungsten content, to give a year-to-date total of 1,020 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:							
July	4	174	49	113	122	461	2,530
August	3	96	47	95	200	441	2,970
September:							
Australia	--	--	(4)	1	(4)	1	31
Austria	--	--	--	4	2	6	181
Belgium	--	--	--	(4)	(4)	(4)	126
Brazil	2	--	1	2	--	5	57
Canada	--	--	13	12	51	77	531
Chile	--	--	1	(4)	--	1	7
China	--	--	2	3	2	7	70
Costa Rica	--	--	--	--	1	1	10
Czech Republic	--	--	--	--	3	3	19
France	--	--	--	2	1	3	79
Germany	--	36	16	7	1	60	823
Hong Kong	--	--	--	(4)	--	(4)	9
Hungary	--	49	(4)	--	(4)	49	83
India	--	--	2	(4)	4	6	36
Indonesia	--	--	(4)	1	--	1	22
Israel	--	--	2	--	--	2	19
Italy	--	--	--	2	(4)	2	11
Japan	--	10	(4)	4	6	21	169
Korea, Republic of	--	--	5	(4)	(4)	6	21
Malaysia	--	--	--	--	--	--	9
Mexico	(4)	--	(4)	1	7	7	110
Netherlands	--	--	--	--	1	1	16
Peru	--	--	2	--	(4)	2	9
Philippines	--	--	(4)	--	--	(4)	13
Saudi Arabia	--	--	--	--	--	--	80
Singapore	--	--	2	(4)	4	6	54
South Africa	--	--	(4)	--	(4)	(4)	29
Sweden	--	--	--	--	(4)	(4)	8
Switzerland	--	--	--	1	--	1	178
Taiwan	--	(4)	3	(4)	(4)	3	87
Thailand	--	--	--	(4)	--	(4)	5
Turkey	--	--	1	--	--	1	11
United Kingdom	--	--	(4)	48	(4)	49	333
Venezuela	--	--	--	1	--	1	18
Other	--	--	2	(4)	(4)	3	31
Total	2	95	54	89	84	324	3,290
January–September	36	760	514	934	1,050	3,290	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 September 2011 totaled 243 metric tons, tungsten content, to give a year-to-date total of 1,860 metric tons, tungsten content.

Source: U.S. Census Bureau.