

# Mineral Industry Surveys

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## MANGANESE IN APRIL 2004

In April, reported consumption of manganese ore containing 35% or more manganese, exclusive of that consumed at iron and steel plants, was 23,700 metric tons (t), which was a 25% decrease from the revised estimate for March of 31,500 t, according to the U.S. Geological Survey. This figure increases to 26,100 t when estimates for annual respondents are added on the basis of 2003 data. Corresponding industry stocks of ore at the end of the month were 179,000 t, which includes an estimate for annual respondents on the basis of 2003 data. (Data for the most recent 13 months are plotted in the graph on page 2.)

Foreign trade data for April will appear in a subsequent report. The data for March 2004 tabulated in this report indicate that the total exports, on a manganese content basis, were about five times those of February 2004, owing to a significant increase in manganese ore exports. Manganese imports, on a manganese content basis, increased by 19%, compared with those of February based on increases in manganese ore and dioxide imports.

On April 27, Consolidated Minerals Ltd. announced it would increase annual production to 800,000 t from 600,000 t at its Woodie Woodie Mine, East Pilbara District of Western Australia, by November 2004. The company plans to spend \$6.5 million to install additional heavy media separation capacity and make minor modifications to the existing crushing plant. The life of the mine would still be 10 years with added production capacity (Consolidated Minerals Ltd., 2004§<sup>1</sup>).

On April 28, the Defense National Stockpile Center issued Amendment No. 006 to the Solicitation of Offers, DLA-Manganese Metallurgical and Chemical Grades-002 for the sale of about 1,240 t of synthetic battery-grade manganese dioxide (Defense National Stockpile Center, 2004).

### Update

Eramet SA announced plans in June to increase production of manganese ore from its Moanda Mine in Gabon by 20% over the next 2 years to meet increasing demand from steelmakers. Production would increase to 3 million tons (Mt) in 2006 from its current annual production of 2.5 Mt (American Metal Market, 2004§).

### Reference Cited

Defense National Stockpile Center, 2004, Stockpile issues manganese ore amendment, Defense National Stockpile Center, News Release DNSC-04-2462, April 28, 1 p.

### Internet References Cited

American Metal Market, 2004 (June 23), Eramet plans to raise manganese production, accessed June 23, 2004, at URL <http://www.amm.com>.  
Consolidated Minerals Ltd., 2004 (April 27), Consmin announces manganese expansion, accessed June 1, 2004, at URL <http://consminerals.com.au>.

<sup>1</sup>References that include a section mark (§) are found in the Internet References Cited section.

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
2003:						
March	28,100	23,300 <sup>r</sup>	51,400 <sup>r</sup>	347	1,010	1,350
January-March	51,600	76,000 <sup>r</sup>	128,000 <sup>r</sup>	674	2,540	3,210
2004:						
January	13,100	37,500	50,600	653	796	1,450
February	20,600	33,100	53,700	1,920	745	2,660
March	34,800	29,300 <sup>3</sup>	64,100	12,400	559	13,000
Total	68,500	99,900	168,000	15,000	2,100	17,100

<sup>r</sup>Revised.

<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.

<sup>3</sup>All or part of these data have been referred to the U.S. Census Bureau for verification.

Source: U.S. Census Bureau.

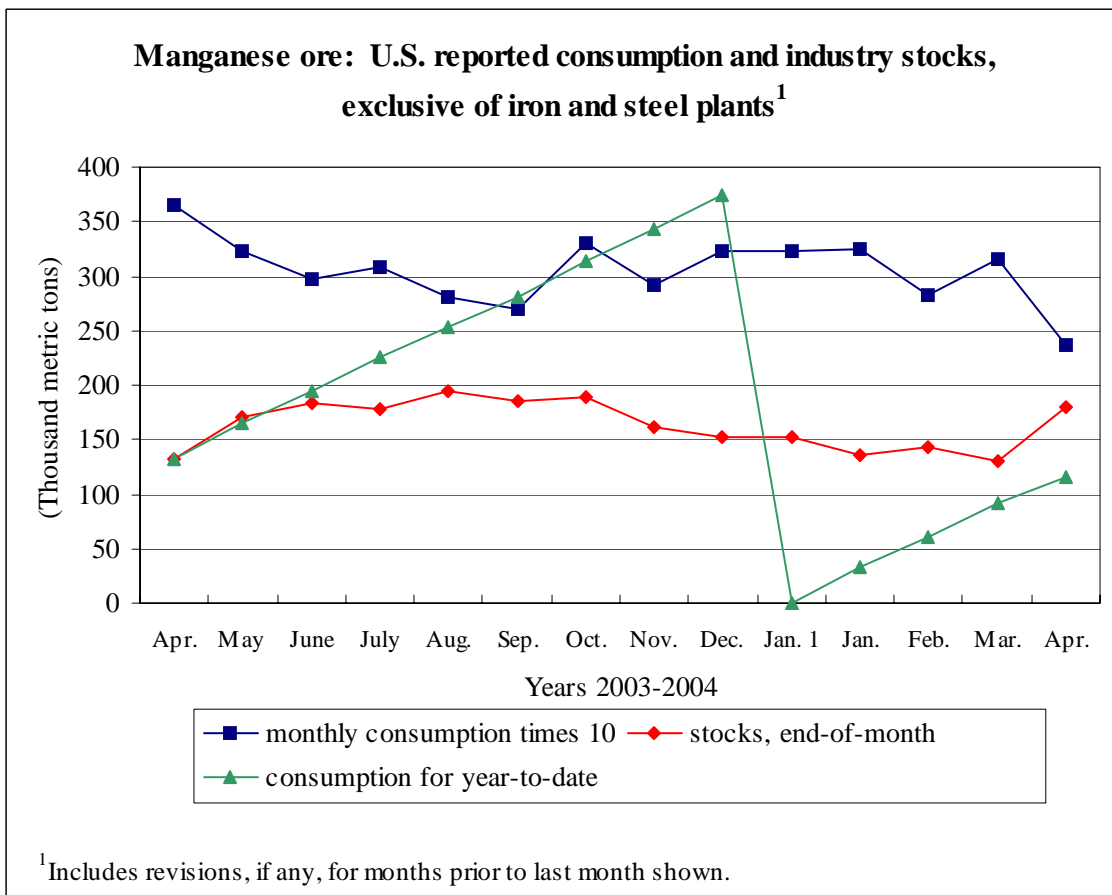


TABLE 2  
U.S. IMPORTS FOR CONSUMPTION OF SILICOMANGANESE IN MARCH 2004<sup>1</sup>

(Metric tons, unless otherwise specified)

Source	Gross weight	Mn content	Customs value	Year to date		
				Gross weight	Mn content	Customs value
Australia	6,120	4,060	\$3,290,000	10,100	6,730	\$5,500,000
Canada	--	--	--	668	552	295,000
Georgia	2,460	1,280	1,400,000	5,220	4,020	2,820,000
Korea, Republic of	--	--	--	4,350	2,860	1,880,000
Norway	38	23	34,700	6,070	3,800	4,720,000
Romania	4,640	3,200	4,900,000	14,800	10,700	11,400,000
South Africa	4,950	3,280	3,460,000	24,900	16,400	15,100,000
Ukraine	--	--	--	18	13	18,000
United Kingdom	--	--	--	17	13	11,700
Total	18,200	11,800	13,100,000	66,200	45,100	41,700,000
Total, general imports	18,200	11,800	13,100,000	66,200	45,100	41,700,000

-- Zero.

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

Source: U.S. Census Bureau.

TABLE 3  
U.S. IMPORTS FOR CONSUMPTION OF FERROMANGANESE IN MARCH 2004<sup>1</sup>

(Metric tons, unless otherwise specified)

Source	Gross weight	Mn content	Customs value	Year to date		
				Gross weight	Mn content	Customs value
<b>Low carbon:</b>						
China	94	88	\$133,000	1,150	976	\$1,000,000
Mexico	--	--	--	1,220	963	1,100,000
Norway	90	73	111,000	791	646	711,000
South Africa	200	186	283,000	364	336	466,000
Total, low carbon	384	347	527,000	3,520	2,920	3,280,000
Total, general imports of low carbon	384	347	527,000	3,520	2,920	3,280,000
<b>Medium carbon, 1%-2% C:</b>						
China	--	--	--	840	682	580,000
Italy	--	--	--	11	76	42,000
Korea, Republic of	--	--	--	2,500	2,000	1,450,000
Mexico	260	199	257,000	427	327	415,000
Norway	--	--	--	2,540	2,080	1,900,000
South Africa	2,710	2,170	2,120,000	11,600	9,300	8,550,000
Total, m.c., 1%-2% C	2,970	2,370	2,380,000	17,900	14,500	12,900,000
Total, general imports of m.c., 1%-2% C	2,970	2,370	2,380,000	17,900	14,500	12,900,000
Medium carbon, 2%-4% C, Georgia	1,200 <sup>2</sup>	1,200 <sup>2</sup>	778,000 <sup>2</sup>	1,200	1,200	778,000
Total, general imports of m.c., 2%-4% C	1,200 <sup>2</sup>	1,200 <sup>2</sup>	778,000 <sup>2</sup>	1,200	1,200	778,000
<b>High carbon:</b>						
Australia	3,100	2,390	1,740,000	5,410	4,170	2,530,000
Brazil	--	--	--	3,920	3,090	1,830,000
Norway	--	--	--	5,890	4,590	2,670,000
South Africa	7,760	6,060	4,440,000	21,200	16,500	11,200,000
Spain	3,000	2,270	2,960,000	3,000	2,270	2,960,000
Total, high carbon	13,900	10,700	9,130,000	39,400	30,600	21,200,000
Total, general imports of high carbon	13,900	10,700	9,130,000	39,400	30,600	21,200,000
Grand total	18,400	14,600	12,800,000	62,000	49,200	38,200,000
Grand total, general imports	18,400	14,600	12,800,000	62,000	49,200	38,200,000

-- Zero.

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

<sup>2</sup>All or part of these data have been referred to the U.S. Census Bureau for verification.

Source: U.S. Census Bureau.

TABLE 4  
U.S. IMPORTS OF MANGANESE ORE (20% OR MORE Mn) IN MARCH 2004<sup>1,2</sup>

(Metric tons)

Source	20% - 47% Mn		47% or more Mn		Total	
	Gross weight	Mn content	Gross weight	Mn content	Gross weight	Mn content
Gabon	1,000	440	63,300	33,300	64,300	33,700
India	--	--	39	35	39	35
Total	1,000	440	63,300	33,300	64,300	33,700
Year to date:						
Australia	--	--	17,300	9,150	17,300	9,150
Belgium	--	--	36	25	36	25
Gabon	1,000	440	105,000	53,900	106,000	54,400
India	--	--	39	35	39	35
Total	1,000	440	122,000	63,100	123,000	63,600

-- 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.

Source: U.S. Census Bureau.

TABLE 5  
U.S. IMPORTS FOR CONSUMPTION OF MANGANESE DIOXIDE IN MARCH 2004<sup>1</sup>

(Metric tons, gross weight)

Source	Manganese dioxide			
	Quantity	Customs value	Year to date	
			Quantity	Customs value
Australia	196	\$240,000	3,350	\$4,070,000
Belgium	55	103,000	123	238,000
Brazil	275	184,000	364	229,000
China	1,220	1,240,000	2,840	2,870,000
Germany	8	32,700	31	71,400
Greece	--	--	288	340,000
Japan	--	--	827	989,000
South Africa	--	--	370	467,000
Total	1,750	1,800,000	8,200	9,280,000
Total, general imports	1,750	1,800,000	8,200	9,280,000

-- Zero.

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

Source: U.S. Census Bureau.

TABLE 6  
U.S. IMPORTS FOR CONSUMPTION OF MANGANESE METAL IN MARCH 2004<sup>1</sup>

(Metric tons)

Source	Gross weight	Customs value	Year to date	
			Gross weight	Customs value
<b>Unwrought flake:</b>				
China	600	\$605,000	1,140	\$1,150,000
South Africa	1,110	1,530,000	1,890	2,520,000
Total	1,710	2,130,000	3,030	3,670,000
<b>Unwrought powder:</b>				
China	160	197,000	532	588,000
South Africa	422	605,000	988	1,540,000
Total	582	802,000	1,520	2,130,000
<b>Unwrought, other:</b>				
China	19	28,500	19	28,500
Spain	68	95,700	102	161,000
South Africa	320	467,000	620	845,000
Total	407	591,000	741	1,030,000
<b>Other manganese, wrought:</b>				
China	59	100,000	165	249,000
Japan	4	14,400	4	14,400
India	--	--	8	12,000
Spain	--	--	17	39,200
United Kingdom	--	--	(2)	5,100
Total	63	114,000	194	320,000
Grand total	2,760	3,640,000	5,490	7,150,000

-- Zero.

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

<sup>2</sup>Less than 1/2 unit.

Note: Imports for consumption of metallic manganese waste and scrap totaled 120 tons, all of which was from Canada, to give a year-to-date total of 283 tons.

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 2004<sup>1</sup>

(Metric tons, gross weight)

	Manganese ore		Ferromanganese, 2% or less C		Silicomanganese		Manganese metal <sup>2</sup>	
	March	Year to date	March	Year to date	March	Year to date	March	Year to date
Australia	16	32	--	--	--	--	--	--
Belgium	--	--	--	--	--	--	18	95
Brazil	15	50	--	--	--	--	(3)	2
Canada	592	1,770	340	1,330	--	--	113	312
China	22,800	22,800	--	--	--	--	--	--
Estonia	--	--	--	54	--	--	--	--
France	--	--	--	--	3	3	--	(3)
Germany	1,080	2,130	--	--	--	--	--	(3)
Hong Kong	--	23	--	--	--	--	--	--
Indonesia	26	26	--	--	--	5	--	--
Italy	--	74	--	--	--	--	9	29
Japan	--	--	--	--	--	--	86	214
Korea, Republic of	--	--	--	--	--	--	4	4
Mexico	--	--	--	22	16	51	--	105
Netherlands	126	2,510	--	--	--	11	--	--
Norway	110	110	--	--	--	--	--	--
Poland	25	213	--	--	--	--	--	--
Russia	--	21	--	--	--	--	--	--
Sweden	100	160	--	--	--	--	31	63
Trinidad and Tobago	--	--	--	--	--	38	--	--
United Kingdom	--	98	--	--	--	--	1	1
Total	24,900	30,000	340	1,410	19	108	262	825

-- Zero.

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

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

<sup>3</sup>Less than 1/2 unit.

Note: Exports of ferromanganese with more than 2% carbon totaled 20 tons, all of which went to Canada, to give a year-to-date total of 115 tons.

Source: U.S. Census Bureau.

TABLE 8  
U.S. FOREIGN TRADE IN SELECTED MANGANESE CHEMICALS IN MARCH 2004, BY CLASS<sup>d</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	289	\$276	Mexico 189; \$68	709	\$630	Mexico 451; \$184
Sulfates, basket category, including manganese sulfate	4,770	1,990	China 3,260; \$1,020	10,100	4,890	China 6,140; \$2,100
Potassium permanganate	31	57	Czech Republic 31; \$57	254	484	Czech Republic 200; \$378
Manganites, manganates, and other permanganates	--	--	XX	274	446	China 274; \$446
<b>Exports:</b>						
Manganese dioxide	311	323	Canada 107; \$42	899	838	Canada 424; \$174
Manganese oxides other than dioxide	455	631	Canada 218; \$79	1,250	1,230	Canada 717; \$290
Sulfates, basket category, including manganese sulfate	1,810	1,050	Canada 1,610; \$549	4,510	2,490	Canada 3,820; \$1,280
Potassium permanganate	196	286	Spain 113; \$170	760	1,110	Spain 518; \$802
Manganites, manganates, and other permanganates	29	133	Hong Kong 14; \$62	148	624	Japan 87; \$380

XX Not applicable.

<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.