

Mineral Industry Surveys

For information, contact:

Désirée E. Polyak, Vanadium Commodity Specialist
National Minerals Information Center
Telephone: (703) 648-4909
Email: dpolyak@usgs.gov

Darlene V. Thompson (Data)
Telephone: (703) 648-7797
Email: dvthompson@usgs.gov

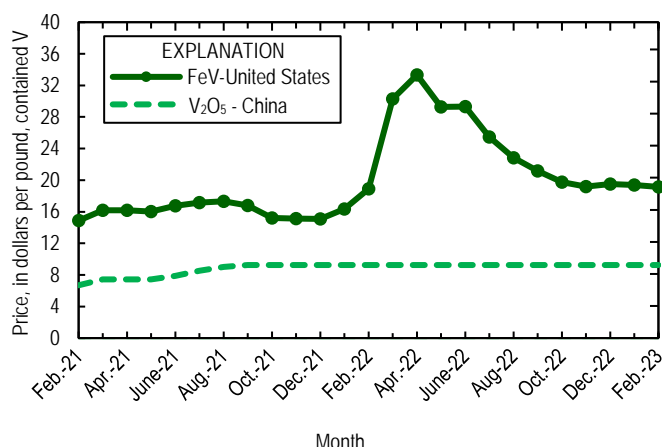
Internet: <https://www.usgs.gov/centers/national-minerals-information-center/mineral-industry-surveys>

VANADIUM IN FEBRUARY 2023

The amount of vanadium in U.S. imports of select vanadium products on a gross weight basis, excluding vanadium bearing ash and residues, in February 2023 was 37% less than the previous month and 53% more than February 2022 (table 1). In February 2023, the leading import sources for vanadium pentoxide (V_2O_5), were South Africa and Germany, in descending order of contained weight quantity. In February 2023, the leading import sources for ferrovanadium (FeV) were Canada, Japan, and Austria, in descending order of contained weight quantity (table 2).

Prices

U.S. FeV prices ranged from \$18.750 to \$19.500 per pound of contained vanadium in February 2023 compared with \$18.967 to \$19.811 per pound in January 2023. In Europe, FeV prices ranged from \$38.625 to \$39.875 per kilogram of contained vanadium in February 2023 compared with \$33.000 to \$35.000 in January 2023. In China, V_2O_5 prices ranged from \$9.000 to \$9.500 per pound of contained vanadium in February 2023, unchanged since September 2021 (fig. 1).



List services and web feed subscribers are the first to receive notification of USGS minerals information publications and data releases. For information on how to subscribe, go to [https://www.usgs.gov/centers/national-minerals-information-](https://www.usgs.gov/centers/national-minerals-information-center/minerals-information-)

Figure 1. Average monthly prices for ferrovanadium (FeV) and vanadium pentoxide (V_2O_5) from February 2021 through February 2023 Source: CRU Group.

TABLE 1
U.S. IMPORTS FOR CONSUMPTION OF VANADIUM PRODUCTS¹

(Kilograms, unless otherwise specified)

Material	HTS ² code	2023								
		January			February			January–February		
		Gross weight	Contained weight	Value (thousands)	Gross weight	Contained weight	Value (thousands)	Gross weight	Contained weight	Value (thousands)
Vanadium ores and concentrates	2615.90.6090	554,000	322,000 ³	\$2,010,000	118,000	71,000 ³	\$545,000	673,000	393,000 ³	\$2,550,000
Vanadium bearing ash and residues	2620.40.0030, 2620.99.1000	(4)	(4)	2,800,000	(4)	(4)	2,090,000	(4)	(4)	4,890,000
Chemical compounds:										
Vanadium pentoxide (anhydride)	2825.30.0010	167,000	103,000	3,790,000	65,000	37,600	1,840,000	232,000	141,000	5,630,000
Vanadium oxides and hydroxides, other	2825.30.0050	--	--	--	60,000	39,100	1,320,000	60,000	39,100	1,320,000
Vanadium chlorides	2827.39.1000	--	--	--	22,700	21,600	777,000	22,700	21,600	777,000
Vanadium chloride oxide and chloride hydroxide	2827.49.1000	22,400	14,000	37,300	67,100	41,900	56,000	89,500	55,800	93,400
Vanadium sulfates	2833.29.3000	--	--	--	--	--	--	--	--	--
Vanadates	2841.90.1000	100	67	4,240	--	--	--	100	67	4,240
Hydrides and nitrides of vanadium	2850.00.2000	22,600	18,600	213,000	10,300	8,270	89,300	32,900	26,800	303,000
Ferrovandium	7202.92.0000	286,000	228,000	9,280,000	326,000	226,000	9,680,000	612,000	454,000	19,000,000
Vanadium metal, including waste and scrap	8112.92.7000	18,300	18,300	811,000	54	49	4,390	18,300	18,300	815,000
Vanadium and articles thereof ⁵	8112.99.2000	42,900	27,800	1,900,000	36,600	23,900	1,690,000	79,500	51,600	3,600,000
Total		1,110,000	XX	20,900,000	706,000	XX	18,100,000	1,820,000	XX	38,900,000

XX Not applicable. -- Zero.

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

²Harmonized Tariff Schedule of the United States.

³Data are in kilograms of vanadium pentoxide.

⁴U.S. Census Bureau has suppressed quantity data for some months; not included in "Total."

⁵Aluminum-vanadium master alloy consisting of 35% aluminum and 64.5% vanadium.

Source: U.S. Census Bureau.

TABLE 2
U.S. IMPORTS AND EXPORTS OF FERROVANADIUM, OTHER OXIDES AND HYDROXIDES OF VANADIUM
AND VANADIUM PENTOXIDE (ANHYDRIDE)^{1, 2}

(Kilograms, gross and contained weight)

Country or locality		HTS ³ code	2023						
			January		February		January–February		
			Gross weight	Contained weight	Gross weight	Contained weight	Gross weight	Contained weight	
Imports for consumption:									
Vanadium ores and concentrates		2615.90.6090							
Mexico			394,000	237,000 ⁴	118,000	71,000 ⁴	513,000	308,000 ⁴	
Other [1 country and (or) locality]			160,000 ^r	85,400 ^{r, 4}	--	--	160,000	85,400 ⁴	
Total			554,000	322,000 ⁴	118,000	71,000 ⁴	673,000	393,000 ⁴	
Vanadium pentoxide (anhydride) ⁵		2825.30.0010							
China			2,410	1,400	1	1	2,410	1,410	
Germany			4,860	3,890	5,000	4,000	9,860	7,890	
South Africa			140,000	78,100	60,000	33,600	200,000	112,000	
Other [1 country and (or) locality]			20,000 ^r	19,900 ^r	--	--	20,000	19,900	
Total			167,000	103,000	65,000	37,600	232,000	141,000	
Other oxides and hydroxides of vanadium:		2825.30.0050							
Brazil			--	--	40,000	26,000	40,000	26,000	
South Africa			--	--	20,000	13,100	20,000	13,100	
Total			--	--	60,000	39,100	60,000	39,100	
Ferrovandium		7202.92.0000							
Austria			131,000	105,000	50,000	40,300	181,000	145,000	
Canada			123,000	103,000	156,000	124,000	279,000	228,000	
Japan			20,000	10,200	100,000	51,000	120,000	61,200	
Latvia			12,000	9,620	20,000	10,700	32,000	20,300	
Total			286,000	228,000	326,000	226,000	612,000	454,000	
Exports:									
Vanadium ores and concentrates		2615.90.6090							
Canada			1,980	NA	653	NA	2,630	NA	
France			--	--	519	NA	519	NA	
Total			1,980	XX	1,170	XX	3,150	XX	
Other oxides and hydroxides of vanadium, Canada		2825.30.0050	--	--	52	NA	52	NA	
Ferrovandium		7202.92.0000							
Netherlands			14,000	10,500	14,000	10,500	28,000	21,000	
Other [1 country and (or) locality]			186 ^r	140 ^r	--	--	186	140	
Total			14,200	10,600	14,000	10,500	28,200	21,100	

¹Revised. NA Not available. XX Not applicable. -- Zero.

²Data are rounded to no more than three significant digits; may not add to totals shown.

³Presentation of monthly data is based on the quantities (gross weight or contained weight) of the leading countries and (or) localities in February.

⁴Harmonized Tariff Schedule of the United States are imports and Schedule B of the United States are exports.

⁵Data are kilograms of vanadium pentoxide.

⁶May include catalysts containing vanadium pentoxide.

Source: U.S. Census Bureau.

TABLE 3
U.S. IMPORTS AND EXPORTS OF ALUMINUM VANADIUM MASTER ALLOY, VANADIUM BEARING ASH AND RESIDUES,
VANADIUM SULFATES, VANADATES, VANADIUM METAL AND U.S. IMPORTS OF SLAG^{1,2}

(Kilograms, gross and contained weight)

Country or locality	HTS ³ code	2023					
		January		February		January–February	
		Gross weight	Contained weight	Gross weight	Contained weight	Gross weight	Contained weight
Imports for consumption:							
Slag, from the manufacture of iron and steel	2619.00.9000						
Canada		1,470,000	NA	786,000	NA	2,260,000	NA
Mexico		53,500	NA	137,000	NA	191,000	NA
Other [1 country and (or) locality]		65 ^r	NA	--	--	65	NA
Total		1,520,000	XX	923,000	XX	2,450,000	XX
Vanadates, Japan	2841.90.1000	100	67	--	--	100	67
Vanadium metal, including waste and scrap and aluminum-vanadium master alloy	8112.92.7000, 8112.99.2000						
China		42,800	27,700	36,000	23,400	78,800	51,000
Japan		--	--	600	480	600	480
Korea, Republic of		--	--	54	49	54	49
Other [3 countries and (or) localities]		18,400 ^r	18,400 ^r	--	--	18,400	18,400
Total		61,100	46,000	36,700	23,900	97,800	69,900
Exports:							
Hydrides and nitrides of vanadium	2850.00.2000						
Germany		3,750	3,710	6,060	4,860	9,810	8,580
South Africa		6,550	5,170	3,980	3,150	10,500	8,320
Sweden		280	221	255	255	535	476
Other [2 countries and (or) localities]		12,000 ^r	9,480 ^r	--	--	12,000	9,480
Total		22,600	18,600	10,300	8,270	32,900	26,800
Vanadium metal, including waste and scrap and aluminum-vanadium master alloy	8112.92.7000, 8112.99.2000						
Colombia		--	--	4	NA	4	NA
France		--	--	93	NA	93	NA
Other [2 countries and (or) localities]		2,460 ^r	NA	--	--	2,460	NA
Total		2,460	XX	97	XX	2,560	XX

^rRevised. NA Not available. XX Not applicable. -- Zero.

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

²Presentation of monthly data is based on the quantities (gross weight or contained weight) of the leading countries and (or) localities in February.

³Harmonized Tariff Schedule of the United States are imports and Schedule B of the United States are exports.

Source: U.S. Census Bureau.