



Mineral Industry Surveys

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CHROMIUM IN APRIL 2008

On the basis of gross weight, consumption of chromium ferroalloys and metal in April 2008 increased slightly compared with consumption in March 2008, 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 April 2008, consumption by end use and consumer stocks of chromium ferroalloys and metal at the end of April 2008, and U.S. foreign trade data for selected chromium-containing materials in March 2008.

TABLE 1
U.S. SALIENT CHROMIUM STATISTICS¹

(Metric tons, gross weight)

	2007	2008			
	January-December ²	February	March	April	January-April ²
Production:					
Stainless steel production ³	2,170,000	206,000	198,000	211,000	818,000
Components of U.S. supply:					
Stainless steel scrap receipts	953,000	79,500	79,400	74,000	314,000
Stainless steel scrap consumption	1,430,000	124,000	116,000	117,000	476,000
Imports for consumption:					
Chromite ore	145,000	35,400	23,400	(4)	60,800
Ferrochromium:					
More than 4% carbon	384,000	33,000	62,200	(4)	137,000
More than 3% carbon but not more than 4% carbon	267	--	--	(4)	160
More than 0.5%, but not more than 3% carbon	7,110	400	340	(4)	1,780
Not more than 0.5% carbon	31,700	1,610	6,190	(4)	9,880
Ferrochromium silicon	37,300	--	5,010	(4)	5,010
Total ferroalloy imports	460,000	35,000	73,700	(4)	154,000
Chromium metal ⁵	11,700	1,260	1,270	(4)	3,320
Stainless steel	809,000	71,800	73,300	(4)	214,000
Stainless steel scrap	118,000	9,780	13,900	(4)	37,700
Distribution of U.S. supply:					
Consumption, industry, chromium ferroalloys and metal	447,000	36,100	35,300	36,200	142,000
Exports:					
Chromite ore	37,600	657	582	(4)	1,720
Chromium ferroalloys:					
High-carbon ferrochromium	24,700	1,380	670	(4)	2,950
Low-carbon ferrochromium	16,200	837	1,590	(4)	3,470
Ferrochromium silicon	328	--	--	(4)	92
Total ferroalloy exports	41,100	2,210	2,260	(4)	6,510
Chromium metal	1,210	30	131	(4)	257
Stainless steel	476,000	36,800	39,600	(4)	113,000
Stainless steel scrap	882,000	92,200	92,100	(4)	259,000
Stocks at end of period:					
Consumer, industry, chromium ferroalloys and metal	XX	11,300	11,800	11,400	XX
Government stockpile:					
Chromium ferroalloys	XX	146,000	142,000	140,000	XX
Chromium metal	XX	4,940	4,940	4,940	XX

XX Not applicable. -- 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.

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.

⁴Data to be published in a subsequent issue.

⁵Includes waste and scrap and other.

TABLE 2
U.S. REPORTED CONSUMPTION AND STOCKS OF CHROMIUM PRODUCTS
IN 2008^{1,2}

(Metric tons, gross weight unless otherwise noted)

	March	April	January- April ³
Consumption by end use:			
Alloy uses:			
Steel:			
Carbon steel	311	300	1,210
High-strength low-alloy steel	262	284	1,050
Stainless and heat-resisting steel	29,300	30,400	118,000
Full alloy steel	1,730	1,460	6,370
Tool steel	416	416	1,660
Steel end use, not reported by grade	2,140	2,140	8,600
Superalloys	472	478	1,880
Other alloys and uses ⁴	709	700	2,810
Total	35,300	36,200	142,000
Total, chromium content	20,200	21,100	82,300
Consumption by material:			
Low-carbon ferrochromium	2,400	2,430	9,900
High-carbon ferrochromium	29,600	30,500	119,000
Ferrochromium silicon	W	W	W
Chromium metal ⁵	257	14	1,000
Chromite ore	W	W	W
Chromium-aluminum alloy	W	W	W
Other chromium materials	W	W	W
Total	35,300	36,200	142,000
Total, chromium content	20,200	21,100	82,300
Consumer stocks:			
Low-carbon ferrochromium	1,860	1,820	XX
High-carbon ferrochromium	8,600	8,340	XX
Ferrochromium silicon	1,080	1,070	XX
Chromium metal	160	150	XX
Chromium-aluminum alloy	W	W	XX
Other chromium materials	W	W	XX
Total	11,800	11,400	XX
Total, chromium content	6,740	6,670	XX

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	
2007:			
April	191,000	94,900	5,280
May	177,000	91,300	5,280
June	177,000	86,700	5,280
July	177,000	86,700	5,150
August	170,000	92,200	5,150
September	113,000	61,000	5,150
October	108,000	60,500	5,090
November	104,000	57,800	5,030
December	99,400	55,400	4,970
2008:			
January	98,200	54,700	4,970
February	95,000	50,800	4,940
March	93,600	48,100	4,940
April	93,600	46,900	4,940

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)
2007:							
March	899	\$368	1,320	745	\$1,620	80	\$1,600
April	12,000	748	1,820	1,070	2,310	140	2,490
May	13,100	1,150	4,060	2,540	5,740	105	1,440
June	790	308	1,830	1,040	2,680	75	1,520
July	844	350	1,130	657	1,760	102	1,760
August	874	364	1,270	747	1,960	123	2,690
September	406	231	4,030	2,470	6,760	95	1,670
October	6,340	812	933	568	1,620	74	1,390
November	525	400	1,580	831	2,600	125	3,850
December	534	284	1,440	737	2,680	67	1,170
January-December	37,600	5,560	41,100	25,800	51,200	1,210	23,200
2008:							
January	482	255	2,040	957	4,470	96	1,600
February	657	424	2,210	905	3,650	30	845
March	582	282	2,260	946	3,600	131	1,940
January-March	1,720	960	6,510	2,810	11,700	257	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.

Source: U.S. Census Bureau.

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

(Metric tons)

	2007		2008	
	January-December ²	February	March	January-March ²
Chromite ore:				
Not more than 40%:				
Gross weight	52	--	--	--
Chromic oxide content	19	--	--	--
More than 40% but less than 46% chromic oxide:				
Gross weight	26,400	2,150	245	2,440
Chromic oxide content	12,100	984	112	1,120
46% or more chromic oxide:				
Gross weight	119,000	33,200	23,100	58,400
Chromic oxide content	55,600	17,000	10,600	28,600
Total, all grades:				
Gross weight	145,000	35,400	23,400	60,800
Chromic oxide content	67,800	18,000	10,800	29,700
Ferrochromium:				
Low-carbon: ³				
Not more than 0.5%:				
Gross weight	31,700	1,610	6,190	9,880
Chromium content	21,000	1,090	4,200	6,740
More than 0.5% but not more than 3%:				
Gross weight	7,110	400	340	1,780
Chromium content	4,020	216	212	1,130
Total, low-carbon:				
Gross weight	38,800	2,010	6,530	11,700
Chromium content	25,100	1,310	4,420	7,870
Medium-carbon: ⁴				
Gross weight	267	--	--	160
Chromium content	144	--	--	90
High-carbon: ⁵				
Gross weight	384,000	33,000	62,200	137,000
Chromium content	217,000	17,200	36,400	76,700
Total, all grades:				
Gross weight	423,000	35,000	68,700	149,000
Chromium content	242,000	18,500	40,800	84,700
Chromium metal:				
Unwrought powders	822	46	139	237
Waste and scrap	357	141	28	226
Other than waste and scrap and unwrought powders	10,500	1,070	1,100	2,860
Total, all grades:	11,700	1,260	1,270	3,320

-- 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 2008,
BY GRADE AND BY COUNTRY¹

Grade and country	March			January-March 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	--	--	--	20	13	\$67
India	8,780	5,450	\$14,300	29,200	18,100	43,700
Italy	--	--	--	159	100	260
Kazakhstan	15,500	10,800	39,400	15,900	11,000	39,800
Mexico	19	14	60	19	14	60
Russia	10,800	7,030	25,100	12,200	7,930	28,500
South Africa	27,000	13,100	29,600	73,700	36,000	79,500
Sweden	--	--	--	219	130	349
Zimbabwe	63	41	148	5,910	3,380	11,400
Total	62,200	36,400	109,000	137,000	76,700	204,000
Medium-carbon ferrochromium, ⁵ Russia	--	--	--	160	90	152
Low-carbon ferrochromium:⁶						
More than 0.5% but not more than 3%:						
China	340	212	1,200	340	212	1,200
Russia	--	--	--	1,040	702	3,490
South Africa	--	--	--	400	216	619
Total	340	212	1,200	1,780	1,130	5,310
Not more than 0.5% carbon:						
China	159	100	564	159	100	564
Germany	500	350	2,110	1,100	769	3,300
Japan	751	498	1,070	1,230	817	1,760
Kazakhstan	149	99	225	254	168	374
Russia	4,610	3,150	20,500	6,800	4,670	29,000
South Africa	17	9	26	283	174	437
Sweden	--	--	--	57	41	291
Total	6,190	4,200	24,500	9,880	6,740	35,700
All grades:						
China	499	312	1,770	519	325	1,830
Germany	500	350	2,110	1,100	769	3,300
India	8,780	5,450	14,300	29,200	18,100	43,700
Italy	--	--	--	159	100	260
Japan	751	498	1,070	1,230	817	1,760
Kazakhstan	15,700	10,900	39,600	16,200	11,200	40,200
Mexico	19	14	60	19	14	60
Russia	15,400	10,200	45,600	20,200	13,400	61,100
South Africa	27,000	13,100	29,600	74,300	36,400	80,500
Sweden	--	--	--	276	172	640
Zimbabwe	63	41	148	5,910	3,380	11,400
Total	68,700	40,800	134,000	149,000	84,700	245,000

-- 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.

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 2008,
BY GRADE AND BY COUNTRY¹

Grade and country	March		January-March ²	
	Gross weight (metric tons)	Value ³ (thousands)	Gross weight (metric tons)	Value ³ (thousands)
Unwrought powders:				
China	24	\$291	41	\$315
France	--	--	14	30
Germany	--	--	1	51
Japan	6	266	6	266
Netherlands	20	173	20	173
Russia	75	587	111	845
United Kingdom	15	197	44	632
Total	139	1,520	237	2,310
Waste and scrap:				
China	--	--	20	64
Germany	--	--	(4)	10
Malaysia	--	--	23	190
Mexico	28	104	173	605
Singapore	--	--	10	100
Total	28	104	226	968
Other than waste and scrap and unwrought powders:				
China	80	879	486	4,120
France	266	3,080	742	8,130
Germany	7	93	8	202
India	63	84	105	141
Italy	--	--	(4)	7
Japan	1	35	3	90
Russia	351	3,510	921	8,490
United Kingdom	329	3,280	596	5,760
Total	1,100	11,000	2,860	26,900
All grades:				
China	104	1,170	546	4,500
France	266	3,080	756	8,160
Germany	7	93	9	262
India	63	84	105	141
Italy	--	--	(4)	7
Japan	7	301	9	357
Malaysia	--	--	23	190
Mexico	28	104	173	605
Netherlands	20	173	20	173
Russia	426	4,100	1,030	9,330
Singapore	--	--	10	100
United Kingdom	344	3,470	640	6,390
Total	1,270	12,600	3,320	30,200

-- Zero.

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

²May include revised data.

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 2008¹

Stainless steel product	March		January-March	
	Gross weight (metric tons)	Value ² (thousands)	Gross weight (metric tons)	Value ² (thousands)
Exports:				
Ingot	1,720	\$11,300	4,570	\$37,100
Flat-rolled (width > 600 mm)	19,000	67,300	60,500	214,000
Flat-rolled (width < 600 mm)	10,200	54,900	23,200	157,000
Bars and rods in irregular coils	1,300	6,240	2,550	12,800
Other bars and rods	3,470	22,900	9,600	66,400
Wire	824	6,530	2,180	16,600
Tubes, pipes, hollow profiles	3,050	28,100	10,700	88,900
Total	39,600	197,000	113,000	593,000
Stainless steel scrap	92,100	92,000	259,000	311,000
Grand total	132,000	289,000	372,000	904,000
Imports:				
Ingot	10,700	47,100	33,600	150,000
Flat-rolled (width > 600 mm)	34,900	135,000	101,000	380,000
Flat-rolled (width < 600 mm)	3,870	19,500	12,000	64,300
Bars and rods in irregular coils	2,220	10,500	6,290	29,300
Other bars and rods	8,940	51,100	24,900	139,000
Wire	3,220	21,100	9,330	59,100
Tubes, pipes, hollow profiles	9,420	83,600	26,000	226,000
Total	73,300	367,000	214,000	1,050,000
Stainless steel scrap	13,900	27,400	37,700	67,100
Grand total	87,200	395,000	251,000	1,110,000

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.