



Mineral Industry Surveys

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CHROMIUM IN MAY 2009

On the basis of gross weight, consumption of chromium ferroalloys and metal in May 2009 increased by 30% compared with consumption in April 2009, according to the U.S. Geological Survey.

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

chromium materials in May 2009, consumption by end use and consumer stocks of chromium ferroalloys and metal at the end of May 2009, and U.S. foreign trade data for selected chromium-containing materials in April 2009.

TABLE 1
U.S. SALIENT CHROMIUM STATISTICS¹

(Metric tons, gross weight)

	2008	2009			
	January-December ²	March	April	May	January-May ²
Production:					
Stainless steel production ³	1,930,000	87,600	84,300	140,000	587,000
Components of U.S. supply:					
Stainless steel scrap receipts	858,000	66,900	65,400	71,900	355,000
Stainless steel scrap consumption	1,330,000	103,000	94,900	113,000	541,000
Imports for consumption:					
Chromite ore	197,000	34,600	198	(4)	45,100 ⁵
Ferrochromium:					
More than 4% carbon	469,000	9,250	210	(4)	20,700 ⁵
More than 3% carbon but not more than 4% carbon	344	159	292	(4)	888 ⁵
More than 0.5%, but not more than 3% carbon	2,250	40	60	(4)	1,640 ⁵
Not more than 0.5% carbon	37,000	3,110	2,280	(4)	10,600 ⁵
Ferrochromium silicon	24,200	--	--	(4)	-- ⁵
Total ferroalloy imports	533,000	12,600	2,840	(4)	33,800 ⁵
Chromium metal ⁶	13,100	589	752	(4)	2,240 ⁵
Stainless steel	783,000	35,500	34,000	(4)	145,000 ⁵
Stainless steel scrap	140,000	7,910	6,510	(4)	28,400 ⁵
Distribution of U.S. supply:					
Consumption, industry, chromium ferroalloys and metal	417,000	27,200	25,700	33,500	153,000
Exports:					
Chromite ore	7,000	53	268	(4)	385 ⁵
Chromium ferroalloys:					
High-carbon ferrochromium	10,800	235	93	(4)	696 ⁵
Low-carbon ferrochromium	13,400	121	20	(4)	818 ⁵
Ferrochromium silicon	216	--	--	(4)	-- ⁵
Total ferroalloy exports	24,500	356	113	(4)	1,510 ⁵
Chromium metal	998	39	15	(4)	140 ⁵
Stainless steel	471,000	24,100	23,200	(4)	94,800 ⁵
Stainless steel scrap	1,000,000	103,000	86,000	(4)	335,000 ⁵
Stocks at end of period:					
Consumer, industry, chromium ferroalloys and metal	XX	9,210 ^r	9,550 ^r	9,070	XX
Government stockpile:					
Chromium ferroalloys	XX	201,000	199,000	198,000	XX
Chromium metal	XX	4,810	4,810	4,810	XX

¹Revised. XX Not applicable. -- Zero.

²Data are rounded to no more than three significant digits; may not add to totals shown.

³May include revised data that are not broken out by specific month.

⁴Data 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.

⁵Data to be published in a subsequent issue.

⁶January through April data only.

^rIncludes 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)

	2009		
	April	May	January- May ³
Consumption by end use:			
Alloy uses:			
Steel:			
Carbon steel	259	308	1,380
High-strength low-alloy steel	162 ^r	163	813
Stainless and heat-resisting steel	21,200	29,000	129,000
Full alloy steel	783	808	5,080
Tool steel	416	416	2,080
Steel end use, not reported by grade	1,780	1,750	8,810
Superalloys	442	444	2,270
Other alloys and uses ⁴	678	687	3,480
Total	25,700	33,500	153,000
Total, chromium content	15,200	19,900	90,200
Consumption by material:			
Low-carbon ferrochromium	2,090 ^r	2,410	11,300
High-carbon ferrochromium	20,900	27,800	127,000
Ferrochromium silicon	W	W	W
Chromium metal ⁵	230	232	1,220
Chromite ore	W	W	W
Chromium-aluminum alloy	W	W	W
Other chromium materials	W	W	W
Total	25,700	33,500	153,000
Total, chromium content	15,200	19,900	90,200
Consumer stocks:			
Low-carbon ferrochromium	1,720 ^r	1,650	XX
High-carbon ferrochromium	6,490	6,080	XX
Ferrochromium silicon	1,080	1,050	XX
Chromium metal	222	239	XX
Chromium-aluminum alloy	W	W	XX
Other chromium materials	W	W	XX
Total	9,550^r	9,070	XX
Total, chromium content	5,690^r	5,500	XX

^rRevised. W Withheld to avoid disclosing company proprietary data; included in "Total." XX Not applicable.

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.

⁴Includes cast irons, welding and alloy hard-facing rods and materials, wear- and corrosion-resistant alloys, and aluminum, copper, magnetic, nickel, and other alloys.

⁵Includes waste and scrap and other.

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	
2008:			
May	93,500	45,800	4,930
June	93,600	45,100	4,930
July	140,000	66,700	4,890
August	140,000	66,700	4,850
September	139,000	66,700	4,820
October	139,000	66,700	4,820
November	139,000	66,700	4,820
December	139,000	66,700	4,820
2009:			
January	138,000	66,700	4,820
February	139,000	66,700	4,810
March	135,000	66,200	4,810
April	133,000	66,200	4,810
May	132,000	66,000	4,810

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

²These Government stocks are reported by the Defense National Stockpile Center 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 National Stockpile Center.

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)
2008:							
April	778	\$411	4,680	1,810	\$6,500	80	\$1,610
May	369	242	4,370	2,040	10,800	129	2,040
June	325	197	2,740	1,180	6,020	128	2,540
July	818	472	899	323	1,130	110	2,210
August	678	372	1,470	544	2,060	123	2,490
September	468	446	713	291	896	33	1,460
October	958	637	2,180	927	2,830	65	1,600
November	413	371	699	254	784	45	1,120
December	475	256	217	111	304	27	984
January-December ⁴	7,000	4,370	24,500	10,300	43,100	998	20,400
2009:							
January	23	72	473	210	604	38	1,130
February	41	95	571	250	765	48	1,410
March	53	46	356	167	497	39	1,240
April	268	187	113	68	133	15	608
January-April	385	401	1,510	695	2,000	140	4,380

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.

Source: U.S. Census Bureau.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF CHROMITE ORE, FERROCHROMIUM, AND CHROMIUM METAL¹

(Metric tons)

	2008		2009	
	January- December ²	March	April	January- April ²
Chromite ore:				
Not more than 40%:				
Gross weight	--	10,300	--	10,300
Chromic oxide content	--	2,560	--	2,560
More than 40% but less than 46% chromic oxide:				
Gross weight	38,400	210	105	490
Chromic oxide content	17,600	96	48	224
46% or more chromic oxide:				
Gross weight	159,000	24,100	93	34,300
Chromic oxide content	76,400	11,200	44	16,000
Total, all grades:				
Gross weight	197,000	34,600	198	45,100
Chromic oxide content	94,000	13,900	92	18,700
Ferrochromium:				
Low-carbon: ³				
Not more than 0.5%:				
Gross weight	37,000	3,110	2,280	10,600
Chromium content	25,300	2,080	1,600	7,190
More than 0.5% but not more than 3%:				
Gross weight	2,250	40	60	1,640
Chromium content	1,450	30	37	965
Total, low-carbon:				
Gross weight	39,300	3,150	2,340	12,200
Chromium content	26,700	2,110	1,630	8,150
Medium-carbon: ⁴				
Gross weight	344	159	292	888
Chromium content	204	86	157	478
High-carbon: ⁵				
Gross weight	469,000	9,250	210	20,700
Chromium content	270,000	4,840	138	10,800
Total, all grades:				
Gross weight	509,000	12,600	2,840	33,800
Chromium content	297,000	7,040	1,930	19,500
Chromium metal:				
Unwrought powders	1,050	44	77	196
Waste and scrap	523	2	7	10
Other than waste and scrap and unwrought powders	11,500	544	668	2,030
Total, all grades:	13,100	589	752	2,240

-- 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.

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 2009,
BY GRADE AND BY 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						
China	--	--	--	40	32	\$142
India	--	--	--	2,050	1,230	1,870
Kazakhstan	134	93	\$406	420	289	1,290
Russia	--	--	--	2,500	1,630	2,790
South Africa	37	19	33	15,600	7,610	10,800
Sweden	38	26	76	76	52	224
Total	210	138	515	20,700	10,800	17,100
Medium-carbon ferrochromium,⁵ Russia						
	292	157	156	888	478	474
Low-carbon ferrochromium:⁶						
More than 0.5% but not more than 3%:						
China	60	37	139	60	37	139
Kazakhstan	--	--	--	375	263	1,220
Russia	--	--	--	82	61	301
South Africa	--	--	--	1,120	603	1,440
Total	60	37	139	1,640	965	3,100
Not more than 0.5% carbon:						
China	47	33	201	309	198	1,050
Germany	205	144	755	1,090	759	4,490
Japan	80	55	350	313	214	1,670
Kazakhstan	60	42	193	113	77	385
Netherlands	--	--	--	22	16	92
Russia	1,600	1,150	4,550	7,200	4,980	24,400
South Africa	240	144	567	1,450	870	2,820
Sweden	41	26	235	115	75	574
Total	2,280	1,600	6,850	10,600	7,190	35,500
All grades:						
China	107	70	340	409	267	1,330
Germany	205	144	755	1,090	759	4,490
India	--	--	--	2,050	1,230	1,870
Japan	80	55	350	313	214	1,670
Kazakhstan	194	134	598	908	629	2,900
Netherlands	--	--	--	22	16	92
Russia	1,890	1,310	4,700	10,700	7,140	28,000
South Africa	277	163	600	18,200	9,080	15,000
Sweden	79	52	311	192	127	798
Total	2,840	1,930	7,660	33,800	19,500	56,100

-- 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.

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 2009,
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:				
China	60	\$804	120	\$1,640
France	--	--	5	24
Germany	--	--	2	71
Russia	17	94	51	283
United Kingdom	(4)	68	19	501
Total	77	966	196	2,520
Waste and scrap:				
Germany	--	--	1	15
Japan	--	--	1	4
Mexico	7	24	7	24
Taiwan	--	--	2	32
Total	7	24	10	75
Other than waste and scrap and unwrought powders:				
China	36	572	186	2,510
France	229	2,650	570	6,740
Germany	(4)	53	39	451
Japan	1	17	1	38
Kazakhstan	--	--	230	784
Russia	78	592	140	1,190
United Kingdom	324	3,630	862	9,600
Total	668	7,520	2,030	21,300
All grades:				
China	96	1,380	306	4,140
France	229	2,650	575	6,770
Germany	(4)	53	42	537
Japan	1	17	2	42
Kazakhstan	--	--	230	784
Mexico	7	24	7	24
Russia	95	685	191	1,470
Taiwan	--	--	2	32
United Kingdom	324	3,700	881	10,100
Total	752	8,510	2,240	23,900

-- 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.

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 2009¹

Stainless steel product	April		January-April ²	
	Gross weight (metric tons)	Value ³ (thousands)	Gross weight (metric tons)	Value ³ (thousands)
Exports:				
Ingot	1,280	\$8,120	6,130	\$35,500
Flat-rolled (width > 600 mm)	11,000	29,300	45,100	127,000
Flat-rolled (width < 600 mm)	5,540	17,700	18,900	70,100
Bars and rods in irregular coils	564	2,090	1,420	6,970
Other bars and rods	2,140	15,200	10,000	69,800
Wire	661	4,820	2,790	20,700
Tubes, pipes, hollow profiles	2,010	15,500	10,500	86,000
Total	23,200	92,700	94,800	416,000
Stainless steel scrap	86,000	46,600	335,000	195,000
Grand total	109,000	139,000	430,000	611,000
Imports:				
Ingot	4,880	13,300	25,100	74,000
Flat-rolled (width > 600 mm)	11,700	25,200	47,800	116,000
Flat-rolled (width < 600 mm)	2,040	8,440	8,720	39,000
Bars and rods in irregular coils	1,100	3,650	3,700	12,600
Other bars and rods	5,650	25,700	23,100	112,000
Wire	2,130	9,270	8,790	42,200
Tubes, pipes, hollow profiles	6,500	61,300	27,400	263,000
Total	34,000	147,000	145,000	658,000
Stainless steel scrap	6,510	3,590	28,400	19,100
Grand total	40,500	150,000	173,000	678,000

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.

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.