

Mineral Industry Surveys

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VANADIUM IN MAY 2016

Reported domestic consumption of vanadium in May 2016 was slightly more than that of the previous month and was slightly less than that of April 2016. Consumer stocks of all forms of vanadium were 152 metric tons (t) at the end of May, a decrease from 166 t at yearend 2015.

According to CRU Group, U.S. ferrovanadium (FeV) prices ranged from \$10.200 to \$10.467 per pound of vanadium content in May, compared with \$8.225 to \$8.738 in April. European FeV prices ranged from \$19.222 to \$19.922 per kilogram of vanadium content in May, compared with \$17.431 to \$18.044 in April. Vanadium pentoxide (V₂O₅) prices ranged from \$2.900 to \$3.200 per pound of vanadium content in May, compared with \$2.750 to \$2.938 in April (fig. 1).

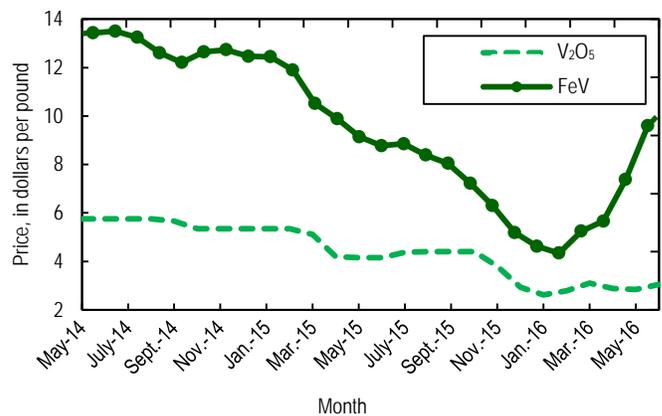


Figure 1. Average monthly prices for U.S. vanadium pentoxide and ferrovanadium from May 2014 through May 2016. Source: CRU Group.

Reference Cited

CRU Group, 2016, Noble alloys and minor metals prices: CRU Group, June 1. (Accessed July 25, 2016, via <http://www.crugroup.com/>.)

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

(Kilograms, contained vanadium)

	2015		2016					
			April		May		January–May	
	Consumption	Stocks	Consumption	Stocks	Consumption	Stocks	Consumption	Stocks
Ferrovandium ²	2,750,000	96,200	219,000	91,200	222,000	82,100	1,110,000	82,100
Vanadium-aluminum alloy and other forms ³	803,000	70,100	66,400	70,100	66,400	70,100	332,000	70,100
Total	3,550,000	166,000	285,000	161,000	289,000	152,000	1,440,000	152,000

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 vanadium-aluminum alloy, other vanadium alloys, vanadium metal, vanadium pentoxide, vanadates, chlorides, and other specialty chemicals.

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

(Kilograms, contained vanadium)

	2015	2016		
	January– December	April	May	January– May
Steel:				
Carbon	W	W	W	W
Full alloy	1,420,000	118,000	118,000	590,000
High-strength low-alloy	W	W	W	W
Stainless and heat resisting	59,200	4,930	4,930	24,700
Tool	W	W	W	W
Total steel	3,240,000	123,000	123,000	614,000
Superalloys	2,800	W	W	W
Miscellaneous and unspecified ²	W	W	W	W
Total	3,550,000	285,000	289,000	1,440,000

W Withheld to avoid disclosing company proprietary data; included in "Total."

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 ALLOYS AND VANADIUM
METAL, INCLUDING WASTE AND SCRAP¹

(Kilograms, gross weight)

	Aluminum-vanadium master alloy ²		Vanadium metal, including waste and scrap ³	
	Quantity	Value	Quantity	Value
Imports for consumption:				
2015	204,000	\$4,520,000	182,000	\$3,450,000
2016:				
April	51,200	785,000	11,800	332,000
May:				
China	9,070	177,000	--	--
Russia	17,700	316,000	--	--
Total	26,800	492,000	--	--
January–May	123,000	2,060,000	13,200	347,000
Exports:				
2015	229,000	6,440,000	5,200	354,000
2016:				
April	19,700	310,000	1,130	98,100
May:				
Belgium	8,970	146,000	--	--
France	381	14,700	160	6,170
Romania	2,000	45,100	--	--
Russia	24,200	507,000	--	--
Total	35,600	712,000	160	6,170
January–May	78,800	1,600,000	1,560	131,000

-- Zero.

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

²Aluminum-vanadium master alloy consisting of 35% aluminum and 64.5% vanadium. Includes Harmonized Tariff Schedule code 8112.99.2000.

³Vanadium metal, including waste and scrap (HTS 8112.92.7000).

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 ²		Vanadium pentoxide (anhydride) ^{3,4}		Other oxides and hydroxides of vanadium ⁵	
	Quantity	Value	Quantity	Value	Quantity	Value
Imports for consumption:						
2015	2,030,000	\$64,700,000	2,870,000	\$32,800,000	93,700	\$1,840,000
2016:						
April	170,000	3,870,000	227,000	2,640,000	106,000	1,430,000
May:						
Austria	58,000	609,000	--	--	32,400	390,000
Brazil	--	--	19,900	149,000	--	--
China	--	--	23,000	304,000	--	--
Colombia	1,390	20,800	--	--	--	--
Czech Republic	--	1,690,000	--	--	--	--
Germany	--	--	30,800	405,000	--	--
Korea, Republic of	90,100	1,030,000	--	--	--	--
Russia	55,000	792,000	--	--	--	--
South Africa	--	--	59,700	590,000	68,300	1,170,000
Taiwan	--	--	21,000	295,000	--	--
Total	204,000	4,140,000	154,000	1,740,000	101,000	1,560,000
January–May	788,000	15,100,000	931,000	9,370,000	307,000	4,460,000
Exports:						
2015	163,000	3,190,000	356,000	3,430,000	99,800	841,000
2016:						
April	33,500	525,000	--	--	100	3,030
May:						
Brazil	9,670	152,000	--	--	--	--
Canada	20,300	298,000	--	--	234	3,070
Germany	--	--	--	--	10,300	165,000
Mexico	17,900	314,000	--	--	--	--
Thailand	--	--	400	12,400	--	--
Total	47,900	763,000	400	12,400	10,600	168,000
January–May	371,000	4,350,000	2,310	67,600	73,700	609,000

-- Zero.

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

²Includes HTS code 7202.92.0000.

³Includes HTS code 2825.30.0010.

⁴May include catalysts containing vanadium pentoxide.

⁵Includes HTS code 2825.30.0050.

Source: U.S. Census Bureau.

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

(Kilograms, contained vanadium pentoxide, unless otherwise specified)

	Ash and residues ²		Slag, from the manufacture of iron and steel	
	Quantity	Value	Quantity (gross weight)	Value
	2015	9,440,000	\$36,700,000	87,600,000
2016:				
April	431,000	1,320,000	79,700	197,000
May:				
Canada	226,000	333,000	83,500	27,100
Mexico	--	--	29,400	29,500
Switzerland	20,200	241,000	--	--
Total	246,000	574,000	113,000	56,600
January–May	1,970,000	3,740,000	356,000	372,000

-- Zero.

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

²Includes HTS code 2620.99.1000 and 2619.00.9000.

Source: U.S. Census Bureau.

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

(Kilograms, contained vanadium)

	Sulfates ²		Vanadates ³	
	Quantity	Value	Quantity	Value
2015	12,600	\$142,000	173,000	\$2,330,000
2016:				
April	700	5,350	67,700	854,000
May:				
China	62	3,120	6,680	139,000
Japan	--	--	45	5,890
Netherlands	--	--	1,040	26,100
South Africa	--	--	2,310	19,000
Total	62	3,120	10,100	190,000
January–May	2,220	23,200	155,000	2,110,000

-- Zero.

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

²Sulfates (HTS code 2833.29.3000).

³Vanadates (HTS code 2841.90.1000).

Source: U.S. Census Bureau.