

Mineral Industry Surveys

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VANADIUM IN JUNE 2016

Reported domestic consumption of vanadium in June 2016 was about the same as the previous month and was 4% less than that of June 2015. Consumer stocks of all forms of vanadium were 167 metric tons (t) at the end of June, an increase from 166 t at yearend 2015.

According to CRU Group, U.S. ferrovanadium (FeV) prices ranged from \$10.911 to \$11.278 per pound of vanadium content in June, compared with \$10.200 to \$10.467 in May. European FeV prices ranged from \$17.778 to \$18.283 per kilogram of vanadium content in June, compared with \$19.222 to \$19.922 in May. Vanadium pentoxide (V₂O₅) prices ranged from \$2.900 to \$3.200 per pound of vanadium content in both May and June (fig. 1).

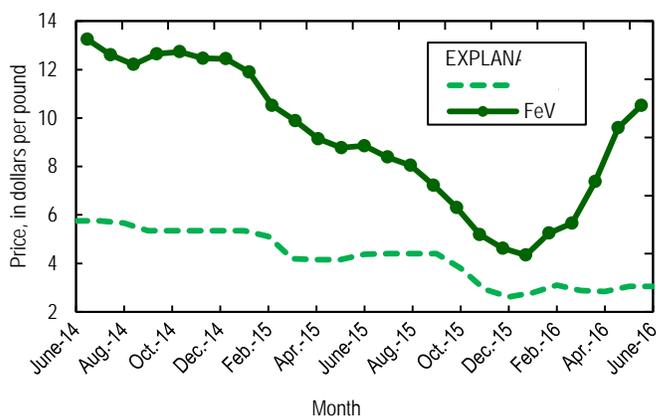


Figure 1. Average monthly prices for U.S. vanadium pentoxide and ferrovanadium from June 2014 through June 2016. Source: CRU Group.

Reference Cited

CRU Group, 2016, Noble alloys and minor metals prices: CRU Group, July 1. (Accessed August 15, 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					
	Consumption	Stocks	May		June		January–June	
			Consumption	Stocks	Consumption	Stocks	Consumption	Stocks
Ferrovandium ²	2,750,000	96,200	222,000	82,100	220,000	96,600	1,330,000	96,600
Vanadium-aluminum alloy and other forms ³	803,000	70,100	66,400	70,100	66,400	70,100	399,000	70,100
Total	3,550,000	166,000	289,000	152,000	286,000	167,000	1,730,000	167,000

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	May	June	January– June
Steel:				
Carbon	W	W	W	W
Full alloy	1,420,000	118,000	118,000	708,000
High-strength low-alloy	W	W	W	W
Stainless and heat resisting	59,200	4,930	4,930	29,600
Tool	W	W	W	W
Total steel	3,240,000	123,000	123,000	737,000
Superalloys	2,800	W	W	W
Miscellaneous and unspecified ²	W	W	W	W
Total	3,550,000	289,000	286,000	1,730,000

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:				
May	26,800	492,000	--	--
June:				
China	18,100	353,000	1,400	13,200
Russia	128	15,300	--	--
United Kingdom	2	4,940	--	--
Total	18,300	373,000	1,400	13,200
January–June	142,000	2,430,000	14,600	360,000
Exports:				
2015	229,000	6,440,000	5,200	354,000
2016:				
May	35,600	712,000	160	6,170
June:				
Germany	416	16,100	530	20,500
India	337	13,000	--	--
United Kingdom	--	--	30	6,600
Total	753	29,100	560	27,100
January–June	79,500	1,630,000	2,120	158,000

-- 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:						
May	204,000	4,140,000	154,000	1,740,000	101,000	1,560,000
June:						
Austria	224,000	2,320,000	--	--	--	--
Brazil	--	--	139,000	1,080,000	--	--
Canada	27,100	360,000	--	--	--	--
China	7,030	127,000	24,800	353,000	--	--
Colombia	796	13,500	--	--	--	--
Czech Republic	--	2,220,000	--	--	--	--
Germany	--	--	11,700	267,000	--	--
Russia	32,700	487,000	--	--	--	--
South Africa	--	--	--	--	51,900	748,000
Taiwan	--	--	21,000	331,000	--	--
Total	292,000	5,530,000	197,000	2,040,000	51,900	748,000
January–June	1,080,000	20,700,000	1,130,000	11,400,000	359,000	5,200,000
Exports:						
2015	163,000	3,190,000	356,000	3,430,000	99,800	841,000
2016:						
May	47,900	763,000	400	12,400	10,600	168,000
June:						
Canada	17,800	367,000	--	--	14,800	132,000
India	--	--	359	3,410	--	--
Mexico	68	4,420	150	2,780	--	--
Total	17,900	372,000	509	6,190	14,800	132,000
January–June	389,000	4,720,000	2,820	73,800	88,500	741,000

-- 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	\$4,600,000
2016:				
May	246,000	574,000	113,000	56,600
June:				
Canada	218,000	99,100	15,100,000 ³	338,000 ³
Mexico	--	--	2,310	2,310
Total	218,000	99,100	15,100,000	340,000
January–June	2,190,000	3,840,000	15,500,000	712,000

-- 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.

³Referred to the U.S. Census Bureau for verification.

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:				
May	62	3,120	10,100	190,000
June:				
China	4,880	49,200	--	--
Japan	--	--	67	4,530
Taiwan	--	--	12,400	140,000
Total	4,880	49,200	12,400	145,000
January–June	7,110	72,500	168,000	2,250,000

-- 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.