



# Mineral Industry Surveys

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## CHROMIUM IN OCTOBER 2012

On the basis of gross weight, consumption of chromium ferroalloys and metal in October 2012 decreased slightly compared with consumption in September 2012. Consumption in October 2012 increased by 3% compared with consumption in the October 2011.

Included in this Mineral Industry Surveys are U.S. salient

chromium statistics, U.S. Government stockpile inventory of chromium materials in October 2012, consumption by end use and consumer stocks of chromium ferroalloys and metal at the end of October 2012, and U.S. foreign trade data for selected chromium-containing materials in October 2012.

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

(Metric tons, gross weight)

	2011	2012			
	January– December <sup>2</sup>	August	September	October	January– October
Production, stainless steel <sup>3</sup>	2,070,000	171,000	163,000	146,000	1,670,000
Components of U.S. supply:					
Stainless steel scrap receipts	866,000	71,600	71,700	72,800	723,000
Stainless steel scrap consumption	1,300,000	109,000	108,000	108,000	1,090,000
Imports for consumption:					
Chromite ore	191,000	43,000	12,500	33,000	234,000
Ferrochromium:					
More than 4% carbon	462,000	21,300	63,300	27,000	382,000
More than 3% but not more than 4% carbon	1,510	--	--	271	411
More than 0.5% but not more than 3% carbon	393	--	1,000	162	3,060
Not more than 0.5% carbon	53,700	2,550	5,040	1,800	38,300
Ferrochromium silicon	20,000	--	3,000	1,500	20,800
Total ferroalloy imports	538,000	23,900	72,300	30,700	445,000
Chromium metal <sup>4</sup>	13,600	1,280	911	1,070	13,400
Stainless steel	605,000	62,800	50,300	57,500	553,000
Stainless steel scrap	169,000	10,000	9,090	10,200	128,000
Distribution of U.S. supply:					
Consumption, industry, chromium ferroalloys and metal	422,000	37,400	35,900	35,500	361,000
Exports:					
Chromite ore	5,250	1,410	605	542	18,700
Chromium ferroalloys:					
High-carbon ferrochromium	4,260	82	463	364	3,050
Low-carbon ferrochromium	1,030	23	40	78	616
Ferrochromium silicon	28	--	--	--	56
Total ferroalloy exports	5,330	105	503	442	3,720
Chromium metal	557	48	36	66	426
Stainless steel	558,000	61,100	50,700	43,800	494,000
Stainless steel scrap	656,000	57,700	54,200	61,400	519,000
Stocks at end of period:					
Consumer, industry, chromium ferroalloys and metal	8,920	10,300	9,920 <sup>r</sup>	10,600	10,600
Government stockpile:					
Chromium ferroalloys	150,000	147,000	146,000	146,000	146,000
Chromium metal	4,230	4,090	4,090	4,090	4,090

<sup>r</sup>Revised. -- 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 that are not broken out by specific month(s).

<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 waste and scrap and other.

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

(Metric tons, gross weight unless otherwise noted)

	2012		
	September	October	January– October <sup>3</sup>
<b>Consumption by end use:</b>			
<b>Steel:</b>			
Carbon steel	272	275	2,850
High-strength low-alloy steel	140	139	2,000
Stainless and heat-resisting steel	31,500	31,100	315,000
Unspecified steel <sup>4</sup>	3,370	3,350	35,100
Superalloys	487	500	5,170
Other alloys and uses <sup>5</sup>	108 <sup>r</sup>	114	1,100
<b>Total</b>	<b>35,900</b>	<b>35,500</b>	<b>361,000</b>
<b>Total, chromium content</b>	<b>20,700</b>	<b>20,500</b>	<b>209,000</b>
<b>Consumption by material:</b>			
Low-carbon ferrochromium	2,360	2,400	24,200
High-carbon ferrochromium	31,000	30,600	311,000
Ferrochromium silicon	W	W	W
Chromium metal	221	230	2,390
Chromite ore	W	W	W
Chromium-aluminum alloy	W	W	W
Other chromium materials	W	W	W
<b>Total</b>	<b>35,900</b>	<b>35,500</b>	<b>361,000</b>
<b>Total, chromium content</b>	<b>20,700</b>	<b>20,500</b>	<b>209,000</b>
<b>Consumer stocks:</b>			
Low-carbon ferrochromium	1,660	1,670	1,670
High-carbon ferrochromium	7,470	8,170	8,170
Ferrochromium silicon	W	W	W
Chromium metal	134	130	130
Chromium-aluminum alloy	W	W	W
Other chromium materials	W	W	W
<b>Total</b>	<b>9,920<sup>r</sup></b>	<b>10,600</b>	<b>10,600</b>
<b>Total, chromium content</b>	<b>5,870</b>	<b>6,280</b>	<b>6,280</b>

<sup>r</sup>Revised. W Withheld to avoid disclosing company proprietary data; included in "Total."

<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 that are not broken out by specific month(s).

<sup>4</sup>Includes electrical, full alloy, tool, and unspecified steel end uses.

<sup>5</sup>Includes cast irons, 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	
2011:			
October	95,200	54,900	4,240
November	95,200	54,600	4,230
December	95,200	54,300	4,230
2012:			
January	95,200	54,100	4,230
February	95,200	53,200	4,230
March	95,200	53,000	4,230
April	95,200	52,200	4,090
May	95,200	52,000	4,090
June	95,200	52,000	4,090
July	95,200	51,500	4,090
August	95,200	51,500	4,090
September	95,200	50,800	4,090
October	95,200	50,500	4,090

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

<sup>2</sup>These Government stocks are reported by the Defense Logistics Agency, DLA Strategic Materials in Inventory of Stockpile Materials D-1, which reports uncommitted inventory. Uncommitted inventory is that inventory for which there is no sales contact. 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 Logistics Agency, DLA Strategic Materials.

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>2011:</b>							
October	370	\$273	143	72	\$212	73	\$1,820
November	615	394	377	151	496	31	805
December	477	333	307	165	515	44	1,250
January–December <sup>4</sup>	5,250	3,520	5,330	2,500	7,670	557	13,800
<b>2012:</b>							
January	803	475	374	199	417	24	891
February	571	345	131	65	244	35	1,060
March	455	292	391	210	561	42	1,150
April	1,290	1,090	479	277	641	53	1,210
May	673	377	460	251	664	46	1,170
June	11,400	3,550	528	315	687	34	1,240
July	886	538	309	155	498	43	1,240
August	1,410	1,030	105	43	148	48	1,250
September	605	427	503	268	788	36	1,090
October	542	330	442	221	644	66	1,330
January–October	18,700	8,450	3,720	2,000	5,290	426	11,600

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

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

<sup>3</sup>Includes chromium metal, waste and scrap, and unwrought powders.

<sup>4</sup>May include revised data that are not broken out by specific month(s).

Source: U.S. Census Bureau.

TABLE 5  
U.S. IMPORTS FOR CONSUMPTION OF CHROMITE ORE, FERROCHROMIUM, AND CHROMIUM METAL<sup>1</sup>

(Metric tons)

	2011	2012		
	January– December <sup>2</sup>	September	October	January– October
<b>Chromite ore:</b>				
Not more than 40% chromic oxide:				
Gross weight	151	--	--	--
Chromic oxide content	78	--	--	--
More than 40% but less than 46% chromic oxide:				
Gross weight	27,900	--	20,000	27,500
Chromic oxide content	12,600	--	8,910	12,300
46% or more chromic oxide:				
Gross weight	163,000	12,500	13,000	206,000
Chromic oxide content	90,000	6,640	5,990	100,000
<b>Total, all grades:</b>				
Gross weight	191,000	12,500	33,000	234,000
Chromic oxide content	103,000	6,640	14,900	112,000
<b>Ferrochromium:</b>				
Low-carbon: <sup>3</sup>				
Not more than 0.5% carbon:				
Gross weight	53,700	5,040	1,800	38,300
Chromium content	37,100	3,470	1,260	26,500
More than 0.5% but not more than 3% carbon:				
Gross weight	393	1,000	162	3,060
Chromium content	224	690	114	2,070
<b>Total, low-carbon:</b>				
Gross weight	54,100	6,040	1,960	41,400
Chromium content	37,400	4,160	1,380	28,600
Medium-carbon: <sup>4</sup>				
Gross weight	1,510	--	271	411
Chromium content	855	--	146	222
High-carbon: <sup>5</sup>				
Gross weight	462,000	63,300	27,000	382,000
Chromium content	265,000	37,500	13,400	220,000
<b>Total, all grades:</b>				
Gross weight	518,000	69,300	29,200	424,000
Chromium content	304,000	41,700	14,900	249,000
<b>Chromium metal:</b>				
Unwrought powders	2,720	109	323	2,510
Waste and scrap	574	20	25	408
Other than waste and scrap and unwrought powders	10,300	782	721	10,500
<b>Total, all grades</b>	<b>13,600</b>	<b>911</b>	<b>1,070</b>	<b>13,400</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 that are not broken out by specific month(s).

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

<sup>4</sup>Ferrochromium containing more than 3% carbon but not more than 4% carbon.

<sup>5</sup>Ferrochromium containing more than 4% carbon.

Source: U.S. Census Bureau.

TABLE 6  
U.S. IMPORTS FOR CONSUMPTION OF FERROCHROMIUM IN 2012, BY GRADE AND COUNTRY<sup>1</sup>

Grade and country	October			January–October <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>						
Albania	--	--	--	1,800	1,160	\$2,630
China	--	--	--	197	137	347
India	260	158	\$302	12,700	7,720	16,600
Kazakhstan	--	--	--	80,000	55,300	110,000
Russia	--	--	--	27,300	17,900	38,300
South Africa	25,900	12,700	25,100	194,000	96,000	192,000
Spain	--	--	--	20	13	33
Sweden	500	338	966	10,400	6,970	19,600
Switzerland	16	8	28	16	8	28
Turkey	269	175	332	31,000	20,400	48,200
Zimbabwe	--	--	--	24,700	14,300	30,500
Total	27,000	13,400	26,800	382,000	220,000	457,000
<b>Medium-carbon ferrochromium:<sup>5</sup></b>						
Belgium	--	--	--	40	22	22
Russia	271	146	145	371	200	198
Total	271	146	145	411	222	221
<b>Low-carbon ferrochromium:<sup>6</sup></b>						
More than 0.5% but not more than 3% carbon:						
China	--	--	--	69	46	99
Kazakhstan	--	--	--	1,350	932	3,610
Russia	162	114	495	1,340	928	3,900
South Africa	--	--	--	302	166	610
Total	162	114	495	3,060	2,070	8,220
Not more than 0.5% carbon:						
Belgium	--	--	--	35	23	128
Brazil	--	--	--	256	143	703
China	--	--	--	60	38	295
France	--	--	--	1	1	3
Germany	580	407	2,660	5,280	3,660	23,700
Japan	160	113	784	1,610	1,120	7,910
Kazakhstan	--	--	--	3,830	2,680	10,400
Russia	684	474	2,230	23,800	16,400	74,100
South Africa	--	--	--	500	338	1,530
Turkey	378	270	1,260	2,930	2,100	9,960
Total	1,800	1,260	6,930	38,300	26,500	129,000
<b>All grades:</b>						
Albania	--	--	--	1,800	1,160	2,630
Belgium	--	--	--	75	46	151
Brazil	--	--	--	256	143	703
China	--	--	--	326	221	741
France	--	--	--	1	1	3
Germany	580	407	2,660	5,280	3,660	23,700
India	260	158	302	12,700	7,720	16,600
Japan	160	113	784	1,610	1,120	7,910
Kazakhstan	--	--	--	85,100	58,900	124,000
Russia	1,120	734	2,870	52,800	35,400	116,000
South Africa	25,900	12,700	25,100	195,000	96,500	194,000
Spain	--	--	--	20	13	33
Sweden	500	338	966	10,400	6,970	19,600
Switzerland	16	8	28	16	8	28
Turkey	647	445	1,600	33,900	22,500	58,200
Zimbabwe	--	--	--	24,700	14,300	30,500
Total	29,200	14,900	34,300	424,000	249,000	594,000

-- 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 that are not broken out by specific month(s).

<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 more than 3% but not more than 4% carbon.

TABLE 6—Continued  
U.S. IMPORTS FOR CONSUMPTION OF FERROCHROMIUM IN 2012, BY GRADE AND COUNTRY<sup>1</sup>

<sup>6</sup>Ferrochromium containing not more than 3% carbon.

Source: U.S. Census Bureau.

TABLE 7  
U.S. IMPORTS FOR CONSUMPTION OF CHROMIUM METAL IN 2012, BY GRADE AND BY COUNTRY<sup>1</sup>

Grade and country	October		January–October <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	101	\$1,360	725	\$10,800
France	75	1,170	593	9,960
Germany	1	55	19	672
Japan	--	--	2	33
Russia	59	645	630	6,980
Spain	48	456	48	456
United Kingdom	39	559	488	6,460
Total	323	4,250	2,510	35,300
<b>Waste and scrap:</b>				
China	--	--	1	27
Japan	--	--	12	197
Mexico	25	49	374	1,020
Singapore	--	--	18	495
Taiwan	--	--	3	35
Total	25	49	408	1,770
<b>Other than waste and scrap and unwrought powders:</b>				
Canada	--	--	2	20
China	118	1,420	1,250	17,000
France	193	2,850	2,080	32,700
Germany	(4)	41	50	1,270
Japan	--	--	6	361
Liechtenstein	(4)	11	(4)	53
Netherlands	--	--	13	124
Russia	120	1,380	4,120	50,600
Spain	--	--	60	652
Sweden	--	--	(4)	16
Switzerland	--	--	(4)	14
United Kingdom	290	3,800	2,920	40,100
Total	721	9,490	10,500	143,000
<b>All grades:</b>				
Canada	--	--	2	20
China	219	2,780	1,970	27,700
France	268	4,020	2,670	42,600
Germany	2	96	69	1,940
Japan	--	--	20	591
Liechtenstein	(4)	11	(4)	53
Mexico	25	49	374	1,020
Netherlands	--	--	13	124
Russia	179	2,030	4,750	57,600
Singapore	--	--	18	495
Spain	48	456	108	1,110
Sweden	--	--	(4)	16
Switzerland	--	--	(4)	14
Taiwan	--	--	3	35
United Kingdom	329	4,350	3,410	46,600
Total	1,070	13,800	13,400	180,000

-- 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 that are not broken out by specific month(s).

<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. STAINLESS STEEL TRADE, BY PRODUCT, IN 2012<sup>1</sup>

Stainless steel product	October		January–October	
	Gross weight (metric tons)	Value <sup>2</sup> (thousands)	Gross weight (metric tons)	Value <sup>2</sup> (thousands)
<b>Exports:</b>				
Ingot	2,370	\$11,300	73,000	\$138,000
Flat-rolled (width > 600 mm)	22,800	69,100	248,000	806,000
Flat-rolled (width < 600 mm)	7,340	28,700	72,700	296,000
Bars and rods in irregular coils	1,160	3,460	6,830	24,400
Other bars and rods	4,420	36,600	41,200	321,000
Wire	1,360	10,900	13,300	93,200
Tubes, pipes, hollow profiles	4,350	36,000	39,200	338,000
Total	43,800	196,000	494,000	2,020,000
Stainless steel scrap	61,400	70,900	519,000	675,000
Grand total	105,000	267,000	1,010,000	2,690,000
<b>Imports:</b>				
Ingot	14,500	\$40,500	124,000	398,000
Flat-rolled (width > 600 mm)	28,200	74,400	268,000	768,000
Flat-rolled (width < 600 mm)	2,870	11,800	34,500	148,000
Bars and rods in irregular coils	2,270	8,300	24,200	98,700
Other bars and rods	360	2,040	2,780	17,100
Wire	319	2,840	3,340	26,300
Tubes, pipes, hollow profiles	8,980	72,300	96,400	823,000
Total	57,500	212,000	553,000	2,280,000
Stainless steel scrap	10,200	15,300	128,000	207,000
Grand total	67,700	227,000	680,000	2,490,000

<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. 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.