



Mineral Industry Surveys

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CHROMIUM IN JANUARY 2010

On the basis of gross weight, consumption of chromium ferroalloys and metal in January 2010 increased by 42% compared with consumption in December 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 January 2010, consumption by end use and consumer stocks of chromium ferroalloys and metal at the end of January 2010, and U.S. foreign trade data for selected chromium-containing materials in December 2009.

TABLE 1
U.S. SALIENT CHROMIUM STATISTICS¹

(Metric tons, gross weight)

	2008	2009			2010
	January-December ²	November	December	January-December ²	January
Production:					
Stainless steel production ³	1,930,000	156,000	102,000	1,620,000	208,000
Components of U.S. supply:					
Stainless steel scrap receipts	858,000	65,500	60,600 ^r	847,000 ^r	81,600
Stainless steel scrap consumption	1,330,000	107,000 ^r	92,900 ^r	1,270,000 ^r	119,000
Imports for consumption:					
Chromite ore	197,000	32	6,030	77,200	(4)
Ferrochromium:					
More than 4% carbon	469,000	23,200	15,700	198,000	(4)
More than 3% carbon but not more than 4% carbon	344	266	610	3,180	(4)
More than 0.5%, but not more than 3% carbon	2,250	160	127	2,110	(4)
Not more than 0.5% carbon	37,000	3,380	3,900	36,600	(4)
Ferrochromium silicon	24,200	--	--	7,560	(4)
Total ferroalloy imports	533,000	27,000	20,400	248,000	(4)
Chromium metal ⁵	13,100	752	961	7,570	(4)
Stainless steel	783,000	34,400	40,600	416,000	(4)
Stainless steel scrap	140,000	6,510	6,190	124,000	(4)
Distribution of U.S. supply:					
Consumption, industry, chromium ferroalloys and metal	406,000	33,700	26,600	372,000	37,800
Exports:					
Chromite ore	7,000	639	69	2,500	(4)
Chromium ferroalloys:					
High-carbon ferrochromium	10,800	326	606	3,200	(4)
Low-carbon ferrochromium	13,400	8	79	1,560	(4)
Ferrochromium silicon	216	--	--	19	(4)
Total ferroalloy exports	24,500	334	685	4,780	(4)
Chromium metal	998	49	19	411	(4)
Stainless steel	471,000	52,600	25,300	414,000	(4)
Stainless steel scrap	1,000,000	89,100	76,900	1,130,000	(4)
Stocks at end of period:					
Consumer, industry, chromium ferroalloys and metal	XX	9,810	8,460	XX	9,560
Government stockpile:					
Chromium ferroalloys	XX	175,000	175,000	XX	166,000
Chromium metal	XX	4,670	4,670	XX	4,630

^rRevised. 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^{1,2}

(Metric tons, gross weight unless otherwise noted)

	2009		2010 January
	December	January- December ³	
Consumption by end use:			
Alloy uses:			
Steel:			
Carbon steel	269	3,320	279
High-strength low-alloy steel	163	1,950	162
Stainless and heat-resisting steel	22,600	323,000	33,800
Unspecified steel ⁴	2,970	36,600	3,050
Superalloys	425 ^r	5,370	453
Other alloys and uses ⁵	92	1,180	96
Total	26,600	372,000	37,800
Total, chromium content	15,800	219,000	21,900
Consumption by material:			
Low-carbon ferrochromium	2,090	26,600	2,420
High-carbon ferrochromium	22,300	316,000	32,800
Ferrochromium silicon	W	W	W
Chromium metal ⁶	210 ^r	2,830	235
Chromite ore	W	W	W
Chromium-aluminum alloy	W	W	W
Other chromium materials	W	W	W
Total	26,600	372,000	37,800
Total, chromium content	15,800	219,000	21,900
Consumer stocks:			
Low-carbon ferrochromium	1,770	XX	1,780
High-carbon ferrochromium	5,700	XX	6,770
Ferrochromium silicon	758	XX	769
Chromium metal	186	XX	182
Chromium-aluminum alloy	W	XX	W
Other chromium materials	W	XX	W
Total	8,460	XX	9,560
Total, chromium content	5,100	XX	5,620

^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 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.

⁶Includes 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	
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
June	128,000	65,900	4,800
July	124,000	64,000	4,790
August	120,000	63,300	4,750
September	115,000	57,900	4,700
October	114,000	57,700	4,670
November	114,000	61,900	4,670
December	113,000	61,500	4,670
2010, January	104,000	62,000	4,630

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:							
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
May	553	326	175	74	204	22	1,020
June	116	69	518	266	700	23	847
July	179	102	441	226	578	39	1,260
August	60	39	226	132	352	59	1,540
September	208	119	301	167	423	13	796
October	286	123	581	341	1,060	47	1,270
November	639	362	334	194	492	49	1,170
December	69	69	685	394	1,020	19	1,020
January-December	2,500	1,610	4,780	2,490	6,820	411	13,300

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	November	December	January- December ²
Chromite ore:				
Not more than 40%:				
Gross weight	--	--	--	10,300
Chromic oxide content	--	--	--	2,560
More than 40% but less than 46% chromic oxide:				
Gross weight	38,400	--	57	859
Chromic oxide content	17,600	--	27	394
46% or more chromic oxide:				
Gross weight	159,000	32	5,970	66,100
Chromic oxide content	76,400	15	2,800	30,600
Total, all grades:				
Gross weight	197,000	32	6,030	77,200
Chromic oxide content	94,000	15	2,830	33,600
Ferrochromium:				
Low-carbon: ³				
Not more than 0.5%:				
Gross weight	37,000	3,380	3,900	36,600
Chromium content	25,300	2,240	2,700	24,800
More than 0.5% but not more than 3%:				
Gross weight	2,250	160	127	2,110
Chromium content	1,450	115	83	1,280
Total, low-carbon:				
Gross weight	39,300	3,540	4,030	38,800
Chromium content	26,700	2,350	2,780	26,100
Medium-carbon: ⁴				
Gross weight	344	266	610	3,180
Chromium content	204	143	329	1,720
High-carbon: ⁵				
Gross weight	469,000	23,200	15,700	198,000
Chromium content	270,000	11,700	8,950	109,000
Total, all grades:				
Gross weight	509,000	27,000	20,400	240,000
Chromium content	297,000	14,200	12,100	137,000
Chromium metal:				
Unwrought powders	1,050	58	104	635
Waste and scrap	523	14	13	107
Other than waste and scrap and unwrought powders	11,500	681	845	6,830
Total, all grades:	13,100	752	961	7,570

-- 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 CHROMITE ORE AND FERROCHROMIUM SILICON IN 2009,
BY GRADE AND BY COUNTRY¹

Grade and country	January-December ²			
	Gross weight (metric tons)	Cr ₂ O ₃ (metric tons)	Chromium content (metric tons)	Value ³ (thousands)
Chromite ore:				
Not more than 40% chromic oxide, South Africa	10,300	2,560	XX	\$3,540
More than 40% but less than 46% chromic oxide, South Africa	859	394	XX	533
46% or more chromic oxide, South Africa	66,100	30,600	XX	13,400
Total all grades, South Africa	77,200	33,600	XX	17,500
Ferrochromium silicon, Kazakhstan	7,560	3,120	XX	9,140

XX Not applicable.

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.

Source: U.S. Census Bureau.

TABLE 7
U.S. IMPORTS FOR CONSUMPTION OF FERROCHROMIUM IN 2009,
BY GRADE AND BY COUNTRY¹

Grade and country	December			January-December 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	56	37	\$131	558	360	\$714
Austria	--	--	--	466	301	576
China	--	--	--	40	32	142
India	--	--	--	2,050	1,230	1,870
Kazakhstan	2,560	1,780	3,460	43,100	29,500	51,200
Russia	638	394	588	15,900	10,100	15,900
South Africa	12,500	6,740	9,810	136,000	67,000	96,100
Sweden	--	--	--	317	210	791
Total	15,700	8,950	14,000	198,000	109,000	167,000
Medium-carbon ferrochromium⁵						
Belgium	--	--	--	17	12	27
Russia	610	329	326	3,160	1,700	1,690
Total	610	329	326	3,180	1,720	1,720
Low-carbon ferrochromium:⁶						
More than 0.5% but not more than 3%:						
China	--	--	--	160	98	368
Kazakhstan	--	--	--	495	348	1,580
Russia	127	83	278	249	175	708
South Africa	--	--	--	1,210	657	1,640
Total	127	83	278	2,110	1,280	4,290
Not more than 0.5% carbon:						
China	20	12	49	1,850	1,180	4,730
Germany	680	474	2,720	3,800	2,640	15,700
Japan	60	42	238	1,090	752	4,810
Kazakhstan	--	--	--	2,030	1,400	6,100
Netherlands	--	--	--	22	16	92
Russia	2,890	2,020	7,950	23,900	16,400	71,100
South Africa	200	120	542	3,630	2,160	7,840
Sweden	--	--	--	115	75	574
Turkey	50	36	147	180	126	390
Total	3,900	2,700	11,600	36,600	24,800	111,000
All grades:						
Albania	56	37	131	558	360	714
Austria	--	--	--	466	301	576
Belgium	--	--	--	17	12	27
China	20	12	49	2,050	1,300	5,240
Germany	680	474	2,720	3,800	2,640	15,700
India	--	--	--	2,050	1,230	1,870
Japan	60	42	238	1,090	752	4,810
Kazakhstan	2,560	1,780	3,460	45,600	31,300	58,900
Netherlands	--	--	--	22	16	92
Russia	4,270	2,820	9,140	43,200	28,400	89,400
South Africa	12,700	6,860	10,400	141,000	69,800	106,000
Sweden	--	--	--	433	285	1,370
Turkey	50	36	147	180	126	390
Total	20,400	12,100	26,200	240,000	137,000	285,000

-- 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.

TABLE 8
U.S. IMPORTS FOR CONSUMPTION OF CHROMIUM METAL IN 2009,
BY GRADE AND BY COUNTRY¹

Grade and country	December		January-December ²	
	Gross weight (metric tons)	Value ³ (thousands)	Gross weight (metric tons)	Value ³ (thousands)
Unwrought powders:				
Canada	(4)	\$9	(4)	\$18
China	9	90	156	2,020
France	--	--	18	54
Germany	--	--	4	126
Japan	--	--	1	14
Russia	77	580	360	2,540
United Kingdom	18	271	96	1,640
Total	104	950	635	6,410
Waste and scrap:				
Germany	--	--	1	17
Japan	--	--	1	4
Mexico	12	57	87	333
Singapore	--	--	15	393
Taiwan	--	--	2	32
United Kingdom	1	18	1	18
Total	13	75	107	797
Other than waste and scrap and unwrought powders:				
Belgium	--	--	(4)	10
China	100	808	1,080	10,200
France	286	3,140	1,520	17,100
Germany	(4)	42	42	896
Italy	(4)	2	38	144
Japan	(4)	41	5	182
Kazakhstan	--	--	230	784
Liechtenstein	(4)	5	(4)	5
Netherlands	5	33	7	39
Russia	122	1,220	979	8,140
Switzerland	--	--	(4)	12
United Kingdom	330	3,110	2,930	30,200
Total	845	8,400	6,830	67,700
All grades:				
Belgium	--	--	(4)	10
Canada	(4)	9	(4)	18
China	109	898	1,230	12,200
France	286	3,140	1,540	17,100
Germany	(4)	42	47	1,040
Italy	(4)	2	38	144
Japan	(4)	41	6	200
Kazakhstan	--	--	230	784
Liechtenstein	(4)	5	(4)	5
Mexico	12	57	87	333
Netherlands	5	33	7	39
Russia	200	1,800	1,340	10,700
Singapore	--	--	15	393
Switzerland	--	--	(4)	12
Taiwan	--	--	2	32
United Kingdom	349	3,400	3,030	31,900
Total	961	9,420	7,570	74,900

-- 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 9
U.S. STAINLESS STEEL TRADE, BY PRODUCT, IN 2009¹

Stainless steel product	December		January-December ²	
	Gross weight (metric tons)	Value ³ (thousands)	Gross weight (metric tons)	Value ³ (thousands)
Exports:				
Ingot	907	\$5,090	56,500	\$101,000
Flat-rolled (width > 600 mm)	14,600	47,300	205,000	569,000
Flat-rolled (width < 600 mm)	4,360	17,900	81,500	271,000
Bars and rods in irregular coils	809	2,820	6,770	24,400
Other bars and rods	1,890	14,800	27,800	186,000
Wire	696	5,130	8,230	59,300
Tubes, pipes, hollow profiles	2,120	17,400	28,600	243,000
Total	25,300	110,000	414,000	1,450,000
Stainless steel scrap	76,900	63,200	1,130,000	777,000
Grand total	102,000	174,000	1,540,000	2,230,000
Imports:				
Ingot	7,960	24,300	70,200	204,000
Flat-rolled (width > 600 mm)	18,500	49,600	170,000	410,000
Flat-rolled (width < 600 mm)	2,810	12,500	26,300	108,000
Bars and rods in irregular coils	1,480	4,940	13,100	41,500
Other bars and rods	1,000	5,130	37,600	180,000
Wire	3,010	13,000	28,800	126,000
Tubes, pipes, hollow profiles	5,760	56,100	70,100	638,000
Total	40,600	165,000	416,000	1,710,000
Stainless steel scrap	6,190	8,140	124,000	138,000
Grand total	46,700	174,000	540,000	1,850,000

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.