

Mineral Industry Surveys

For information, contact:

John F. Papp, Chromium Commodity Specialist National Minerals Information Center U.S. Geological Survey 989 National Center Reston, VA 20192 Telephone: (703) 648-4963, Fax: (703) 648-7757 Email: jpapp@usgs.gov Benjamin N. Bryden (Data) Telephone: (703) 648-7953 Fax: (703) 648-7975 Email: bbryden@usgs.gov

Internet: http://minerals.usgs.gov/minerals/

CHROMIUM IN JANUARY 2016

On the basis of gross quantity, consumption of chromium ferroalloys and metal in January 2016 increased by about 8% compared to that of December 2015. Consumption in January 2016 was 6% less than that of January 2015.

Mintal Group (Inner Mongolia Autonomous Region), a major producer of ferrochromium in Baotou, China, planned to increase ferrochromium production capacity to 600,000 metric tons per year (t/yr) in 2016 from its present capacity of 300,000 t/yr. The increased production capacity will put Mintal on a par with Xinganglian Metallurgy, China's leading ferrochromium producer. Mintal's original plant was built by Outotec (Finland) and its plant expansion will be sourced from Outotec. Outotec planned to deliver engineering and supplies of proprietary and other key equipment for a steel belt sintering plant with an annual capacity of 700,000 metric tons of sintered pellets and two 75-megavolt-ampere smelting furnaces with preheating technology. The new plant was expected to become operational in 2016 (CRU Group, 2016; Outotec Oyj, 2016).

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References Cited

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- Outotec Oyj, 2016, Outotec to deliver its third ferrochrome plant in China: Espoo, Finland, Outotec Ojy press release, January 7, unpaginated. (Accessed March 15, 2016, at http://www.outotec.com/en/Media/News/2016/Outotecto-deliver-its-third-ferrochrome-plant-in-China/.)

TABLE 1 U.S. SALIENT CHROMIUM STATISTICS¹

Matulia	t)
(Metric	tons)

	2015			
			January-	2016
	November	December	December ^{p, 2}	January
Production, stainless steel ³	159,000	166,000	2,350,000	191,000
Components of U.S. supply:	-			
Stainless steel scrap receipts	75,000	74,700 ^r	919,000 ^r	NA
Stainless steel scrap consumption	113,000	112,000 ^r	1,340,000 ^r	NA
Imports for consumption:	-			
Chromite ore	3,750	2,210	131,000	10,100
Ferrochromium:	_			
More than 4% carbon	11,200	5,170	347,000	11,100
More than 3% but not more than 4% carbon		1,820	2,590	
More than 0.5% but not more than 3% carbon	100	81	3,960	478
Not more than 0.5% carbon	5,070	1,830	48,400	1,810
Ferrochromium silicon	27		5,810	
Total ferroalloy imports	16,400	8,900	408,000	13,400
Chromium metal ⁴	713	809	12,900	1,100
Stainless steel	42,400	51,500	700,000	44,300
Stainless steel scrap	13,500	14,200	192,000	16,900
Distribution of U.S. supply:	-			
Consumption, industry, chromium ferroalloys and metal	34,000	32,400	419,000	35,100
Exports:	-			
Chromite ore	185	316	7,210	186
Chromium ferroalloys:	_			
High-carbon ferrochromium	44	32	740	57
Low-carbon ferrochromium	23	9	279	25
Ferrochromium silicon		42	73	
Total ferroalloy exports	67	83	1,090	83
Chromium metal	50	25	800	25
Stainless steel	58,500	59,800	809,000	64,900
Stainless steel scrap	48,700	38,100	520,000	52,800
Stocks at end of period:	-			
Consumer, industry, chromium ferroalloys and metal	10,400	10,300	10,300	9,670
Government stockpile:	-			
Chromium ferroalloys	95,700	95,700	95,700	94,600
Chromium metal	3,960	3,960	3,960	3,930

^pPreliminary. ^rRevised. NA Not available. -- 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(s).

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 waste and scrap and other.

TABLE 2

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

(Metric tons)

	20	2015	
		January-	2016
	December	December ³	January
Consumption by end use:			
Steel:			
Carbon steel	147	2,160	181
High-strength low-alloy steel	137	1,720	133
Stainless and heat-resisting steel	28,800	374,000	31,500
Unspecified steel ⁴	2,720	34,600	2,720
Superalloys	443	5,140	428
Other alloys and uses ⁵	114	1,280	89
Total	32,400	419,000	35,100
Total, chromium content	18,700	241,000	20,200
Consumption by material:			
Low-carbon ferrochromium	1,760	22,300	1,790
High-carbon ferrochromium	28,000	365,000	30,700
Ferrochromium silicon	W	W	W
Chromium metal	176	1,930	161
Chromite ore	27	233	7
Chromium-aluminum alloy	W	W	W
Other chromium materials	W	W	W
Total	32,400	419,000	35,100
Total, chromium content	18,700	241,000	20,200
Consumer stocks:			
Low-carbon ferrochromium	1,490	1,490	1,480
High-carbon ferrochromium	7,920	7,920	7,350
Ferrochromium silicon	750	750	744
Chromium metal	W	W	W
Chromium-aluminum alloy	27	27	22
Other chromium materials	W	W	W
Total	10,300	10,300	9,670
Total, chromium content	5,990	5,990	5,650

W Withheld to avoid disclosing company proprietary data; included in "Total."

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(s).

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.

TABLE 3U.S. GOVERNMENT STOCKPILE INVENTORY OF
CHROMIUM MATERIALS1

(Metric tons)

	Chromium f		
	High-carbon	Low-carbon	
	ferro-	ferro-	Chromium
	chromium	chromium	metal
2015:			
January	70,700	34,200	3,960
February	70,700	34,200	3,960
March	69,700	34,100	3,960
April	69,700	34,000	3,960
May	67,100	33,700	3,960
June	64,100	33,400	3,960
July	63,000	33,300	3,960
August	63,000	33,200	3,960
September	63,000	32,900	3,960
October	63,000	32,900	3,960
November	63,000	32,600	3,960
December	63,000	32,600	3,960
2016, January	62,100	32,500	3,930

¹Data are rounded to no more than three significant digits.

Source: Defense Logistics Agency, DLA Strategic Materials.

	Chron	Chromite ore Chromium ferroalloys ²		Chromium ferroalloys ²		Chromium metal ³	
	Gross weight	Value	Gross weight	Chromium content	Value	Gross weight	Value
	(metric tons)	(thousands)	(metric tons)	(metric tons)	(thousands)	(metric tons)	(thousands)
2015:							
January	1,110	\$621	218	111	\$399	33	\$746
February	153	165	132	66	190	100	1,820
March	1,350	818	130	76	232	128	1,690
April	318	779	106	55	172	160	2,120
May	1,990	1,530	27	16	60	97	1,040
June	1,250	688	22	13	46	32	821
July	180	96	70	33	115	48	1,380
August	188	106	26	15	48	55	1,330
September	95	50	120	53	154	31	937
October	74	42	91	35	160	38	1,320
November	185	169	67	32	141	50	1,490
December	316	621	83	41	144	25	973
January–December ⁴	7,210	5,680	1,090	545	1,860	800	15,700
2016 January	186	121	83	50	114	25	1.100

TABLE 4 U.S. EXPORTS OF CHROMITE ORE, CHROMIUM FERROALLOYS, AND METAL $^{\rm 1}$

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(s).

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

(Metric tons)

	2015		
	January-		2016
	December	December ²	January
Chromite ore:			
Not more than 40% chromic oxide:	-		
Quantity			
Chromic oxide content			
More than 40% but less than 46% chromic oxide:	-		
Quantity	1,550	34,600	
Chromic oxide content	693	15,100	
46% or more chromic oxide:	-		
Quantity	662	96,100	10,100
Chromic oxide content	335	66,700	4,710
Total, all grades:			
Quantity	2,210	131,000	10,100
Chromic oxide content	1,030	81,800	4,710
Ferrochromium:	_		
Low-carbon: ³	-		
Not more than 0.5% carbon:	-		
Quantity	1,830	48,400	1,810
Chromium content	1,120	32,800	1,220
More than 0.5% but not more than 3% carbon:	-		
Quantity	81	3,960	478
Chromium content	57	2,660	294
Total, low-carbon:	_		
Quantity	1,910	52,400	2,290
Chromium content	1,180	35,500	1,520
Medium-carbon: ⁴	_		
Quantity	1,820	2,590	
Chromium content	926	1,320	
High-carbon: ⁵	_		
Quantity	5,170	347,000	11,100
Chromium content	2,820	189,000	6,290
Total, all grades:	_		
Quantity	8,900	402,000	13,400
Chromium content	4,920	226,000	7,810
Chromium metal:	=		
Unwrought powders	331	4,840	392
Waste and scrap	30	153	
Other than waste and scrap and unwrought powders	447	7,890	705
Total, all grades	809	12,900	1,100

-- 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(s). 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.

TABLE 6

U.S. IMPORTS FOR CONSUMPTION OF FERROCHROMIUM IN 2016, BY GRADE AND COUNTRY¹

	January		
		Chromium	
	Quantity	content	Value ²
Grade and country	(metric tons)	(metric tons)	(thousands)
High-carbon ferrochromium: ³			
India	1,570	981	\$1,550
Kazakhstan	1,990	1,340	2,590
Russia	1,160	801	1,440
South Africa	5,770	2,800	4,390
Turkey	577	372	614
Total	11,100	6,290	10,600
Low-carbon ferrochromium: ⁴			
More than 0.5% but not more than 3% carbon:			
Brazil	378	232	715
China	100	62	201
Total	478	294	916
Not more than 0.5% carbon:			
Brazil	460	281	905
China	51	32	126
Germany	480	334	1,850
India	8	5	41
Japan	100	70	340
Russia	276	202	910
Turkey	432	300	1,200
Total	1,810	1,220	5,370
All grades:			
Brazil	838	513	1,620
China	151	94	326
Germany	480	334	1,850
India	1,570	986	1,590
Japan	100	70	340
Kazakhstan	1,990	1,340	2,590
Russia	1,430	1,000	2,350
South Africa	5,770	2,800	4,390
Turkey	1,010	672	1,810
Total	13,400	7,810	16,900

-- Zero.

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

²Customs 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.

³Ferrochromium containing more than 4% carbon.

⁴Ferrochromium containing not more than 3% carbon.

TABLE 7U.S. IMPORTS FOR CONSUMPTION OF CHROMIUM METAL IN 2016,
BY GRADE AND BY COUNTRY1

	January		
	Quantity Valu		
Grade and country	(metric tons)	(thousands)	
Unwrought powders:			
China	90	\$1,140	
France	38	478	
Russia	40	294	
United Kingdom	224	2,210	
Total	392	4,120	
Other than waste and scrap and unwrought powders:			
Canada	28	2,180	
China	117	887	
France	133	1,340	
Germany	97	571	
New Zealand	(3)	15	
Russia	311	2,240	
United Kingdom	20	265	
Total	705	7,500	
All grades:			
Canada	28	2,180	
China	207	2,030	
France	171	1,820	
Germany	97	571	
New Zealand	(3)	15	
Russia	351	2,530	
United Kingdom	244	2,470	
Total	1,100	11,600	

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown. ²Customs 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.

³Less than ¹/₂ unit.

TABLE 8U.S. STAINLESS STEEL TRADE, BY PRODUCT, IN 20161

	January		
	Gross weight Valu		
Stainless steel product	(metric tons)	(thousands)	
Exports:			
Ingot	2,540	\$11,900	
Flat-rolled (width > 600 mm)	48,100	90,000	
Flat-rolled (width < 600 mm)	6,900	24,500	
Bars and rods in irregular coils	1,200	3,770	
Other bars and rods	2,430	22,000	
Wire	789	10,000	
Tubes, pipes, hollow profiles	2,930	27,100	
Total	64,900	189,000	
Stainless steel scrap	52,800	35,600	
Grand total	118,000	225,000	
Imports:			
Ingot	5,400	37,600	
Flat-rolled (width > 600 mm)	22,800	47,700	
Flat-rolled (width < 600 mm)	4,150	13,600	
Bars and rods in irregular coils	2,970	8,320	
Other bars and rods	374	1,640	
Wire	846	4,200	
Tubes, pipes, hollow profiles	7,690	45,500	
Total	44,300	159,000	
Stainless steel scrap	16,900	9,760	
Grand total	61,200	168,000	

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.