

# Mineral Industry Surveys

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**For information, contact:**

Lisa A. Corathers, Manganese Commodity Specialist  
U.S. Geological Survey  
989 National Center  
Reston, VA 20192  
Telephone: (703) 648-4973, Fax: (703) 648-7757  
E-mail: lcorathers@usgs.gov

Hodan A. Fatah (Data)  
Telephone: (703) 648-4971  
Fax: (703) 648-7975  
E-mail: hfatah@usgs.gov

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

## MANGANESE IN DECEMBER 2013

Preliminary domestic data (gross weight) for December 2013 indicated that consumption of manganese ore containing more than 20% manganese, exclusive of that consumed at iron and steel plants, was 38,600 metric tons (t). This was a 26% increase compared to the amount consumed in November 2013, owing to increased manganese alloy production. Manganese ore consumption during 2013 was 499,000 t, which was 7% less

than that of 2012. Industry stocks of ore at the end of December 2013 were estimated to be 190,000 t, which was a 7% increase from those at the end of November 2013.

Included in this Mineral Industry Surveys are U.S. spot market prices and U.S. foreign trade data for selected manganese-containing materials in December 2013.

TABLE 1  
PRICES FOR MANGANESE FERROALLOYS, METAL, AND ORE IN DECEMBER 2013

		High	Low	Average	Average low, mid, and high
<u>Manganese ferroalloys:<sup>1</sup></u>					
High-carbon ferromanganese, 75% manganese	dollars per long ton of contained manganese	1,010.00	990.00	1,000.00	XX
Medium-carbon ferromanganese, 85% manganese	cents per pound of contained manganese	88.00	86.00	86.50	XX
Silicomanganese, 65% manganese	do.	54.00	53.00	53.50	XX
Manganese metal, 99.9% manganese flake <sup>2</sup>	cents per pound	130.00	128.00	XX	128.00–129.00–130.00
<u>Manganese ore:<sup>3,4</sup></u>					
36%–39% manganese	dollars per metric ton unit contained manganese	4.50	4.25	XX	4.25–4.38–4.50
44% manganese	do.	5.40	5.15	XX	5.18–5.25–5.32
46% manganese	do.	5.45	5.35	XX	5.35–5.40–5.45

do. Ditto. XX Not applicable.

<sup>1</sup>Platts Metals Week; in U.S. warehouse; average prices reported for all transactions during the month.

<sup>2</sup>Ryan's Notes North American transaction prices, electrolytic manganese metal flake, 99.99% manganese, free-on-board producing point or Chicago/Pittsburgh warehouse; average prices reported for the price range.

<sup>3</sup>Ryan's Notes, cost and freight, China; average prices reported for the price range.

<sup>4</sup>To determine dollars per metric ton of ore (gross weight), multiply the manganese content percentage by the price; that is, by 46 when the manganese content is 46%.

TABLE 2  
SELECTED U.S. FOREIGN TRADE IN MANGANESE<sup>1</sup>

(Metric tons, manganese content)<sup>2</sup>

	Imports for consumption			Exports		
	Ore and dioxide	Ferroalloy and metal	Total	Ore	Ferroalloy and metal	Total
2012:						
December	26,400	36,100	62,500	18	732	750
January–December	241,000	588,000	829,000	856	10,700	11,500
2013:						
January	11,300	26,200	37,500	16	464	480
February	30,100	48,400	78,500	10	588	599
March	38,100	49,100	87,200	29	1,410	1,440
April	1,020	63,400	64,400	13	1,530	1,550
May	26,100	51,300	77,400	22	1,060	1,080
June	24,900	52,700	77,600	31	345	376
July	2,810	34,100	36,900	12	343	355
August	36,600	36,600	73,200	84	368	452
September	50,000	39,200	89,200	12	204	216
October	4,060	36,800	40,900	18	368	386
November	27,300	51,000	78,300	49	169	217
December	22,400	30,600	53,000	18	270	287
January–December	275,000	519,000	794,000	314	7,120	7,430

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

<sup>2</sup>As reported except as estimated for imports of manganese dioxide and manganese waste and scrap and for exports from gross weights.

Source: U.S. Census Bureau.

TABLE 3  
U.S. IMPORTS FOR CONSUMPTION OF SILICOMANGANESE IN DECEMBER 2013<sup>1</sup>

(Metric tons)

Source	Gross weight	Mn content	Customs value <sup>2</sup>	January–December		
				Gross weight	Mn content	Customs value <sup>2</sup>
Australia	3,900	2,610	\$4,000,000	75,300	50,400	\$69,100,000
Bahrain	--	--	--	1,450	968	1,750,000
Brazil	--	--	--	3,020	1,980	2,880,000
Canada	--	--	--	45	30	36,400
China	--	--	--	8	4	11,800
Georgia	781	567	729,000	106,000	75,200	104,000,000
India	603	361	850,000	5,220	3,100	7,410,000
Korea, Republic of	--	--	--	6,650	3,560	6,950,000
Mexico	--	--	--	27,400	17,900	28,800,000
Norway	8,900	5,810	9,920,000	42,200	26,900	51,500,000
South Africa	1,290	836	1,490,000	56,900	39,300	60,600,000
Spain	72	43	107,000	5,080	3,300	5,520,000
Total	15,500	10,200	17,100,000	329,000	223,000	339,000,000

-- Zero.

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

<sup>2</sup>Customs 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 material into the United States.

Source: U.S. Census Bureau.

TABLE 4  
U.S. IMPORTS FOR CONSUMPTION OF FERROMANGANESE IN DECEMBER 2013<sup>1</sup>

(Metric tons)

Source	Gross weight	Mn content	Customs value <sup>2</sup>	January–December		
				Gross weight	Mn content	Customs value <sup>2</sup>
<b>Low carbon:</b>						
Canada	--	--	--	37	30	\$56,700
China	204	190	\$487,000	6,470	6,130	15,100,000
France	--	--	--	19	15	48,300
Korea, Republic of	--	--	--	2,800	2,450	5,960,000
Mexico	--	--	--	500	405	868,000
Netherlands	19	15	48,300	19	15	48,300
Norway	2,370	1,920	3,450,000	17,000	13,800	24,700,000
South Africa	--	--	--	2,020	1,800	4,340,000
Vietnam	--	--	--	175	140	303,000
Total	2,590	2,130	3,990,000	29,100	24,800	51,500,000
<b>Medium carbon, 1%–2% C:</b>						
China	--	--	--	140	107	327,000
Hong Kong	--	--	--	208	166	320,000
India	--	--	--	506	392	737,000
Korea, Republic of	--	--	--	11,600	9,310	14,800,000
Mexico	41	31	93,900	5,310	4,020	8,000,000
Norway	442	360	552,000	10,100	8,360	12,200,000
South Africa	2,570	2,040	3,380,000	14,400	11,600	20,500,000
Vietnam	--	--	--	8	6	11,900
Total	3,050	2,430	4,030,000	42,300	33,900	56,900,000
Medium carbon, 2%–4% C, South Africa	--	--	--	18	14	40,300
<b>High carbon:</b>						
Australia	--	--	--	30,900	23,500	27,500,000
Bahrain	--	--	--	29	23	33,600
Brazil	--	--	--	666	500	610,000
Canada	--	--	--	195	132	234,000
France	--	--	--	15,200	11,600	13,700,000
India	--	--	--	5	4	7,460
Korea, Republic of	--	--	--	11,300	8,490	12,000,000
Norway	--	--	--	2,850	2,230	2,340,000
South Africa	18,800	14,400	15,000,000	197,000	151,000	189,000,000
Spain	72	55	71,700	744	552	773,000
Ukraine	--	--	--	161	107	202,000
United Kingdom	--	--	--	2	2	3,170
Total	18,800	14,400	15,000,000	259,000	198,000	247,000,000
Grand total	24,500	19,000	23,100,000	331,000	257,000	355,000,000

-- Zero.

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

<sup>2</sup>Customs 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 material into the United States.

Source: U.S. Census Bureau.

TABLE 5  
U.S. IMPORTS FOR CONSUMPTION OF MANGANESE ORE (20% OR MORE Mn) IN DECEMBER 2013<sup>1,2</sup>

(Metric tons)

Source	Gross weight	Mn content	Customs value <sup>3</sup>	January–December		
				Gross weight	Mn content	Customs value <sup>3</sup>
<b>More than 20%, but less than 47% manganese:</b>						
Australia	--	--	--	33,000	15,500	\$7,400,000
Belgium	--	--	--	12	5	6,370
Brazil	53	24	\$23,700	106	47	45,400
China	--	--	--	7	3	4,000
France	--	--	--	8,010	3,560	1,820,000
Gabon	--	--	--	46,700	18,200	7,960,000
Ghana	--	--	--	39,800	11,200	3,830,000
Mexico	120	56	38,400	12,800	4,820	2,720,000
South Africa	--	--	--	34,100	12,700	4,810,000
Total	173	80	62,100	175,000	66,100	28,600,000
<b>47% or more manganese:</b>						
Argentina	--	--	--	(4)	(4)	120,000
Australia	--	--	--	27,800	13,700	8,650,000
Belgium	--	--	--	1,380	689	82,700
Brazil	--	--	--	7,380	3,800	3,220,000
China	--	--	--	40	20	37,200
France	--	--	--	2,020	1,030	627,000
Gabon	39,600	20,500	9,570,000	328,000	173,000	84,200,000
Georgia	--	--	--	63	58	230,000
Korea, Republic of	100	49	72,800	100	49	72,800
Morocco	1,410	446	84,600	7,600	3,800	456,000
South Africa	160	78	81,600	324	158	165,000
Total	41,300	21,100	9,810,000	375,000	197,000	97,900,000
Grand total	41,400	21,200	9,870,000	549,000	263,000	126,000,000

-- Zero.

<sup>1</sup>Quantities for general imports and imports for consumption are identical.

<sup>2</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>3</sup>Customs 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 material into the United States.

<sup>4</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 6  
U.S. IMPORTS FOR CONSUMPTION OF MANGANESE DIOXIDE IN DECEMBER 2013<sup>1</sup>

(Metric tons, gross weight)

Source	Quantity	Customs value <sup>2</sup>	January–December	
			Quantity	Customs value <sup>2</sup>
Belgium	20	\$33,700	69	\$124,000
Brazil	--	--	19	26,900
China	40	33,800	82	81,400
Germany	8	13,100	38	65,400
India	17	27,300	33	52,900
Japan	432	1,020,000	6,210	14,600,000
Singapore	24	40,500	194	318,000
South Africa	980	1,880,000	13,100	26,700,000
Turkey	--	--	151	256,000
United Kingdom	--	--	(3)	5,100
Total	1,520	3,048,400	19,896	42,229,700

-- Zero.

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

<sup>2</sup>Customs 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 material into the United States.

<sup>3</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 7  
U.S. IMPORTS FOR CONSUMPTION OF MANGANESE METAL IN DECEMBER 2013<sup>1</sup>  
(Metric tons)

Source	Gross weight	Customs value <sup>2</sup>	January–December	
			Gross weight	Customs value <sup>2</sup>
<b>Unwrought flake:</b>				
China	509	\$1,030,000	12,100	\$26,900,000
Hong Kong	--	--	25	52,000
Japan	23	78,000	213	725,000
Mexico	15	63,000	255	1,070,000
Netherlands	--	--	76	208,000
South Africa	272	711,000	8,110	22,700,000
Total	819	1,880,000	20,800	51,700,000
<b>Unwrought powder:</b>				
China	41	85,000	102	219,000
South Africa	100	385,000	2,190	8,730,000
Total	141	470,000	2,290	8,950,000
<b>Unwrought, other:</b>				
China	241	549,000	15,500	37,300,000
Germany	13	28,900	151	386,000
Hong Kong	112	226,000	228	469,000
Mexico	5	18,000	5	18,000
Netherlands	19	44,400	57	134,000
Poland	--	--	(3)	15,000
South Africa	17	27,900	401	1,470,000
Spain	--	--	179	601,000
Total	408	894,000	16,500	40,400,000
<b>Other manganese, wrought:</b>				
China	(3)	26,400	72	190,000
Germany	--	--	7	90,700
Japan	(3)	3,450	(3)	131,000
Korea, Republic of	--	--	55	142,000
United Kingdom	--	--	3	38,700
Total	(3)	29,900	136	593,000
<b>Metallic waste and scrap:</b>				
Canada	89	40,700	890	466,000
China	--	--	(3)	3,860
Total	89	40,700	890	469,000
Grand total	1,460	3,320,000	40,600	102,000,000

-- Zero.

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

<sup>2</sup>Customs 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 material into the United States.

<sup>3</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 8  
U.S. EXPORTS OF MANGANESE ORE (20% OR MORE Mn), FERROMANGANESE, SILICOMANGANESE,  
AND MANGANESE METAL BY COUNTRIES OF DESTINATION IN DECEMBER 2013<sup>1,2</sup>

Source	Gross weight (metric tons)	F.a.s. value <sup>3</sup> (thousands)	January–December	
			Gross weight (metric tons)	F.a.s. value <sup>3</sup> (thousands)
<b>Ore and concentrates with 20% or more manganese:</b>				
Brazil	--	--	19	\$18
Canada	5	\$4	71	84
China	13	11	75	114
Korea, Republic of	--	--	38	38
Malaysia	--	--	22	30
Mexico	--	--	39	66
Netherlands	18	64	239	868
Panama	--	--	33	28
Poland	--	--	72	87
United Kingdom	--	--	19	17
<b>Total</b>	<b>35</b>	<b>80</b>	<b>628</b>	<b>1,350</b>
<b>Ferromanganese:</b>				
2% or less carbon:				
Australia	--	--	32	60
Canada	61	78	470	635
Japan	159	287	299	547
Korea, Republic of	--	--	10	27
Mexico	--	--	80	111
Saudi Arabia	--	--	8	15
Spain	--	--	22	51
Turkey	--	--	338	740
Other (6 countries)	4	13	40	83
<b>Total</b>	<b>224</b>	<b>378</b>	<b>1,300</b>	<b>2,270</b>
More than 2% carbon:				
Brazil	--	--	37	103
Canada	55	55	506	551
Chile	--	--	19	29
Malaysia	1	3	31	125
Singapore	3	8	17	47
Other (9 countries)	5	14	64	181
<b>Total</b>	<b>65</b>	<b>80</b>	<b>674</b>	<b>1,030</b>
<b>Silicomanganese:</b>				
Brazil	--	--	360	360
Canada	--	--	5,110	5,590
Mexico	--	--	160	180
Spain	--	--	261	370
<b>Total</b>	<b>--</b>	<b>--</b>	<b>5,890</b>	<b>6,500</b>
<b>Metal, including alloys and waste and scrap:<sup>4</sup></b>				
Canada	6	21	78	264
China	7	103	663	1,660
Germany	--	--	74	294
India	--	--	236	549
Japan	25	93	49	192
Korea, Republic of	3	12	144	677
Norway	--	--	94	1,190
Pakistan	--	--	190	200
Vietnam	--	--	77	134
Other (8 countries)	1	27	73	615
<b>Total</b>	<b>42</b>	<b>256</b>	<b>1,680</b>	<b>5,770</b>
<b>Grand total</b>	<b>366</b>	<b>794</b>	<b>10,200</b>	<b>16,900</b>

-- Zero.

<sup>1</sup>Presentation of monthly data is based on the "January–December" quantities of the leading countries.

<sup>2</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>3</sup>Free alongside ship.

<sup>4</sup>Includes manganese-aluminum, other alloys, and waste and scrap.

Source: U.S. Census Bureau.

TABLE 9  
U.S. FOREIGN TRADE IN SELECTED MANGANESE CHEMICALS IN DECEMBER 2013, BY CLASS<sup>1</sup>

Class	Gross weight (metric tons)	Value <sup>3</sup> (thousands)	Principal sources and destinations: gross weight (metric tons); value <sup>3</sup> (thousands)	January–December <sup>2</sup>		
				Gross weight (metric tons)	Value <sup>3</sup> (thousands)	Principal sources and destinations: gross weight (metric tons); value <sup>3</sup> (thousands)
<b>Imports for consumption:</b>						
Manganese oxides other than dioxide	264	\$233	Mexico 146; \$130	4,550	\$4,300	Mexico 1,610; \$1,450
Manganites, manganates, and other permanganates	16	11	India 16; \$11	47	72	India 41; \$36
Potassium permanganate	48	141	India 48; \$141	1,320	3,820	India 1,320; \$3,820
Sodium permanganate	48	112	China 30; \$71	916	2,220	China 885; \$2,120
Sulfates, basket category, including manganese sulfate	11,700	7,890	Chile 7,830; \$4,580	66,800	61,900	Mexico 18,400; \$16,400
<b>Exports:</b>						
Manganese dioxide	159	366	Canada 80; \$98	6,530	14,500	Belgium 2,230; \$7,480
Manganese oxides other than dioxide	934	1,663	Norway 209; \$111	9,760	16,300	Canada 1,590; \$1,970
Manganites, manganates, and other permanganates	6	16	Canada 6; \$16	218	666	Canada 144; \$369
Potassium permanganate	199	527	Belgium 126; \$294	3,060	8,260	Belgium 2,100; \$4,900
Sodium permanganate	70	242	Belgium 52; \$112	771	2,080	Belgium 283; \$568
Sulfates, basket category, including manganese sulfate	1,380	1,780	Canada 1,060; \$856	17,100	17,500	Canada 12,900; \$8,240

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

<sup>2</sup>Reflects changes to previously published data.

<sup>3</sup>For imports, customs value; for exports, free alongside ship value.

Source: U.S. Census Bureau.