

Mineral Industry Surveys

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CHROMIUM IN FEBRUARY 2016

On the basis of gross quantity, consumption of chromium ferroalloys and metal in February 2016 decreased by 3% compared with that of January 2016. Consumption in February 2016 was slightly less than that of February 2015.

According to CRU Group, U.S. high-carbon (60%–70% chromium) ferrochromium (FeCr) prices were 93.81 cents per pound of contained chromium in February 2016, compared with 96.94 cents per pound of contained chromium in January 2016. U.S. charge-grade FeCr (47%–55% chromium) prices were

89.75 cents per pound of contained chromium in February 2016, compared with 95.38 cents per pound of contained chromium in January 2016.

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TABLE 1
U.S. SALIENT CHROMIUM STATISTICS¹

(Metric tons)

	2015		2016		
	December	January– December ^{p, 2}	January	February	January– February ²
Production, stainless steel ³	166,000	2,350,000	191,000	165,000	356,000
Components of U.S. supply:					
Stainless steel scrap receipts	74,700	919,000	75,000	62,900	138,000
Stainless steel scrap consumption	112,000	1,340,000	114,000	92,800	207,000
Imports for consumption:					
Chromite ore	2,210	131,000	10,100	7,060	17,200
Ferrochromium:					
More than 4% carbon	5,170	347,000	11,100	89,500	101,000
More than 3% but not more than 4% carbon	1,820	2,590	--	405	405
More than 0.5% but not more than 3% carbon	81	3,960	478	1,880	2,360
Not more than 0.5% carbon	1,830	48,400	1,810	1,500	3,310
Ferrochromium silicon	--	5,810	--	3,730	3,730
Total ferroalloy imports	8,900	408,000	13,400	97,000	110,000
Chromium metal ⁴	809	12,900	1,100	978	2,080
Stainless steel	51,500	700,000	44,300	44,800	89,000
Stainless steel scrap	14,200	192,000	16,900	17,900	34,800
Distribution of U.S. supply:					
Consumption, industry, chromium ferroalloys and metal	32,400	419,000	35,100	34,000	69,100
Exports:					
Chromite ore	316	7,210	186	227	413
Chromium ferroalloys:					
High-carbon ferrochromium	32	740	57	54	112
Low-carbon ferrochromium	9	279	25	19	44
Ferrochromium silicon	42	73	--	--	--
Total ferroalloy exports	83	1,090	83	73	156
Chromium metal	25	800	25	32	57
Stainless steel	59,800	809,000	64,900	64,400	129,000
Stainless steel scrap	38,100	520,000	52,800	104,000	157,000
Stocks at end of period:					
Consumer, industry, chromium ferroalloys and metal	10,300	10,300	9,670	10,100	10,100
Government stockpile:					
Chromium ferroalloys	95,700	95,700	94,600	94,400	94,400
Chromium metal	3,960	3,960	3,930	3,930	3,930

^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)

	2016		January– February ³
	January	February	
Consumption by end use:			
Steel:			
Carbon steel	181	170	351
High-strength low-alloy steel	133	133	267
Stainless and heat-resisting steel	31,500	30,400	62,000
Unspecified steel ⁴	2,720	2,720	5,430
Superalloys	428	429	856
Other alloys and uses ⁵	89	103	192
Total	35,100	34,000	69,100
Total, chromium content	20,200	19,500	39,700
Consumption by material:			
Low-carbon ferrochromium	1,790	1,790	3,570
High-carbon ferrochromium	30,700	29,600	60,300
Ferrochromium silicon	W	W	W
Chromium metal	161	161	322
Chromite ore	7	18	25
Chromium-aluminum alloy	W	W	W
Other chromium materials	W	W	W
Total	35,100	34,000	69,100
Total, chromium content	20,200	19,500	39,700
Consumer stocks:			
Low-carbon ferrochromium	1,480	1,450	1,450
High-carbon ferrochromium	7,350	7,880	7,880
Ferrochromium silicon	744	722	722
Chromium metal	W	W	W
Chromium-aluminum alloy	W	W	W
Other chromium materials	W	W	W
Total	9,670	10,100	10,100
Total, chromium content	5,650	5,910	5,910

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	
2015:			
February	70,700	34,200	3,960
March	69,700	34,100	3,960
April	69,700	34,000	3,960
May	67,100	33,700	3,960
June	64,100	33,400	3,960
July	63,000	33,300	3,960
August	63,000	33,200	3,960
September	63,000	32,900	3,960
October	63,000	32,900	3,960
November	63,000	32,600	3,960
December	63,000	32,600	3,960
2016:			
January	62,100	32,500	3,930
February	62,100	32,300	3,930

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)
2015:							
February	153	\$165	132	66	\$190	100	\$1,820
March	1,350	818	130	76	232	128	1,690
April	318	779	106	55	172	160	2,120
May	1,990	1,530	27	16	60	97	1,040
June	1,250	688	22	13	46	32	821
July	180	96	70	33	115	48	1,380
August	188	106	26	15	48	55	1,330
September	95	50	120	53	154	31	937
October	74	42	91	35	160	38	1,320
November	185	169	67	32	141	50	1,490
December	316	621	83	41	144	25	973
January–December ⁴	7,210	5,680	1,090	545	1,860	800	15,700
2016:							
January	186	121	83	50	114	25	1,100
February	227	124	73	35	108	32	1,000
January–February ⁴	413	244	156	84	222	57	2,100

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)

	2015	2016		
	January– December ²	January	February	January– February ²
Chromite ore:				
Not more than 40% chromic oxide:				
Gross weight	--	--	--	--
Chromic oxide content	--	--	--	--
More than 40% but less than 46% chromic oxide:				
Gross weight	34,600	--	1,600	1,600
Chromic oxide content	15,100	--	708	708
46% or more chromic oxide:				
Gross weight	96,100	10,100	5,460	15,600
Chromic oxide content	66,700	4,710	2,550	7,260
Total, all grades:				
Gross weight	131,000	10,100	7,060	17,200
Chromic oxide content	81,800	4,710	3,260	7,970
Ferrochromium:				
Low-carbon: ³				
Not more than 0.5% carbon:				
Gross weight	48,400	1,810	1,500	3,310
Chromium content	32,800	1,220	895	2,120
More than 0.5% but not more than 3% carbon:				
Gross weight	3,960	478	1,880	2,360
Chromium content	2,660	294	1,200	1,490
Total, low-carbon:				
Gross weight	52,400	2,290	3,380	5,660
Chromium content	35,500	1,520	2,090	3,610
Medium-carbon: ⁴				
Gross weight	2,590	--	405	405
Chromium content	1,320	--	218	218
High-carbon: ⁵				
Gross weight	347,000	11,100	89,500	101,000
Chromium content	189,000	6,290	51,200	57,500
Total, all grades:				
Gross weight	402,000	13,400	93,300	107,000
Chromium content	226,000	7,810	53,500	61,400
Chromium metal:				
Unwrought powders	4,840	392	600	993
Waste and scrap	153	--	7	7
Other than waste and scrap and unwrought powders	7,890	705	371	1,080
Total, all grades	12,900	1,100	978	2,080

-- 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 2016, BY GRADE AND COUNTRY¹

Grade and country	February			January–February 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	108	73	\$134	108	73	\$134
Brazil	243	132	154	243	132	154
India	53	35	53	1,620	1,020	1,610
Kazakhstan	11,500	11,300	7,840	13,500	12,700	10,400
Russia	1,800	1,120	2,480	2,960	1,920	3,930
South Africa	72,300	36,500	52,400	78,100	39,300	56,800
Turkey	312	192	278	889	564	892
Zimbabwe	3,170	1,820	3,200	3,170	1,820	3,200
Total	89,500	51,200	66,500	101,000	57,500	77,100
Medium-carbon ferrochromium, South Africa⁵						
	405	218	216	405	218	216
Low-carbon ferrochromium:⁶						
More than 0.5% but not more than 3% carbon						
Brazil	1,380	845	2,680	1,760	1,080	3,390
China	100	64	204	200	126	405
Kazakhstan	400	286	1,260	400	286	1,260
Total	1,880	1,200	4,140	2,360	1,490	5,060
Not more than 0.5% carbon:						
Brazil	447	164	587	907	445	1,490
China	71	43	171	122	75	297
Germany	480	336	1,920	960	669	3,780
India	25	16	121	33	21	162
Japan	60	42	253	160	112	593
Russia	355	252	982	631	454	1,890
Turkey	60	42	193	492	342	1,390
Total	1,500	895	4,230	3,310	2,120	9,600
All grades:						
Albania	108	73	134	108	73	134
Brazil	2,070	1,140	3,420	2,910	1,650	5,040
China	171	107	375	322	201	702
Germany	480	336	1,920	960	669	3,780
India	78	51	174	1,650	1,040	1,770
Japan	60	42	253	160	112	593
Kazakhstan	11,900	11,600	9,110	13,900	13,000	11,700
Russia	2,150	1,370	3,470	3,590	2,370	5,820
South Africa	72,700	36,700	52,600	78,500	39,500	57,000
Turkey	372	234	471	1,380	906	2,280
Zimbabwe	3,170	1,820	3,200	3,170	1,820	3,200
Total	93,300	53,500	75,100	107,000	61,400	92,000

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).

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 2016, BY GRADE AND BY COUNTRY¹

Grade and country	February		January–February ²	
	Gross weight (metric tons)	Value ³ (thousands)	Gross weight (metric tons)	Value ³ (thousands)
Unwrought powders:				
China	60	\$945	150	\$2,090
France	229	2,450	266	2,920
Germany	5	127	5	127
Russia	20	138	60	432
United Kingdom	287	3,020	512	5,220
Total	600	6,670	993	10,800
Waste and scrap, United Kingdom	7	74	7	74
Other than waste and scrap and unwrought powders:				
Canada	28	2,150	55	4,330
China	67	519	183	1,410
France	--	--	133	1,340
Germany	79	437	176	1,010
Hong Kong	(4)	2	(4)	2
Japan	1	47	1	47
New Zealand	--	--	(4)	15
Russia	148	1,020	459	3,260
Spain	48	329	48	329
United Kingdom	--	--	20	265
Total	371	4,510	1,080	12,000
All grades:				
Canada	28	2,150	55	4,330
China	127	1,460	334	3,490
France	229	2,450	400	4,270
Germany	84	564	181	1,140
Hong Kong	(4)	2	(4)	2
Japan	1	47	1	47
New Zealand	--	--	(4)	15
Russia	168	1,160	519	3,690
Spain	48	329	48	329
United Kingdom	294	3,090	538	5,560
Total	978	11,300	2,080	22,900

-- 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 2016¹

Stainless steel product	February		January-February ²	
	Gross weight (metric tons)	Value ³ (thousands)	Gross weight (metric tons)	Value ³ (thousands)
Exports:				
Ingot	2,800	\$12,100	5,340	\$24,000
Flat-rolled (width > 600 mm)	48,000	77,800	96,100	168,000
Flat-rolled (width < 600 mm)	6,250	23,800	13,200	48,200
Bars and rods in irregular coils	1,050	3,400	2,250	7,170
Other bars and rods	2,900	21,900	5,320	43,900
Wire	740	9,180	1,530	19,200
Tubes, pipes, hollow profiles	2,590	24,300	5,520	51,400
Total	64,400	173,000	129,000	362,000
Stainless steel scrap	104,000	38,500	157,000	74,100
Grand total	168,000	211,000	286,000	436,000
Imports:				
Ingot	6,920	33,500	12,300	71,100
Flat-rolled (width > 600 mm)	21,700	43,600	44,500	91,300
Flat-rolled (width < 600 mm)	5,710	18,500	9,860	32,100
Bars and rods in irregular coils	2,050	5,450	5,020	13,800
Other bars and rods	239	1,430	613	3,070
Wire	826	3,990	1,670	8,190
Tubes, pipes, hollow profiles	7,330	41,400	15,000	87,000
Total	44,800	148,000	89,000	307,000
Stainless steel scrap	17,900	9,860	34,800	19,600
Grand total	62,600	158,000	124,000	326,000

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 charges incurred in bringing the merchandise into the United States.

Source: U.S. Census Bureau.