

Mineral Industry Surveys

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CHROMIUM IN JUNE 2007

On the basis of gross weight, consumption of chromium ferroalloys and metal in June 2007 increased 3% compared with consumption in May 2007; consumption in the second quarter 2007 increased slightly compared with consumption in the first quarter 2007 and increased 5% compared with consumption in the second quarter 2006, 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 June 2007, and consumption by end use and consumer stocks of chromium ferroalloys and metal at the end of June 2007. Details for U.S. foreign trade data for selected chromium-containing materials in May 2007 are also included.

TABLE 1
U.S. SALIENT CHROMIUM STATISTICS¹

(Metric tons, gross weight)

	2006	2007				
	January- December ²	First quarter ²	April	May	June	January- June ²
Production:						
Stainless steel production ³	2,460,000	619,000	199,000	191,000	218,000	1,230,000 ⁴
Components of U.S. supply:						
Stainless steel scrap receipts	1,050,000	272,000	78,200	78,100	84,800	513,000
Stainless steel scrap consumption	1,500,000	394,000	115,000	115,000	123,000	747,000
Imports for consumption:						
Chromite ore	150,000	45,600	3,790	3,420	470	53,300
Ferrochromium:						
More than 4% carbon	393,000	101,000	36,000	49,800	14,500	201,000
More than 0.5%, but not more than 3% carbon	29	3,900	600	--	--	4,500
Not more than 0.5% carbon	28,100	9,150	2,680	2,990	1,200	16,000
Ferrochromium silicon	38,300	7,600	5,690	--	--	13,300
Total ferroalloy imports	459,000	121,000	44,900	52,700	15,700	235,000
Chromium metal ⁵	10,900	2,230	1,240	1,140	1,400	6,000
Stainless steel	872,000	215,000	69,200	74,300	76,900	435,000
Stainless steel scrap	180,000	33,200	12,000	13,600	11,400	70,200
Distribution of U.S. supply:						
Consumption, industry, chromium ferroalloys and metal	553,000	110,000	37,700	37,200	38,400	224,000
Exports:						
Chromite ore	53,900	2,180	12,000	13,100	790	28,100
Chromium ferroalloys:						
High-carbon ferrochromium	18,800	14,700	1,340	939	1,550	18,500
Low-carbon ferrochromium	16,600	8,340	395	3,010	248	12,000
Ferrochromium silicon	248	32	82	110	29	254
Total ferroalloy exports	35,700	23,100	1,820	4,060	1,830	30,800
Chromium metal	1,020	302	140	105	75	622
Stainless steel	410,000	121,000	44,800	54,600	43,400	263,000
Stainless steel scrap	506,000	223,000	58,000	69,800	77,300	428,000
Stocks at end of period:						
Consumer, industry, chromium ferroalloys and metal	XX	XX	11,700	12,800	12,000	XX
Government stockpile:						
Chromium ferroalloys	XX	XX	286,000	268,000	264,000	XX
Chromium metal	XX	XX	5,280	5,280	5,280	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.

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 revised data that are not broken out by specific month.

⁵Includes waste and scrap and other.

TABLE 2
U.S. REPORTED CONSUMPTION AND STOCKS OF CHROMIUM PRODUCTS IN 2007^{1,2}

(Metric tons, gross weight unless otherwise noted)

	May	June	January- June ³
Consumption by end use:			
Alloy uses:			
Iron alloys:			
Steel:			
Carbon steel	309	421	1,960
High-strength low-alloy steel	420	503	2,760
Stainless and heat-resisting steel	32,600	34,500	198,000
Full alloy steel	1,780	979	8,570
Electrical steel	W	W	W
Tool steel	440	427	2,620
Unspecified steel	W	W	W
Cast irons	W	W	W
Superalloys	709	602	4,160
Other alloys ⁴	37	32	204
Total	37,200	38,400	224,000
Total, chromium content	21,500	22,000	130,000
Consumption by material:			
Low-carbon ferrochromium	1,970	1,800	11,400
High-carbon ferrochromium	32,100	33,600	182,000
Ferrochromium silicon	2,690	2,670	17,900
Chromium metal	357	304	2,650
Chromite ore	W	W	W
Chromium-aluminum alloy	22	W	W
Other chromium materials	W	W	W
Total	37,200	38,400	224,000
Total, chromium content	21,500	22,000	130,000
Consumer stocks:			
Low-carbon ferrochromium	2,000	1,980	XX
High-carbon ferrochromium	9,560	8,850	XX
Ferrochromium silicon	1,040	923	XX
Chromium metal	132	143	XX
Chromite ore	21	24	XX
Chromium-aluminum alloy	19	W	XX
Other chromium materials	10	W	XX
Total	12,800	12,000	XX
Total, chromium content	7,480	7,020	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.

⁴Includes 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	
2006:			
June	270,000	139,000	5,280
July	270,000	137,000	5,280
August	267,000	137,000	5,280
September	265,000	135,000	5,280
October	263,000	133,000	5,280
November	255,000	132,000	5,280
December	229,000	118,000	5,280
2007:			
January	223,000	111,000	5,280
February	215,000	108,000	5,280
March	204,000	98,900	5,280
April	191,000	94,900	5,280
May	177,000	91,300	5,280
June	177,000	86,700	5,280

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 R-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 R-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 R-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)
2006:							
May	1,080	\$277	1,710	937	\$1,670	58	\$1,440
June	8,160	825	6,300	3,750	5,660	66	1,380
July	8,780	725	8,570	5,170	7,060	95	1,800
August	6,940	5,550	2,380	1,410	3,000	109	2,270
September	2,280	309	1,440	801	2,060	109	1,910
October	445	157	2,050	1,240	2,360	95	1,830
November	22,700	1,240	2,560	1,610	3,650	85	1,720
December	286	116	7,380	4,410	8,550	62	1,490
January-December	53,900	10,200	35,700	21,300	38,100	1,020	21,300
2007:							
January	455	185	5,410	3,330	6,050	107	1,990
February	821	361	16,300	11,100	15,500	115	1,600
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
January-May	27,300	2,820	28,900	18,800	31,200	547	9,130

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

²Includes low-, medium-, 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)

	2006	2007		
	January-December ²	April	May	January-May ²
Chromite ore:				
Not more than 40%:				
Gross weight	117	5	--	5
Chromic oxide content	45	2	--	2
More than 40% but less than 46% chromic oxide:				
Gross weight	3,810	48	96	26,000
Chromic oxide content	1,750	22	44	11,900
46% or more chromic oxide:				
Gross weight	146,000	3,740	3,330	26,900
Chromic oxide content	76,300	1,780	1,530	12,500
Total, all grades:				
Gross weight	150,000	3,790	3,420	52,800
Chromic oxide content	78,100	1,800	1,580	24,500
Ferrochromium:				
Low-carbon: ³				
Not more than 0.5%:				
Gross weight	28,100	2,680	2,990	14,800
Chromium content	19,300	1,840	2,060	10,100
More than 0.5% but not more than 3%:				
Gross weight	29	600	--	4,500
Chromium content	23	419	--	2,540
Total, low-carbon:				
Gross weight	28,100	3,280	2,990	19,300
Chromium content	19,300	2,260	2,060	12,700
High-carbon: ⁴				
Gross weight	393,000	36,000	49,800	186,000
Chromium content	230,000	21,000	25,000	105,000
Total, all grades:				
Gross weight	421,000	39,200	52,700	206,000
Chromium content	249,000	23,200	27,000	118,000
Chromium metal:				
Unwrought powders	1,250	90	78	497
Waste and scrap	90	4	17	23
Other than waste and scrap and unwrought powders	9,540	1,150	1,040	4,080
Total, all grades	10,900	1,240	1,140	4,600

-- Zero.

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

²May include revised data.

³Ferrochromium containing not more than 3% carbon.

⁴Ferrochromium containing more than 4% carbon.

Source: U.S. Census Bureau.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF FERROCHROMIUM IN 2007,
BY GRADE AND BY COUNTRY¹

Grade and country	May			January-May 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						
India	--	--	--	55	36	27
Kazakhstan	76	53	119	51,400	36,100	54,700
Russia	1,510	940	1,740	10,000	6,300	8,670
South Africa	46,100	22,800	31,200	113,000	56,100	70,600
Switzerland	--	--	--	3,500	1,680	2,130
Zimbabwe	2,030	1,210	2,550	8,070	4,840	8,130
Total	49,800	25,000	35,600	186,000	105,000	144,000
Low-carbon ferrochromium:⁵						
Not more than 0.5% carbon:						
Brazil	--	--	--	2	1	6
China	81	54	183	225	148	479
Germany	620	435	1,530	2,970	2,080	6,750
Japan	457	305	852	2,040	1,370	4,040
Kazakhstan	--	--	--	1,700	1,190	2,870
Russia	1,640	1,140	3,150	7,390	5,050	12,400
South Africa	140	87	247	422	245	517
Sweden	49	32	70	68	46	139
Turkey	8	5	26	8	5	26
Total	2,990	2,060	6,060	14,800	10,100	27,200
More than 0.5% but not more than 3%:						
Kazakhstan	--	--	--	600	419	1,090
South Africa	--	--	--	3,900	2,120	3,860
Total	--	--	--	4,500	2,540	4,950
All grades:						
Brazil	--	--	--	2	1	6
China	81	54	183	225	148	479
Germany	620	435	1,530	2,970	2,080	6,750
India	--	--	--	55	36	27
Japan	457	305	852	2,040	1,370	4,040
Kazakhstan	76	53	119	53,700	37,700	58,600
Russia	3,140	2,080	4,890	17,400	11,300	21,000
South Africa	46,300	22,900	31,400	118,000	58,500	75,000
Sweden	49	32	70	68	46	139
Switzerland	--	--	--	3,500	1,680	2,130
Turkey	8	5	26	8	5	26
Zimbabwe	2,030	1,210	2,550	8,070	4,840	8,130
Total	52,700	27,000	41,600	206,000	118,000	176,000

-- 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

⁴Ferrochromium containing more than 4% carbon.

⁵Ferrochromium containing not more than 3% carbon.

Source: U.S. Census Bureau.

TABLE 7
U.S. IMPORTS FOR CONSUMPTION OF CHROMIUM METAL IN 2007,
BY GRADE AND BY COUNTRY¹

Grade and country	May		January-May ²	
	Gross weight (metric tons)	Value ³ (thousands)	Gross weight (metric tons)	Value ³ (thousands)
Unwrought powders:				
China	28	\$551	66	\$1,180
France	--	--	3	20
Germany	--	--	12	71
Japan	13	314	31	996
Russia	6	201	173	1,630
Spain	--	--	16	86
United Kingdom	31	285	196	1,480
Total	78	1,350	497	5,460
Waste and scrap:				
Germany	14	21	14	21
Japan	3	13	7	58
Korea, Republic of	--	--	(4)	8
Taiwan	--	--	2	28
Total	17	34	23	115
Other than waste and scrap and unwrought powders:				
China	331	2,300	1,050	8,330
France	230	1,990	1,010	8,980
Germany	47	434	66	955
Hong Kong	(4)	8	(4)	8
Italy	(4)	4	(4)	7
Japan	1	25	2	49
Netherlands	--	--	7	31
Russia	420	2,680	1,470	9,640
Switzerland	--	--	(4)	5
Taiwan	--	--	5	9
United Kingdom	14	98	473	3,710
Total	1,040	7,530	4,080	31,700
All grades:				
China	359	2,850	1,120	9,510
France	230	1,990	1,010	9,000
Germany	61	455	93	1,050
Hong Kong	(4)	8	(4)	8
Italy	(4)	4	(4)	7
Japan	18	353	39	1,100
Korea, Republic of	--	--	(4)	8
Netherlands	--	--	7	31
Russia	426	2,880	1,640	11,300
Spain	--	--	16	86
Switzerland	--	--	(4)	5
Taiwan	--	--	6	38
United Kingdom	45	384	669	5,190
Total	1,140	8,920	4,600	37,300

-- 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

⁴Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 8
U.S. TRADE OF STAINLESS STEEL, BY PRODUCT, IN 2007¹

Stainless steel product	May		January-May	
	Gross weight (metric tons)	Value ² (thousands)	Gross weight (metric tons)	Value ² (thousands)
Exports:				
Ingot	1,600	\$11,000	6,380	\$42,300
Flat-rolled (width > 600 mm)	33,000	83,900	123,000	374,000
Flat-rolled (width < 600 mm)	10,300	60,900	47,000	251,000
Bars and rods in irregular coils	849	5,510	4,190	21,800
Other bars and rods	3,730	25,700	16,600	116,000
Wire	876	6,400	3,620	25,500
Tubes, pipes, hollow profiles	4,210	31,300	18,900	139,000
Total	54,600	225,000	220,000	971,000
Stainless steel scrap	69,800	134,000	351,000	776,000
Grand total	124,000	358,000	571,000	1,750,000
Imports:				
Ingot	11,300	61,300	55,900	261,000
Flat-rolled (width > 600 mm)	33,700	160,000	151,000	634,000
Flat-rolled (width < 600 mm)	3,010	17,300	18,500	102,000
Bars and rods in irregular coils	2,720	13,900	13,100	61,800
Other bars and rods	8,430	47,900	44,700	232,000
Wire	4,200	27,400	18,600	113,000
Tubes, pipes, hollow profiles	11,000	80,600	56,700	413,000
Total	74,300	409,000	358,000	1,820,000
Stainless steel scrap	13,600	28,900	58,800	91,000
Grand total	87,800	438,000	417,000	1,910,000

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

²Export value is free alongside ship (f.a.s.). 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.