

Mineral Industry Surveys

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VANADIUM IN NOVEMBER 2009

Reported domestic consumption of vanadium in November 2009 was slightly less than that of the previous month, and was slightly more than that of November 2008, according to the U.S. Geological Survey. Consumer stocks of vanadium, in all forms, were revised to 335 metric tons (t) at the beginning of 2009 and were 277 t at the end of November.

According to Ryan's Notes (2009), U.S. ferrovanadium (FeV) prices ranged from \$10.857 to \$11.336 per pound of vanadium content in November, as compared with \$11.278 to \$12.056 in October. European FeV prices ranged from \$22.000 to \$23.429

per kilogram in November, as compared with \$25.111 to \$26.222 in October. Vanadium pentoxide (V_2O_5) prices ranged from \$5.500 to \$5.964 per pound in November, as compared with \$6.056 to \$6.556 in October.

Reference Cited

Ryan's Notes, 2009, [untitled]: Ryan's Notes, v. 15, no. 47, December 1, p. 10.

TABLE 1
U.S. CONSUMPTION AND CONSUMER STOCKS OF VANADIUM, BY FORM¹

(Kilograms, contained vanadium)

	2008		2009					
	Consumption	Stocks	October		November		January-November	
			Consumption	Stocks	Consumption	Stocks	Consumption	Stocks
Ferrovandium ²	4,030,000	231,000	342,000	217,000	339,000	217,000	3,690,000	217,000
Vanadium-aluminum alloy	W	W	W	W	W	W	W	W
Other ³	817,000	76,400	61,400	49,400	52,200	59,900	638,000	59,900
Total	4,850,000	308,000	404,000	266,000	392,000	277,000	4,330,000	277,000

W Withheld to avoid disclosing company proprietary data; included with "Other."

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

²Includes other vanadium-iron-carbon alloys as well as vanadium oxides added directly to steel.

³Includes other vanadium alloys, vanadium metal, vanadium pentoxide, vanadates, chlorides, other specialty chemicals, and items indicated by symbol W.

TABLE 2
U.S. CONSUMPTION OF VANADIUM, BY END USE¹

(Kilograms, contained vanadium)

	2008	2009		
		October	November	January-November
Steel:				
Carbon	760,000	58,900	60,300	555,000
High-strength low-alloy	1,540,000	128,000	128,000	1,410,000
Stainless and heat-resisting	116,000	10,600	5,110	114,000
Full alloy	2,000,000	155,000	156,000	1,720,000
Tool	151,000	34,700	34,700	382,000
Total steel	4,570,000	387,000	384,000	4,190,000
Superalloys	2,490	181	415	2,530
Miscellaneous and unspecified ²	275,000	16,300	7,080	142,000
Total consumption	4,850,000	404,000	392,000	4,330,000

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

²Includes cast irons, alloys excluding steel and superalloys, chemical and ceramic uses, and other miscellaneous and unspecified uses.

TABLE 3
U.S. IMPORTS AND EXPORTS OF ALUMINUM-VANADIUM MASTER ALLOY AND VANADIUM
METAL, INCLUDING WASTE AND SCRAP¹

(Kilograms, gross weight)

	Aluminum-vanadium master alloy		Vanadium metal, including waste and scrap	
	Quantity	Value	Quantity	Value
Imports for consumption:				
2008	618,000	\$2,760,000	3,620	\$198,000
2009:				
September	4,280	16,200	--	--
Year to date	261,000	888,000	2,770	317,000
October:				
Belgium	9,620	45,400	--	--
Netherlands	620	2,350	--	--
Total	10,200	47,700	--	--
Year to date	271,000	936,000	--	--
Exports:				
2008	21,900,000	76,200,000	57,100	3,740,000
2009:				
September	1,400,000	3,380,000	241	17,400
October:				
Canada	269,000	834,000	--	--
Egypt	670	19,700	--	--
Israel	627	8,150	--	--
Mexico	2,190	64,400	--	--
Singapore	473,000	1,220,000	--	--
South Africa	--	--	755	55,500
Total	745,000	2,140,000	755	55,500
Year to date	9,540,000	23,400,000	22,700	1,040,000

-- Zero.

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

Source: U.S. Census Bureau.

TABLE 4
U.S. IMPORTS AND EXPORTS OF FERROVANADIUM, VANADIUM PENTOXIDE (ANHYDRIDE) AND
OTHER OXIDES AND HYDROXIDES OF VANADIUM¹

(Kilograms, contained vanadium)

	Ferrovanadium		Vanadium pentoxide (anhydride) ²		Other oxides and hydroxides of vanadium	
	Quantity	Value	Quantity	Value	Quantity	Value
Imports for consumption:						
2008	2,800,000	\$159,000,000	3,700,000	\$115,000,000	144,000	\$4,320,000
2009:						
September	21,200	450,000	56,700	632,000	--	--
October:						
Canada	20,700	535,000	--	--	--	--
Germany	399	19,200	--	--	--	--
Korea, Republic of	5,940	270,000	94,500	1,210,000	--	--
Russia	--	--	20,500	343,000	--	--
Taiwan	--	--	2,500	38,500	--	--
Total	27,100	824,000	117,000	1,590,000	--	--
Year to date	299,000	11,300,000	872,000	13,000,000	16,800	320,000
Exports:						
2008	281,000	12,600,000	249,000	5,650,000	1,040,000	11,300,000
2009:						
September	23,900	732,000	12,600	224,000	76,100	976,000
October:						
Argentina	--	--	499	18,100	--	--
Brazil	--	--	19,900	285,000	--	--
Canada	7,060	157,000	--	--	31,700	270,000
Japan	--	--	--	--	6,310	56,100
Mexico	4,610	142,000	680	12,600	--	--
Netherlands	13,500	283,000	20,000	347,000	20,200	180,000
Spain	--	--	8,700	105,000	--	--
Trinidad and Tobago	--	--	1,270	27,900	--	--
Total	25,200	582,000	51,100	797,000	58,100	505,000
Year to date	631,000	13,900,000	342,000	3,990,000	368,000	3,960,000

-- Zero.

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

²May include catalysts containing vanadium pentoxide.

Source: U.S. Census Bureau.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF VANADIUM-BEARING ASH, SLAG¹

(Kilograms, contained vanadium pentoxide)

	Ash and residues		Ash and residues (not from the manufacture of iron and steel)	
	Quantity	Value	Quantity	Value
2008	1,040,000	\$18,000,000	601,000	\$795,000
2009:				
September	43,400	583,000	75,300	161,000
October:				
Canada	--	--	58,400	125,000
Mexico	12,000	56,700	--	--
Total	12,000	56,700	58,400	125,000
Year to date	728,000	11,600,000	522,000	957,000

-- Zero.

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

Source: U.S. Census Bureau.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF MISCELLANEOUS VANADIUM CHEMICALS¹

(Kilograms, contained vanadium)

	Sulfates		Vanadates	
	Quantity	Value	Quantity	Value
2008	2,160	\$119,000	187,000	\$4,230,000
2009:				
September	60	6,250	33,100	605,000
October:				
South Africa	--	--	11,100	179,000
Total	--	--	11,100	179,000
Year to date	11,700	136,000	146,000	2,100,000

-- Zero.

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

Source: U.S. Census Bureau.