

# Mineral Industry Surveys

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## CHROMIUM IN JANUARY 2021

Estimated consumption of chromium, on a gross weight basis, in January 2021 was unchanged compared with consumption of chromium in December 2020, and decreased by 22% compared with consumption in January 2020. Estimated consumer stocks were unchanged compared with stocks in December 2020 and decreased by 51% compared with those of January 2020 (tables 1, 2).

Stainless steel production increased by 5% in January 2021 compared with production in December 2020, and decreased by 5% compared with production in January 2020 (table 1). Government stockpile inventories for chromium metal were unchanged compared with those in December 2020 and decreased slightly compared with those in January 2020.

Government stockpile inventories of ferroalloys were unchanged compared with those in December 2020 and decreased by 9% compared with those of January 2020 (table 3).

Imports of chromite ore, chromium ferroalloys, chromium metal, and stainless steel commonly fluctuate from month to month (table 1). In January 2021, imports of all grades of chromium ferroalloys decreased by 67% compared with imports of chromium ferroalloys in December 2020 and decreased by 19% compared with those in January 2020. Stainless steel imports in January 2021 increased by 17% compared with imports in December 2020 and decreased slightly compared with those in January 2020 (fig. 1, table 1).

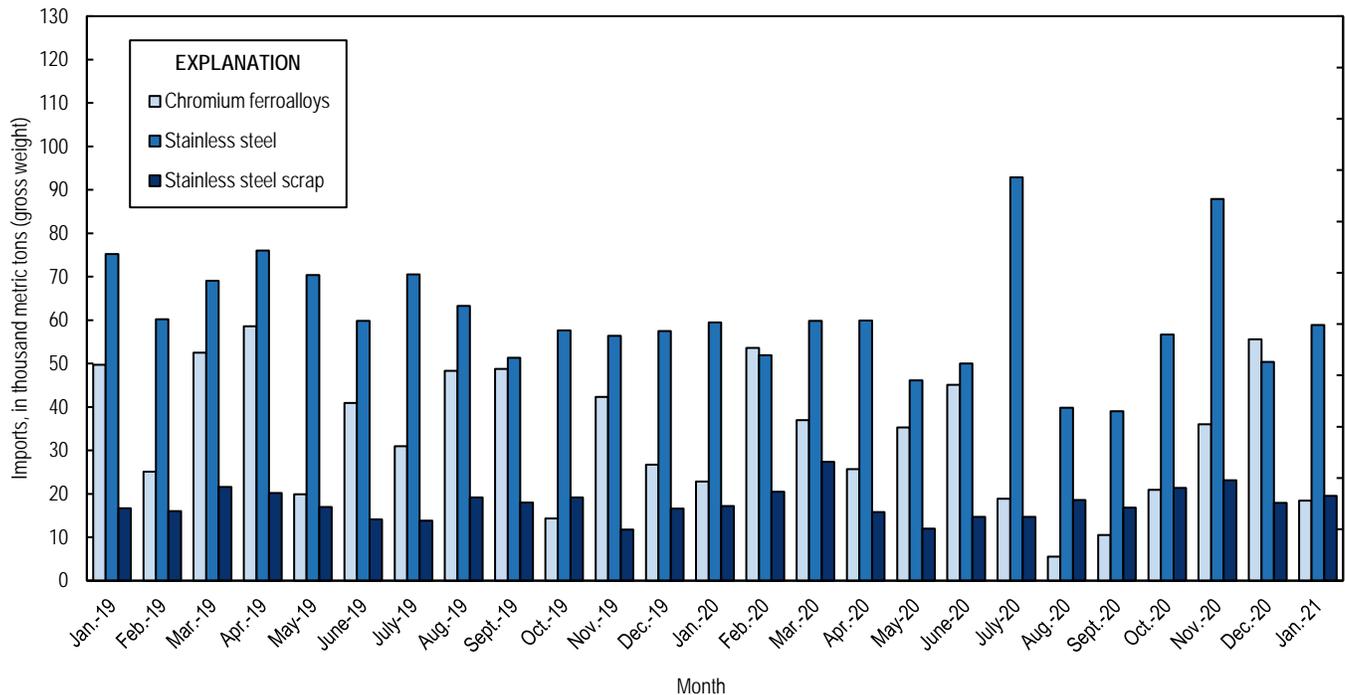


Figure 1. Chromium ferroalloys and stainless steel imports from January 2019 through January 2021. Source: U.S. Census Bureau.

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 90% in January 2021 compared with exports in December 2020 and decreased by 64% compared with exports in January 2020. Stainless steel exports in January 2021 increased by 13% compared with exports in December 2020 and decreased by 10% compared with those of January 2020 (table 1).

In January 2021, the leading import sources for ferrochromium (FeCr) 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 Russia, France, and the United Kingdom (table 7).

The U.S. chromium metal (99% Cr) average price was \$3.30 per pound in January 2021, a 5% increase from the average price in December 2020, and a 3% increase compared with the average price in January 2020. The U.S. high-carbon FeCr (62%–70% chromium) average price was 98.38 cents per pound of contained chromium in January 2021, a 4% increase from the average price in December 2020, and a 17% increase from the average price in January 2020 (fig. 2) (CRU Group, 2021).

**Industry News**

Transnational Company Kazchrome JSC (Kazakhstan), a subsidiary of Eurasian Resources Group S.à r.l.

(Luxembourg), completed testing its novel floatation technology for the recovery of chromite from tailings at its Donskoy Mining and Processing Plant. The chromite recovered contained a chromium oxide content of 55% and was compatible with specifications required for use in its ferrochromium smelters (Sebetlela, 2021; Transnational Company Kazchrome JSC, undated).

**References Cited**

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 Sebetlela, Teboho, 2021, Chromium—Kazchrome completes chromite floatation trials: London, United Kingdom, Roskill Information Services Ltd., January 13. (Accessed March 11, 2021, at <https://roskill.com/news/chromite-kazchrome-successfully-completes-chromite-floatation-trials/>.)  
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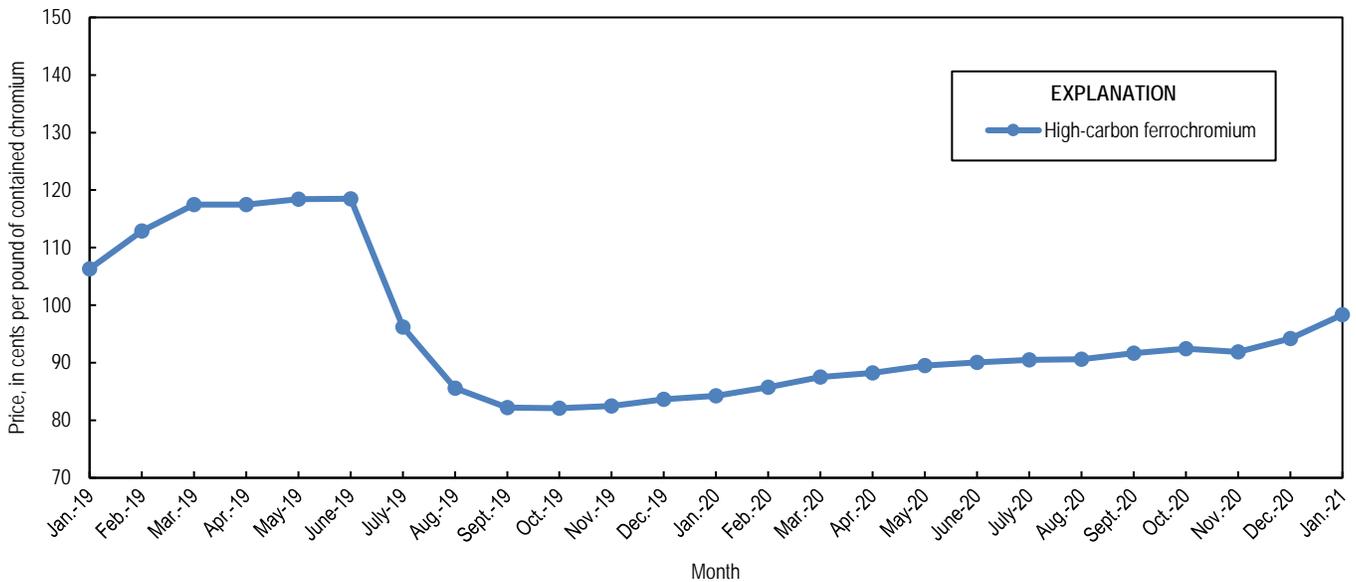


Figure 2. Average monthly prices for U.S. high-carbon ferrochromium from January 2019 through January 2021. Source: CRU Group.

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

(Metric tons, gross weight)

	2020			2021
	November	December	January– December <sup>p, 2</sup>	January
Production, stainless steel <sup>3</sup>	186,000	200,000	2,140,000	211,000
Components of U.S. supply:				
Stainless steel scrap receipts	43,200 <sup>e</sup>	46,600 <sup>e</sup>	681,000 <sup>e</sup>	45,600
Stainless steel scrap consumption	64,600 <sup>e</sup>	69,600 <sup>e</sup>	1,030,000 <sup>e</sup>	71,600
Imports for consumption:				
Chromite ore	35,400	1,490	101,000	7,970
Ferrochromium:				
More than 4% carbon	30,000	51,400	310,000	10,300
More than 3% but not more than 4% carbon	--	--	212	--
More than 0.5% but not more than 3% carbon	733	--	3,360	--
Not more than 0.5% carbon	5,280	4,140	37,400	3,540
Ferrochromium silicon	--	55	15,800	4,530
Total ferroalloy imports	36,000	55,600	367,000	18,400
Chromium metal <sup>4</sup>	488	268	11,700	525
Stainless steel	87,900	50,400	694,000	58,900
Stainless steel scrap	23,100	17,900	220,000	19,500
Distribution of U.S. supply:				
Consumption, industry, chromium ferroalloys and metal	26,000 <sup>e</sup>	27,000 <sup>e</sup>	335,000 <sup>e</sup>	27,000 <sup>e</sup>
Exports:				
Chromite ore	59	222	1,760	70
Chromium ferroalloys:				
High-carbon ferrochromium	79	174	949	24
Low-carbon ferrochromium	4	4	393	--
Ferrochromium silicon	--	74	238	--
Total ferroalloy exports	83	252	1,580	24
Chromium metal	22	16	378	44
Stainless steel	28,800	26,600	321,000	30,200
Stainless steel scrap	35,900	25,200	319,000	18,300
Stocks at end of period:				
Consumer, industry, chromium ferroalloys and metal	7,400 <sup>e</sup>	7,400 <sup>e</sup>	7,400 <sup>e</sup>	7,400 <sup>e</sup>
Government stockpile:				
Chromium ferroalloys	60,700	59,600	59,600	59,600
Chromium metal	3,790	3,750	3,750	3,750

<sup>e</sup>Estimated. <sup>p</sup>Preliminary. -- 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. REPORTED CONSUMPTION AND STOCKS OF CHROMIUM PRODUCTS<sup>1</sup>

(Metric tons, gross weight unless otherwise noted)

	2020		2021 January
	December	January– December <sup>2</sup>	
<b>Consumption by end use:</b>			
<b>Steel:</b>			
Carbon steel	W	W	W
High-strength low-alloy steel	140 <sup>e</sup>	1,600 <sup>e</sup>	140 <sup>e</sup>
Stainless and heat-resisting steel	23,000 <sup>e</sup>	289,000 <sup>e</sup>	23,000 <sup>e</sup>
Unspecified steel <sup>3</sup>	3,400 <sup>e</sup>	39,800 <sup>e</sup>	3,400 <sup>e</sup>
Superalloys	200 <sup>e</sup>	2,400 <sup>e</sup>	200 <sup>e</sup>
Other alloys and uses <sup>4</sup>	W	W	W
<b>Total</b>	<b>27,000<sup>e</sup></b>	<b>335,000<sup>e</sup></b>	<b>27,000<sup>e</sup></b>
<b>Total, chromium content</b>	<b>16,000<sup>e</sup></b>	<b>191,000<sup>e</sup></b>	<b>16,000<sup>e</sup></b>
<b>Consumption by material:</b>			
Low-carbon ferrochromium	1,700 <sup>e</sup>	20,700 <sup>e</sup>	1,700 <sup>e</sup>
High-carbon ferrochromium	24,000 <sup>e</sup>	303,000 <sup>e</sup>	24,000 <sup>e</sup>
Ferrochromium silicon	W	W	W
Chromium metal	140 <sup>e</sup>	1,600 <sup>e</sup>	140 <sup>e</sup>
Chromite ore	130 <sup>e</sup>	1,500 <sup>e</sup>	130 <sup>e</sup>
Chromium-aluminum alloy	W	W	W
Other chromium materials	W	W	W
<b>Total</b>	<b>27,000<sup>e</sup></b>	<b>335,000<sup>e</sup></b>	<b>27,000<sup>e</sup></b>
<b>Total, chromium content</b>	<b>16,000<sup>e</sup></b>	<b>191,000<sup>e</sup></b>	<b>16,000<sup>e</sup></b>
<b>Consumer stocks:</b>			
Low-carbon ferrochromium	740 <sup>e</sup>	740 <sup>e</sup>	740 <sup>e</sup>
High-carbon ferrochromium	2,200 <sup>e</sup>	2,200 <sup>e</sup>	2,200 <sup>e</sup>
Ferrochromium silicon	W	W	W
Chromium metal	19 <sup>e</sup>	19 <sup>e</sup>	19 <sup>e</sup>
Chromium-aluminum alloy	W	W	W
Other chromium materials <sup>5</sup>	4,100 <sup>e</sup>	4,100 <sup>e</sup>	4,100 <sup>e</sup>
<b>Total</b>	<b>7,400<sup>e</sup></b>	<b>7,400<sup>e</sup></b>	<b>7,400<sup>e</sup></b>
<b>Total, chromium content</b>	<b>4,700<sup>e</sup></b>	<b>4,700<sup>e</sup></b>	<b>4,700<sup>e</sup></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.

<sup>5</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	
2020:			
January	37,800	27,400	3,850
February	37,100	27,400	3,850
March	36,700	27,100	3,850
April	36,700	27,100	3,850
May	36,000	26,800	3,850
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

<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:							
January	147	\$82	66	36	\$91	37	\$733
February	176	104	66	40	118	24	658
March	140	79	106	63	207	35	972
April	115	83	118	61	182	31	550
May	155	90	85	41	106	35	1,050
June	186	133	56	34	72	33	529
July	96	68	133	71	180	46	1,770
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>	1,760	1,050	1,580	893	2,280	378	9,960
2021, January	70	55	24	15	43	44	1,050

<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	January– December <sup>2</sup>	
<b>Chromite ore:</b>			
Not more than 40% chromic oxide:			
Quantity	564	3,600	1,760
Chromic oxide content	144	909	364
More than 40% but less than 46% chromic oxide:			
Quantity	925	11,000	1,050
Chromic oxide content	399	4,780	450
46% or more chromic oxide:			
Quantity	1	86,300	5,150
Chromic oxide content	1	77,500	2,470
Total, all grades:			
Quantity	1,490	101,000	7,970
Chromic oxide content	544	83,200	3,280
<b>Ferrochromium:</b>			
Low-carbon: <sup>3</sup>			
Not more than 0.5% carbon:			
Quantity	4,140	37,400	3,540
Chromium content	2,830	25,200	2,510
More than 0.5% but not more than 3% carbon:			
Quantity	--	3,360	--
Chromium content	--	2,260	--
Total, low-carbon:			
Quantity	4,140	40,800	3,540
Chromium content	2,830	27,400	2,510
Medium-carbon: <sup>4</sup>			
Quantity	--	212	--
Chromium content	--	116	--
High-carbon: <sup>5</sup>			
Quantity	51,400	310,000	10,300
Chromium content	25,700	169,000	6,860
Total, all grades:			
Quantity	55,600	351,000	13,800
Chromium content	28,500	196,000	9,370
<b>Chromium metal:</b>			
Unwrought powders	254	9,790	423
Waste and scrap	8	168	1
Other than waste and scrap and unwrought powders	6	1,690	100
Total, all grades	268	11,700	525

-- 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	January		
	Quantity (metric tons)	Chromium content (metric tons)	Value <sup>2</sup> (thousands)
<b>High-carbon ferrochromium:<sup>3</sup></b>			
Albania	358	252	\$412
Finland	1,500	800	1,190
India	272	164	230
Kazakhstan	7,860	5,450	9,660
Russia	294	196	333
<b>Total</b>	<b>10,300</b>	<b>6,860</b>	<b>11,800</b>
<b>Low-carbon ferrochromium:<sup>4</sup></b>			
Not more than 0.5% carbon:			
Belgium	368	287	1,160
Brazil	577	353	812
Germany	383	296	1,200
Japan	20	14	78
Kazakhstan	1,030	742	2,650
Russia	673	472	1,640
Turkey	499	344	1,040
<b>Total</b>	<b>3,540</b>	<b>2,510</b>	<b>8,590</b>
<b>All grades:</b>			
Albania	358	252	412
Belgium	368	287	1,160
Brazil	577	353	812
Finland	1,500	800	1,190
Germany	383	296	1,200
India	272	164	230
Japan	20	14	78
Kazakhstan	8,890	6,190	12,300
Russia	966	669	1,970
Turkey	499	344	1,040
<b>Total</b>	<b>13,800</b>	<b>9,370</b>	<b>20,400</b>

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

<sup>2</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>3</sup>Ferrochromium containing more than 4% carbon.

<sup>4</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	January	
	Quantity (metric tons)	Value <sup>2</sup> (thousands)
Unwrought powders:		
Belgium	3	\$88
China	40	337
France	133	842
Germany	41	224
Russia	141	807
Spain	23	111
United Kingdom	42	484
Total	423	2,890
Waste and scrap, Taiwan	1	15
Other than waste and scrap and unwrought powders:		
Canada	(3)	3
China	(3)	4
Germany	(3)	14
Liechtenstein	(3)	10
Russia	100	537
Total	100	568
All grades:		
Belgium	3	88
Canada	(3)	3
China	40	341
France	133	842
Germany	41	238
Liechtenstein	(3)	10
Russia	241	1,340
Spain	23	111
Taiwan	1	15
United Kingdom	42	484
Total	525	3,480

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

<sup>2</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>3</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	January	
	Gross weight (metric tons)	Value <sup>2</sup> (thousands)
<b>Exports:</b>		
Ingot	726	\$4,540
Flat-rolled (width > 600 mm)	19,300	54,100
Flat-rolled (width < 600 mm)	4,710	27,200
Bars and rods in irregular coils	211	965
Other bars and rods	2,180	19,000
Wire	673	7,690
Tubes, pipes, hollow profiles	2,340	23,000
Total	30,200	137,000
Stainless steel scrap	18,300	19,800
Grand total	48,500	156,000
<b>Imports:</b>		
Ingot	21,900	18,500
Flat-rolled (width > 600 mm)	14,900	34,700
Flat-rolled (width < 600 mm)	3,090	11,500
Bars and rods in irregular coils	2,180	8,060
Other bars and rods	9,090	34,200
Wire	2,320	8,980
Tubes, pipes, hollow profiles	5,450	35,400
Total	58,900	151,000
Stainless steel scrap	19,500	22,100
Grand total	78,400	173,000

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

<sup>2</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 charges incurred in bringing the merchandise into the United States.

Source: U.S. Census Bureau.