

Mineral Industry Surveys

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CHROMIUM IN AUGUST 2013

On the basis of gross quantity, consumption of chromium ferroalloys and metal in August 2013 was about the same as that in July 2013. Consumption in August 2013 decreased slightly compared with consumption in the August 2012.

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

chromium materials in August 2013, consumption by end use and consumer stocks of chromium ferroalloys and metal at the end of August 2013, and U.S. foreign trade data for selected chromium-containing materials in August 2013.

TABLE 1
U.S. SALIENT CHROMIUM STATISTICS¹

(Metric tons, gross weight)

	2012	2013			
	January– December ²	June	July	August	January– August ²
Production, stainless steel ³	1,980,000	151,000	165,000	185,000	1,330,000
Components of U.S. supply:					
Stainless steel scrap receipts	858,000	72,300	74,600	71,900	586,000
Stainless steel scrap consumption	1,300,000	108,000	109,000	111,000	877,000
Imports for consumption:					
Chromite ore	277,000	6,500	2,180	30,300	92,900
Ferrochromium:					
More than 4% carbon	449,000	37,200	37,500	30,000	275,000
More than 3% but not more than 4% carbon	411	39	--	--	370
More than 0.5% but not more than 3% carbon	7,580	--	2,060	--	11,000
Not more than 0.5% carbon	43,900	4,310	2,550	3,140	25,200
Ferrochromium silicon	25,800	--	3,000	--	9,620
Total ferroalloy imports	526,000	41,600	45,100	33,200	321,000
Chromium metal ⁴	15,300	996	1,420	999	9,530
Stainless steel	668,000	48,400	53,600	48,200	390,000
Stainless steel scrap	155,000	13,900	20,200	18,100	127,000
Distribution of U.S. supply:					
Consumption, industry, chromium ferroalloys and metal	421,000	35,900	35,900	35,900	284,000
Exports:					
Chromite ore	21,200	308	363	210	7,830
Chromium ferroalloys:					
High-carbon ferrochromium	4,460	370	451	189	3,210
Low-carbon ferrochromium	768	47	24	24	224
Ferrochromium silicon	64	--	--	--	9
Total ferroalloy exports	5,300	417	475	212	3,450
Chromium metal	462	89	88	61	551
Stainless steel	590,000	52,100	49,000	64,800	413,000
Stainless steel scrap	624,000	56,500	49,600	54,700	437,000
Stocks at end of period:					
Consumer, industry, chromium ferroalloys and metal	9,120	9,390	9,930 ^r	9,960	9,960
Government stockpile:					
Chromium ferroalloys	144,000	137,000	136,000	136,000	136,000
Chromium metal	4,090	4,090	4,090	4,090	4,090

^rRevised. -- 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)

	2013		
	July	August	January– August ³
Consumption by end use:			
Steel:			
Carbon steel	167	199	1,400
High-strength low-alloy steel	150	151	1,170
Stainless and heat-resisting steel	31,800 ^r	31,800	253,000
Unspecified steel ⁴	3,120 ^r	3,150	24,000
Superalloys	464	463	3,780
Other alloys and uses ⁵	142	100	814
Total	35,900	35,900	284,000
Total, chromium content	20,500	20,500	163,000
Consumption by material:			
Low-carbon ferrochromium	1,780 ^r	1,810	14,200
High-carbon ferrochromium	31,500	31,500	250,000
Ferrochromium silicon	W	W	W
Chromium metal	201	202	1,640
Chromite ore	W	W	W
Chromium-aluminum alloy	W	W	W
Other chromium materials	W	W	W
Total	35,900	35,900	284,000
Total, chromium content	20,500	20,500	163,000
Consumer stocks:			
Low-carbon ferrochromium	1,590 ^r	1,580	1,580
High-carbon ferrochromium	7,570 ^r	7,620	7,620
Ferrochromium silicon	W	W	W
Chromium metal	113	110	110
Chromium-aluminum alloy	W	W	W
Other chromium materials	W	W	W
Total	9,930^r	9,960	9,960
Total, chromium content	5,820^r	5,840	5,840

^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	
2012:			
August	95,200	51,500	4,090
September	95,200	50,800	4,090
October	95,200	50,500	4,090
November	95,200	50,000	4,090
December	94,300	49,400	4,090
2013:			
January	93,400	48,400	4,090
February	92,500	48,100	4,090
March	92,000	47,600	4,090
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

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 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 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)
2012:							
August	1,410	\$1,030	105	43	\$148	48	\$1,250
September	605	427	503	268	788	36	1,090
October	542	330	442	221	644	66	1,330
November	1,210	782	893	332	1,050	19	746
December	1,300	644	680	271	910	18	630
January–December ⁴	21,200	9,870	5,300	2,610	7,250	462	13,000
2013:							
January	725	549	171	78	239	42	984
February	5,600	936	580	280	667	43	1,390
March	191	173	484	234	584	56	1,280
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
January–August ⁴	7,830	2,520	3,450	1,770	4,930	551	13,400

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

²Includes 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)

	2012		2013	
	January– December ²	July	August	January– August 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	29,000	1,500	18,500	53,100
Chromic oxide content	12,900	671	8,500	24,200
46% or more chromic oxide:				
Gross weight	248,000	681	11,800	39,800
Chromic oxide content	120,000	669	5,520	19,300
Total, all grades:				
Gross weight	277,000	2,180	30,300	92,900
Chromic oxide content	133,000	1,340	14,000	43,600
Ferrochromium:				
Low-carbon: ³				
Not more than 0.5% carbon:				
Gross weight	43,900	2,550	3,140	25,200
Chromium content	30,300	1,760	2,160	17,200
More than 0.5% but not more than 3% carbon:				
Gross weight	7,580	2,060	--	11,000
Chromium content	5,150	1,420	--	7,450
Total, low-carbon:				
Gross weight	51,500	4,610	3,140	36,200
Chromium content	35,500	3,180	2,160	24,600
Medium-carbon: ⁴				
Gross weight	411	--	--	370
Chromium content	222	--	--	210
High-carbon: ⁵				
Gross weight	449,000	37,500	30,000	275,000
Chromium content	257,000	22,000	15,400	151,000
Total, all grades:				
Gross weight	500,000	42,100	33,200	311,000
Chromium content	293,000	25,200	17,600	176,000
Chromium metal:				
Unwrought powders	3,060	370	237	2,560
Waste and scrap	415	15	6	48
Other than waste and scrap and unwrought powders	11,800	1,040	756	6,920
Total, all grades	15,300	1,420	999	9,530

-- 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 2013, BY GRADE AND COUNTRY¹

Grade and country	August			January–August 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	259	190	\$364	726	508	\$1,010
India	--	--	--	1,610	999	2,260
Kazakhstan	1,220	853	1,690	49,500	34,200	60,000
Netherlands	--	--	--	199	131	295
Russia	550	378	733	12,400	8,170	16,200
South Africa	26,800	13,200	24,800	189,000	93,500	170,000
Sweden	--	--	--	4,660	3,090	8,730
Turkey	1,220	785	1,510	12,200	8,010	16,600
Zimbabwe	--	--	--	4,090	2,310	4,340
Total	30,000	15,400	29,100	275,000	151,000	279,000
Medium-carbon ferrochromium:⁵						
Belgium	--	--	--	60	44	31
Russia	--	--	--	310	167	207
Total	--	--	--	370	210	238
Low-carbon ferrochromium:⁶						
More than 0.5% but not more than 3% carbon:						
Germany	--	--	--	2,090	1,390	3,040
Kazakhstan	--	--	--	2,290	1,580	5,830
Russia	--	--	--	6,160	4,260	16,300
South Africa	--	--	--	420	228	880
Total	--	--	--	11,000	7,450	26,100
Not more than 0.5% carbon:						
Brazil	--	--	--	60	37	147
China	20	13	106	40	27	212
France	--	--	--	1	1	4
Germany	739	512	2,600	4,570	3,200	18,500
India	--	--	--	41	26	228
Japan	140	97	605	1,210	841	5,350
Kazakhstan	--	--	--	405	106	585
Malta	--	--	--	20	14	69
Russia	2,080	1,420	5,950	16,200	11,000	46,600
South Africa	--	--	--	500	316	1,350
Sweden	3	3	15	3	3	15
Taiwan	--	--	--	108	74	299
Turkey	157	113	515	2,080	1,480	6,750
Total	3,140	2,160	9,790	25,200	17,200	80,100
All grades:						
Albania	259	190	364	726	508	1,010
Belgium	--	--	--	60	44	31
Brazil	--	--	--	60	37	147
China	20	13	106	40	27	212
France	--	--	--	1	1	4
Germany	739	512	2,600	6,660	4,590	21,500
India	--	--	--	1,650	1,030	2,490
Japan	140	97	605	1,210	841	5,350
Kazakhstan	1,220	853	1,690	52,200	35,800	66,500
Malta	--	--	--	20	14	69
Netherlands	--	--	--	199	131	295
Russia	2,630	1,800	6,690	35,100	23,600	79,300
South Africa	26,800	13,200	24,800	190,000	94,000	172,000
Sweden	3	3	15	4,660	3,090	8,750
Taiwan	--	--	--	108	74	299
Turkey	1,370	898	2,030	14,300	9,490	23,300
Zimbabwe	--	--	--	4,090	2,310	4,340
Total	33,200	17,600	38,900	311,000	176,000	386,000

-- 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.

TABLE 6—Continued
U.S. IMPORTS FOR CONSUMPTION OF FERROCHROMIUM IN 2013, BY GRADE AND COUNTRY¹

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 2013, BY GRADE AND BY COUNTRY¹

Grade and country	August		January–August ²	
	Gross weight (metric tons)	Value ³ (thousands)	Gross weight (metric tons)	Value ³ (thousands)
Unwrought powders:				
Belgium	--	--	190	\$2,870
China	210	\$2,210	1,490	16,400
France	19	261	357	5,070
Germany	(4)	14	17	549
Japan	--	--	1	36
Korea, Republic of	--	--	(4)	11
Russia	--	--	340	3,760
Turkey	--	--	16	31
United Kingdom	7	224	154	2,490
Total	237	2,700	2,560	31,200
Waste and scrap:				
Canada	1	5	22	113
Germany	5	109	5	109
Japan	--	--	11	185
Singapore	--	--	2	6
United Kingdom	--	--	8	55
Total	6	115	48	469
Other than waste and scrap and unwrought powders:				
Canada	2	157	4	321
China	382	3,450	1,760	17,000
France	286	3,170	1,820	22,700
Germany	(4)	52	51	1,210
Japan	1	59	3	161
Liechtenstein	(4)	14	1	86
Malaysia	--	--	(4)	4
Netherlands	--	--	3	29
Russia	--	--	1,830	17,400
Spain	--	--	9	43
Switzerland	--	--	(4)	3
United Kingdom	85	1,040	1,440	17,800
Total	756	7,940	6,920	76,800
All grades:				
Belgium	--	--	190	2,870
Canada	3	163	26	434
China	592	5,650	3,250	33,500
France	305	3,430	2,180	27,800
Germany	6	175	73	1,870
Japan	1	59	15	383
Korea, Republic of	--	--	(4)	11
Liechtenstein	(4)	14	1	86
Malaysia	--	--	(4)	4
Netherlands	--	--	3	29
Russia	--	--	2,170	21,100
Singapore	--	--	2	6
Spain	--	--	9	43
Switzerland	--	--	(4)	3
Turkey	--	--	16	31
United Kingdom	92	1,260	1,610	20,300
Total	999	10,800	9,530	108,000

-- 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 2013¹

Stainless steel product	August		January–August ²	
	Gross weight (metric tons)	Value ³ (thousands)	Gross weight (metric tons)	Value ³ (thousands)
Exports:				
Ingot	9,260	\$12,600	48,800	\$89,600
Flat-rolled (width > 600 mm)	38,600	96,200	232,000	684,000
Flat-rolled (width < 600 mm)	7,780	30,500	57,300	228,000
Bars and rods in irregular coils	704	2,180	5,990	18,400
Other bars and rods	3,540	26,300	28,300	214,000
Wire	1,220	8,360	9,870	69,000
Tubes, pipes, hollow profiles	3,760	31,400	29,900	263,000
Total	64,800	207,000	413,000	1,570,000
Stainless steel scrap	54,700	67,500	437,000	519,000
Grand total	119,000	275,000	850,000	2,080,000
Imports:				
Ingot	11,300	32,400	81,900	247,000
Flat-rolled (width > 600 mm)	20,300	51,100	184,000	498,000
Flat-rolled (width < 600 mm)	3,500	13,700	25,700	104,000
Bars and rods in irregular coils	1,860	6,420	17,800	63,400
Other bars and rods	146	1,340	2,410	15,800
Wire	650	3,480	5,040	30,300
Tubes, pipes, hollow profiles	10,500	81,800	72,800	565,000
Total	48,200	190,000	390,000	1,520,000
Stainless steel scrap	18,100	13,700	127,000	131,000
Grand total	66,300	204,000	517,000	1,650,000

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.