

Mineral Industry Surveys

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CHROMIUM IN JULY 2019

Reported consumption of chromium, on a gross weight basis, in July 2019 decreased slightly compared with reported consumption of chromium in June 2019, and decreased by 10% compared with reported consumption in July 2018. High-carbon ferrochromium accounted for 86% of the chromium material consumed in July 2019. Stainless and heat-resisting steel was the leading end use, consuming 89% of chromium materials. Consumer stocks decreased slightly compared with those of the previous month and increased by 5% compared with those of July 2018 (tables 1, 2).

Stainless steel production increased by 6% in July 2019 compared with production in June 2019, and decreased by 13% compared with production in July 2018 (table 1).

Government stockpile inventories for chromium metal have remained unchanged since February 2018. Government stockpiles inventories of ferroalloys were unchanged since May 2019 and decreased by 7% compared with those of July 2018 (table 3).

Imports of chromite ore, chromium ferroalloys, chromium metal, and stainless steel commonly fluctuate from month to month (table 1). Stainless steel imports in July 2019 increased by 18% compared with imports in June 2019 and decreased by 9% compared with imports in July 2018 (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). Stainless steel exports in July 2019

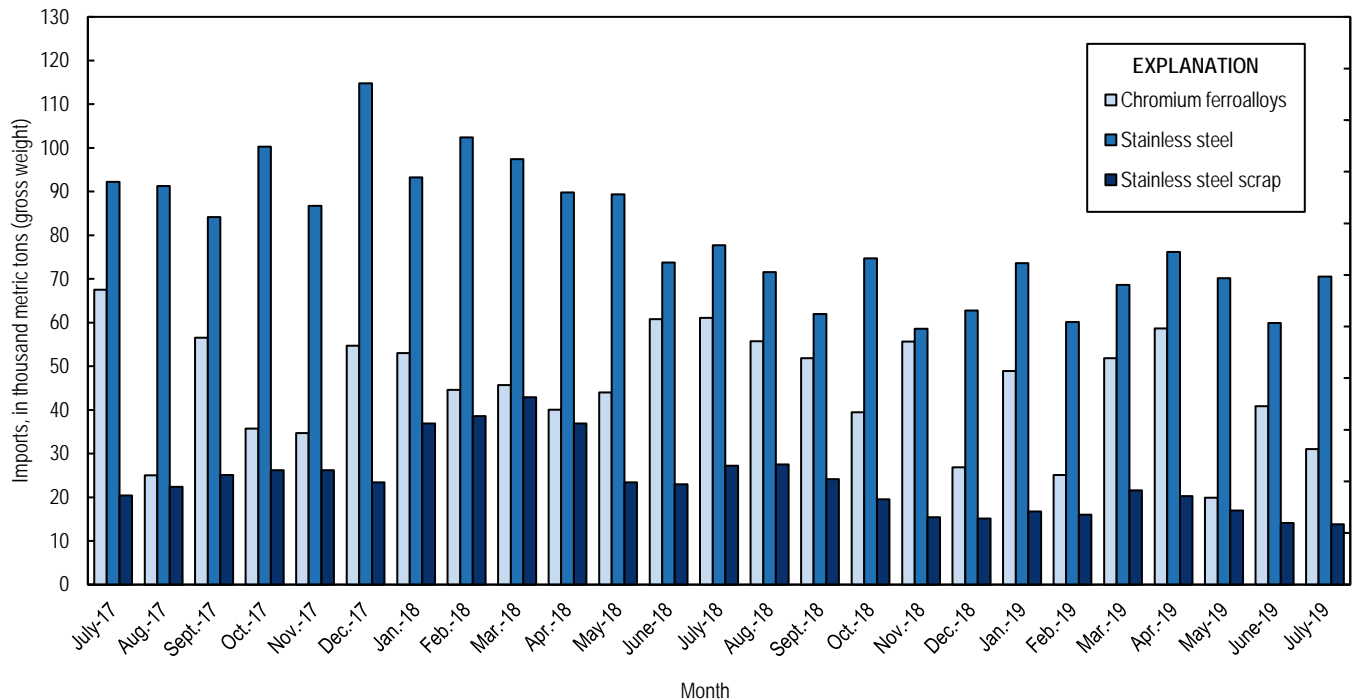


Figure 1. Chromium ferroalloys and stainless steel imports from July 2017 through July 2019. Source: U.S. Census Bureau.

increased by 14% compared with exports in June 2019 (table 1) and increased by 19% compared with those of July 2018.

In July 2019, the leading import sources for ferrochromium (FeCr) into the United States were, in descending order of quantity by gross weight and chromium content, South Africa, Kazakhstan, and India (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 decreased by 5% to \$4.028 per pound in July 2019 compared with the average price in June 2019 and decreased by 36% compared with the average price in July 2018 (CRU Group, 2019b). The U.S. high-carbon FeCr (62%–70% chromium) average price was 96.167 cents per pound of contained chromium in July 2019, a 19% decrease from the average price in June 2019, and a 33% decrease from the average price in July 2018 (fig. 2) (CRU Group, 2019b). The decrease in high-carbon FeCr prices was related to lower priced imports from India as well as a decrease in U.S. car production (CRU Group, 2019a).

Industry News

On July 24, Ferro Alloys Corp. Ltd. (India) reported mining operations resumed at the Ostapal and Kalarangiatta chromite mines in Odisha, India. Mining had been suspended since June because of a dispute with a contractor. (Equity Bulls, 2019).

A new chromium coating line was approved by thyssenkrupp AG (Germany) for packing steel at its Andernach plant in Germany operated by subsidiary thyssenkrupp Rasselstein (thyssenkrupp AG, 2019). The

coating line was designed to meet new technical requirements for the production of chromium-coated steel as well as to improve health, safety and environmental compliance related to the European Union ban on chromium (VI) compounds used in production processes.

References Cited

- CRU Group, 2019a, Chrome Monitor—US ferrochrome prices fall on lower priced imports: CRU Group, July 3. (Accessed July 9, 2019, via <http://www.crugroup.com/>.)
- CRU Group, 2019b, CRU prices_chrome_historical_data_31_july_2019_july_avg: CRU Group, July 31. (Accessed August 6, 2019, via <http://www.crugroup.com/>.)
- Equity Bulls, 2019, Ferro Alloys Corporation Ltd announces resumption of mining operations: Chennai, India, Equity Bulls Stock Report, July 25. (Accessed September 23, 2019, at https://www.equitybulls.com/admin/news2006/news_det.asp?id=253889.)
- thyssenkrupp AG, 2019, Strong signals for site and region—thyssenkrupp invests in new state-of-the-art coating line at Andernach site: Essen, Germany, thyssenkrupp AG press release, July 2. (Accessed September 9, 2019, at <https://www.thyssenkrupp.com/en/newsroom/press-releases/strong-signal-for-site-and-region--thyssenkrupp-invests-in-new-state-of-the-art-coating-line-at-andernach-site-13825.html>.)

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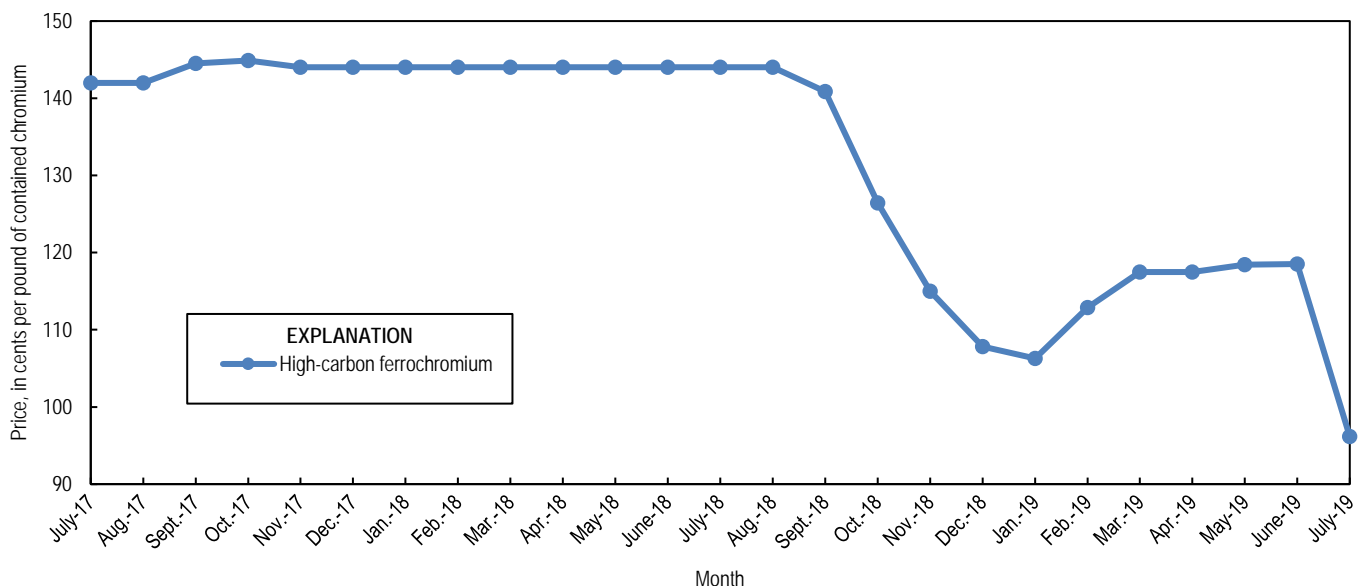


Figure 2. Average monthly prices for U.S. high-carbon ferrochromium from July 2017 through July 2019. Source: CRU Group.

TABLE 1
U.S. SALIENT CHROMIUM STATISTICS¹

(Metric tons, gross weight)

	2018	2019			
	January– December ^p	May	June	July	January– July ²
Production, stainless steel ³	2,810,000	205,000	209,000	222,000	1,570,000
Components of U.S. supply:					
Stainless steel scrap receipts	818,000	68,200	67,200	105,000	518,000
Stainless steel scrap consumption	1,230,000	104,000	104,000	102,000	729,000
Imports for consumption:					
Chromite ore	197,000	832	6,120	39,000	97,400
Ferrochromium:					
More than 4% carbon	495,000	16,000	38,200	25,400	239,000
More than 3% but not more than 4% carbon	8,610	--	114	--	168
More than 0.5% but not more than 3% carbon	4,130	--	162	73	1,440
Not more than 0.5% carbon	53,100	3,510	2,390	3,540	25,200
Ferrochromium silicon	18,000	432	--	2020	10,600
Total ferroalloy imports	579,000	19,900	40,800	31,000	276,000
Chromium metal ⁴	15,500	1,180	1,020	1,120	8,600
Stainless steel	953,000	70,200	59,900	70,500	479,000
Stainless steel scrap	331,000	17,000	14,100	13,800	119,000
Distribution of U.S. supply:					
Consumption, industry, chromium ferroalloys and metal	404,000	32,800	32,300	32,000	226,000
Exports:					
Chromite ore	6,280	251	220	269	1,380
Chromium ferroalloys:					
High-carbon ferrochromium	731	21	59	70	656
Low-carbon ferrochromium	1,740	26	31	25	302
Ferrochromium silicon	60	--	--	--	18
Total ferroalloy exports	2,530	47	90	95	976
Chromium metal	514	70	37	42	269
Stainless steel	668,000	47,700	33,400	38,100	270,000
Stainless steel scrap	653,000	57,200	27,900	29,400	260,000
Stocks at end of period:					
Consumer, industry, chromium ferroalloys and metal	11,300	10,700	10,400	10,200	10,200
Government stockpile:					
Chromium ferroalloys	71,200	67,300	67,300	67,300	67,300
Chromium metal	3,850	3,850	3,850	3,850	3,850

^pPreliminary. -- 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.

TABLE 2
U.S. REPORTED CONSUMPTION AND STOCKS OF CHROMIUM PRODUCTS^{1,2}

(Metric tons, gross weight unless otherwise noted)

	2019		
	June	July	January– July ³
Consumption by end use:			
Steel:			
Carbon steel	155	197	1,210
High-strength low-alloy steel	146	146	1,020
Stainless and heat-resisting steel	28,800	28,400	201,000
Unspecified steel ⁴	2,720	2,720	19,000
Superalloys	423	424	2,970
Other alloys and uses ⁵	86	90	657
Total	32,300	32,000	226,000
Total, chromium content	19,000	18,800	133,000
Consumption by material:			
Low-carbon ferrochromium	1,810	1,880	13,100
High-carbon ferrochromium	27,900	27,500	195,000
Ferrochromium silicon	W	W	W
Chromium metal	162	162	1,410
Chromite ore	13	16	135
Chromium-aluminum alloy	W	W	W
Other chromium materials	W	W	W
Total	32,300	32,000	226,000
Total, chromium content	19,000	18,800	133,000
Consumer stocks:			
Low-carbon ferrochromium	1,580	1,590	1,590
High-carbon ferrochromium	7,910	7,680	7,680
Ferrochromium silicon	793	806	806
Chromium metal	44	44	44
Chromium-aluminum alloy	W	W	W
Other chromium materials	W	W	W
Total	10,400	10,200	10,200
Total, chromium content	6,180	6,040	6,040

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 estimates.

³May include revised data that are not broken out by specific month(s).

⁴Includes electrical, full alloy, tool, and unspecified steel end uses.

⁵Includes 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 MATERIALS¹

(metric tons)

	Chromium ferroalloys		Chromium metal
	High-carbon ferro- chromium	Low-carbon ferro- chromium	
2018:			
July	44,500	27,600	3,850
August	44,500	27,600	3,850
September	44,500	27,600	3,850
October	44,500	27,600	3,850
November	44,000	27,600	3,850
December	43,800	27,400	3,850
2019:			
January	43,800	27,400	3,850
February	43,300	27,400	3,850
March	42,400	27,400	3,850
April	41,000	27,400	3,850
May	39,900	27,400	3,850
June	39,900	27,400	3,850
July	39,900	27,400	3,850

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)
2018:							
July	811	\$456	255	153	\$420	41	\$1,090
August	181	138	123	81	291	33	990
September	294	395	165	99	222	53	1,280
October	637	408	406	224	565	43	1,160
November	843	398	123	68	231	43	982
December	741	368	90	42	111	29	674
January–December ⁴	6,280	3,810	2,530	1,400	3,590	514	12,300
2019:							
January	169	124	204	64	188	25	644
February	158	134	48	29	111	44	1,220
March	113	106	322	175	667	26	848
April	199	226	169	78	256	28	1,190
May	251	192	47	28	87	70	2,460
June	220	177	90	54	158	37	844
July	269	217	95	53	160	42	971
January–July ⁴	1,380	1,180	976	481	1,630	269	8,170

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 METAL

(Metric tons)

	2018	2019		
	January– December	June	July	January– July ²
Chromite ore:				
Not more than 40% chromic oxide:				
Gross weight	462	81	179	631
Chromic oxide content	173	31	70	244
More than 40% but less than 46% chromic oxide:				
Gross weight	14,600	214	52	1,570
Chromic oxide content	6,590	95	23	684
46% or more chromic oxide:				
Gross weight	181,000	5,820	38,800	95,200
Chromic oxide content	85,800	2,730	19,800	48,000
Total, all grades:				
Gross weight	197,000	6,120	39,000	97,400
Chromic oxide content	92,600	2,860	19,900	48,900
Ferrochromium:				
Low-carbon: ³				
Not more than 0.5% carbon:				
Gross weight	53,100	2,390	3,540	25,200
Chromium content	37,100	1,660	2,530	17,600
More than 0.5% but not more than 3% carbon:				
Gross weight	4,130	162	73	1,440
Chromium content	2,570	114	41	904
Total, low-carbon:				
Gross weight	57,300	2,550	3,610	26,600
Chromium content	39,700	1,770	2,570	18,500
Medium-carbon: ⁴				
Gross weight	8,610	114	--	168
Chromium content	4,560	61	--	85
High-carbon: ⁵				
Gross weight	495,000	38,200	25,400	239,000
Chromium content	269,000	23,000	13,900	132,000
Total, all grades:				
Gross weight	561,000	40,800	29,000	266,000
Chromium content	314,000	24,800	16,500	151,000
Chromium metal:				
Unwrought powders	7,920	747	962	6,760
Waste and scrap	177	3	12	172
Other than waste and scrap and unwrought powders	7,440	271	144	1,670
Total, all grades	15,500	1,020	1,120	8,600

-- 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 2019, BY GRADE AND COUNTRY OR LOCALITY¹

Grade and country or locality	July			January–July 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	498	337	\$668	9,450	6,280	\$13,000
Finland	--	--	--	80	41	78
Germany	--	--	--	3	2	11
India	4,680	2,900	5,170	21,000	13,000	21,900
Kazakhstan	2,740	1,900	3,700	29,000	20,200	44,300
Oman	288	175	305	5,210	3,100	6,010
Russia	--	--	--	12,200	8,320	15,600
South Africa	16,300	8,040	15,200	147,000	72,800	135,000
Sweden	--	--	--	902	604	1,320
Turkey	882	565	1,150	2,110	1,330	2,850
Zimbabwe	--	--	--	12,100	6,630	11,800
Total	25,400	13,900	26,200	239,000	132,000	252,000
Medium-carbon ferrochromium:⁵						
South Africa	--	--	--	54	24	20
Turkey	--	--	--	114	61	61
Total	--	--	--	168	85	81
Low-carbon ferrochromium:⁶						
More than 0.5% but not more than 3% carbon						
Brazil	--	--	--	810	489	1,690
Kazakhstan	--	--	--	384	270	1,020
Russia	--	--	--	54	37	141
South Africa	73	41	139	192	108	346
Total	73	41	139	1,440	904	3,190
Not more than 0.5% carbon:						
Brazil	--	--	--	296	185	664
China	--	--	--	47	29	115
Germany	594	415	1,920	4,670	3,260	15,200
India	--	--	--	245	153	587
Japan	160	114	644	1,120	794	4,610
Kazakhstan	2,110	1,520	6,020	8,090	5,810	23,100
Russia	267	195	727	8,010	5,490	20,500
South Africa	--	--	--	40	22	69
Turkey	403	280	1,070	2,670	1,850	7,560
Total	3,540	2,530	10,400	25,200	17,600	72,400
All grades:						
Albania	498	337	668	9,450	6,280	13,000
Brazil	--	--	--	1,110	673	2,360
China	--	--	--	47	29	115
Finland	--	--	--	80	41	78
Germany	594	415	1,920	4,670	3,260	15,200
India	4,680	2,900	5,170	21,300	13,100	22,500
Japan	160	114	644	1,120	794	4,610
Kazakhstan	4,860	3,420	9,720	37,500	26,300	68,400
Oman	288	175	305	5,210	3,100	6,010
Russia	267	195	727	20,200	13,800	36,300
South Africa	16,400	8,080	15,300	147,000	72,900	135,000
Sweden	--	--	--	902	604	1,320
Turkey	1,280	845	2,220	4,890	3,240	10,500
Zimbabwe	--	--	--	12,100	6,630	11,800
Total	29,000	16,500	36,700	266,000	151,000	327,000

(See footnotes at end of table)

TABLE 6—Continued
U.S. IMPORTS FOR CONSUMPTION OF FERROCHROMIUM IN 2019, BY GRADE AND COUNTRY OR LOCALITY¹

-- 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 2019,
BY GRADE AND BY COUNTRY OR LOCALITY¹

Grade and country or locality	July		January–July ²	
	Gross weight (metric tons)	Value ³ (thousands)	Gross weight (metric tons)	Value ³ (thousands)
Unwrought powders:				
China	94	\$1,460	1,270	\$14,200
France	229	2,360	1,340	15,500
Germany	43	599	281	3,180
India	19	207	19	207
Italy	--	--	(4)	5
Japan	(4)	3	1	71
Korea, Republic of	--	--	1	38
Russia	381	3,330	1,790	17,100
Spain	--	--	18	117
Taiwan	--	--	1	30
United Kingdom	196	2,430	2,040	27,700
Total	962	10,400	6,760	78,200
Waste and scrap:				
Canada	--	--	16	70
China	--	--	2	95
Germany	9	71	9	71
Japan	3	14	31	250
Korea, Republic of	--	--	2	11
Taiwan	--	--	15	313
United Kingdom	--	--	97	766
Total	12	85	172	1,580
Other than waste and scrap and unwrought powders:				
Canada	--	--	(4)	7
China	(4)	20	11	190
Czechia	--	--	1	7
France	--	--	357	4,550
Germany	--	--	5	313
Ireland	--	--	(4)	3
Israel	--	--	(4)	4
Japan	--	--	3	104
Liechtenstein	(4)	5	(4)	8
Lithuania	--	--	(4)	3
Malaysia	--	--	(4)	8
New Zealand	(4)	4	1	41
Russia	112	840	1,230	11,300
Spain	23	153	23	153
United Kingdom	8	100	37	524
Total	144	1,120	1,670	17,200
All grades:				
Canada	--	--	16	76
China	95	1,480	1,280	14,500
Czechia	--	--	1	7
France	229	2,360	1,700	20,100
Germany	52	670	295	3,560
India	19	207	19	207
Ireland	--	--	(4)	3
Israel	--	--	(4)	4
Italy	--	--	(4)	5
Japan	3	17	34	425
Korea, Republic of	--	--	3	49
Liechtenstein	(4)	5	(4)	8
Lithuania	--	--	(4)	3
Malaysia	--	--	(4)	8
New Zealand	(4)	4	1	41
Russia	493	4,170	3,020	28,400
Spain	23	153	41	271
Taiwan	--	--	16	343
United Kingdom	204	2,530	2,180	29,000
Total	1,120	11,600	8,600	97,000

(See footnotes at end of table.)

TABLE 7—Continued
U.S. IMPORTS FOR CONSUMPTION OF CHROMIUM METAL IN 2019,
BY GRADE AND BY COUNTRY OR LOCALITY¹

-- 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 2019¹

Stainless steel product	July		January–July ²	
	Gross weight (metric tons)	Value ³ (thousands)	Gross weight (metric tons)	Value ³ (thousands)
Exports:				
Ingot	1,160	\$7,530	9,880	\$54,700
Flat-rolled (width > 600 mm)	25,400	66,600	170,000	459,000
Flat-rolled (width < 600 mm)	5,010	26,200	41,100	195,000
Bars and rods in irregular coils	199	1,280	2,050	8,230
Other bars and rods	2,490	24,900	19,200	194,000
Wire	892	12,600	5,210	70,600
Tubes, pipes, hollow profiles	2,930	28,900	22,200	221,000
Total	38,100	168,000	270,000	1,200,000
Stainless steel scrap	29,400	28,800	260,000	201,000
Grand total	67,500	197,000	530,000	1,400,000
Imports:				
Ingot	10,300	25,000	71,100	163,000
Flat-rolled (width > 600 mm)	23,600	59,800	154,000	379,000
Flat-rolled (width < 600 mm)	5,210	19,700	32,700	120,000
Bars and rods in irregular coils	3,710	11,800	23,100	76,800
Other bars and rods	13,200	49,500	87,700	335,000
Wire	3,950	18,400	27,700	125,000
Tubes, pipes, hollow profiles	10,500	66,500	82,600	492,000
Total	70,500	251,000	479,000	1,690,000
Stainless steel scrap	13,800	11,800	119,000	110,000
Grand total	84,300	263,000	599,000	1,800,000

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.