

# Mineral Industry Surveys

## 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

Connie Lopez (Data)  
 Telephone: (703) 648-7995  
 Fax: (703) 648-7975  
 E-mail: connielopez@usgs.gov

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

## MANGANESE IN DECEMBER 2011

Preliminary domestic data (gross weight) for December 2011 indicated that consumption of manganese ore containing 35% or more manganese, exclusive of that consumed at iron and steel plants, was 44,400 metric tons (t). This was a slight increase from the amount consumed in November 2011. Manganese ore consumption during 2011 was 496,000 t. This was an 8% increase from that consumed during 2010. Industry stocks of ore at the end of December 2011 were 159,000 t, which was the same as those at the end of November 2011.

Data for U.S. manganese imports and exports for November 2011 are published in this issue. On a contained-weight basis, U.S. manganese ore plus dioxide and manganese ferroalloys plus metal imports for November 2011 were 53% higher and 47% higher, respectively, than those in October 2011. U.S. imports of manganese ore plus dioxide and manganese

ferroalloys plus metal during the first 11 months of 2011 were slightly higher and 14% higher, respectively, than those during the same period in 2010 (table 1).

On a contained-weight basis, U.S. manganese ore and manganese ferroalloys plus metal exports for November 2011 were 35% higher and 9% lower, respectively, than those in October 2011. U.S. exports of manganese ore and manganese ferroalloys plus metal during the first 11 months of 2011 were 91% lower and 53% lower, respectively, than those during the same period in 2010 (table 1).

### Prices

Prices for manganese materials in December 2011, manganese content, are listed below.

### Ferroalloys prices<sup>1</sup>

	<u>Price Range</u>	<u>Average Price</u>
High-carbon ferromanganese <sup>2</sup>	1,150.00–1,325.00	1,202.50
Medium-carbon ferromanganese <sup>3</sup>	95.00–97.00	96.00
Silicomanganese <sup>3</sup>	49.00–52.00	50.50

### Manganese metal and ore prices<sup>4</sup>

	<u>Price Range</u>	<u>Average Low, Mid, and High Prices</u>
Manganese metal <sup>3</sup>	163.00–182.00	169.67–171.17–172.67
36%-39% Manganese ore <sup>5</sup>	3.80–3.90	3.80–3.85–3.90
44% Manganese ore <sup>5</sup>	4.20–4.30	4.20–4.25–4.30
48% Manganese ore <sup>5</sup>	4.65–4.75	4.65–4.70–4.75

<sup>1</sup>Source: Platts Metals Week, dealer import price; average prices reported for all transactions during the month.

<sup>2</sup>Dollars per gross ton.

<sup>3</sup>Cents per pound.

<sup>4</sup>Source: Ryan's Notes, cost and freight, China; average prices reported for the price range.

<sup>5</sup>Dollars per metric ton unit, contained manganese. To determine dollars per metric ton of ore (gross weight), multiply the manganese content percentage by the price; that is, by 48 when the manganese content is 48%.

TABLE 1  
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
2010:						
November	21,800	37,600	59,400	219	8,130	8,350
January–November	254,000	446,000	700,000	6,940	23,400	30,300
2011:						
January	28,900	44,500	73,400	36	1,080	1,120
February	9,160	30,400	39,600	46	1,240	1,290
March	50,900	68,900	120,000	73	1,740	1,810
April	1,720	27,800	29,500	61	1,150	1,210
May	21,100	51,000	72,100	33	1,800	1,830
June	26,800	68,700	95,500	59	519	578
July	11,500	57,400	69,000	82	669	750
August	25,500	50,600	76,100	65	902	967
September	38,800	55,800	94,600	--	611	611
October	16,900	22,300	39,200	84	708	792
November	25,800	32,700	58,600	113	642	755
Total	257,000	510,000	767,000	653	11,100	11,700

-- Zero.

<sup>1</sup>Data 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 2  
U.S. IMPORTS FOR CONSUMPTION OF SILICOMANGANESE IN NOVEMBER 2011<sup>1</sup>

(Metric tons)

Source	Gross weight	Mn content	Customs value <sup>2</sup>	January–November		
				Gross weight	Mn content	Customs value <sup>2</sup>
Australia	857	576	\$871,000	42,900	28,500	\$43,600,000
Canada	--	--	--	127	67	85,200
China	1	1	2,500	1	1	2,500
Georgia	--	--	--	100,000	69,500	120,000,000
Greece	--	--	--	20	15	45,100
India	104	58	172,000	962	535	1,550,000
Korea, Republic of	--	--	--	300	174	600,000
Mexico	1,250	815	1,330,000	11,700	7,640	12,800,000
Norway	--	--	--	33,500	21,000	55,300,000
Romania	--	--	--	7,490	4,620	7,490,000
South Africa	17,100	11,300	20,000,000	130,000	86,000	148,000,000
Spain	--	--	--	4,880	2,950	9,800,000
Total	19,300	12,800	22,400,000	332,000	221,000	399,000,000

-- Zero.

<sup>1</sup>Data 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 3  
U.S. IMPORTS FOR CONSUMPTION OF FERROMANGANESE IN NOVEMBER

(Metric tons)

Source	Gross weight	Mn content	Customs value <sup>2</sup>	January–November	
				Gross weight	Mn content
<b>Low carbon:</b>					
China	440	411	\$1,300,000	16,300	14,300
India	--	--	--	200	155
Korea, Republic of	--	--	--	222	200
Mexico	500	406	892,000	8,460	6,850
Norway	692	556	1,220,000	5,480	4,420
South Africa	--	--	--	20	16
Vietnam	217	205	702,000	1,250	1,180
<b>Total</b>	<b>1,850</b>	<b>1,580</b>	<b>4,110,000</b>	<b>31,900</b>	<b>27,100</b>
<b>Medium carbon, 1%–2% C:</b>					
China	29	23	53,300	262	221
Korea, Republic of	5,000	4,070	8,500,000	31,500	25,400
Mexico	750	610	1,230,000	9,660	7,770
Norway	--	--	--	7,920	6,410
South Africa	75	59	172,000	21,900	17,600
Spain	--	--	--	40	32
Ukraine	--	--	--	392	342
<b>Total</b>	<b>5,850</b>	<b>4,760</b>	<b>9,950,000</b>	<b>71,700</b>	<b>57,800</b>
<b>Medium carbon, 2%–4% C:</b>					
South Africa	--	--	--	342	301
Sweden	3	2	6,180	3	2
<b>Total</b>	<b>3</b>	<b>2</b>	<b>6,180</b>	<b>344</b>	<b>303</b>
<b>High carbon:</b>					
Australia	--	--	--	9,030	6,990
Bahrain	--	--	--	180	142
Brazil	--	--	--	199	147
France	--	--	--	2,600	1,770
Germany	--	--	--	19	6
India	--	--	--	429	332
Korea, Republic of	--	--	--	1,830	1,380
Norway	2,700	2,110	2,860,000	9,820	7,680
South Africa	10,600	8,080	12,000,000	172,000	133,000
Spain	598	441	703,000	598	441
Sweden	--	--	--	100	67
Ukraine	--	--	--	26,100	20,300
<b>Total</b>	<b>13,900</b>	<b>10,600</b>	<b>15,600,000</b>	<b>223,000</b>	<b>172,000</b>
<b>Grand total</b>	<b>21,600</b>	<b>17,000</b>	<b>29,600,000</b>	<b>327,000</b>	<b>257,000</b>

-- Zero.

<sup>1</sup>Data 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. 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 MANGANESE ORE (20% OR MORE Mn) IN NOVEMBER 2011<sup>1,2</sup>

(Metric tons)

Source	Gross weight	Mn content	Customs value <sup>3</sup>	January–November		
				Gross weight	Mn content	Customs value <sup>3</sup>
<b>More than 20%, but less than 47% manganese:</b>						
Australia	--	--	--	82,200	32,300	\$15,700,000
Brazil	--	--	--	3,220	1,480	1,150,000
Gabon	--	--	--	17,900	7,950	3,070,000
Mexico	--	--	--	4,540	1,640	1,060,000
Netherlands	--	--	--	86	18	17,200
South Africa	--	--	--	13,000	5,520	6,680,000
Turkey	--	--	--	566	199	190,000
Total	--	--	--	122,000	49,100	27,900,000
<b>47% or more manganese:</b>						
Australia	--	--	--	78,600	38,300	18,800,000
Belgium	201	101	\$12,100	201	101	12,100
Brazil	106	54	37,600	3,260	1,670	1,110,000
Gabon	48,400	24,300	11,600,000	297,000	152,000	83,800,000
Morocco	--	--	--	902	454	317,000
Netherlands	--	--	--	446	223	26,700
South Africa	--	--	--	20	10	12,800
Total	48,700	24,400	11,700,000	381,000	193,000	104,000,000
Grand total	48,700	24,400	11,700,000	502,000	242,000	132,000,000

-- Zero.

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

<sup>2</sup>Data 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.

Source: U.S. Census Bureau.

TABLE 5  
U.S. IMPORTS FOR CONSUMPTION OF MANGANESE DIOXIDE IN NOVEMBER 2011<sup>1</sup>

(Metric tons, gross weight)

Source	Quantity	Customs value <sup>2</sup>	January–November	
			Quantity	Customs value <sup>2</sup>
Belgium	12	\$24,000	478	\$555,000
Brazil	--	--	73	82,400
China	1	2,500	1	2,500
Colombia	--	--	600	1,150,000
Germany	61	104,000	106	180,000
India	--	--	20	25,000
Japan	519	1,270,000	8,080	18,700,000
Mexico	180	165,000	1,010	941,000
Netherlands	--	--	101	61,500
Singapore	23	38,800	171	252,000
South Africa	1,550	3,880,000	15,000	40,600,000
Turkey	--	--	176	89,000
Total	2,350	5,480,000	25,800	62,700,000

-- Zero.

<sup>1</sup>Data 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 6  
U.S. IMPORTS FOR CONSUMPTION OF MANGANESE METAL IN NOVEMBER 2011<sup>1</sup>

(Metric tons)

Source	Gross weight	Customs value <sup>2</sup>	January–November	
			Gross weight	Customs value <sup>2</sup>
<b>Unwrought flake:</b>				
China	958	\$3,070,000	11,400	\$33,400,000
Hong Kong	60	192,000	60	192,000
Japan	--	--	20	33,000
Mexico	--	--	91	395,000
South Africa	248	1,030,000	1,720	6,930,000
Vietnam	340	1,150,000	428	1,430,000
Total	1,610	5,450,000	13,700	42,400,000
<b>Unwrought powder:</b>				
China	41	131,000	283	903,000
Mexico	18	87,100	91	416,000
South Africa	100	390,000	2,710	10,500,000
United Kingdom	--	--	1	2,210
Total	159	608,000	3,090	11,800,000
<b>Unwrought, other:</b>				
China	1,080	3,370,000	13,000	41,700,000
Germany	--	--	233	867,000
Korea, Republic of	--	--	1	8,220
Netherlands	--	--	10	71,200
Poland	--	--	(3)	13,100
South Africa	114	425,000	1,120	4,170,000
Spain	--	--	150	582,000
Total	1,200	3,800,000	14,500	47,400,000
<b>Other manganese, wrought:</b>				
China	13	47,200	163	547,000
Germany	--	--	4	68,900
Japan	--	--	(3)	17,200
Mexico	--	--	26	109,000
United Kingdom	--	--	(3)	5,860
Vietnam	--	--	168	548,000
Total	13	47,200	361	1,300,000
Grand total	2,980	9,910,000	31,700	103,000,000

-- Zero.

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

<sup>2</sup>Customs value generally represent 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.

Note: Imports for consumption of metallic waste and scrap totaled 36 metric tons (t), all of which was from Canada, to give a year-to-date total of 504 t.

Source: U.S. Census Bureau.

TABLE 7  
U.S. EXPORTS OF MANGANESE ORE (20% OR MORE Mn), FERROMANGANESE, SILICOMANGANESE,  
AND MANGANESE METAL BY COUNTRIES OF DESTINATION IN NOVEMBER 2011<sup>1</sup>

(Metric tons, gross weight)

Country	Manganese ore		Ferromanganese,				Silicomanganese		Manganese metal <sup>2</sup>	
	November	January– November	2% or less C		More than 2% C		November	January– November	November	January– November
			November	January– November	November	January– November				
Aruba	121	121	--	--	--	--	--	--	--	--
Australia	--	--	--	--	--	53	--	--	--	3
Bahamas, The	--	--	--	--	--	--	--	--	--	1
Bahrain	--	66	--	--	--	--	--	--	--	--
Belgium	--	18	--	357	--	--	--	--	--	--
Brazil	--	--	--	--	--	138	--	--	--	--
Canada	37	369	3	435	60	1,360	288	6,050	--	562
Chile	--	--	--	--	26	26	--	--	--	--
China	--	91	--	--	--	--	--	--	141	1,280
Colombia	--	--	--	--	--	--	--	352	--	1
Costa Rica	--	--	--	--	--	--	--	--	--	18
Dominican Republic	--	--	--	--	--	(3)	--	--	43	142
Egypt	--	--	--	8	--	--	--	--	--	--
France	--	--	--	--	--	27	--	--	--	1
Germany	--	10	--	--	--	34	--	--	--	24
Guatemala	--	--	2	11	--	--	--	--	--	--
Guyana	--	--	--	--	--	--	--	--	--	3
Hong Kong	--	181	--	--	--	--	--	--	--	11
India	--	(3)	--	--	--	--	--	--	--	242
Ireland	--	--	--	--	--	4	--	--	--	--
Italy	--	--	--	--	--	--	--	--	--	7
Japan	--	--	100	100	--	--	--	--	44	430
Korea, Republic of	34	374	--	--	--	--	--	--	--	4
Malaysia	--	--	--	--	--	6	--	--	--	--
Mexico	2	44	--	1,320	--	--	51	526	19	64
Netherlands	32	32	--	--	--	--	--	--	--	--
Norway	--	--	--	--	--	17	--	--	--	--
Peru	--	--	--	--	--	100	--	--	--	--
Philippines	--	--	--	--	--	--	--	7	--	--
Portugal	--	--	20	20	--	--	--	--	--	--
Romania	--	--	--	--	6	40	--	--	--	--
Saint Lucia	--	--	--	--	--	--	--	--	--	15
Singapore	--	--	--	--	3	42	--	--	--	--
Spain	--	--	--	--	--	--	--	--	--	10
Taiwan	--	--	--	--	--	--	--	--	--	250
Turkey	--	--	--	120	--	--	--	--	--	--
United Arab Emirates	--	--	--	--	--	4	--	--	--	--
United Kingdom	--	--	--	57	--	--	--	--	--	10
Venezuela	--	--	--	--	--	4	--	--	--	--
Vietnam	--	--	--	--	--	--	--	--	--	19
Total	226	1,310	123	2,420	94	1,850	339	6,930	247	3,100

-- Zero.

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

<sup>2</sup>Includes manganese-aluminum, other alloys, and waste and scrap.

<sup>3</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 8  
U.S. FOREIGN TRADE IN SELECTED MANGANESE CHEMICALS IN NOVEMBER 2011, BY CLASS<sup>1</sup>

Class	Gross weight (metric tons)	Value <sup>2</sup> (thousands)	Principal sources and destinations: gross weight (metric tons); value <sup>2</sup> (thousands)	January–November		
				Gross weight (metric tons)	Value <sup>2</sup> (thousands)	Principal sources and destinations: gross weight (metric tons); value <sup>2</sup> (thousands)
<b>Imports for consumption:</b>						
Manganese oxides other than dioxide	103	\$191	Brazil 38; \$44	2,550	\$2,740	South Africa 692; \$770
Manganites, manganates, and other permanganates	--	--	--	17	65	Germany 17; \$65
Potassium permanganate	164	501	India 126; \$390	1,560	4,750	India 1,440; \$4,380
Sodium permanganate	37	107	China 36; \$95	491	1,240	China 485; \$1,200
Sulfates, basket category, including manganese sulfate	3,660	3,820	Mexico 1,540; \$1,420	41,900	39,500	Mexico 17,200; \$14,500
<b>Exports:</b>						
Manganese dioxide	2,180	3,020	Canada 701; \$571	10,300	17,500	Canada 4,760; \$4,390
Manganese oxides other than dioxide	923	1,700	Canada 185; \$276	7,020	14,600	Canada 1,640; \$2,020
Manganites, manganates, and other permanganates	23	58	Canada 17; \$45	134	524	Canada 102; \$275
Potassium permanganate	110	316	Belgium 91; \$237	2,870	8,270	Belgium 2,000; \$5,100
Sodium permanganate	74	216	Taiwan 24; \$69	909	2,160	Belgium 319; \$544
Sulfates, basket category, including manganese sulfate	1,300	1,120	Canada 910; \$578	14,700	13,300	Canada 10,700; \$6,020

-- Zero.

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

<sup>2</sup>For imports, Customs value; for exports, free alongside ship value.

Source: U.S. Census Bureau.