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Mineral Industry Surveys

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CHROMIUM IN JANUARY 2012

On the basis of gross weight, consumption of chromium ferroalloys and metal in January 2012 increased by 20% compared with consumption in December 2011. Consumption in January 2012 decreased slightly compared with consumption in the January 2011.

Included in this Mineral Industry Surveys are U.S. salient chromium statistics, U.S. Government stockpile inventory of chromium materials in January 2012, consumption by end use and consumer stocks of chromium ferroalloys and metal at the end of January 2012, and U.S. foreign trade data for selected chromium-containing materials in December 2011.

TABLE 1
U.S. SALIENT CHROMIUM STATISTICS[1]

(Metric tons, gross weight)

	2010	2011			2012
	January–December[2]	November	December	January–December[2]	January
Production:					
Stainless steel production[3]	2,200,000	154,000	164,000	2,070,000	169,000
Components of U.S. supply:					
Stainless steel scrap receipts	846,000	72,100 r	68,200 r	866,000 r	72,900
Stainless steel scrap consumption	1,280,000	110,000 r	103,000 r	1,300,000 r	114,000
Imports for consumption:					
Chromite ore	139,000	40,000	8,000	191,000	40,500
Ferrochromium:					
More than 4% carbon	454,000	14,500	24,500	462,000	55,100
More than 3% but not more than 4% carbon	1,170	20	--	1,510	100
More than 0.5% but not more than 3% carbon	2,370	100	--	393	202
Not more than 0.5% carbon	49,900	1,300	5,100	53,700	4,830
Ferrochromium silicon	17,000	--	3,570	20,000	358
Total ferroalloy imports	524,000	16,000	33,200	538,000	60,500
Chromium metal[4]	13,000	930	1,190	13,600	1,220
Stainless steel	585,000	41,500	42,200	605,000	47,800
Stainless steel scrap	195,000	13,300	11,000	169,000	20,200
Distribution of U.S. supply:					
Consumption, industry, chromium ferroalloys and metal	411,000	34,300	30,000 r	420,000 r	36,100
Exports:					
Chromite ore	4,420	615	477	5,250	803
Chromium ferroalloys:					
High-carbon ferrochromium	6,530	321	190	4,260	325
Low-carbon ferrochromium	2,490	56	93	1,030	34
Ferrochromium silicon	106	--	24	28	14
Total ferroalloy exports	9,130	377	307	5,330	374
Chromium metal	597	31	44	557	24
Stainless steel	508,000	34,900	41,700	558,000	46,100
Stainless steel scrap	937,000	49,700	58,200	656,000	36,700
Stocks at end of period:					
Consumer, industry, chromium ferroalloys and metal	8,110	10,400	8,910 r	8,910 r	9,840
Government stockpile:					
Chromium ferroalloys	154,000	150,000	150,000	150,000	149,000
Chromium metal	4,430	4,230	4,230	4,230	4,230

rRevised. -- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

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

[3]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.

[4]Includes 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)

	2011		2012
	December	January–December[3]	January
Consumption by end use:			
Steel:			
Carbon steel	324	3,800	323
High-strength low-alloy steel	214	2,710	232
Stainless and heat-resisting steel	25,200 r	362,000 r	31,000
Unspecified steel[4]	3,690 r	45,100 r	3,930
Superalloys	413	5,110	418
Other alloys and uses[5]	107	1,310	110
Total	30,000 r	420,000 r	36,100
Total, chromium content	17,700 r	246,000 r	20,900
Consumption by material:			
Low-carbon ferrochromium	2,330	28,800	2,420
High-carbon ferrochromium	25,300 r	362,000 r	31,100
Ferrochromium silicon	W	W	W
Chromium metal	227	2,860	232
Chromite ore	W	W	W
Chromium-aluminum alloy	W	W	W
Other chromium materials	W	W	W
Total	30,000 r	420,000 r	36,100
Total, chromium content	17,700 r	246,000 r	20,900
Consumer stocks:			
Low-carbon ferrochromium	1,640 r	1,640 r	1,650
High-carbon ferrochromium	6,470 r	6,470 r	7,310
Ferrochromium silicon	W	W	W
Chromium metal	162	162	160
Chromium-aluminum alloy	W	W	W
Other chromium materials	W	W	W
Total	8,910 r	8,910 r	9,790
Total, chromium content	5,410 r	5,410 r	5,820

rRevised. W Withheld to avoid disclosing company proprietary data; included in "Total."

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]Includes estimates.

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

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

[5]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[1, 2]

(Metric tons)

Period	Chromium ferroalloys		Chromium metal
	High-carbon ferro-chromium	Low-carbon ferro-chromium	
2011:			
January	95,400	59,000	4,430
February	95,400	59,000	4,430
March	95,400	57,400	4,430
April	95,400	57,400	4,390
May	94,100	56,200	4,290
June	94,100	56,200	4,290
July	94,100	55,700	4,270
August	94,100	55,600	4,270
September	95,200	55,100	4,240
October	95,200	54,900	4,240
November	95,200	54,600	4,230
December	95,200	54,300	4,230
2012, January	95,200	54,100	4,230

[1]Data are rounded to no more than three significant digits.

[2]These Government stocks are reported by the Defense Logistics Agency, DLA Strategic Materials in Inventory of Stockpile Materials D–1, which reports uncommitted inventory. Uncommitted inventory is that inventory for which there is no sales contract. Committed inventory is that inventory for which there is a sales contract, however, the material has not yet been shipped. For chromium materials, the D–1 report includes chromium materials that (1) meet specifications and are held in excess of goal and (2) do not meet specifications and are held in excess of goal. The D–1 report excludes chromium materials that are committed and awaiting shipment.

Source: Defense Logistics Agency, DLA Strategic Materials.

TABLE 4
U.S. EXPORTS OF CHROMITE ORE, CHROMIUM FERROALLOYS, AND METAL[1]

Period	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)
2010:							
December	837	$457	532	287	$783	51	$1,580
January–December[4]	4,420	2,620	9,130	4,250	12,900	597	18,400
2011:							
January	137	154	730	331	1,040	17	614
February	160	111	384	175	584	27	851
March	381	250	282	158	533	61	1,680
April	618	411	444	236	733	80	1,560
May	318	182	831	363	1,050	49	1,050
June	216	161	693	297	803	38	978
July	375	250	294	112	517	38	1,120
August	846	513	287	159	396	31	937
September	739	491	554	281	793	66	1,150
October	370	273	143	72	212	73	1,820
November	615	394	377	151	496	31	805
December	477	333	307	165	515	44	1,250
January–December	5,250	3,520	5,330	2,500	7,670	557	13,800
2012, January	803	475	374	199	417	24	891

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]Includes low- and high-carbon ferrochromium and ferrochromium silicon.

[3]Includes chromium metal, waste and scrap, and unwrought powders.

[4]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[1]

(Metric tons)

	2010	2011			2012
	January–December[2]	November	December	January–December	January
Chromite ore:					
Not more than 40%:					
Gross weight	--	--	--	151	--
Chromic oxide content	--	--	--	78	--
More than 40% but less than 46% chromic oxide:					
Gross weight	65,400	--	--	27,900	1,500
Chromic oxide content	29,900	--	--	12,600	684
46% or more chromic oxide:					
Gross weight	73,700	40,000	8,000	163,000	39,000
Chromic oxide content	34,200	19,000	3,840	90,000	19,300
Total, all grades:					
Gross weight	139,000	40,000	8,000	191,000	40,500
Chromic oxide content	64,000	19,000	3,840	103,000	20,000
Ferrochromium:					
Low-carbon:[3]					
Not more than 0.5%:					
Gross weight	49,900	1,300	5,100	53,700	4,830
Chromium content	34,300	908	3,540	37,100	3,310
More than 0.5% but not more than 3%:					
Gross weight	2,370	100	--	393	202
Chromium content	1,450	56	--	224	116
Total, low-carbon:					
Gross weight	52,300	1,400	5,100	54,100	5,030
Chromium content	35,700	963	3,540	37,400	3,430
Medium-carbon:[4]					
Gross weight	1,170	20	--	1,510	100
Chromium content	697	14	--	855	54
High-carbon:[5]					
Gross weight	454,000	14,500	24,500	462,000	55,100
Chromium content	261,000	7,660	16,100	265,000	30,700
Total, all grades:					
Gross weight	507,000	16,000	29,600	518,000	60,200
Chromium content	297,000	8,640	19,600	304,000	34,200
Chromium metal:					
Unwrought powders	1,860	143	220	2,720	180
Waste and scrap	544	40	37	574	26
Other than waste and scrap and unwrought powders	10,600	747	930	10,300	1,020
Total, all grades:	13,000	930	1,190	13,600	1,220

-- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

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

[3]Ferrochromium containing not more than 3% carbon.

[4]Ferrrochromium containing more than 3% carbon but not more than 4% carbon.

[5]Ferrrochromium containing more than 4% carbon.

Source: U.S. Census Bureau.

TABLE 6

U.S. IMPORTS FOR CONSUMPTION OF CHROMITE ORE AND FERROCHROMIUM SILICON IN 2011, BY GRADE AND BY COUNTRY[1]

Grade and country	January-December[2]			
	Gross weight (metric tons)	Cr_2O_3 (metric tons)	Chromium content (metric tons)	Value[3] (thousands)
Chromite ore:				
More than 40% but less than 46% chromic oxide, South Africa	27,900	12,600	XX	$7,040
46% or more chromic oxide:				
Germany	1	1	XX	10
Netherlands	1	1	XX	8
South Africa	163,000	90,000	XX	60,700
Total	163,000	90,000	XX	60,700
All grades:				
Canada	25	9	XX	22
Germany	2	2	XX	21
India	54	10	XX	3
Netherlands	1	1	XX	8
South Africa	191,000	103,000	XX	67,800
Total	191,000	103,000	XX	67,900
Ferrochromium silicon:				
Kazakhstan	17,100	XX	6,700	28,300
Russia	2,880	XX	1,120	5,340
Total	20,000	XX	7,820	33,600

XX Not applicable.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]May include revised data.

[3]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.

Source: U.S. Census Bureau.

TABLE 7

U.S. IMPORTS FOR CONSUMPTION OF FERROCHROMIUM IN 2011, BY GRADE AND COUNTRY[1]

Grade and country	December			January–December[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	1,000	629	$1,350	8,520	5,440	$12,500
China	--	--	--	3	2	9
Finland	--	--	--	214	111	212
India	280	169	342	13,400	8,080	19,300
Kazakhstan	14,400	9,940	18,700	120,000	83,000	190,000
Portugal	--	--	--	501	323	719
Russia	2,730	1,850	3,690	33,000	21,900	56,500
South Africa	3,410	1,660	3,300	243,000	119,000	248,000
Sweden	794	536	1,560	11,100	7,370	22,300
Turkey	1,970	1,310	3,090	8,690	5,680	16,000
Vietnam	--	--	--	150	90	360
Zimbabwe	--	--	--	23,800	13,900	37,000
Total	24,500	16,100	32,000	462,000	265,000	602,000
Medium-carbon ferrochromium:[5]						
Belgium	--	--	--	(6)	(6)	4
India	--	--	--	95	54	105
Russia	--	--	--	1,390	786	1,020
Turkey	--	--	--	20	14	64
Total	--	--	--	1,510	855	1,200
Low-carbon ferrochromium:[7]						
More than 0.5% but not more than 3% carbon:						
Russia	--	--	--	40	31	150
South Africa	--	--	--	353	193	762
Total	--	--	--	393	224	912
Not more than 0.5% carbon:						
Albania	--	--	--	284	197	593
Belgium	--	--	--	61	41	266
Brazil	--	--	--	1,220	729	3,170
China	--	--	--	708	466	2,460
Germany	70	48	312	6,540	4,580	31,600
Japan	100	70	509	2,660	1,860	13,500
Kazakhstan	1,380	963	3,650	8,070	5,660	23,200
Netherlands	--	--	--	17	11	61
Russia	3,540	2,440	10,800	31,400	21,600	101,000
South Africa	--	--	--	20	11	61
Sweden	--	--	--	20	14	103
Turkey	20	14	71	2,770	1,970	9,410
Total	5,100	3,540	15,300	53,700	37,100	186,000
All grades:						
Albania	1,000	629	1,350	8,800	5,630	13,100
Belgium	--	--	--	61	41	269
Brazil	--	--	--	1,220	729	3,170
China	--	--	--	711	468	2,470
Finland	--	--	--	214	111	212
Germany	70	48	312	6,540	4,580	31,600
India	280	169	342	13,500	8,140	19,400
Japan	100	70	509	2,660	1,860	13,500
Kazakhstan	15,700	10,900	22,300	128,000	88,700	213,000
Netherlands	--	--	--	17	11	61
Portugal	--	--	--	501	323	719
Russia	6,270	4,300	14,400	65,800	44,300	159,000
South Africa	3,410	1,660	3,300	244,000	120,000	249,000
Sweden	794	536	1,560	11,100	7,390	22,400
Turkey	1,990	1,330	3,160	11,500	7,660	25,500
Vietnam	--	--	--	150	90	360
Zimbabwe	--	--	--	23,800	13,900	37,000
Total	29,600	19,600	47,300	518,000	304,000	790,000

TABLE 7—Continued
U.S. IMPORTS FOR CONSUMPTION OF FERROCHROMIUM IN 2011, BY GRADE AND COUNTRY[1]

-- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

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

[3]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.

[4]Ferrrochromium containing more than 4% carbon.

[5]Ferrrochromium containing more than 3% but not more than 4% carbon.

[6]Less than ½ unit.

[7]Ferrochromium containing not more than 3% carbon.

Source: U.S. Census Bureau.

TABLE 7A
U.S. IMPORTS FOR CONSUMPTION OF FERROCHROMIUM IN 2012, BY GRADE AND COUNTRY[1]

Grade and country	January		
	Gross weight (metric tons)	Chromium content (metric tons)	Value[2] (thousands)
High-carbon ferrochromium:[3]			
Albania	450	282	$585
India	2,050	1,240	2,520
Russia	1,520	934	2,040
South Africa	28,000	13,700	25,900
Sweden	1,950	1,310	3,600
Turkey	10,500	6,880	16,800
Zimbabwe	10,600	6,350	13,000
Total	55,100	30,700	64,300
Medium-carbon ferrochromium,[4] Russia	100	54	54
Low-carbon ferrochromium:[5]			
More than 0.5% but not more than 3% carbon:			
Russia	40	28	118
South Africa	162	88	337
Total	202	116	456
Not more than 0.5% carbon:			
Belgium	35	23	128
Brazil	40	13	135
Germany	360	251	1,560
Japan	40	28	205
Russia	4,210	2,900	13,100
Turkey	145	103	481
Total	4,830	3,310	15,600
All grades:			
Albania	450	282	585
Belgium	35	23	128
Brazil	40	13	135
Germany	360	251	1,560
India	2,050	1,240	2,520
Japan	40	28	205
Russia	5,870	3,910	15,300
South Africa	28,100	13,800	26,200
Sweden	1,950	1,310	3,600
Turkey	10,600	6,990	17,200
Zimbabwe	10,600	6,350	13,000
Total	60,200	34,200	80,400

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]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.

[3]Ferrrochromium containing more than 4% carbon.

[4]Ferrrochromium containing more than 3% but not more than 4% carbon.

[5]Ferrochromium containing not more than 3% carbon.

Source: U.S. Census Bureau.

TABLE 8

U.S. IMPORTS FOR CONSUMPTION OF CHROMIUM METAL IN 2011, BY GRADE AND BY COUNTRY[1]

Grade and country	December		January–December[2]	
	Gross weight (metric tons)	Value[3] (thousands)	Gross weight (metric tons)	Value[3] (thousands)
Unwrought powders:				
China	105	$1,390	1,660	$23,500
France	51	950	279	5,190
Germany	2	90	14	613
India	--	--	4	55
Japan	1	9	5	214
Russia	--	--	435	5,510
United Kingdom	61	828	323	4,840
Total	220	3,260	2,720	40,000
Waste and scrap:				
Germany	--	--	12	200
Japan	--	--	1	100
Mexico	37	150	545	1,620
Singapore	--	--	3	54
United Kingdom	--	--	13	121
Total	37	150	574	2,090
Other than waste and scrap and unwrought powders:				
China	57	965	1,530	21,000
France	234	3,750	2,210	35,200
Germany	1	79	99	2,020
Italy	(4)	3	(4)	13
Japan	2	41	16	360
Liechtenstein	--	--	(4)	11
Netherlands	--	--	57	784
Russia	420	6,270	3,580	49,200
United Kingdom	216	3,090	2,850	41,300
Total	930	14,200	10,300	150,000
All grades:				
China	162	2,350	3,190	44,600
France	285	4,700	2,480	40,400
Germany	3	168	125	2,830
India	--	--	4	55
Italy	(4)	3	(4)	13
Japan	2	50	22	674
Liechtenstein	--	--	(4)	11
Mexico	37	150	545	1,620
Netherlands	--	--	57	784
Russia	420	6,270	4,020	54,700
Singapore	--	--	3	54
United Kingdom	277	3,920	3,180	46,300
Total	1,190	17,600	13,600	192,000

-- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

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

[3]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.

[4]Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 8A
U.S. IMPORTS FOR CONSUMPTION OF CHROMIUM METAL IN 2012, BY GRADE AND BY COUNTRY[1]

Grade and country	January	
	Gross weight (metric tons)	Value[2] (thousands)
Unwrought powders:		
China	67	$990
France	61	993
Germany	2	83
Japan	2	33
Russia	41	441
United Kingdom	6	144
Total	180	2,680
Waste and scrap:		
Japan	1	5
Mexico	25	87
Total	26	92
Other than waste and scrap and unwrought powders:		
China	66	962
France	156	2,400
Germany	(3)	44
Russia	486	8,210
United Kingdom	307	4,250
Total	1,020	15,900
All grades:		
China	133	1,950
France	217	3,390
Germany	3	127
Japan	3	39
Mexico	25	87
Russia	527	8,650
United Kingdom	313	4,390
Total	1,220	18,600

-- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]Customs import value generally represents a value in the foreign country and therefore excludes insurance, and other charges incurred in bringing the merchandise into the United States.

[3]Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 9
U.S. STAINLESS STEEL TRADE, BY PRODUCT, IN 2011[1]

Stainless steel product	December		January–December	
	Gross weight (metric tons)	Value[2] (thousands)	Gross weight (metric tons)	Value[2] (thousands)
Exports:				
Ingot	7,820	$14,100	75,200	$159,000
Flat-rolled (width > 600 mm)	19,500	72,700	292,000	1,100,000
Flat-rolled (width < 600 mm)	5,890	25,100	78,100	342,000
Bars and rods in irregular coils	648	2,670	15,700	91,900
Other bars and rods	3,140	24,700	40,600	324,000
Wire	983	7,530	14,400	109,000
Tubes, pipes, hollow profiles	3,670	35,100	42,100	388,000
Total	41,700	182,000	558,000	2,510,000
Stainless steel scrap	58,200	85,100	656,000	958,000
Grand total	99,900	267,000	1,210,000	3,470,000
Imports:				
Ingot	8,680	31,100	132,000	505,000
Flat-rolled (width > 600 mm)	18,600	55,300	297,000	1,010,000
Flat-rolled (width < 600 mm)	2,830	12,800	44,000	200,000
Bars and rods in irregular coils	1,990	9,030	25,100	118,000
Other bars and rods	273	1,650	3,980	24,800
Wire	280	1,900	4,290	32,500
Tubes, pipes, hollow profiles	9,560	81,800	98,000	765,000
Total	42,200	194,000	605,000	2,650,000
Stainless steel scrap	11,000	15,200	169,000	295,000
Grand total	53,200	209,000	774,000	2,950,000

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]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.

TABLE 9A

U.S. STAINLESS STEEL TRADE, BY PRODUCT, IN 2012[1]

Stainless steel product	January	
	Gross weight (metric tons)	Value[2] (thousands)
Exports:		
Ingot	5,080	$11,700
Flat-rolled (width > 600 mm)	25,100	84,000
Flat-rolled (width < 600 mm)	6,170	24,800
Bars and rods in irregular coils	563	1,950
Other bars and rods	4,080	31,600
Wire	1,090	8,110
Tubes, pipes, hollow profiles	3,940	32,600
Total	46,100	195,000
Stainless steel scrap	36,700	53,700
Grand total	82,800	248,000
Imports:		
Ingot	9,250	29,700
Flat-rolled (width > 600 mm)	20,700	61,000
Flat-rolled (width < 600 mm)	3,380	13,300
Bars and rods in irregular coils	1,940	7,660
Other bars and rods	365	2,120
Wire	202	2,170
Tubes, pipes, hollow profiles	11,900	86,100
Total	47,800	202,000
Stainless steel scrap	20,200	32,600
Grand total	68,000	235,000

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]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.