

Mineral Industry Surveys

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CHROMIUM IN SEPTEMBER 2014

On the basis of gross weight, consumption of chromium ferroalloys and metal in September 2014 increased slightly compared with that of August 2014. Consumption in September 2014 increased 3% compared with that of September 2013 (revised).

Included in this Mineral Industry Surveys are U.S. salient chromium statistics, U.S. Government stockpile inventory of chromium materials in September 2014, consumption by end use and consumer stocks of chromium ferroalloys and metal at the

end of September 2014, and U.S. foreign trade data for selected chromium-containing materials in September 2014.

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TABLE 1
U.S. SALIENT CHROMIUM STATISTICS¹

(Metric tons, gross weight)

	2013 ^P	2014			
	January– December ²	July	August	September	January– September ²
Production, stainless steel ³	2,030,000	203,000	195,000	206,000	1,770,000
Components of U.S. supply:					
Stainless steel scrap receipts	882,000	77,400	119,000 ^r	75,900	719,000
Stainless steel scrap consumption	1,300,000	109,000	109,000 ^r	111,000	980,000
Imports for consumption:					
Chromite ore	173,000	3,110	34,400	5,860	120,000
Ferrochromium:					
More than 4% carbon	416,000	39,500	76,700	34,700	441,000
More than 3% but not more than 4% carbon	370	--	3,000	7	3,040
More than 0.5% but not more than 3% carbon	13,800	--	2,630	--	10,800
Not more than 0.5% carbon	36,500	5,120	1,710	3,340	32,100
Ferrochromium silicon	12,000	--	3,000	--	12,800
Total ferroalloy imports	478,000	44,600	87,100	38,000	499,000
Chromium metal ⁴	13,700	1,400	1,000	1,430	12,800
Stainless steel	570,000	64,900	65,300	63,200	514,000
Stainless steel scrap	226,000	31,900	28,300	32,500	269,000
Distribution of U.S. supply:					
Consumption, industry, chromium ferroalloys and metal	422,000	36,600	34,900 ^r	35,900	324,000
Exports:					
Chromite ore	8,530	281	196	1,090	4,640
Chromium ferroalloys:					
High-carbon ferrochromium	4,460	387	192	504	3,110
Low-carbon ferrochromium	379	98	116	114	709
Ferrochromium silicon	16	--	--	--	--
Total ferroalloy exports	4,850	485	308	618	3,820
Chromium metal	856	46	76	25	536
Stainless steel	603,000	69,600	75,600	76,500	566,000
Stainless steel scrap	644,000	49,900	55,200	45,400	422,000
Stocks at end of period:					
Consumer, industry, chromium ferroalloys and metal	9,770	10,300	9,990 ^r	9,440	9,440
Government stockpile:					
Chromium ferroalloys	132,000	NA	NA	NA	NA
Chromium metal	4,090	NA	NA	NA	NA

^PPreliminary. ^rRevised. NA Not available. -- 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		
	August	September	January– September ³
Consumption by end use:			
Steel:			
Carbon steel	229 ^r	232	1,890
High-strength low-alloy steel	143	148	1,320
Stainless and heat-resisting steel	30,500 ^r	31,400	286,000
Unspecified steel ⁴	3,560	3,560	30,900
Superalloys	420 ^r	425	3,890
Other alloys and uses ⁵	94	96	852
Total	34,900 ^r	35,900	324,000
Total, chromium content	20,100 ^r	20,600	186,000
Consumption by material:			
Low-carbon ferrochromium	2,070 ^r	2,090	18,100
High-carbon ferrochromium	30,300 ^r	31,200	283,000
Ferrochromium silicon	W	W	W
Chromium metal	158	162	1,490
Chromite ore	W	W	W
Chromium-aluminum alloy	W	W	W
Other chromium materials	W	W	W
Total	34,900 ^r	35,900	324,000
Total, chromium content	20,100 ^r	20,600	186,000
Consumer stocks:			
Low-carbon ferrochromium	1,530 ^r	1,500	1,500
High-carbon ferrochromium	7,580 ^r	7,110	7,110
Ferrochromium silicon	769	741	741
Chromium metal	51 ^r	48	48
Chromium-aluminum alloy	W	W	W
Other chromium materials	W	W	W
Total	9,990 ^r	9,440	9,440
Total, chromium content	5,830 ^r	5,510	5,510

^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:			
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
May	77,600	41,100	4,000
June	77,200	40,200	4,000
July	NA	NA	NA
August	NA	NA	NA
September	NA	NA	NA

NA Not available.

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)
2013:							
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
May	503	321	394	238	810	114	3,050
June	553	304	594	262	814	62	1,590
July	281	1,070	485	256	955	46	1,140
August	196	104	308	160	692	76	1,360
September	1,090	547	618	259	952	25	683
January–September ⁴	4,640	3,330	3,820	1,860	6,600	536	14,900

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	August	September	January– September ²
Chromite ore:				
Not more than 40% chromic oxide:				
Gross weight	6,380	--	--	27
Chromic oxide content	1,610	--	--	6
More than 40% but less than 46% chromic oxide:				
Gross weight	68,400	120	81	42,800
Chromic oxide content	30,800	54	36	19,500
46% or more chromic oxide:				
Gross weight	98,400	34,300	5,780	77,400
Chromic oxide content	46,700	16,000	2,690	37,400
Total, all grades:				
Gross weight	173,000	34,400	5,860	120,000
Chromic oxide content	79,100	16,000	2,730	57,000
Ferrochromium:				
Low-carbon: ³				
Not more than 0.5% carbon:				
Gross weight	36,500	1,710	3,340	32,100
Chromium content	24,800	1,170	2,310	21,900
More than 0.5% but not more than 3% carbon:				
Gross weight	13,800	2,630	--	10,800
Chromium content	9,410	1,820	--	7,460
Total, low-carbon:				
Gross weight	50,300	4,340	3,340	42,800
Chromium content	34,200	2,980	2,310	29,400
Medium-carbon: ⁴				
Gross weight	370	3,000	7	3,040
Chromium content	210	1,450	4	1,470
High-carbon: ⁵				
Gross weight	416,000	76,700	34,700	441,000
Chromium content	227,000	42,500	18,100	239,000
Total, all grades:				
Gross weight	466,000	84,100	38,000	486,000
Chromium content	262,000	46,900	20,400	270,000
Chromium metal:				
Unwrought powders	3,350	248	625	3,280
Waste and scrap	70	6	4	43
Other than waste and scrap and unwrought powders	10,200	750	797	9,500
Total, all grades	13,700	1,000	1,430	12,800

-- 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	September			January–September 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	266	192	\$396	1,500	986	\$2,230
Brazil	--	--	--	3,040	1,550	2,600
Colombia	--	--	--	21	14	34
Germany	--	--	--	299	208	500
India	858	587	1,100	7,480	4,650	8,850
Kazakhstan	--	--	--	71,300	49,400	96,000
Latvia	--	--	--	440	307	770
Oman	--	--	--	263	160	321
Russia	531	367	840	10,500	6,940	14,000
South Africa	26,700	13,400	25,000	308,000	152,000	290,000
Sweden	1,240	795	1,670	6,700	4,420	11,400
Turkey	--	--	--	16,000	10,400	22,900
Zimbabwe	5,100	2,790	5,890	15,300	8,380	16,600
Total	34,700	18,100	34,900	441,000	239,000	466,000
Medium-carbon ferrochromium:⁵						
Belgium	--	--	--	28	15	15
China	7	4	17	9	6	22
South Africa	--	--	--	3,000	1,450	3,030
Total	7	4	17	3,040	1,470	3,060
Low-carbon ferrochromium:⁶						
More than 0.5% but not more than 3% carbon:						
Brazil	--	--	--	108	66	265
Kazakhstan	--	--	--	4,760	3,320	11,800
Poland	--	--	--	41	23	75
Russia	--	--	--	5,870	4,060	15,400
Total	--	--	--	10,800	7,460	27,600
Not more than 0.5% carbon:						
Brazil	--	--	--	714	442	1,720
China	19	11	47	121	76	455
Germany	1,170	816	4,440	5,930	4,160	22,800
India	39	24	227	121	81	694
Japan	299	209	1,240	1,530	1,070	6,020
Kazakhstan	--	--	--	5,020	3,470	12,500
Mexico	--	--	--	100	65	509
Russia	1,670	1,150	4,780	17,100	11,700	47,800
South Africa	--	--	--	843	501	1,950
Sweden	--	--	--	1	1	3
Turkey	140	96	450	577	405	1,890
Total	3,340	2,310	11,200	32,100	21,900	96,400
All grades:						
Albania	266	192	396	1,500	986	2,230
Belgium	--	--	--	28	15	15
Brazil	--	--	--	3,860	2,060	4,590
China	26	15	65	131	82	476
Colombia	--	--	--	21	14	34
Germany	1,170	816	4,440	6,230	4,370	23,300
India	897	612	1,320	7,610	4,730	9,550
Japan	299	209	1,240	1,530	1,070	6,020
Kazakhstan	--	--	--	81,100	56,200	120,000
Latvia	--	--	--	440	307	770
Mexico	--	--	--	100	65	509
Oman	--	--	--	263	160	321
Poland	--	--	--	41	23	75
Russia	2,200	1,520	5,620	33,500	22,700	77,200
South Africa	26,700	13,400	25,000	311,000	154,000	295,000
Sweden	1,240	795	1,670	6,700	4,420	11,400
Turkey	140	96	450	16,600	10,800	24,800
Zimbabwe	5,100	2,790	5,890	15,300	8,380	16,600
Total	38,000	20,400	46,100	486,000	270,000	593,000

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	September			January–September 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	September		January–September ²	
	Gross weight (metric tons)	Value ³ (thousands)	Gross weight (metric tons)	Value ³ (thousands)
Unwrought powders:				
Austria	--	--	(4)	\$2
Belgium	--	--	93	1,330
China	331	\$3,440	2,030	21,000
France	22	251	401	5,330
Germany	4	165	30	945
India	--	--	19	206
Japan	--	--	1	126
Korea, Republic of	--	--	(4)	3
Russia	--	--	260	2,170
Sweden	--	--	(4)	27
Taiwan	--	--	(4)	13
United Kingdom	268	3,060	441	5,640
Total	625	6,920	3,280	36,800
Waste and scrap:				
Brazil	--	--	6	32
France	--	--	1	31
Germany	4	21	15	135
Japan	(4)	3	2	25
Singapore	--	--	9	91
Taiwan	--	--	1	19
United Kingdom	--	--	9	104
Total	4	24	43	437
Other than waste and scrap and unwrought powders:				
Canada	26	2,080	170	13,900
China	161	1,490	1,960	15,800
France	171	1,710	2,650	28,300
Germany	1	84	59	1,820
Ireland	(4)	10	(4)	10
Japan	(4)	5	11	558
Jordan	--	--	(4)	4
Malaysia	1	5	1	13
New Zealand	(4)	6	1	16
Russia	418	3,520	3,060	25,200
Spain	--	--	47	349
Taiwan	(4)	3	1	16
United Kingdom	18	170	1,530	16,700
Total	797	9,080	9,500	103,000
All grades:				
Austria	--	--	(4)	2
Belgium	--	--	93	1,330
Brazil	--	--	6	32
Canada	26	2,080	170	13,900
China	492	4,930	4,000	36,800
France	193	1,960	3,060	33,700
Germany	8	269	105	2,900
India	--	--	19	206
Ireland	(4)	10	(4)	10
Japan	1	8	14	709
Jordan	--	--	(4)	4
Korea, Republic of	--	--	(4)	3
Malaysia	1	5	1	13
New Zealand	(4)	6	1	16
Russia	418	3,520	3,320	27,400
Singapore	--	--	9	91
Spain	--	--	47	349
Sweden	--	--	(4)	27
Taiwan	(4)	3	3	48
United Kingdom	286	3,230	1,990	22,400
Total	1,430	16,000	12,800	140,000

See footnotes at end of table.

TABLE 7—continued
 U.S. IMPORTS FOR CONSUMPTION OF CHROMIUM METAL IN 2014, BY GRADE AND BY COUNTRY¹

Grade and country	September		January–September ²	
	Gross weight (metric tons)	Value ³ (thousands)	Gross weight (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.

⁴Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 8
 U.S. STAINLESS STEEL TRADE, BY PRODUCT, IN 2014¹

Stainless steel product	September		January–September ²	
	Gross weight (metric tons)	Value ² (thousands)	Gross weight (metric tons)	Value ³ (thousands)
Exports:				
Ingot	8,000	\$11,600	33,400	\$96,900
Flat-rolled (width > 600 mm)	50,400	123,000	375,000	1,020,000
Flat-rolled (width < 600 mm)	9,460	34,400	75,600	286,000
Bars and rods in irregular coils	970	3,090	8,900	27,200
Other bars and rods	3,560	30,000	30,600	245,000
Wire	598	9,150	6,460	82,400
Tubes, pipes, hollow profiles	3,560	33,000	35,500	321,000
Total	76,500	244,000	566,000	2,070,000
Stainless steel scrap	45,400	59,200	422,000	521,000
Grand total	122,000	303,000	988,000	2,590,000
Imports:				
Ingot	8,600	25,700	109,000	309,000
Flat-rolled (width > 600 mm)	35,300	98,700	244,000	660,000
Flat-rolled (width < 600 mm)	4,710	18,800	38,200	152,000
Bars and rods in irregular coils	2,470	8,690	24,500	87,100
Other bars and rods	324	2,220	3,300	20,900
Wire	724	3,890	7,120	40,900
Tubes, pipes, hollow profiles	11,100	79,900	87,900	642,000
Total	63,200	238,000	514,000	1,910,000
Stainless steel scrap	32,500	46,100	269,000	361,000
Grand total	95,800	284,000	783,000	2,270,000

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.