

# Mineral Industry Surveys

**For information, contact:**

Ruth F. Schulte, Chromium Commodity Specialist  
 National Minerals Information Center  
 U.S. Geological Survey  
 989 National Center  
 Reston, VA 20192  
 Telephone: (703) 648-4963, Fax: (703) 648-7757  
 Email: rschulte@usgs.gov

Benjamin N. Bryden (Data)  
 Telephone: (703) 648-7953  
 Fax: (703) 648-7975  
 Email: bbryden@usgs.gov

**Internet:** <https://www.usgs.gov/centers/nmic>

## CHROMIUM IN JUNE 2021

Estimated consumption of chromium, on a gross weight basis, in June 2021 was unchanged compared with estimated consumption of chromium in May 2021 and were essentially unchanged compared with consumption in June 2020. Estimated consumer stocks increased by 43% compared with stocks in May 2021 and decreased by 85% compared with those of June 2020 (tables 1, 2).

Stainless steel production increased slightly in June 2021 compared with production in May 2021 and increased by 48% compared with production in June 2020 (table 1). Year-to-date production through June 2021 increased by 16% compared with year-to-date production through June 2020. Government stockpile inventories for chromium metal were unchanged

compared with those in May 2021 and decreased by 4% compared with those in June 2020. Government stockpile inventories of ferroalloys were essentially unchanged compared with those in May 2021 and decreased by 12% compared with those of June 2020 (table 3).

Imports of chromite ore, chromium ferroalloys, stainless steel, and stainless steel scrap commonly fluctuate from month to month (table 1). In June 2021, imports of all grades of chromium ferroalloys increased by 79% compared with imports of chromium ferroalloys in May 2021 and increased by 15% compared with those in June 2020. Stainless steel and stainless steel scrap imports in June 2021 more than doubled and increased by 4%, respectively, compared with

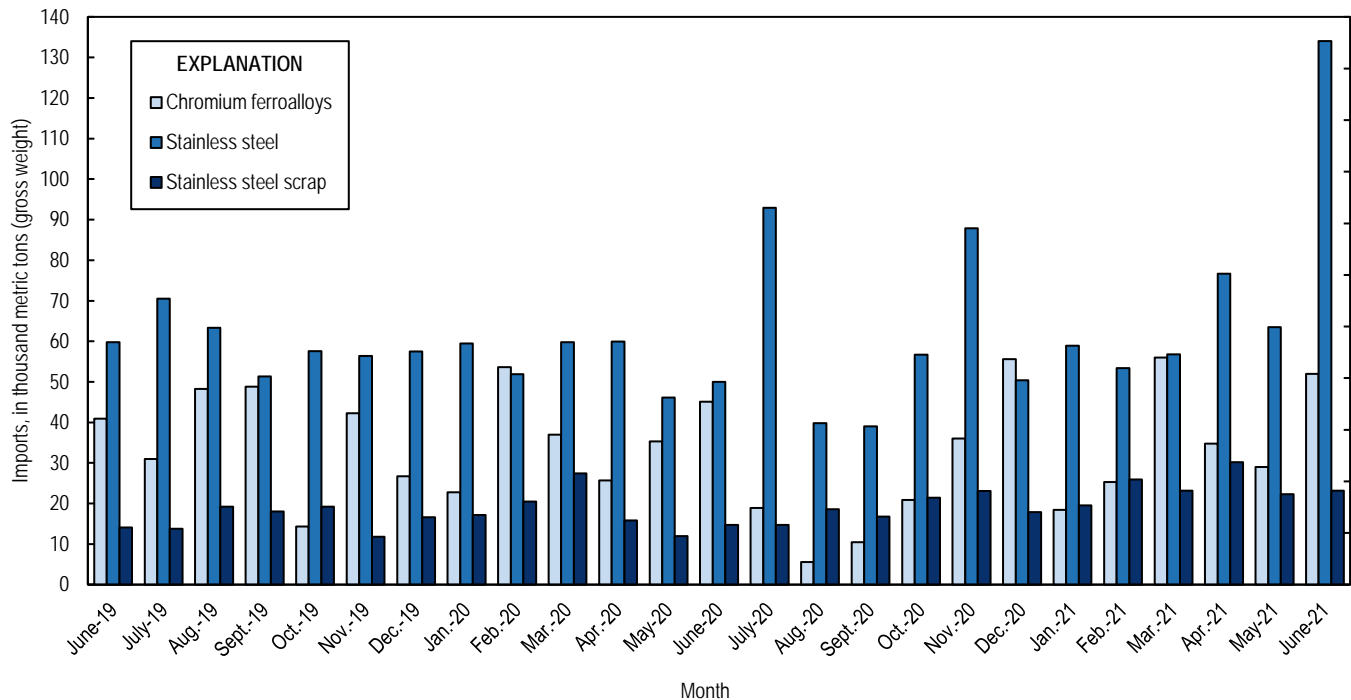


Figure 1. Chromium ferroalloys, stainless steel, and stainless steel scrap imports from June 2019 through June 2021. Source: U.S. Census Bureau.

imports in May 2021 and more than doubled and increased by 58%, respectively, compared with those in June 2020 (fig. 1, table 1).

Exports of chromite ore, chromium ferroalloys, chromium metal, and stainless steel also frequently fluctuate from month to month (table 1, table 4). Exports of chromium ferroalloys decreased by 13% in June 2021 compared with exports in May 2021 and increased by 46% compared with exports in June 2020. Stainless steel exports in June 2021 decreased by 13% compared with exports in May 2021 and increased by 44% compared with those of June 2020 (table 1).

In June 2021, the leading import sources for ferrochromium (FeCr) into the United States were, in descending order of quantity by gross weight, South Africa, Kazakhstan, and Russia (table 6), whereas the leading import sources for chromium metal were Russia, France, and the United Kingdom (table 7).

The U.S. chromium metal (99% Cr) average price was \$3.81 per pound in June 2021, a 7% increase from the average price in May 2021, and a 14% increase compared with the average price in June 2020. The U.S. high-carbon FeCr (62%–70% chromium) average price was 135.22 cents per pound of contained chromium in June 2021, a slight increase from the average price in May 2021, and a 50% increase from the average price in June 2020 (fig. 2) (CRU Group, 2021).

### Industry News

Cleveland-Cliffs Inc. announced it would idle its Indiana Harbor No. 7 blast furnace for maintenance and repair beginning September 1. The planned maintenance would take approximately 45 days to complete, during which time other blast furnaces would operate (England, 2021).

Aperam S.A., a stainless-steel company in Luxembourg, announced a share purchase agreement with Franz Haniel and

Cie. GmbH (Germany) to acquire stainless steel scrap recycler ELG Haniel Group. Aperam planned to operate ELG as a separate company. After the merger was approved, Aperam would be able to control the quality of stainless steel scrap for its stainless steel production (Aperam S.A., 2021; Franz Haniel and Cie. GmbH, 2021).

### References Cited

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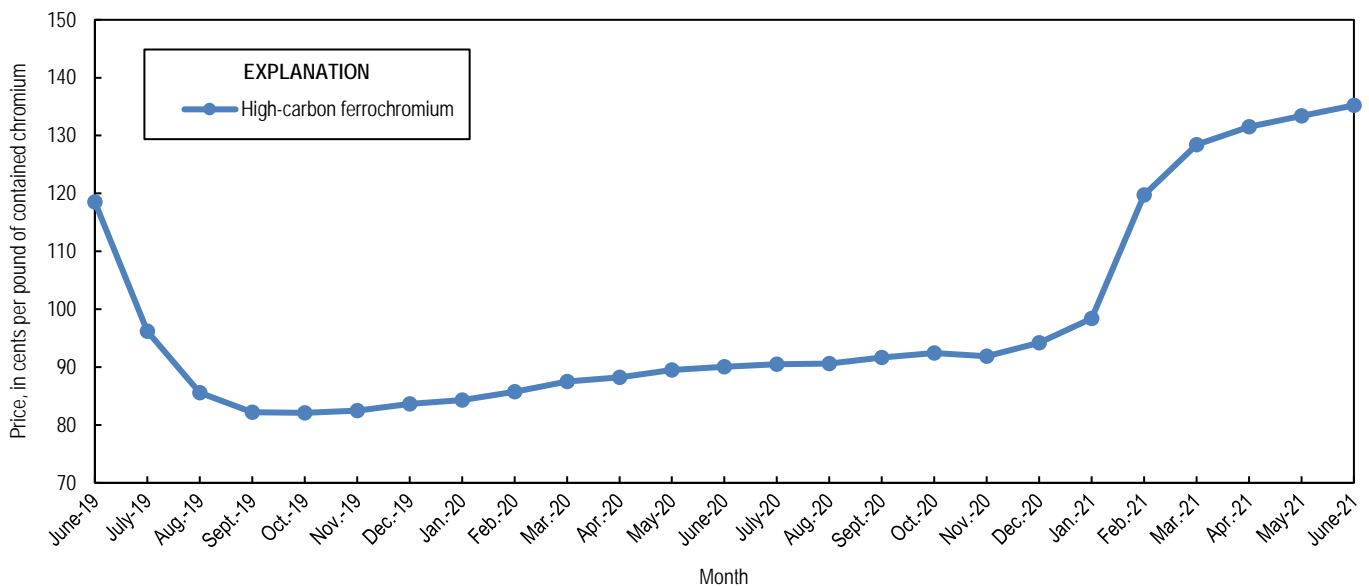


Figure 2. Average monthly prices for U.S. high-carbon ferrochromium from June 2019 through June 2021. Source: CRU Group.

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

(Metric tons, gross weight)

	2020	2021			
	January– December <sup>p</sup>	April	May	June	January– June <sup>2</sup>
Production, stainless steel <sup>3</sup>	2,140,000	221,000	215,000	218,000	1,280,000
Components of U.S. supply:					
Stainless steel scrap receipts	682,000 <sup>r</sup>	54,400 <sup>r</sup>	54,500 <sup>r</sup>	55,200 <sup>e</sup>	345,000
Stainless steel scrap consumption	1,040,000 <sup>r</sup>	82,300 <sup>r</sup>	82,400 <sup>r</sup>	83,400 <sup>e</sup>	532,000
Imports for consumption:					
Chromite ore	101,000	17,800	5,140	38,500	76,800
Ferrochromium:					
More than 4% carbon	310,000	32,600	24,600	32,500	163,000
More than 3% but not more than 4% carbon	212	27	--	--	6,580
More than 0.5% but not more than 3% carbon	3,360	--	325	--	1,460
Not more than 0.5% carbon	37,400	2,180	2,730	14,500	29,600
Ferrochromium silicon	15,800	--	1,350	4,970	14,900
Total ferroalloy imports	367,000	34,800	29,000	52,000	215,000
Chromium metal <sup>4</sup>	11,600	1,450	1,100	939	5,710
Stainless steel	694,000	76,700	63,500	134,000	443,000
Stainless steel scrap	219,000	30,200	22,300	23,200	144,000
Distribution of U.S. supply:					
Consumption, industry, chromium ferroalloys and metal <sup>e</sup>	335,000	26,000	27,100	27,100	162,000
Exports:					
Chromite ore	1,780	157	115	155	1,130
Chromium ferroalloys:					
High-carbon ferrochromium	949	7	81	65	287
Low-carbon ferrochromium	393	21	11	17	150
Ferrochromium silicon	238	--	2	--	112
Total ferroalloy exports	1,580	28	94	82	548
Chromium metal	379	25	66	86	297
Stainless steel	325,000	30,900	32,300	28,200	186,000
Stainless steel scrap	314,000	17,700	21,500	36,800	130,000
Stocks at end of period:					
Consumer, industry, chromium ferroalloys and metal <sup>e</sup>	7,400	740	770	1,100	1,100
Government stockpile:					
Chromium ferroalloys	59,600	55,200	55,200	55,000	55,000
Chromium metal	3,750	3,690	3,690	3,690	3,690

<sup>e</sup>Estimated. <sup>p</sup>Preliminary. <sup>r</sup>Revised. -- 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.

TABLE 2  
U.S. CONSUMPTION AND STOCKS OF CHROMIUM PRODUCTS<sup>1</sup>

(Metric tons, gross weight unless otherwise noted)

	2021		
	May	June	January– June <sup>2</sup>
<b>Consumption by end use:</b>			
<b>Steel:</b>			
Carbon steel	W	W	W
High-strength low-alloy steel <sup>e</sup>	150	150	890
Stainless and heat-resisting steel <sup>e</sup>	23,000	23,000	137,000
Unspecified steel <sup>e, 3</sup>	3,400	3,400	20,400
Superalloys <sup>e</sup>	250	250	1,450
Other alloys and uses <sup>4</sup>	W	W	W
<b>Total<sup>e</sup></b>	<b>27,100</b>	<b>27,100</b>	<b>162,000</b>
<b>Total, chromium content<sup>e</sup></b>	<b>16,100</b>	<b>16,100</b>	<b>95,900</b>
<b>Consumption by material:</b>			
Low-carbon ferrochromium <sup>e</sup>	1,800	1,800	10,700
High-carbon ferrochromium <sup>e</sup>	23,500	23,500	141,000
Ferrochromium silicon	W	W	W
Chromium metal <sup>e</sup>	140	140	870
Chromite ore	130 <sup>e</sup>	130 <sup>e</sup>	W
Chromium-aluminum alloy	W	W	W
Other chromium materials	W	W	W
<b>Total<sup>e</sup></b>	<b>27,100</b>	<b>27,100</b>	<b>162,000</b>
<b>Total, chromium content<sup>e</sup></b>	<b>16,100</b>	<b>16,100</b>	<b>95,900</b>
<b>Consumer stocks:</b>			
Low-carbon ferrochromium <sup>e</sup>	300	500	500
High-carbon ferrochromium <sup>e</sup>	400	400	400
Ferrochromium silicon	W	W	W
Chromium metal <sup>e</sup>	20	20	20
Chromium-aluminum alloy	W	W	W
Other chromium materials	W	W	W
<b>Total<sup>e</sup></b>	<b>770</b>	<b>1,100</b>	<b>1,100</b>
<b>Total, chromium content<sup>e</sup></b>	<b>450</b>	<b>620</b>	<b>620</b>

<sup>e</sup>Estimated. W Withheld to avoid disclosing company proprietary data; included in "Total."

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

<sup>4</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.

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	
2020:			
June	35,700	26,800	3,840
July	35,100	26,800	3,840
August	33,900	26,800	3,830
September	33,900	26,800	3,830
October	33,900	26,800	3,830
November	33,900	26,800	3,790
December	33,000	26,600	3,750
2021:			
January	33,000	26,600	3,750
February	32,400	26,500	3,690
March	28,800	27,500	3,690
April	27,700	27,500	3,690
May	27,700	27,500	3,690
June	27,500	27,500	3,690

<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)
2020:							
June	210	\$131	56	34	\$72	33	\$529
July	96	68	133	71	180	47	1,780
August	305	97	149	90	233	42	927
September	19	8	208	115	324	33	727
October	139	120	260	157	316	23	942
November	59	45	83	51	141	22	580
December	222	136	252	133	306	16	531
January–December <sup>4</sup>	1,780	1,040	1,580	893	2,280	379	9,970
2021:							
January	70	55	24	15	43	44	1,050
February	420	264	111	58	169	30	650
March	208	147	209	100	401	47	783
April	157	128	28	17	54	25	659
May	115	106	94	59	155	66	1,200
June	155	86	82	43	142	86	1,200
January–June <sup>4</sup>	1,130	786	548	292	964	297	5,550

<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)

	2020	2021		
	January– December	May	June	January– June <sup>2</sup>
<b>Chromite ore:</b>				
Not more than 40% chromic oxide:				
Gross weight	3,600	762	2,590	8,740
Chromic oxide content	909	186	544	1,850
More than 40% but less than 46% chromic oxide:				
Gross weight	11,000	1,770	855	8,280
Chromic oxide content	4,780	789	367	3,610
46% or more chromic oxide:				
Gross weight	86,300	2,600	35,000	59,800
Chromic oxide content	77,500	1,220	34,500	52,100
<b>Total, all grades:</b>				
Gross weight	101,000	5,140	38,500	76,800
Chromic oxide content	83,200	2,200	35,400	57,600
<b>Ferrochromium:</b>				
Low-carbon: <sup>3</sup>				
Not more than 0.5% carbon:				
Gross weight	37,400	2,730	14,500	29,600
Chromium content	25,200	1,980	10,000	20,800
More than 0.5% but not more than 3% carbon:				
Gross weight	3,360	325	--	1,460
Chromium content	2,260	230	--	1,000
<b>Total, low-carbon:</b>				
Gross weight	40,800	3,060	14,500	31,100
Chromium content	27,400	2,210	10,000	21,800
Medium-carbon: <sup>4</sup>				
Gross weight	212	--	--	6,580
Chromium content	116	--	--	3,360
High-carbon: <sup>5</sup>				
Gross weight	310,000	24,600	32,500	163,000
Chromium content	169,000	13,400	18,800	91,100
<b>Total, all grades:</b>				
Gross weight	351,000	27,700	47,000	201,000
Chromium content	196,000	15,600	28,800	116,000
<b>Chromium metal:</b>				
Unwrought powders	9,730	785	889	4,790
Waste and scrap	168	1	9	54
Other than waste and scrap and unwrought powders	1,740	313	40	873
<b>Total, all grades</b>	<b>11,600</b>	<b>1,100</b>	<b>939</b>	<b>5,710</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	June			January–June <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	308	232	\$449	2,970	2,100	\$3,820
Finland	--	--	--	14,500	7,680	13,500
Germany	9	6	18	9	6	18
India	129	78	122	1,320	811	1,160
Kazakhstan	11,300	7,820	21,300	35,400	24,500	57,300
Russia	--	--	--	781	533	931
South Africa	17,400	8,460	19,800	88,300	43,000	83,800
Sweden	190	128	276	10,900	7,210	15,700
Turkey	3,120	2,060	4,720	3,320	2,190	4,950
Zimbabwe	--	--	--	5,450	3,010	3,760
Total	32,500	18,800	46,800	163,000	91,100	185,000
<b>Medium-carbon ferrochromium:<sup>5</sup></b>						
China	--	--	--	5	3	2
Russia	--	--	--	77	41	63
South Africa	--	--	--	6,500	3,310	5,340
Total	--	--	--	6,580	3,360	5,410
<b>Low-carbon ferrochromium:<sup>6</sup></b>						
More than 0.5% but not more than 3% carbon						
Brazil	--	--	--	318	197	436
Kazakhstan	--	--	--	1,140	807	3,360
Total	--	--	--	1,460	1,000	3,790
Not more than 0.5% carbon:						
Belgium	--	--	--	368	287	1,160
Brazil	50	30	95	892	558	1,340
Germany	563	438	1,790	4,120	3,190	13,300
Japan	220	154	755	777	548	2,760
Kazakhstan	3,850	2,780	13,200	8,120	5,860	25,300
Russia	9,720	6,510	26,800	14,200	9,580	38,800
Turkey	150	104	408	1,120	770	2,440
Total	14,500	10,000	43,100	29,600	20,800	85,100
<b>All grades:</b>						
Albania	308	232	449	2,970	2,100	3,820
Belgium	--	--	--	368	287	1,160
Brazil	50	30	95	1,210	755	1,770
China	--	--	--	5	3	2
Finland	--	--	--	14,500	7,680	13,500
Germany	572	444	1,810	4,130	3,200	13,300
India	129	78	122	1,320	811	1,160
Japan	220	154	755	777	548	2,760
Kazakhstan	15,100	10,600	34,500	44,700	31,200	86,000
Russia	9,720	6,510	26,800	15,100	10,200	39,800
South Africa	17,400	8,460	19,800	94,800	46,300	89,100
Sweden	190	128	276	10,900	7,210	15,700
Turkey	3,270	2,170	5,130	4,440	2,960	7,400
Zimbabwe	--	--	--	5,450	3,010	3,760
Total	47,000	28,800	89,800	201,000	116,000	279,000

-- 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	June		January–June <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>				
Belgium	--	--	3	\$88
China	102	\$683	481	3,900
France	210	1,890	1,070	7,610
Germany	79	482	418	2,360
India	20	181	78	682
Japan	--	--	1	21
Korea, Republic of	1	22	1	22
Russia	295	2,110	1,800	11,100
Spain	--	--	46	223
United Kingdom	183	1,620	894	8,060
Total	889	6,990	4,790	34,100
<b>Waste and scrap:</b>				
Canada	--	--	18	67
Germany	--	--	1	10
Japan	--	--	5	35
Liechtenstein	--	--	1	6
Taiwan	--	--	1	15
United Kingdom	9	54	27	158
Total	9	54	54	291
<b>Other than waste and scrap and unwrought powders:</b>				
Canada	--	--	(4)	7
China	(4)	25	12	336
Germany	1	58	9	349
Italy	2	31	2	31
Japan	1	41	4	186
Liechtenstein	--	--	(4)	18
Malaysia	--	--	(4)	12
Netherlands	--	--	(4)	7
Russia	20	134	710	4,440
South Africa	9	69	13	99
Spain	--	--	93	446
Taiwan	(4)	40	(4)	49
United Kingdom	8	101	30	376
Total	40	498	873	6,360
<b>All grades:</b>				
Belgium	--	--	3	88
Canada	--	--	18	74
China	102	709	493	4,240
France	210	1,890	1,070	7,610
Germany	79	540	429	2,720
India	20	181	78	682
Italy	2	31	2	31
Japan	1	41	10	242
Korea, Republic of	1	22	1	22
Liechtenstein	--	--	2	25
Malaysia	--	--	(4)	12
Netherlands	--	--	(4)	7
Russia	315	2,240	2,510	15,600
South Africa	9	69	13	99
Spain	--	--	139	668
Taiwan	(4)	40	1	63
United Kingdom	201	1,770	952	8,590
Total	939	7,540	5,710	40,700

-- 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	June		January–June <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	801	\$5,330	9,480	\$48,200
Flat-rolled (width > 600 mm)	16,100	52,500	109,000	337,000
Flat-rolled (width < 600 mm)	4,840	28,500	29,900	174,000
Bars and rods in irregular coils	118	631	1,050	5,770
Other bars and rods	2,140	23,600	12,900	134,000
Wire	817	10,200	4,580	57,700
Tubes, pipes, hollow profiles	3,370	29,600	18,600	174,000
Total	28,200	150,000	186,000	930,000
Stainless steel scrap	36,800	28,600	130,000	137,000
Grand total	65,000	179,000	316,000	1,070,000
<b>Imports:</b>				
Ingot	70,600	47,000	142,000	294,000
Flat-rolled (width > 600 mm)	28,200	76,700	131,000	337,000
Flat-rolled (width < 600 mm)	5,060	18,600	27,100	91,100
Bars and rods in irregular coils	4,020	14,300	15,800	56,700
Other bars and rods	13,000	51,600	58,900	232,000
Wire	3,850	17,300	19,700	81,700
Tubes, pipes, hollow profiles	9,100	61,100	48,700	286,000
Total	134,000	287,000	443,000	1,380,000
Stainless steel scrap	23,200	32,200	144,000	186,000
Grand total	157,000	319,000	587,000	1,570,000

<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.