

Mineral Industry Surveys

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CHROMIUM IN APRIL 2014

On the basis of gross weight, consumption of chromium ferroalloys and metal in April 2014 decreased slightly compared with that of March 2014. Consumption in April 2014 increased slightly compared with that of April 2013.

Included in this Mineral Industry Surveys are U.S. salient chromium statistics, U.S. Government stockpile inventory of

chromium materials in April 2014, consumption by end use and consumer stocks of chromium ferroalloys and metal at the end of April 2014, and U.S. foreign trade data for selected chromium-containing materials in April 2014.

TABLE 1
U.S. SALIENT CHROMIUM STATISTICS¹

(Metric tons, gross weight)

	2013	2014			
	January– December ²	February	March	April	January– April ²
Production, stainless steel ³	2,030,000	169,000	189,000	195,000	752,000
Components of U.S. supply:					
Stainless steel scrap receipts	882,000	72,700	73,200	75,200	297,000
Stainless steel scrap consumption	1,300,000	107,000	110,000	109,000	435,000
Imports for consumption:					
Chromite ore	173,000	31,000	3,520	447	37,800
Ferrochromium:					
More than 4% carbon	416,000	59,900	18,900	48,000	171,000
More than 3% but not more than 4% carbon	370	--	28	2	30
More than 0.5% but not more than 3% carbon	13,800	41	54	1,600	3,630
Not more than 0.5% carbon	36,500	2,360	4,000	2,840	15,300
Ferrochromium silicon	12,000	--	--	5,160	9,770
Total ferroalloy imports	478,000	62,300	23,000	57,600	200,000
Chromium metal ⁴	13,700	1,130	1,350	2,690	6,290
Stainless steel	570,000	46,100	52,800	58,600	206,000
Stainless steel scrap	226,000	29,400	28,900	28,800	110,000
Distribution of U.S. supply:					
Consumption, industry, chromium ferroalloys and metal	422,000	35,000	36,800	36,100	144,000
Exports:					
Chromite ore	8,530	427	322	1,050	2,020
Chromium ferroalloys:					
High-carbon ferrochromium	4,460	383	318	239	1,120
Low-carbon ferrochromium	379	62	39	9	300
Ferrochromium silicon	16	--	--	--	--
Total ferroalloy exports	4,850	445	358	247	1,420
Chromium metal	856	45	53	63	213
Stainless steel	603,000	50,200	56,300	55,700	210,000
Stainless steel scrap	644,000	41,100	42,900	51,300	176,000
Stocks at end of period:					
Consumer, industry, chromium ferroalloys and metal	9,700	10,400	9,490	10,400	10,400
Government stockpile:					
Chromium ferroalloys	132,000	124,000	123,000	121,000	121,000
Chromium metal	4,090	4,090	4,040	4,040	4,090

-- 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)

	2014		
	March	April	January– April ³
Consumption by end use:			
Steel:			
Carbon steel	189 ^r	200	859
High-strength low-alloy steel	154	156	612
Stainless and heat-resisting steel	32,600	31,800	127,000
Unspecified steel ⁴	3,330	3,360	13,200
Superalloys	477	480	1,940
Other alloys and uses ⁵	103 ^r	89	375
Total	36,800	36,100	144,000
Total, chromium content	21,000	20,700	82,700
Consumption by material:			
Low-carbon ferrochromium	1,990 ^r	1,990	8,050
High-carbon ferrochromium	32,200	31,500	126,000
Ferrochromium silicon	W	W	W
Chromium metal	199	197	828
Chromite ore	W	W	W
Chromium-aluminum alloy	W	W	W
Other chromium materials	W	W	W
Total	36,800	36,100	144,000
Total, chromium content	21,000	20,700	82,700
Consumer stocks:			
Low-carbon ferrochromium	1,550 ^r	1,590	1,590
High-carbon ferrochromium	7,220 ^r	8,040	8,040
Ferrochromium silicon	W	W	W
Chromium metal	88	84	84
Chromium-aluminum alloy	W	W	W
Other chromium materials	W	W	W
Total	9,490^r	10,400	10,400
Total, chromium content	5,540^r	6,080	6,080

^rRevised. 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 MATERIALS^{1,2}

(Metric tons)

Period	Chromium ferroalloys		Chromium metal
	High-carbon ferro-chromium	Low-carbon ferro-chromium	
2013:			
April	91,200	47,600	4,090
May	90,200	47,200	4,090
June	90,200	46,500	4,090
July	90,000	46,000	4,090
August	90,000	46,000	4,090
September	88,600	45,600	4,090
October	88,600	45,600	4,090
November	86,300	45,300	4,090
December	85,100	44,300	4,090
2014:			
January	82,300	43,500	4,090
February	81,000	43,300	4,090
March	81,000	42,300	4,040
April	79,500	41,700	4,040

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

²These 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 contact. 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 METAL¹

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)
2013:							
April	287	\$169	663	390	\$1,120	100	\$2,360
May	151	106	444	226	507	71	1,690
June	308	225	417	217	738	89	2,220
July	363	209	475	241	730	88	1,970
August	210	148	212	105	342	61	1,510
September	82	114	375	153	537	104	1,790
October	130	129	357	214	717	30	862
November	253	122	365	203	607	132	1,950
December	233	157	308	157	514	39	990
January–December ⁴	8,530	3,040	4,850	2,500	7,300	856	19,000
2014:							
January	221	154	367	176	711	53	1,470
February	427	203	445	174	691	45	1,210
March	322	157	358	194	586	53	2,140
April	1,050	467	247	141	392	63	2,250
January–April ⁴	2,020	981	1,420	685	2,380	213	7,070

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)

	2013		2014	
	January– December ²	March	April	January– April ²
Chromite ore:				
Not more than 40% chromic oxide:				
Gross weight	6,380	--	22	22
Chromic oxide content	1,610	--	4	4
More than 40% but less than 46% chromic oxide:				
Gross weight	68,400	1,840	192	30,400
Chromic oxide content	30,800	811	86	13,900
46% or more chromic oxide:				
Gross weight	98,400	1,680	233	7,390
Chromic oxide content	46,700	797	111	3,610
Total, all grades:				
Gross weight	173,000	3,520	447	37,800
Chromic oxide content	79,100	1,610	201	17,500
Ferrochromium:				
Low-carbon: ³				
Not more than 0.5% carbon:				
Gross weight	36,500	4,000	2,840	15,300
Chromium content	24,800	2,710	1,920	10,400
More than 0.5% but not more than 3% carbon:				
Gross weight	13,800	54	1,600	3,630
Chromium content	9,410	32	1,100	2,490
Total, low-carbon:				
Gross weight	50,300	4,060	4,440	18,900
Chromium content	34,200	2,740	3,020	12,900
Medium-carbon: ⁴				
Gross weight	370	28	2	30
Chromium content	210	15	2	17
High-carbon: ⁵				
Gross weight	416,000	18,900	48,000	171,000
Chromium content	227,000	10,500	26,500	94,300
Total, all grades:				
Gross weight	466,000	23,000	52,400	190,000
Chromium content	262,000	13,300	29,600	107,000
Chromium metal:				
Unwrought powders	3,350	243	479	1,310
Waste and scrap	70	--	11	14
Other than waste and scrap and unwrought powders	10,200	1,110	2,200	4,970
Total, all grades	13,700	1,350	2,690	6,290

-- 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 2014, BY GRADE AND COUNTRY¹

Grade and country	April			January–April 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	--	--	--	338	213	\$521
Brazil	1,010	523	\$848	1,500	760	1,260
Colombia	21	14	34	21	14	34
Germany	--	--	--	299	208	500
India	1,350	826	1,560	3,080	1,880	3,520
Kazakhstan	10,200	7,010	13,800	37,600	25,900	48,000
Latvia	--	--	--	440	307	770
Russia	1,600	1,010	2,010	4,070	2,680	5,240
South Africa	30,800	15,200	29,600	112,000	55,200	104,000
Sweden	2,520	1,650	4,200	2,680	1,750	4,510
Turkey	501	320	587	3,950	2,530	5,180
Zimbabwe	--	--	--	5,060	2,810	5,260
Total	48,000	26,500	52,600	171,000	94,300	179,000
Medium-carbon ferrochromium:⁵						
Belgium	--	--	--	28	15	15
China	2	2	4	2	2	4
Total	2	2	4	30	17	19
Low-carbon ferrochromium:⁶						
More than 0.5% but not more than 3% carbon:						
Brazil	--	--	--	108	66	265
Kazakhstan	600	414	1,480	1,610	1,110	3,910
Poland	--	--	--	41	23	75
Russia	1,000	690	2,620	1,870	1,290	4,840
Total	1,600	1,100	4,100	3,630	2,490	9,090
Not more than 0.5% carbon:						
Brazil	414	256	999	714	442	1,720
China	--	--	--	62	39	210
Germany	600	419	2,360	2,200	1,540	8,460
India	26	17	141	45	29	264
Japan	140	97	551	451	312	1,600
Kazakhstan	--	--	--	4,750	3,280	11,900
Mexico	19	12	133	36	23	236
Russia	1,440	991	4,010	6,380	4,370	17,900
South Africa	100	55	193	523	306	1,160
Sweden	--	--	--	1	1	3
Turkey	100	71	337	139	98	460
Total	2,840	1,920	8,730	15,300	10,400	43,900
All grades:						
Albania	--	--	--	338	213	521
Belgium	--	--	--	28	15	15
Brazil	1,420	779	1,850	2,320	1,270	3,250
China	2	2	4	64	41	215
Colombia	21	14	34	21	14	34
Germany	600	419	2,360	2,500	1,750	8,960
India	1,380	842	1,700	3,130	1,910	3,780
Japan	140	97	551	451	312	1,600
Kazakhstan	10,800	7,420	15,300	43,900	30,300	63,800
Latvia	--	--	--	440	307	770
Mexico	19	12	133	36	23	236
Poland	--	--	--	41	23	75
Russia	4,040	2,690	8,640	12,300	8,340	28,000
South Africa	30,900	15,300	29,800	113,000	55,500	105,000
Sweden	2,520	1,650	4,200	2,680	1,750	4,510
Turkey	601	390	925	4,090	2,630	5,640
Zimbabwe	--	--	--	5,060	2,810	5,260
Total	52,400	29,600	65,500	190,000	107,000	232,000

See footnotes at end of table.

TABLE 6—continued
 U.S. IMPORTS FOR CONSUMPTION OF FERROCHROMIUM IN 2014, BY GRADE AND COUNTRY¹

Grade and country	April			January–April ²		
	Gross weight (metric tons)	Chromium content (metric tons)	Value ³ (thousands)	Gross weight (metric tons)	Chromium content (metric tons)	Value ³ (thousands)

-- 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 2014, BY GRADE AND BY COUNTRY¹

Grade and country	April		January–April ²	
	Gross weight (metric tons)	Value ³ (thousands)	Gross weight (metric tons)	Value ³ (thousands)
Unwrought powders:				
Austria	--	--	(4)	\$2
Belgium	57	\$819	93	1,330
China	214	2,020	705	7,500
France	64	815	199	2,670
Germany	(4)	10	12	375
Japan	--	--	1	126
Korea, Republic of	(4)	3	(4)	3
Russia	120	982	180	1,490
Sweden	--	--	(4)	27
United Kingdom	25	362	117	1,610
Total	479	5,010	1,310	15,100
Waste and scrap:				
Germany	11	114	11	114
Japan	--	--	(4)	6
Singapore	--	--	2	44
Taiwan	--	--	1	5
Total	11	114	14	170
Other than waste and scrap and unwrought powders:				
Canada	20	1,620	42	3,560
China	505	2,990	1,010	7,500
France	606	6,440	1,510	16,200
Germany	6	142	15	448
Japan	3	94	4	176
Malaysia	(4)	8	(4)	8
New Zealand	--	--	(4)	8
Russia	806	6,580	1,620	13,200
Spain	--	--	47	349
Taiwan	--	--	1	11
United Kingdom	258	2,900	720	7,740
Total	2,200	20,800	4,970	49,100
All grades:				
Austria	--	--	(4)	2
Belgium	57	819	93	1,330
Canada	20	1,620	42	3,560
China	718	5,010	1,720	15,000
France	669	7,250	1,710	18,800
Germany	17	266	38	937
Japan	3	94	5	308
Korea, Republic of	(4)	3	(4)	3
Malaysia	(4)	8	(4)	8
New Zealand	--	--	(4)	8
Russia	926	7,570	1,800	14,700
Singapore	--	--	2	44
Spain	--	--	47	349
Sweden	--	--	(4)	27
Taiwan	--	--	1	16
United Kingdom	283	3,260	837	9,350
Total	2,690	25,900	6,290	64,400

-- 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 2014¹

Stainless steel product	April		January–April ²	
	Gross weight (metric tons)	Value ² (thousands)	Gross weight (metric tons)	Value ² (thousands)
Exports:				
Ingot	1,790	\$13,200	6,090	\$43,900
Flat-rolled (width > 600 mm)	36,100	109,000	137,000	414,000
Flat-rolled (width < 600 mm)	8,710	31,700	30,800	118,000
Bars and rods in irregular coils	567	2,040	3,420	11,000
Other bars and rods	3,400	27,500	13,300	107,000
Wire	767	10,500	2,850	35,500
Tubes, pipes, hollow profiles	4,430	35,900	15,700	140,000
Total	55,700	230,000	210,000	868,000
Stainless steel scrap	51,300	58,500	176,000	199,000
Grand total	107,000	288,000	386,000	1,070,000
Imports:				
Ingot	14,600	40,900	47,200	127,000
Flat-rolled (width > 600 mm)	25,800	66,700	93,600	240,000
Flat-rolled (width < 600 mm)	4,240	16,600	16,600	65,000
Bars and rods in irregular coils	3,140	11,800	9,800	34,100
Other bars and rods	427	2,780	1,520	8,930
Wire	1,110	5,540	3,180	17,700
Tubes, pipes, hollow profiles	9,280	65,700	33,700	265,000
Total	58,600	210,000	206,000	757,000
Stainless steel scrap	28,800	34,900	110,000	125,000
Grand total	87,500	245,000	316,000	882,000

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

²Export 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.