

# Mineral Industry Surveys

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## CHROMIUM IN MAY 2022

Stainless steel production decreased by 12% in May 2022 compared with production in April 2022 and decreased by 25% compared with production in May 2021 (table 1). Government stockpile inventories for chromium metal were unchanged compared with those in April and decreased by 5% compared with May 2021. Government stockpile inventories for high-carbon ferrochromium decreased slightly and low-carbon ferrochromium was unchanged compared with those in April. Inventories for high-carbon ferrochromium and low-carbon ferrochromium decreased by 31% and by 3%, respectively, compared with inventories in May 2021 (table 3).

In May 2022, the leading import sources for ferrochromium into the United States were, in descending order of quantity by gross weight, Sweden, Zimbabwe, and Germany (table 6),

whereas the leading import sources for chromium metal were China, Russia, and France (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 May 2022, imports of chromite ore decreased 98% compared with imports in April and decreased by 87% compared with imports in May 2021. Imports of all grades of chromium ferroalloys, including ferrochromium silicon, decreased 95% compared with imports of chromium ferroalloys in April and decreased by 81% compared with imports in May 2021. Stainless steel imports in May 2022 decreased by 11% compared with imports in April and were 65% more than those in May 2021. Stainless steel scrap imports were unchanged in May 2022 compared with imports in April and increased by 15% compared with those in

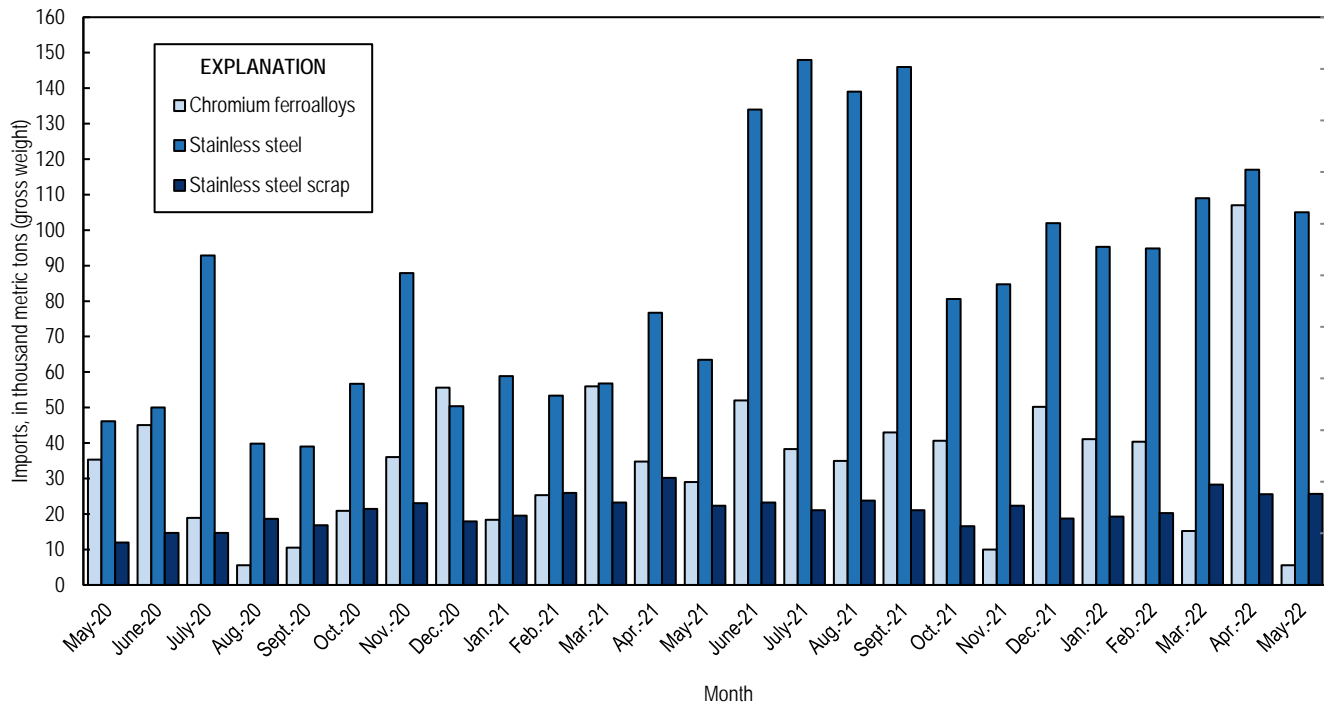


Figure 1. Chromium ferroalloys, stainless steel, and stainless steel scrap imports from May 2020 through May 2022. Source: U.S. Census Bureau.

May 2021 (table 1).

The U.S. chromium metal (99% chromium) average price was \$8.83 per pound in May 2022, essentially unchanged from the average price in April, and more than double the average price in May 2021. The U.S. high-carbon ferrochromium (62%–70% chromium) average price was 401.39 cents per pound of contained chromium in May 2022, a 6% increase from the average price in April 2022, and triple the average price in May 2021 (fig. 2) (CRU Group, 2022).

### Industry News

Indian Metals and Ferro Alloys (India) adjusted its fiscal year (April–March) production targets for ferrochromium and chromite ore up from 246,175 metric tons per year (t/yr) to 250,000 t/yr and from 559,358 t/yr to 600,000 t/yr, respectively. The increases in production were attributed to anticipated increases in demand, owing to Covid-19 lockdowns in China and trade disruptions from the Russia-Ukraine conflict (Argus Metals International, 2022).

### References Cited

Argus Metals International, 2022, India’s IMFA ramps up ferro-chrome production: Argus Media group, Argus Metals International, May 25. (Accessed July 18, 2022, via <https://www2.argusmedia.com/metals/>.)  
 CRU Group, 2022, CRU prices: CRU Group, June 1. (Accessed July 18, 2022, via <http://www.crugroup.com/>.)

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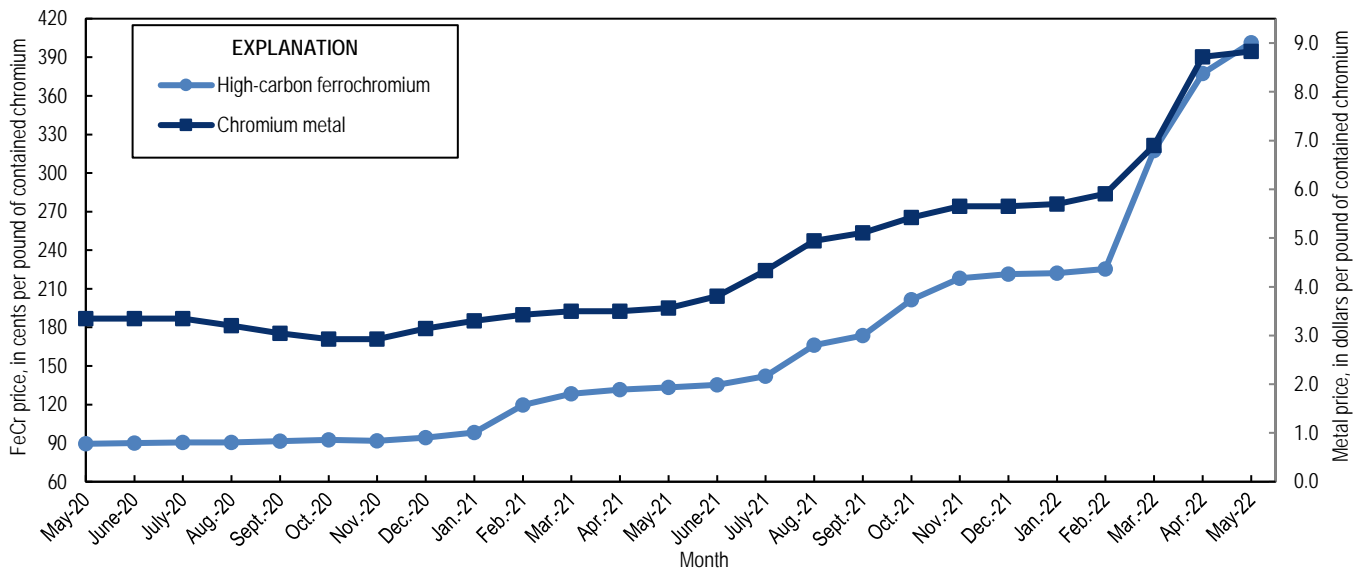


Figure 2. Average monthly prices for U.S. high-carbon ferrochromium (FeCr) and chromium metal from May 2020 through May 2022. Source: CRU Group.

**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](mailto:escottsangine@usgs.gov).

TABLE 1  
U.S. SALIENT CHROMIUM STATISTICS<sup>1</sup>

(Metric tons, gross weight)

	2021	2022			
	January– December	March	April	May	January– May <sup>2</sup>
Production, stainless steel <sup>3</sup>	2,370,000	197,000	183,000	161,000	913,000
Components of U.S. supply:					
Stainless steel scrap receipts	672,000	53,500 <sup>e</sup>	49,700 <sup>e</sup>	46,600	250,000 <sup>e</sup>
Stainless steel scrap consumption	1,010,000	80,900 <sup>e</sup>	75,100 <sup>e</sup>	73,100	381,000 <sup>e</sup>
Imports for consumption:					
Chromite ore	146,000	852	41,500	675	49,100
Ferrochromium:					
More than 4% carbon	347,000	7,350	101,000	2,430	180,000
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	252	--	--	279
Not more than 0.5% carbon	57,700	6,140	2,230	1,680	17,500
Ferrochromium silicon	19,800	1,500	3,500	1,440	10,600
Total ferroalloy imports	433,000	15,200	107,000	5,570	209,000
Chromium metal <sup>4</sup>	12,100	1,260	1,490	1,840	6,730
Stainless steel	1,140,000	109,000	117,000	105,000	522,000
Stainless steel scrap	268,000	28,300	25,600	25,700	119,000
Distribution of U.S. supply:					
Consumption, industry, chromium ferroalloys and metal	314,000	W	W	W	W
Exports:					
Chromite ore	2,110	262	255	96	873
Chromium ferroalloys:					
High-carbon ferrochromium	1,690	96	213	366	998
Low-carbon ferrochromium	1,580	61	32	22	324
Ferrochromium silicon	134	--	--	--	40
Total ferroalloy exports	3,410	157	245	387	1,360
Chromium metal	456	66	45	68	281
Stainless steel	355,000	31,600	35,300	31,400	150,000
Stainless steel scrap	293,000	23,200	20,200	59,200	136,000
Stocks at end of period:					
Consumer, industry, chromium ferroalloys and metal	7,730	W	W	W	W
Government stockpile:					
Chromium ferroalloys <sup>5</sup>	49,900	47,400	46,400	46,000	46,000
Chromium metal	3,560	3,520	3,520	3,520	3,520

<sup>e</sup>Estimated. W Withheld to avoid disclosing company proprietary data. -- Zero.

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

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

<sup>3</sup>Data 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.

<sup>4</sup>Includes waste and scrap and other.

<sup>5</sup>Includes high- and low-carbon ferrochromium.

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

(Metric tons, gross weight unless otherwise noted)

	2022	
	April	May
<b>Consumption by end use:</b>		
<b>Steel:</b>		
Carbon steel	W	W
High-strength low-alloy steel	W	W
Stainless and heat-resisting steel	W	W
Unspecified steel <sup>1</sup>	W	W
Superalloys	W	W
Other alloys and uses <sup>2</sup>	W	W
<b>Total</b>	<b>W</b>	<b>W</b>
<b>Total, chromium content</b>	<b>W</b>	<b>W</b>
<b>Consumption by material:</b>		
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 <sup>3</sup>	W	W
<b>Total</b>	<b>W</b>	<b>W</b>
<b>Total, chromium content</b>	<b>W</b>	<b>W</b>
<b>Consumer stocks:</b>		
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 <sup>3</sup>	W	W
<b>Total</b>	<b>W</b>	<b>W</b>
<b>Total, chromium content</b>	<b>W</b>	<b>W</b>

W Withheld to avoid disclosing company proprietary data.

<sup>1</sup>Includes electrical, full alloy, tool, and unspecified steel end uses.

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

<sup>3</sup>Includes chromite ore as foundry sand.

TABLE 3  
U.S. GOVERNMENT STOCKPILE INVENTORY OF  
CHROMIUM MATERIALS<sup>1</sup>

(Metric tons)

	Chromium ferroalloys		Chromium metal
	High-carbon ferro- chromium	Low-carbon ferro- chromium	
2021:			
May	27,700	27,500	3,690
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

<sup>1</sup>Data 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 METAL<sup>1</sup>

	Chromite ore		Chromium ferroalloys <sup>2</sup>			Chromium metal <sup>3</sup>	
	Gross weight (metric tons)	Value (thousands)	Gross weight (metric tons)	Chromium content (metric tons)	Value (thousands)	Gross weight (metric tons)	Value (thousands)
2021:							
May	115	\$106	94	59	\$155	66	\$1,200
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 <sup>4</sup>	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
January–May <sup>4</sup>	873	742	1,360	557	1,520	281	5,740

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

<sup>2</sup>Includes low- and high-carbon ferrochromium and ferrochromium silicon.

<sup>3</sup>Includes chromium metal, waste and scrap, and unwrought powders.

<sup>4</sup>May 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 METAL<sup>1</sup>

(Metric tons)

	2021	2022		
	January– December	April	May	January– May <sup>2</sup>
<b>Chromite ore:</b>				
Not more than 40% chromic oxide:				
Gross weight	15,800	535	161	1,980
Chromic oxide content	3,490	209	63	660
More than 40% but less than 46% chromic oxide:				
Gross weight	21,400	538	493	2,920
Chromic oxide content	9,270	232	215	1,270
46% or more chromic oxide:				
Gross weight	108,000	40,400	21	44,200
Chromic oxide content	94,300	36,800	14	38,700
<b>Total, all grades:</b>				
Gross weight	146,000	41,500	675	49,100
Chromic oxide content	107,000	37,300	292	40,600
<b>Ferrochromium:</b>				
Low-carbon: <sup>3</sup>				
Not more than 0.5% carbon:				
Gross weight	57,700	2,230	1,680	17,500
Chromium content	40,400	1,590	1,150	12,100
More than 0.5% but not more than 3% carbon:				
Gross weight	1,810	--	--	279
Chromium content	1,250	--	--	191
<b>Total, low-carbon:</b>				
Gross weight	59,500	2,230	1,680	17,700
Chromium content	41,600	1,590	1,150	12,300
Medium-carbon: <sup>4</sup>				
Gross weight	6,700	--	16	16
Chromium content	3,420	--	11	11
High-carbon: <sup>5</sup>				
Gross weight	347,000	101,000	2,430	180,000
Chromium content	191,000	54,800	1,480	101,000
<b>Total, all grades:</b>				
Gross weight	413,000	103,000	4,130	198,000
Chromium content	236,000	56,400	2,640	114,000
<b>Chromium metal:</b>				
Unwrought powders	10,300	1,160	1,630	5,810
Waste and scrap	112	1	17	135
Other than waste and scrap and unwrought powders	1,710	329	192	791
<b>Total, all grades</b>	<b>12,100</b>	<b>1,490</b>	<b>1,840</b>	<b>6,730</b>

-- Zero.

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

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

<sup>3</sup>Ferrochromium containing not more than 3% carbon.

<sup>4</sup>Ferrochromium containing more than 3% carbon but not more than 4% carbon.

<sup>5</sup>Ferrochromium 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 LOCALITY<sup>1</sup>

Grade and country or locality	May			January–May <sup>2</sup>		
	Gross weight (metric tons)	Chromium content (metric tons)	Value <sup>3</sup> (thousands)	Gross weight (metric tons)	Chromium content (metric tons)	Value <sup>3</sup> (thousands)
<b>High-carbon ferrochromium:<sup>4</sup></b>						
Albania	50	33	\$108	7,940	5,400	\$25,600
Finland	--	--	--	3,500	1,920	4,510
India	394	240	1,040	654	406	1,400
Kazakhstan	83	57	93	27,200	18,700	92,000
Russia	--	--	--	17,900	11,200	36,200
South Africa	--	--	--	92,800	45,400	129,000
Sweden	980	657	3,110	3,170	2,150	8,760
Turkey	--	--	--	13,300	8,620	43,700
Zimbabwe	925	496	1,040	13,900	7,610	16,600
Total	2,430	1,480	5,390	180,000	101,000	358,000
<b>Medium-carbon ferrochromium, Kazakhstan<sup>5</sup></b>						
	16	11	90	16	11	90
<b>Low-carbon ferrochromium:<sup>6</sup></b>						
<b>More than 0.5% but not more than 3% carbon</b>						
Brazil	--	--	--	27	17	93
Kazakhstan	--	--	--	252	174	374
Total	--	--	--	279	191	467
<b>Not more than 0.5% carbon:</b>						
Belgium	--	--	--	40	28	127
Brazil	139	86	583	328	207	1,260
China	200	144	829	208	150	863
Germany	854	580	2,690	3,390	2,410	10,900
Japan	239	169	1,290	898	631	4,260
Kazakhstan	--	--	--	3,710	2,680	22,200
Russia	108	76	980	8,740	5,860	44,500
Sweden	--	--	--	14	10	59
Turkey	138	97	783	138	97	783
Total	1,680	1,150	7,150	17,500	12,100	84,900
<b>All grades:</b>						
Albania	50	33	108	7,940	5,400	25,600
Belgium	--	--	--	40	28	127
Brazil	139	86	583	355	224	1,360
China	200	144	829	208	150	863
Finland	--	--	--	3,500	1,920	4,510
Germany	854	580	2,690	3,390	2,410	10,900
India	394	240	1,040	654	406	1,400
Japan	239	169	1,290	898	631	4,260
Kazakhstan	100	68	183	31,200	21,500	115,000
Russia	108	76	980	26,600	17,100	80,700
South Africa	--	--	--	92,800	45,400	129,000
Sweden	980	657	3,110	3,180	2,160	8,820
Turkey	138	97	783	13,500	8,710	44,400
Zimbabwe	925	496	1,040	13,900	7,610	16,600
Total	4,130	2,640	12,600	198,000	114,000	443,000

-- Zero.

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

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

<sup>3</sup>Customs 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.

<sup>4</sup>Ferrochromium containing more than 4% carbon.

<sup>5</sup>Ferrochromium containing more than 3% carbon but not more than 4% carbon.

<sup>6</sup>Ferrochromium 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 LOCALITY<sup>1</sup>

Grade and country or locality	May		January–May <sup>2</sup>	
	Gross weight (metric tons)	Value <sup>3</sup> (thousands)	Gross weight (metric tons)	Value <sup>3</sup> (thousands)
<b>Unwrought powders:</b>				
China	707	\$8,530	1,720	\$18,800
France	343	5,990	1,120	15,800
Germany	5	149	107	1,780
India	59	861	80	1,360
Korea, Republic of	--	--	16	228
Russia	234	2,960	1,420	15,000
Spain	--	--	29	138
Ukraine	1	22	1	22
United Kingdom	282	6,600	1,320	23,000
Total	1,630	25,100	5,810	76,100
<b>Waste and scrap:</b>				
China	5	28	25	218
Japan	--	--	(4)	4
United Kingdom	11	144	110	1,110
Total	17	172	135	1,330
<b>Other than waste and scrap and unwrought powders:</b>				
Austria	(4)	3	(4)	3
Canada	--	--	(4)	3
China	(4)	29	3	316
France	--	--	(4)	18
Germany	(4)	56	13	369
Italy	--	--	(4)	30
Japan	(4)	13	3	155
Malaysia	(4)	19	(4)	19
Russia	160	2,110	709	8,150
South Africa	1	8	8	77
United Kingdom	30	495	55	827
Total	192	2,730	791	9,960
<b>All grades:</b>				
Austria	(4)	3	(4)	3
Canada	--	--	(4)	3
China	712	8,580	1,750	19,300
France	343	5,990	1,120	15,800
Germany	6	205	120	2,150
India	59	861	80	1,360
Italy	--	--	(4)	30
Japan	(4)	13	3	160
Korea, Republic of	--	--	16	228
Malaysia	(4)	19	(4)	19
Russia	394	5,070	2,130	23,100
South Africa	1	8	8	77
Spain	--	--	29	138
Ukraine	1	22	1	22
United Kingdom	324	7,240	1,480	24,900
Total	1,840	28,000	6,730	87,400

-- Zero.

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

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

<sup>3</sup>Customs 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.

<sup>4</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 8  
U.S. STAINLESS STEEL TRADE, BY PRODUCT, IN 2021<sup>1</sup>

Stainless steel product	May		January–May <sup>2</sup>	
	Gross weight (metric tons)	Value <sup>3</sup> (thousands)	Gross weight (metric tons)	Value <sup>3</sup> (thousands)
<b>Exports:</b>				
Ingot	948	\$6,740	5,980	\$39,200
Flat-rolled (width > 600 mm)	18,200	93,100	87,800	404,000
Flat-rolled (width < 600 mm)	5,450	35,100	25,100	168,000
Bars and rods in irregular coils	142	1,350	885	5,710
Other bars and rods	3,020	39,000	11,800	151,000
Wire	637	12,800	3,230	64,200
Tubes, pipes, hollow profiles	2,990	32,400	15,600	161,000
Total	31,400	221,000	150,000	994,000
Stainless steel scrap	59,200	38,600	136,000	155,000
Grand total	90,600	259,000	286,000	1,150,000
<b>Imports:</b>				
Ingot	9,760	42,100	70,100	224,000
Flat-rolled (width > 600 mm)	48,800	180,000	246,000	847,000
Flat-rolled (width < 600 mm)	5,230	27,300	28,300	135,000
Bars and rods in irregular coils	5,650	26,700	22,600	98,700
Other bars and rods	13,600	72,900	58,200	296,000
Wire	5,230	29,200	25,200	134,000
Tubes, pipes, hollow profiles	16,600	116,000	72,000	493,000
Total	105,000	494,000	522,000	2,230,000
Stainless steel scrap	25,700	56,400	119,000	226,000
Grand total	131,000	550,000	641,000	2,450,000

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

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

<sup>3</sup>Export 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.