

Mineral Industry Surveys

For information, contact:

Ruth F. Schulte, Chromium Commodity Specialist
 National Minerals Information Center
 Telephone: (703) 648-4963
 Email: rschulte@usgs.gov

Benjamin N. Bryden (Data)
 Telephone: (703) 648-7953
 Email: bbryden@usgs.gov

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

CHROMIUM IN JUNE 2022

Stainless steel production increased by 9% in June 2022 compared with production in May 2022 and decreased by 19% compared with production in June 2021 (table 1). Government stockpile inventories for chromium metal were essentially unchanged compared with those in May and decreased by 6% compared with June 2021. Government stockpile inventories for high-carbon ferrochromium decreased by 5% and low-carbon ferrochromium inventories were unchanged compared with those in May. Inventories for high-carbon ferrochromium and low-carbon ferrochromium decreased by 33% and by 3%, respectively, compared with inventories in June 2021 (table 3).

In June 2022, the leading import sources for ferrochromium into the United States were, in descending order of quantity by gross weight, Kazakhstan, Finland, and Russia (table 6),

whereas the leading import sources for chromium metal were China, the United Kingdom, and Russia (table 7).

Imports of chromite ore, chromium ferroalloys, stainless steel, and stainless steel scrap commonly fluctuate from month to month (fig. 1, table 1). In June 2022, imports of chromite ore increased five-fold compared with imports in May and decreased by 91% compared with imports in June 2021. Imports of all grades of chromium ferroalloys, including ferrochromium silicon, increased more than four times imports of chromium ferroalloys in May and decreased by 57% compared with imports in June 2021. Stainless steel imports in June 2022 increased by 4% compared with imports in May and decreased by 18% compared with those in June 2021. Stainless steel scrap imports in June 2022 were 6% less than imports in May and 4% more than those in June 2021 (table

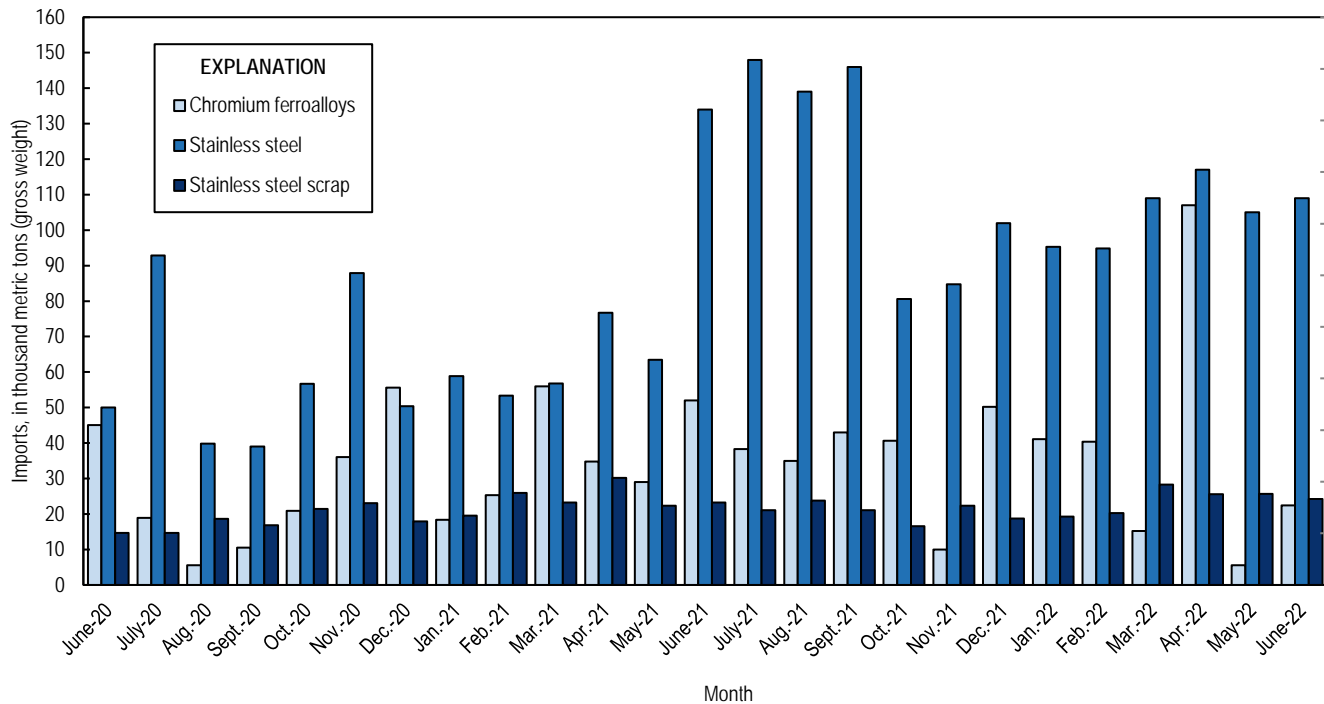


Figure 1. Chromium ferroalloys, stainless steel, and stainless steel scrap imports from June 2020 through June 2022. Source: U.S. Census Bureau.

1).

The U.S. chromium metal (99% chromium) average price was \$8.52 per pound in June 2022, a 3% decrease from the average price in May, and more than double the average price in June 2021. The U.S. high-carbon ferrochromium (62%–70% chromium) average price was 399.72 cents per pound of contained chromium in June 2022, unchanged from the average price in May 2022, and more than double the average price in June 2021 (fig. 2) (CRU Group, 2022).

Industry News

Universal Stainless & Alloy Products, Inc. announced its operations at its Bridgeville facility in Pennsylvania returned to full capacity in June following a metal spill from its electric arc furnace in April. No injuries or environmental impact were reported and there were no immediate delays in product delivery (Universal Stainless & Alloy Products, Inc., 2022).

Bauba Resources Ltd. (South Africa) announced an 8-year mining right had been granted to its subsidiary Nuco Chrome Bophuthatswana (Pty) Ltd. (South Africa) (Nuco Chrome) in the Kookfontein Mineral Right area of South Africa. The mining right would enable Nuco Chrome to mine for chromite, copper, gold, nickel, and platinum group metals in the Kookfontein Mineral Right area, located approximately 5 kilometers from Rustenburg and directly adjacent to the town of Phoken (Bauba Resources Ltd., 2022; undated).

Oman Chromite Company signed a joint exploration agreement with Minerals Development Oman (MDO) to determine the mining potential for chromite ore at two exploration sites in the Governorates of Al Batinah North and Al Buraimi. MDO is a state-owned mining and minerals processing company affiliated with Oman Investment Authority (a wealth fund of the Sultanate of Oman) that has

been working to develop Oman’s mineral resources (Al Maashani, 2022).

References Cited

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Universal Stainless & Alloy Products, Inc., 2022, Universal Stainless resumes operations at Bridgeville, PA melt shop: Bridgeville, PA, Universal Stainless & Alloy Products, Inc. press release, June 21. (Accessed August 2, 2022, at [https://investors.univstainless.com/news-releases/news-release-details/universal-stainless-resumes-operations-bridgeville-pa-melt-shop.](https://investors.univstainless.com/news-releases/news-release-details/universal-stainless-resumes-operations-bridgeville-pa-melt-shop))

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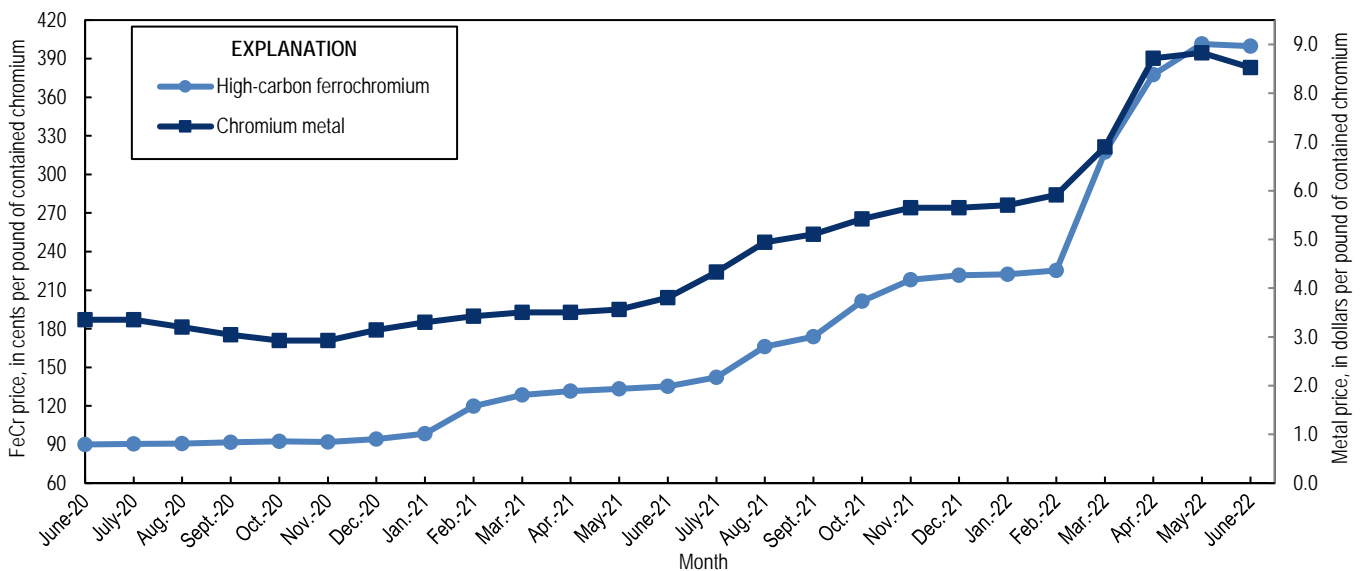


Figure 2. Average monthly prices for U.S. high-carbon ferrochromium (FeCr) and chromium metal from June 2020 through June 2022. Source: CRU Group.

NOTICE

The U.S. Geological Survey plans to discontinue reporting industry consumption of ferroalloys and chromium metal in tables 1 and 2 of this Mineral Industry Surveys report. The last published report that will include tables 1 and 2 will be Chromium in June 2022. Information in these tables will still be available on an annual basis in the chromium chapters of the Mineral Commodity Summaries and the Minerals Yearbook, Volume I, Metals and Minerals. Prior to the proposed discontinuation date, please direct any comments or concerns to Elizabeth Sangine, Chief, Mineral Commodities Section, escottsangine@usgs.gov.

TABLE 1
U.S. SALIENT CHROMIUM STATISTICS¹

(Metric tons, gross weight)

	2021	2022			
	January– December	April	May	June	January– June ²
Production, stainless steel ³	2,370,000	183,000	161,000	176,000	1,090,000
Components of U.S. supply:					
Stainless steel scrap receipts	672,000	56,100 ^r	46,600	51,000 ^e	310,000 ^e
Stainless steel scrap consumption	1,010,000	83,900 ^r	73,100	83,900	470,000 ^e
Imports for consumption:					
Chromite ore	146,000	41,500	675	3,380	52,500
Ferrochromium:					
More than 4% carbon	347,000	101,000	2,430	17,000	197,000
More than 3% but not more than 4% carbon	6,700	--	16	--	16
More than 0.5% but not more than 3% carbon	1,810	--	--	306	586
Not more than 0.5% carbon	57,700	2,230	1,680	5,020	22,500
Ferrochromium silicon	19,800	3,500	1,440	110	10,700
Total ferroalloy imports	433,000	107,000	5,570	22,400	231,000
Chromium metal ⁴	12,100	1,490	1,840	1,660	8,390
Stainless steel	1,140,000	117,000	105,000	109,000	631,000
Stainless steel scrap	268,000	25,600	25,700	24,200	143,000
Distribution of U.S. supply:					
Consumption, industry, chromium ferroalloys and metal	314,000	W	W	W	W
Exports:					
Chromite ore	2,110	255	96	161	1,030
Chromium ferroalloys:					
High-carbon ferrochromium	1,690	213	366	453	1,450
Low-carbon ferrochromium	1,580	32	22	259	583
Ferrochromium silicon	134	--	--	--	40
Total ferroalloy exports	3,410	245	387	712	2,070
Chromium metal	456	45	68	34	315
Stainless steel	355,000	35,300	31,400	29,200	180,000
Stainless steel scrap	293,000	20,200	59,200	16,300	152,000
Stocks at end of period:					
Consumer, industry, chromium ferroalloys and metal	7,730	W	W	W	W
Government stockpile:					
Chromium ferroalloys ⁵	49,900	46,400	46,000	45,100	45,100
Chromium metal	3,560	3,520	3,520	3,480	3,480

^eEstimated. ^rRevised. W Withheld to avoid disclosing company proprietary data. -- Zero.

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

²May include revised data that are not broken out by specific month(s).

³Data on stainless steel production reported by American Iron and Steel Institute; monthly, quarterly, and year-to-date production of stainless and heat-resisting raw steel.

⁴Includes waste and scrap and other.

⁵Includes high- and low-carbon ferrochromium.

TABLE 2
U.S. CONSUMPTION AND STOCKS OF CHROMIUM PRODUCTS

(Metric tons, gross weight unless otherwise noted)

	2022	
	May	June
Consumption by end use:		
Steel:		
Carbon steel	W	W
High-strength low-alloy steel	W	W
Stainless and heat-resisting steel	W	W
Unspecified steel ¹	W	W
Superalloys	W	W
Other alloys and uses ²	W	W
Total	W	W
Total, chromium content	W	W
Consumption by material:		
Low-carbon ferrochromium	W	W
High-carbon ferrochromium	W	W
Ferrochromium silicon	W	W
Chromium metal	W	W
Chromium-aluminum alloy	W	W
Other chromium materials ³	W	W
Total	W	W
Total, chromium content	W	W
Consumer stocks:		
Low-carbon ferrochromium	W	W
High-carbon ferrochromium	W	W
Ferrochromium silicon	W	W
Chromium metal	W	W
Chromium-aluminum alloy	W	W
Other chromium materials ³	W	W
Total	W	W
Total, chromium content	W	W

W Withheld to avoid disclosing company proprietary data.

¹Includes electrical, full alloy, tool, and unspecified steel end uses.

²Includes cast irons, welding and alloy hard-facing rods and materials, wear- and corrosion-resistant alloys, and aluminum, copper, magnetic, nickel, and other alloys.

³Includes chromite ore as foundry sand.

TABLE 3
U.S. GOVERNMENT STOCKPILE INVENTORY OF
CHROMIUM MATERIALS¹

(Metric tons)

	Chromium ferroalloys		Chromium metal
	High-carbon ferro- chromium	Low-carbon ferro- chromium	
2021:			
June	27,500	27,500	3,690
July	27,300	27,500	3,690
August	26,200	27,500	3,620
September	25,600	27,400	3,620
October	25,600	27,400	3,620
November	24,700	27,200	3,560
December	22,900	27,000	3,560
2022:			
January	22,000	27,000	3,560
February	22,000	27,000	3,560
March	20,700	26,800	3,520
April	19,600	26,800	3,520
May	19,200	26,800	3,520
June	18,300	26,800	3,480

¹Data are rounded to no more than three significant digits.

Source: Defense Logistics Agency, DLA Strategic Materials.

TABLE 4
U.S. EXPORTS OF CHROMITE ORE, CHROMIUM FERROALLOYS, AND METAL¹

	Chromite ore		Chromium ferroalloys ²			Chromium metal ³	
	Gross weight (metric tons)	Value (thousands)	Gross weight (metric tons)	Chromium content (metric tons)	Value (thousands)	Gross weight (metric tons)	Value (thousands)
2021:							
June	155	\$86	82	43	\$142	86	\$1,200
July	156	104	274	147	529	15	406
August	116	81	435	212	600	47	1,000
September	302	191	354	167	484	25	773
October	142	95	752	403	2,260	21	584
November	219	135	465	254	947	21	418
December	50	37	558	179	676	29	924
January–December ⁴	2,110	1,430	3,410	1,670	6,510	456	9,660
2022:							
January	90	88	321	124	414	63	1,030
February	170	144	252	52	259	39	1,080
March	262	206	157	44	172	66	1,360
April	255	227	245	129	282	45	867
May	96	77	387	208	390	68	1,410
June	161	110	712	425	783	34	899
January–June ⁴	1,030	852	2,070	982	2,300	315	6,640

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

²Includes low- and high-carbon ferrochromium and ferrochromium silicon.

³Includes chromium metal, waste and scrap, and unwrought powders.

⁴May include revised data that are not broken out by specific month(s).

Source: U.S. Census Bureau.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF CHROMITE ORE, FERROCHROMIUM, AND
CHROMIUM METAL¹

(Metric tons)

	2021	2022		
	January– December	May	June	January– June ²
Chromite ore:				
Not more than 40% chromic oxide:				
Gross weight	15,800	161	53	2,030
Chromic oxide content	3,490	63	20	680
More than 40% but less than 46% chromic oxide:				
Gross weight	21,400	493	1,670	4,590
Chromic oxide content	9,270	215	722	1,990
46% or more chromic oxide:				
Gross weight	108,000	21	1,650	45,900
Chromic oxide content	94,300	14	790	39,500
Total, all grades:				
Gross weight	146,000	675	3,380	52,500
Chromic oxide content	107,000	292	1,530	42,100
Ferrochromium:				
Low-carbon: ³				
Not more than 0.5% carbon:				
Gross weight	57,700	1,680	5,020	22,500
Chromium content	40,400	1,150	3,530	15,600
More than 0.5% but not more than 3% carbon:				
Gross weight	1,810	--	306	586
Chromium content	1,250	--	200	391
Total, low-carbon:				
Gross weight	59,500	1,680	5,320	23,100
Chromium content	41,600	1,150	3,730	16,000
Medium-carbon: ⁴				
Gross weight	6,700	16	--	16
Chromium content	3,420	11	--	11
High-carbon: ⁵				
Gross weight	347,000	2,430	17,000	197,000
Chromium content	191,000	1,480	10,400	112,000
Total, all grades:				
Gross weight	413,000	4,130	22,300	221,000
Chromium content	236,000	2,640	14,100	128,000
Chromium metal:				
Unwrought powders	10,300	1,630	1,510	7,320
Waste and scrap	112	17	107	242
Other than waste and scrap and unwrought powders	1,710	192	42	833
Total, all grades	12,100	1,840	1,660	8,390

-- Zero.

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

²May include revised data that are not broken out by specific month(s).

³Ferrochromium containing not more than 3% carbon.

⁴Ferrochromium containing more than 3% carbon but not more than 4% carbon.

⁵Ferrochromium containing more than 4% carbon.

Source: U.S. Census Bureau.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF FERROCHROMIUM IN 2021, BY GRADE AND COUNTRY OR LOCALITY¹

Grade and country or locality	June			January–June ²		
	Gross weight (metric tons)	Chromium content (metric tons)	Value ³ (thousands)	Gross weight (metric tons)	Chromium content (metric tons)	Value ³ (thousands)
High-carbon ferrochromium:⁴						
Albania	154	101	\$371	8,090	5,500	\$26,000
Finland	5,100	2,710	8,010	8,600	4,640	12,500
India	150	92	244	804	498	1,640
Kazakhstan	8,210	5,660	42,000	35,400	24,300	134,000
Russia	2,640	1,410	4,600	20,500	12,600	40,800
South Africa	513	248	387	93,400	45,700	130,000
Sweden	--	--	--	3,170	2,150	8,760
Turkey	244	158	996	13,600	8,780	44,600
Zimbabwe	--	--	--	13,900	7,610	16,600
Total	17,000	10,400	56,600	197,000	112,000	415,000
Medium-carbon ferrochromium, Kazakhstan⁵						
	--	--	--	16	11	90
Low-carbon ferrochromium:⁶						
More than 0.5% but not more than 3% carbon						
Brazil	162	99	800	189	116	893
Kazakhstan	144	101	795	397	276	1,170
Total	306	200	1,600	586	391	2,060
Not more than 0.5% carbon:						
Belgium	--	--	--	40	28	127
Brazil	147	98	576	475	305	1,840
China	390	305	1,770	599	455	2,630
Germany	848	582	2,640	4,240	3,000	13,500
India	100	62	379	100	62	379
Japan	22	16	89	920	648	4,350
Kazakhstan	1,650	1,190	16,800	5,360	3,870	39,000
Russia	1,860	1,280	16,800	10,600	7,140	61,200
Sweden	--	--	--	14	10	59
Turkey	--	--	--	138	97	783
Total	5,020	3,530	39,000	22,500	15,600	124,000
All grades:						
Albania	154	101	371	8,090	5,500	26,000
Belgium	--	--	--	40	28	127
Brazil	309	196	1,380	664	420	2,730
China	390	305	1,770	599	455	2,630
Finland	5,100	2,710	8,010	8,600	4,640	12,500
Germany	848	582	2,640	4,240	3,000	13,500
India	250	154	623	904	560	2,020
Japan	22	16	89	920	648	4,350
Kazakhstan	10,000	6,950	59,600	41,200	28,500	174,000
Russia	4,500	2,680	21,400	31,100	19,700	102,000
South Africa	513	248	387	93,400	45,700	130,000
Sweden	--	--	--	3,180	2,160	8,820
Turkey	244	158	996	13,700	8,870	45,400
Zimbabwe	--	--	--	13,900	7,610	16,600
Total	22,300	14,100	97,200	221,000	128,000	541,000

-- Zero.

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

²May include revised data that are not broken out by specific month(s).

³Customs import value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the merchandise into the United States.

⁴Ferrochromium containing more than 4% carbon.

⁵Ferrochromium containing more than 3% carbon but not more than 4% carbon.

⁶Ferrochromium containing not more than 3% carbon.

Source: U.S. Census Bureau.

TABLE 7
U.S. IMPORTS FOR CONSUMPTION OF CHROMIUM METAL IN 2021,
BY GRADE AND BY COUNTRY OR LOCALITY¹

Grade and country or locality	June		January-June ²	
	Gross weight (metric tons)	Value ³ (thousands)	Gross weight (metric tons)	Value ³ (thousands)
Unwrought powders:				
China	788	\$9,470	2,500	\$28,300
France	134	2,630	1,250	18,400
Germany	6	125	113	1,910
India	--	--	80	1,360
Korea, Republic of	--	--	16	228
Russia	210	2,350	1,630	17,300
Spain	--	--	29	138
Ukraine	--	--	1	22
United Kingdom	371	9,020	1,690	32,000
Total	1,510	23,600	7,320	99,700
Waste and scrap:				
Canada	3	19	3	19
China	--	--	25	218
Japan	--	--	(4)	4
South Africa	14	180	14	180
United Kingdom	89	937	199	2,050
Total	107	1,140	242	2,470
Other than waste and scrap and unwrought powders:				
Austria	--	--	(4)	3
Canada	(4)	5	(4)	8
China	1	90	4	407
France	(4)	4	(4)	22
Germany	(4)	32	14	401
Italy	--	--	(4)	30
Japan	1	49	4	205
Malaysia	--	--	(4)	19
Russia	40	584	749	8,730
South Africa	--	--	8	77
United Kingdom	--	--	55	827
Total	42	764	833	10,700
All grades:				
Austria	--	--	(4)	3
Canada	3	24	3	26
China	789	9,560	2,530	28,900
France	134	2,630	1,250	18,400
Germany	7	157	126	2,310
India	--	--	80	1,360
Italy	--	--	(4)	30
Japan	1	49	4	209
Korea, Republic of	--	--	16	228
Malaysia	--	--	(4)	19
Russia	250	2,930	2,380	26,100
South Africa	14	180	22	257
Spain	--	--	29	138
Ukraine	--	--	1	22
United Kingdom	461	9,960	1,940	34,900
Total	1,660	25,500	8,390	113,000

-- Zero.

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

²May include revised data that are not broken out by specific month(s).

³Customs import value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the merchandise into the United States.

⁴Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 8
U.S. STAINLESS STEEL TRADE, BY PRODUCT, IN 2021¹

Stainless steel product	June		January–June ²	
	Gross weight (metric tons)	Value ³ (thousands)	Gross weight (metric tons)	Value ³ (thousands)
Exports:				
Ingot	688	\$6,010	6,660	\$45,200
Flat-rolled (width > 600 mm)	16,100	85,200	104,000	489,000
Flat-rolled (width < 600 mm)	5,320	36,300	30,400	204,000
Bars and rods in irregular coils	381	1,880	1,270	7,590
Other bars and rods	2,690	36,400	14,500	188,000
Wire	639	13,700	3,870	77,900
Tubes, pipes, hollow profiles	3,340	39,800	18,900	201,000
Total	29,200	219,000	180,000	1,210,000
Stainless steel scrap	16,300	29,300	152,000	184,000
Grand total	45,500	249,000	332,000	1,400,000
Imports:				
Ingot	15,800	53,800	85,900	278,000
Flat-rolled (width > 600 mm)	53,000	195,000	299,000	1,040,000
Flat-rolled (width < 600 mm)	5,270	30,000	33,500	165,000
Bars and rods in irregular coils	5,580	29,800	28,100	129,000
Other bars and rods	11,200	63,900	69,400	360,000
Wire	4,180	25,300	29,300	159,000
Tubes, pipes, hollow profiles	14,400	103,000	86,400	595,000
Total	109,000	500,000	631,000	2,730,000
Stainless steel scrap	24,200	44,100	143,000	270,000
Grand total	134,000	544,000	775,000	3,000,000

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

²May include revised data that are not broken out by specific month(s).

³Export value is free alongside ship. Import value is Customs import value, which generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other incurred in bringing the merchandise into the United States.

Source: U.S. Census Bureau.