



# Mineral Industry Surveys

---

**For information, contact:**

John F. Papp, Chromium Commodity Specialist  
U.S. Geological Survey  
989 National Center  
Reston, VA 20192  
Telephone: (703) 648-4963, Fax: (703) 648-7757  
E-mail: [jpapp@usgs.gov](mailto:jpapp@usgs.gov)

Columbus J. Dixon (Data)  
Telephone: (703) 648-4984  
Fax: (703) 648-7975  
E-mail: [cjdixon@usgs.gov](mailto:cjdixon@usgs.gov)

**Internet:** <http://minerals.usgs.gov/minerals>

## CHROMIUM IN SEPTEMBER 2007

On the basis of gross weight, consumption of chromium ferroalloys and metal in September 2007 decreased by 11% compared with consumption in August 2007; consumption in the third quarter 2007 decreased 8% compared with consumption in the second quarter 2007 and decreased 3% compared with consumption in the third 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 September 2007, consumption by end use and consumer stocks of chromium ferroalloys and metal at the end of September 2007, and U.S. foreign trade data for selected chromium-containing materials in August 2007.

TABLE 1  
U.S. SALIENT CHROMIUM STATISTICS<sup>1</sup>

(Metric tons, gross weight)

	2006		2007			
	January-December	Second quarter <sup>2</sup>	July	August	September	January-September <sup>2</sup>
<b>Production:</b>						
Stainless steel production <sup>3</sup>	2,460,000	609,000	151,000	147,000	128,000	1,650,000 <sup>4</sup>
<b>Components of U.S. supply:</b>						
Stainless steel scrap receipts	1,050,000	241,000	71,900	71,400	73,500	730,000
Stainless steel scrap consumption	1,500,000	352,000	114,000	113,000	111,000	1,080,000
<b>Imports for consumption:</b>						
Chromite ore	150,000	7,690	5,420	35,800	1,750	96,300
<b>Ferrochromium:</b>						
More than 4% carbon	393,000	100,000	18,400	29,000	31,000	279,000
More than 0.5%, but not more than 3% carbon	29	600	514	200	--	5,210
Not more than 0.5% carbon	28,100	6,870	1,750	1,940	3,740	23,400
Ferrochromium silicon	38,300	5,690	10,800	6,430	--	30,600
Total ferroalloy imports	459,000	113,000	31,400	37,600	34,700	338,000
Chromium metal <sup>5</sup>	10,900	3,780	1,200	1,290	849	9,340
Stainless steel	872,000	220,000	74,000	66,400	58,100	633,000
Stainless steel scrap	180,000	37,000	5,380	5,550	4,230	85,400
<b>Distribution of U.S. supply:</b>						
Consumption, industry, chromium ferroalloys and metal	553,000	113,000	36,800	35,400	31,600	327,000
<b>Exports:</b>						
Chromite ore	53,900	25,900	844	874	406	30,200
<b>Chromium ferroalloys:</b>						
High-carbon ferrochromium	18,800	3,830	869	533	2,860	22,800
Low-carbon ferrochromium	16,600	3,650	238	715	1,160	14,100
Ferrochromium silicon	248	221	21	19	4	297
Total ferroalloy exports	35,700	7,700	1,130	1,270	4,030	37,200
Chromium metal	1,020	320	102	123	95	942
Stainless steel	410,000	143,000	35,400	35,100	31,800	366,000
Stainless steel scrap	506,000	205,000	70,700	69,200	68,900	637,000
<b>Stocks at end of period:</b>						
Consumer, industry, chromium ferroalloys and metal	XX	XX	11,900	12,500	12,100	XX
<b>Government stockpile:</b>						
Chromium ferroalloys	XX	XX	264,000	262,000	174,000	XX
Chromium metal	XX	XX	5,150	5,150	5,150	XX

XX Not applicable. -- Zero.

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

<sup>2</sup>May include revised data.

<sup>3</sup>Data 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.

<sup>4</sup>Includes revised data that are not broken out by specific month.

<sup>5</sup>Includes waste and scrap and other.

TABLE 2  
U.S. REPORTED CONSUMPTION AND STOCKS OF CHROMIUM PRODUCTS IN 2007<sup>1,2</sup>

(Metric tons, gross weight unless otherwise noted)

	August	September	January- September <sup>3</sup>
<b>Consumption by end use:</b>			
Alloy uses:			
Iron alloys:			
Steel:			
Carbon steel	337	319	3,000
High-strength low-alloy steel	502	499	4,260
Stainless and heat-resisting steel	30,700	27,600	288,000
Full alloy steel	1,740	1,320	13,300
Electrical steel	W	W	W
Tool steel	427	413	3,880
Unspecified steel	W	W	W
Cast irons	W	W	W
Superalloys	748	517	6,050
Other alloys <sup>4</sup>	33	36	317
Total	35,400	31,600	327,000
Total, chromium content	20,800	18,500	191,000
<b>Consumption by material:</b>			
Low-carbon ferrochromium	2,040	1,850	17,700
High-carbon ferrochromium	30,400	26,900	281,000
Ferrochromium silicon	W	W	W
Chromium metal	409	293	2,780
Chromite ore	W	W	W
Chromium-aluminum alloy	W	W	W
Other chromium materials	W	W	W
Total	35,400	31,600	327,000
Total, chromium content	20,800	18,500	191,000
<b>Consumer stocks:</b>			
Low-carbon ferrochromium	1,920	1,870	XX
High-carbon ferrochromium	9,240	8,960	XX
Ferrochromium silicon	1,070	991	XX
Chromium metal	160	165	XX
Chromite ore	W	W	XX
Chromium-aluminum alloy	W	W	XX
Other chromium materials	15	15	XX
Total	12,500	12,100	XX
Total, chromium content	7,390	7,100	XX

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

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

<sup>2</sup>Includes estimates.

<sup>3</sup>May include revised data.

<sup>4</sup>Includes 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<sup>1,2</sup>

(Metric tons)

Period	Chromium ferroalloys		Chromium metal
	High-carbon ferro-chromium	Low-carbon ferro-chromium	
2006:			
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
July	177,000	86,700	5,150
August	170,000	92,200	5,150
September	113,000	61,000	5,150

<sup>1</sup>Data are rounded to no more than three significant digits.

<sup>2</sup>These 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 METAL<sup>1</sup>

Period	Chromite ore		Chromium ferroalloys <sup>2</sup>			Chromium metal <sup>3</sup>	
	Gross weight (metric tons)	Value (thousands)	Gross weight (metric tons)	Chromium content (metric tons)	Value (thousands)	Gross weight (metric tons)	Value (thousands)
<b>2006:</b>							
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
<b>2007:</b>							
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
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
January-August	29,800	3,840	33,200	21,200	37,600	847	15,100

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

<sup>2</sup>Includes low-, medium-, and high-carbon ferrochromium and ferrochromium silicon.

<sup>3</sup>Includes 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 METAL<sup>1</sup>

(Metric tons)

	2006	2007		
	January- December <sup>2</sup>	July	August	January- August <sup>2</sup>
<b>Chromite ore:</b>				
Not more than 40%:				
Gross weight	117	--	10	15
Chromic oxide content	45	--	4	6
More than 40% but less than 46% chromic oxide:				
Gross weight	3,810	48	10	26,100
Chromic oxide content	1,750	22	4	12,000
46% or more chromic oxide:				
Gross weight	146,000	5,380	35,800	68,400
Chromic oxide content	76,300	2,500	16,500	31,700
<b>Total, all grades:</b>				
Gross weight	150,000	5,420	35,800	94,500
Chromic oxide content	78,100	2,520	16,500	43,700
<b>Ferrochromium:</b>				
Low-carbon: <sup>3</sup>				
Not more than 0.5%:				
Gross weight	28,100	1,750	1,940	19,700
Chromium content	19,300	1,210	1,340	13,500
More than 0.5% but not more than 3%:				
Gross weight	29	514	200	5,210
Chromium content	23	358	108	3,000
<b>Total, low-carbon:</b>				
Gross weight	28,100	2,260	2,140	24,900
Chromium content	19,300	1,560	1,440	16,500
High-carbon: <sup>4</sup>				
Gross weight	393,000	18,400	29,000	248,000
Chromium content	230,000	11,300	14,900	139,000
<b>Total, all grades:</b>				
Gross weight	421,000	20,600	31,200	273,000
Chromium content	249,000	12,800	16,400	155,000
<b>Chromium metal:</b>				
Unwrought powders	1,250	15	22	615
Waste and scrap	90	15	57	167
Other than waste and scrap and unwrought powders	9,540	1,170	1,210	7,710
<b>Total, all grades</b>	<b>10,900</b>	<b>1,200</b>	<b>1,290</b>	<b>8,490</b>

-- Zero.

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

<sup>2</sup>May include revised data.

<sup>3</sup>Ferrochromium containing not more than 3% carbon.

<sup>4</sup>Ferrochromium 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 COUNTRY<sup>1</sup>

Grade and country	August			January-August <sup>2</sup>		
	Gross weight (metric tons)	Chromium content (metric tons)	Value <sup>3</sup> (thousands)	Gross weight (metric tons)	Chromium content (metric tons)	Value <sup>3</sup> (thousands)
<b>High-carbon ferrochromium.<sup>4</sup></b>						
India	--	--	--	463	283	\$460
Kazakhstan	206	132	\$219	62,100	43,500	71,000
Mexico	--	--	--	20	14	32
Russia	2,020	1,260	3,110	14,000	8,810	14,900
South Africa	23,800	11,800	22,800	157,000	77,600	107,000
Sweden	--	--	--	41	28	105
Switzerland	--	--	--	3,500	1,680	2,130
Tajikistan	--	--	--	5	3	9
Zimbabwe	3,030	1,790	5,190	11,100	6,620	13,300
Total	29,000	14,900	31,300	248,000	139,000	209,000
<b>Low-carbon ferrochromium.<sup>5</sup></b>						
Not more than 0.5% carbon:						
Brazil	3	2	4	5	3	10
China	--	--	--	225	148	479
Germany	577	405	1,420	4,220	2,960	9,690
Japan	402	270	774	3,250	2,180	6,370
Kazakhstan	--	--	--	1,700	1,190	2,870
Russia	885	613	2,030	9,430	6,450	17,100
South Africa	--	--	--	718	427	1,050
Sweden	68	46	139	161	112	369
Turkey	--	--	--	8	5	26
Total	1,940	1,340	4,370	19,700	13,500	37,900
More than 0.5% but not more than 3%:						
Kazakhstan	--	--	--	1,110	777	2,090
South Africa	200	108	239	4,100	2,220	4,100
Total	200	108	239	5,210	3,000	6,190
<b>All grades:</b>						
Brazil	3	2	4	5	3	10
China	--	--	--	225	148	479
Germany	577	405	1,420	4,220	2,960	9,690
India	--	--	--	463	283	460
Japan	402	270	774	3,250	2,180	6,370
Kazakhstan	206	132	219	64,900	45,500	76,000
Mexico	--	--	--	20	14	32
Russia	2,900	1,880	5,140	23,400	15,300	31,900
South Africa	24,000	11,900	23,100	162,000	80,200	112,000
Sweden	68	46	139	201	140	475
Switzerland	--	--	--	3,500	1,680	2,130
Tajikistan	--	--	--	5	3	9
Turkey	--	--	--	8	5	26
Zimbabwe	3,030	1,790	5,190	11,100	6,620	13,300
Total	31,200	16,400	35,900	273,000	155,000	253,000

-- Zero.

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

<sup>2</sup>May include revised data.

<sup>3</sup>Customs 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.

<sup>4</sup>Ferrochromium containing more than 4% carbon.

<sup>5</sup>Ferrochromium 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 COUNTRY<sup>1</sup>

Grade and country	August		January-August <sup>2</sup>	
	Gross weight (metric tons)	Value <sup>3</sup> (thousands)	Gross weight (metric tons)	Value <sup>3</sup> (thousands)
<b>Unwrought powders:</b>				
China	12	\$256	115	\$2,180
France	--	--	6	43
Germany	5	23	18	94
Japan	4	132	38	1,290
Russia	--	--	199	1,980
Singapore	1	11	1	11
Spain	--	--	16	86
United Kingdom	(4)	96	224	1,900
Total	22	518	615	7,580
<b>Waste and scrap:</b>				
Germany	2	39	18	102
Japan	--	--	16	191
Korea, Republic of	--	--	(4)	8
Mexico	55	237	126	635
Singapore	--	--	4	102
Taiwan	--	--	2	28
Total	57	276	166	1,070
<b>Other than waste and scrap and unwrought powders:</b>				
China	90	770	1,480	11,800
France	286	2,550	1,770	15,800
Germany	7	201	76	1,290
Hong Kong	--	--	(4)	8
Italy	(4)	3	1	22
Japan	1	23	19	137
Netherlands	--	--	7	31
Russia	700	4,830	3,370	23,000
Switzerland	--	--	(4)	5
Taiwan	--	--	5	9
United Kingdom	123	996	974	7,680
Total	1,210	9,370	7,710	59,800
<b>All grades:</b>				
China	102	1,030	1,590	13,900
France	286	2,550	1,780	15,900
Germany	15	263	112	1,490
Hong Kong	--	--	(4)	8
Italy	(4)	3	1	22
Japan	4	154	72	1,610
Korea, Republic of	--	--	(4)	8
Mexico	55	237	126	635
Netherlands	--	--	7	31
Russia	700	4,830	3,570	25,000
Singapore	1	11	5	113
Spain	--	--	16	86
Switzerland	--	--	(4)	5
Taiwan	--	--	6	38
United Kingdom	124	1,090	1,200	9,580
Total	1,290	10,200	8,490	68,400

-- Zero.

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

<sup>2</sup>May include revised data.

<sup>3</sup>Customs 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.

<sup>4</sup>Less than ½ unit.

Source: U.S. Census Bureau.



TABLE 8  
U.S. TRADE OF STAINLESS STEEL, BY PRODUCT, IN 2007<sup>1</sup>

Stainless steel product	August		January-August	
	Gross weight (metric tons)	Value <sup>2</sup> (thousands)	Gross weight (metric tons)	Value <sup>2</sup> (thousands)
<b>Exports:</b>				
Ingot	1,030	\$7,090	9,860	\$67,400
Flat-rolled (width > 600 mm)	18,900	56,000	188,000	558,000
Flat-rolled (width < 600 mm)	6,740	39,100	67,800	366,000
Bars and rods in irregular coils	570	2,170	5,950	30,400
Other bars and rods	2,990	23,000	26,500	192,000
Wire	682	4,840	5,920	41,900
Tubes, pipes, hollow profiles	4,240	29,000	30,400	224,000
Total	35,100	161,000	334,000	1,480,000
Stainless steel scrap	69,200	96,000	568,000	1,170,000
Grand total	104,000	257,000	902,000	2,650,000
<b>Imports:</b>				
Ingot	11,100	56,600	91,100	456,000
Flat-rolled (width > 600 mm)	25,100	118,000	244,000	1,080,000
Flat-rolled (width < 600 mm)	3,660	20,300	29,500	164,000
Bars and rods in irregular coils	2,150	11,300	20,000	101,000
Other bars and rods	8,650	54,100	70,500	392,000
Wire	3,940	27,800	29,400	192,000
Tubes, pipes, hollow profiles	11,800	105,000	90,900	704,000
Total	66,400	393,000	575,000	3,090,000
Stainless steel scrap	5,550	7,380	81,200	129,000
Grand total	71,900	401,000	657,000	3,220,000

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

<sup>2</sup>Export 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.