

# Mineral Industry Surveys

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## MANGANESE IN DECEMBER 2010

Preliminary reported data (gross weight) for December 2010 indicate that consumption of manganese ore containing 35% or more manganese, exclusive of that consumed at iron and steel plants, was 39,100 metric tons (t), according to the U.S. Geological Survey. This was 3% less than the amount consumed in November 2010. The amount of manganese ore consumed in the fourth quarter of 2010 increased slightly to 119,000 t from the amount consumed during the second quarter of 2010. The amount of manganese ore consumed during 2010 was 460,000 t. This was a 9% increase from the revised amount consumed during 2009 (422,000 t). Industry stocks of ore at the end of November 2010 were 206,000 t, which was a slight increase from those at the end of October 2010.

Data for U.S. manganese imports and exports for November 2010 are published in this issue. On a contained-weight basis, U.S. imports of manganese ore plus dioxide and manganese ferroalloys plus metal were 17% lower and 9% higher,

respectively, than those in October 2010. U.S. imports of manganese ore plus dioxide and manganese ferroalloys plus metal during the first 11 months of 2010 were 56% higher and 136% higher, respectively, than those during the same period in 2009 (table 1).

On a contained-weight basis, U.S. manganese ore and manganese ferroalloys plus metal exports for November 2010 were 161% higher and 282% higher, respectively, than those in October 2010. U.S. exports of manganese ore and manganese ferroalloys plus metal during the first 11 months of 2010 were 8% lower and 28% lower, respectively, than those during the same period in 2009 (table 1).

### Prices

Prices for manganese materials in December 2010, manganese content, are listed below.

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

	<u>Price Range</u>	<u>Average Price</u>
High-carbon ferromanganese <sup>2</sup>	1,300.00-1,350.00	1,346.00
Medium-carbon ferromanganese <sup>3</sup>	117.00-125.00	120.00
Silicomanganese <sup>3</sup>	59.00-63.00	61.10

### 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>	182.50-187.50	182.50-185.00-187.50
36%-39% Manganese ore <sup>5</sup>	5.00-5.60	5.07-5.34-5.60
44% Manganese ore <sup>5</sup>	5.70-6.20	5.76-5.98-6.20
48% Manganese ore <sup>5</sup>	6.50-6.80	6.50-6.65-6.80

<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
2009:						
November	24,000	42,300	66,300	242	2,060	2,310
January-November	163,000	189,000	352,000	7,510	32,700	40,200
2010:						
January	782	34,600	35,400	51	992	1,040
February	75,800	37,800	114,000	159	1,400	1,560
March	14,600	42,300	56,900	820	1,540	2,360
April	18,000	33,600	51,600	113	1,290	1,410
May	31,800	33,900	65,700	864	1,010	1,880
June	11,100	49,400	60,500	54	1,140	1,200
July	26,900	59,300	86,200	4,390	591	4,980
August	2,570	52,100	54,700	95	3,120	3,210
September	24,500	30,700	55,200	92	2,040	2,140
October	26,400	34,400	60,800	84	2,130	2,210
November	21,800	37,600	59,400	219	8,130	8,350
Total	254,000	446,000	700,000	6,940	23,400	30,300

<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 2010<sup>1</sup>

(Metric tons)

Source	Gross weight	Mn content	Customs value <sup>2</sup>	Year to date		
				Gross weight	Mn content	Customs value <sup>2</sup>
Australia	1,500	1,000	\$1,370,000	28,500	19,000	\$30,200,000
Bahrain	--	--	--	1,140	760	1,480,000
Canada	--	--	--	52	31	44,700
China	--	--	--	35	23	54,100
Georgia	21,300	14,500	27,400,000	67,300	46,600	83,300,000
India	104	58	163,000	806	447	1,380,000
Macedonia	--	--	--	986	657	1,310,000
Mexico	1,040	680	1,230,000	11,500	7,530	13,500,000
Norway	--	--	--	36,300	22,700	58,100,000
Russia	--	--	--	2,050	1,350	2,310,000
Saudi Arabia	--	--	--	2,540	1,670	2,990,000
South Africa	4,600	2,990	4,710,000	118,000	78,500	141,000,000
Spain	--	--	--	3,990	2,410	7,470,000
Vietnam	--	--	--	40	26	60,100
Total	28,500	19,200	34,800,000	273,000	182,000	343,000,000

-- 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 2010<sup>1</sup>

(Metric tons)

Source	Gross weight	Mn content	Customs value <sup>2</sup>	Year to date		
				Gross weight	Mn content	Customs value <sup>2</sup>
<b>Low carbon:</b>						
China	1,110	1,040	\$3,300,000	21,100	18,500	\$53,500,000
Korea, Republic of	--	--	--	3,000	2,420	6,760,000
Mexico	400	320	854,000	8,770	7,060	18,100,000
Netherlands	--	--	--	220	178	429,000
Norway	--	--	--	3,610	2,930	7,410,000
South Africa	--	--	--	23	21	69,800
Vietnam	217	203	619,000	578	541	1,550,000
<b>Total</b>	<b>1,730</b>	<b>1,570</b>	<b>4,770,000</b>	<b>37,300</b>	<b>31,700</b>	<b>87,900,000</b>
<b>Medium carbon, 1%-2% C:</b>						
China	--	--	--	11,100	8,860	20,200,000
India	--	--	--	1,110	875	2,340,000
Korea, Republic of	--	--	--	12,400	9,920	27,100,000
Mexico	1,130	910	2,260,000	11,200	8,840	22,500,000
Netherlands	--	--	--	48	39	118,000
Norway	1,300	1,050	2,430,000	18,500	14,900	34,600,000
Russia	--	--	--	18	14	46,300
South Africa	732	585	1,610,000	26,400	21,000	48,400,000
Spain	--	--	--	99	80	146,000
<b>Total</b>	<b>3,160</b>	<b>2,550</b>	<b>6,290,000</b>	<b>80,800</b>	<b>64,500</b>	<b>156,000,000</b>
<b>Medium carbon, 2%-4% C:</b>						
Brazil	--	--	--	1	1	2,780
China	20	11	38,900	60	32	114,000
South Africa	18	17	48,100	162	148	415,000
Switzerland	--	--	--	50	39	49,100
<b>Total</b>	<b>38</b>	<b>28</b>	<b>87,000</b>	<b>273</b>	<b>220</b>	<b>581,000</b>
<b>High carbon:</b>						
Australia	--	--	--	4,040	3,140	4,200,000
Bahrain	--	--	--	300	229	360,000
Brazil	--	--	--	1,100	829	1,340,000
France	--	--	--	10,700	7,760	12,800,000
India	--	--	--	198	147	233,000
Kazakhstan	--	--	--	1,450	1,100	1,620,000
Korea, Republic of	--	--	--	1,500	1,130	1,800,000
Mexico	--	--	--	8	6	14,600
Norway	2,200	1,730	2,470,000	9,200	7,240	10,300,000
Russia	--	--	--	649	473	659,000
South Africa	12,900	9,850	14,000,000	110,000	85,300	131,000,000
Ukraine	--	--	--	33,900	26,500	39,800,000
Venezuela	--	--	--	1,000	750	1,450,000
Zambia	--	--	--	1,490	1,050	1,600,000
<b>Total</b>	<b>15,100</b>	<b>11,600</b>	<b>16,400,000</b>	<b>176,000</b>	<b>136,000</b>	<b>208,000,000</b>
<b>Grand total</b>	<b>20,000</b>	<b>15,700</b>	<b>27,600,000</b>	<b>294,000</b>	<b>232,000</b>	<b>452,000,000</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. 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 MANGANESE ORE (20% OR MORE Mn) IN NOVEMBER 2010<sup>1,2</sup>

(Metric tons)

Source	Gross weight	Mn content	Customs value <sup>3</sup>	Year to date		
				Gross weight	Mn content	Customs value <sup>3</sup>
<b>More than 20%, but less than 47% manganese:</b>						
Gabon	--	--	--	16,800	7,480	\$2,320,000
Ghana	--	--	--	36,600	10,300	5,080,000
Mexico	--	--	--	2,920	1,050	687,000
South Africa	33,000	12,500	\$2,210,000	77,300	30,300	9,460,000
Total	33,000	12,500	2,210,000	134,000	49,100	17,500,000
<b>47% or more manganese:</b>						
Australia	16,900	8,300	4,760,000	86,400	65,200	24,900,000
Brazil	--	--	--	6,780	3,440	2,520,000
China	221	150	199,000	707	481	637,000
Gabon	--	--	--	204,000	105,000	60,600,000
Georgia	--	--	--	12,400	8,610	13,000,000
Morocco	40	32	29,200	1,510	772	186,000
South Africa	--	--	--	18,000	9,850	6,010,000
Total	17,100	8,490	4,990,000	330,000	193,000	108,000,000
Grand total	50,100	21,000	7,200,000	464,000	242,000	125,000,000

-- 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 2010<sup>1</sup>

(Metric tons, gross weight)

Source	Quantity	Customs value <sup>2</sup>	Year to date	
			Quantity	Customs value <sup>2</sup>
Belgium	--	--	94	\$374,000
Brazil	--	--	1	2,240
China	--	--	41	20,200
Colombia	300	\$577,000	680	1,310,000
Germany	9	16,100	49	93,800
India	--	--	( <sup>3</sup> )	3,970
Japan	558	1,270,000	6,210	13,700,000
Korea, Republic of	--	--	( <sup>3</sup> )	4,260
Mexico	6	9,800	8	13,800
Morocco	--	--	45	28,800
Netherlands	--	--	246	145,000
Singapore	11	19,400	133	226,000
South Africa	407	1,210,000	12,100	33,500,000
Spain	--	--	214	424,000
Total	1,290	3,100,000	19,800	49,800,000

-- 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.

<sup>3</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 6  
U.S. IMPORTS FOR CONSUMPTION OF MANGANESE METAL IN NOVEMBER 2010<sup>1</sup>

(Metric tons)

Source	Gross weight	Customs value <sup>2</sup>	Year to date	
			Gross weight	Customs value <sup>2</sup>
<b>Unwrought flake:</b>				
China	1,090	\$2,480,000	12,800	\$31,400,000
Hong Kong	60	175,000	724	1,980,000
Japan	--	--	30	38,700
Mexico	5	21,400	5	21,400
South Africa	114	398,000	1,330	4,210,000
Vietnam	--	--	1,210	2,940,000
Total	1,270	3,080,000	16,100	40,600,000
<b>Unwrought powder:</b>				
China	61	242,000	260	783,000
Mexico	--	--	39	206,000
South Africa	318	1,140,000	2,920	10,100,000
Total	379	1,380,000	3,220	11,100,000
<b>Unwrought, other:</b>				
China	816	2,240,000	10,000	24,300,000
Germany	44	150,000	788	2,410,000
Hong Kong	--	--	132	339,000
Poland	--	--	(3)	6,990
South Africa	--	--	800	2,670,000
Spain	--	--	43	90,200
Ukraine	--	--	19	23,800
United Kingdom	18	63,000	167	582,000
Total	878	2,450,000	12,000	30,400,000
<b>Other manganese, wrought:</b>				
Canada	--	--	(3)	7,110
China	11	29,500	56	169,000
France	12	56,400	35	140,000
Mexico	71	296,000	396	2,180,000
Poland	--	--	(3)	4,900
South Africa	--	--	40	124,000
Switzerland	(3)	2,650	(3)	2,650
United Kingdom	--	--	8	30,700
Total	94	384,000	535	2,660,000
Grand total	2,620	7,300,000	31,800	84,800,000

-- 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 31 metric tons (t), all of which was from Canada, to give a year-to-date total of 643 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 2010<sup>1</sup>

(Metric tons, gross weight)

Country	Manganese ore		Ferromanganese,				Silicomanganese		Manganese metal <sup>2</sup>	
	November	Year to date	2% or less C		More than 2% C		November	Year to date	November	Year to date
			November	Year to date	November	Year to date				
Australia	--	2	--	--	--	--	--	1	--	22
Belgium	--	407	--	--	--	--	--	240	--	192
Brazil	--	--	--	1,620	--	551	--	4	--	139
Canada	19	3,160	--	327	496	5,040	858	2,500	87	180
Chile	--	--	--	1,390	--	184	--	--	--	28
China	--	8,790	--	--	--	--	--	--	--	632
Colombia	--	1	--	21	--	--	--	--	--	--
Denmark	--	--	--	--	--	2	--	--	--	--
El Salvador	--	--	--	--	--	--	--	--	--	1
France	--	--	--	--	--	--	--	--	--	(3)
Germany	--	75	--	--	--	--	--	--	--	82
Guyana	--	--	--	--	--	--	--	--	--	2
Hong Kong	--	--	--	--	--	--	--	--	72	849
India	--	--	--	--	--	--	--	--	113	536
Indonesia	--	--	--	--	--	1	--	--	--	38
Ireland	--	--	--	--	--	19	--	--	--	--
Japan	--	--	--	--	--	--	--	--	34	254
Korea, Republic of	--	272	--	--	--	--	--	--	--	2
Luxembourg	--	--	--	--	--	--	--	--	--	3
Malaysia	--	102	--	--	--	4	--	--	4	5
Mexico	--	40	7,450	8,540	147	514	1,220	4,980	18	118
Norway	--	--	--	--	--	3	--	19	--	--
Pakistan	419	419	--	--	--	--	--	--	--	--
Romania	--	--	--	--	1	4	--	--	--	--
Russia	--	14	--	--	--	--	--	--	--	--
Singapore	--	--	--	--	13	37	--	--	--	--
Spain	--	8	--	--	--	--	--	60	--	--
Suriname	--	--	--	--	--	--	--	--	--	1
Taiwan	--	560	--	--	--	--	--	--	28	66
Trinidad and Tobago	--	7	--	--	--	--	--	279	--	--
Turkey	--	1	--	--	--	--	--	420	--	--
United Kingdom	--	40	--	--	--	--	--	--	--	1
Venezuela	--	--	--	--	--	1	--	--	--	--
Vietnam	--	--	--	--	--	--	--	--	--	217
Total	438	13,900	7,450	11,900	657	6,360	2,070	8,510	356	3,370

-- 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 2010, 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)	Year to date		
				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	1,000	\$845	South Africa 573; \$446	7,830	\$6,800	South Africa 3,090; \$2,200
Manganites, manganates, and other permanganates	--	--	--	18	101	Germany 17; \$62
Potassium permanganate	86	255	India 72; \$215	1,020	3,110	India 636; \$1,960
Sodium permanganate	--	--	--	530	1,220	China 528; \$1,200
Sulfates, basket category, including manganese sulfate	3,550	2,730	Mexico 2,060; \$1,640	37,500	37,200	Mexico 18,100; \$15,200
<b>Exports:</b>						
Manganese dioxide	669	1,130	Canada 318; \$333	8,550	14,200	Canada 3,780; \$3,900
Manganese oxides other than dioxide	529	701	Canada 230; \$162	7,120	11,900	Canada 2,380; \$1,990
Manganites, manganates, and other permanganates	11	135	Canada 9; \$23	89	415	Canada 86; \$218
Potassium permanganate	76	212	Canada 32; \$82	2,840	8,170	Belgium 1,650; \$4,270
Sodium permanganate	39	97	Mexico 19; \$45	1,120	2,790	Singapore 402; \$1,090
Sulfates, basket category, including manganese sulfate	972	752	Canada 764; \$427	15,300	12,900	Canada 11,500; \$6,890

-- 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.