

# 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

Oana Petrican (Data)  
Telephone: (703) 648-7968  
Fax: (703) 648-7975  
E-mail: opetrican@usgs.gov

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

## MANGANESE IN SEPTEMBER 2004

In September, reported consumption of manganese ore containing 35% or more manganese, exclusive of that consumed at iron and steel plants, was 31,900 metric tons (t), which was a 9% decrease from that of August 2004, according to the U.S. Geological Survey. This figure increases to 34,300 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 180,000 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.) Domestic consumption of manganese ore during the third quarter of 2004 was 95,500 t, which was 9% higher than the revised second quarter 2004 (87,800 t). Domestic consumption during the first

9 months of 2004 was 283,000 t, which was 5% higher than that during the same period in 2003 (270,000 t).

Foreign trade data for September will appear in a subsequent report. The following comparisons of trade data were made on the basis of manganese content. The data for August 2004 tabulated in this report indicate that the total exports of 2,490 t decreased by 69% from those of the previous month, owing to a significant decrease in manganese ore exports. Manganese imports were 104,000 t, which was an increase of 34%, compared with those of July. The increase in manganese imports was based on significant increases in manganese ore and dioxide imports.

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
<b>2003:</b>						
August	17,800	33,900	51,700	4,920	1,600	6,520
January-August	150,000	226,000 <sup>r</sup>	376,000 <sup>r</sup>	7,580	7,230	14,800
<b>2004:</b>						
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
April	3,720	57,300 <sup>3</sup>	61,000	733	1,300	2,030
May	44,200	25,000	69,200	1,990	643	2,630
June	23,800	45,200	69,000	3,210	507	3,720
July	1,130	76,300	77,400	7,260	701	7,960
August	4,410	99,300	104,000	1,940	543	2,490
Total	146,000	403,000	549,000	30,100	5,790	35,900

<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.

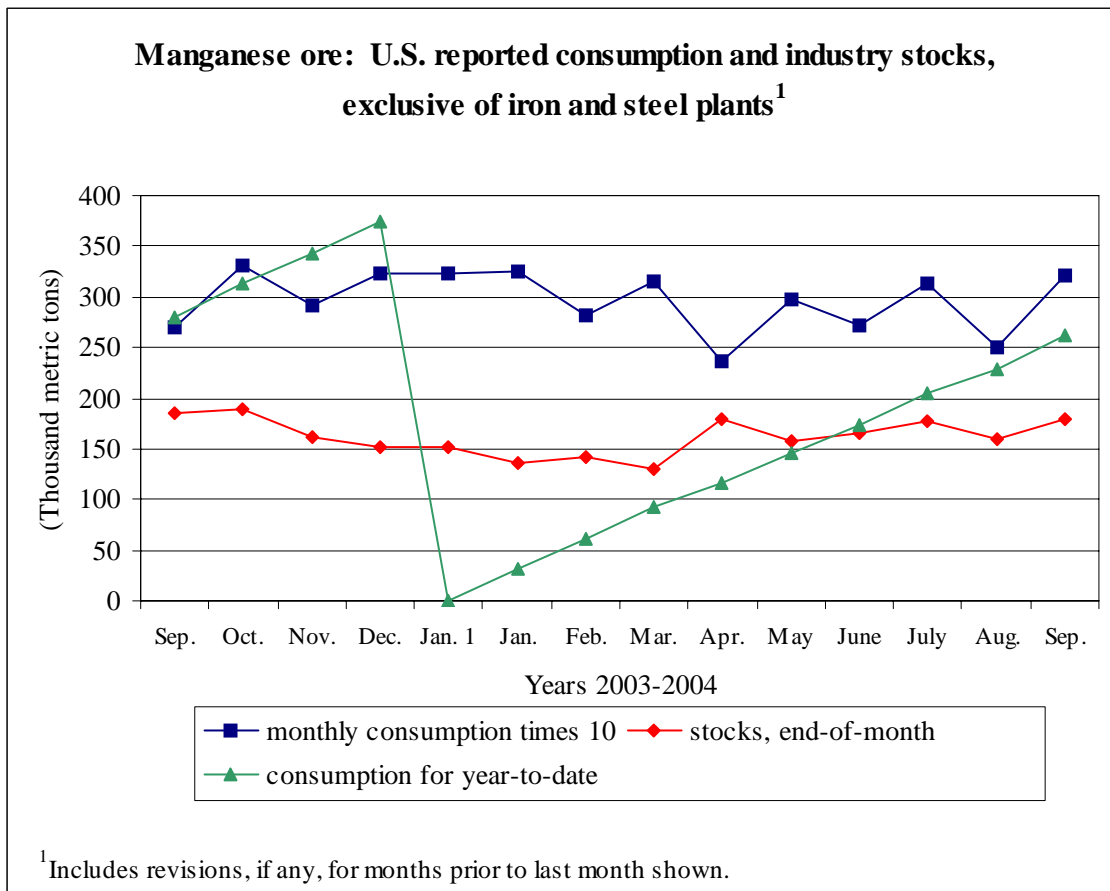


TABLE 2  
U.S. IMPORTS FOR CONSUMPTION OF SILICOMANGANESE IN AUGUST 2004<sup>1</sup>

(Metric tons)

Source	Gross weight	Mn content	Customs value	Year to date		
				Gross weight	Mn content	Customs value
Australia	--	--	--	21,200	14,000	\$15,000,000
Canada	--	--	--	704	580	317,000
China	240	160	\$316,000	240	160	\$316,000
France	--	--	--	3,010	2,030	2,980,000
Gabon	46	33	63,300	46	33	63,300
Georgia	4,530	3,390	5,510,000	23,100	17,900	21,500,000
Korea, Republic of	--	--	--	5,850	3,830	3,370,000
Mexico	2,000	1,310	1,280,000	4,510	2,950	2,780,000
Norway	8,780	5,610	10,600,000	38,900	21,000	29,400,000
Romania	14,400	10,000	18,400,000	47,800	34,900	49,900,000
Russia	18,800	5,750	2,980,000	24,000	9,160	10,200,000
Slovakia	1,520	985	803,000	1,520	985	803,000
South Africa	14,800	9,730	18,200,000	103,000	63,900	91,100,000
Spain	--	--	--	1,400	933	1,910,000
Ukraine	22	17	33,000	72	40	56,200
United Kingdom	--	--	--	17	13	11,700
Venezuela	--	--	--	18	404	210,000
Total	65,200	37,000	58,300,000	275,000	173,000	230,000,000
Total, general imports	65,200	37,000	58,300,000	275,000	173,000	230,000,000

-- 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 AUGUST 2004<sup>1</sup>

(Metric tons)

Source	Gross weight	Mn content	Customs value	Year to date		
				Gross weight	Mn content	Customs value
Low carbon:						
China	1,070	1,010	\$1,700,000	4,820	4,320	\$6,370,000
Japan	--	--	--	1,200	965	1,230,000
Mexico	--	--	--	1,340	1,070	1,330,000
Norway	--	--	--	1,190	974	1,230,000
South Africa	240	223	399,000	1,170	1,090	1,670,000
Spain	--	--	--	18	14	19,000
Ukraine	40	32	47,900	40	32	47,900
Total, low carbon	1,350	1,260	2,140,000	9,780	8,460	11,900,000
Total, general imports of low carbon	1,350	1,260	2,140,000	9,780	8,460	11,900,000

See footnotes at end of table.

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

(Metric tons)

Source	Gross weight	Mn content	Customs value	Year to date		
				Gross weight	Mn content	Customs value
<b>Medium carbon, 1%-2% C:</b>						
Argentina	--	--	--	420	287	\$482,000
Austria	--	--	--	5	4	2,880
China	2,910	2,320	\$3,200,000	6,210	4,970	6,020,000
Italy	--	--	--	11	76	42,000
Korea, Republic of	--	--	--	5,500	4,650	4,040,000
Mexico	1,650	1,310	1,510,000	6,720	5,300	6,220,000
Netherlands	--	--	--	757	590	848,000
Norway	3,000	2,460	4,560,000	6,940	5,670	8,280,000
Romania	--	--	--	150	113	78,500
Saudi Arabia	8	7	3,620	8	7	3,620
South Africa	2,560	2,070	2,720,000	31,300	25,300	29,200,000
Ukraine	4,020	3,170	4,340,000	4,140	3,270	4,450,000
Venezuela	--	--	--	400	253	372,000
Total, m.c., 1%-2% C	14,100	11,300	16,300,000	62,600	50,500	60,000,000
Total, general imports of m.c., 1%-2% C	14,100	11,300	16,300,000	62,600	50,500	60,000,000
<b>Medium carbon, 2%-4% C</b>						
China	38	35	60,200	38	35	60,200
Georgia	1,500	1,230	1,940,000	5,390	5,120	4,750,000
Total, m.c., 2%-4% C	1,530	1,260	2,000,000	5,430	5,160	4,810,000
Total, general imports of m.c., 2%-4% C	1,530	1,260	2,000,000	5,430	5,160	4,810,000
<b>High carbon:</b>						
Australia	--	--	--	17,900	12,500	11,900,000
Brazil	5,720	3,500	1,630,000	9,640	6,590	3,460,000
Canada	41	32	24,500	77	59	44,100
China	24,300	15,400	6,000,000	25,300	16,300	7,430,000
France	8	33	15,500	1,310	1,050	953,000
India	5,170	3,920	6,400,000	6,810	5,190	7,090,000
Norway	2,290	1,400	1,650,000	10,700	7,950	7,890,000
Poland	211	167	308,000	231	183	344,000
Saudi Arabia	11	46	21,500	11	46	21,500
South Africa	31,400	20,000	14,100,000	126,000	87,200	86,500,000
Spain	36	30	57,900	8,600	6,720	8,640,000
Switzerland	--	--	--	80	64	120,000
Ukraine	303	233	451,000	1,880	1,440	2,240,000
United Kingdom	--	--	--	60	47	86,600
Total, high carbon	69,400	44,800	30,700,000	208,000	145,000	137,000,000
Total, general imports of high carbon	69,400	44,800	30,700,000	208,000	145,000	137,000,000
Grand total	86,400	58,600	51,100,000	286,000	209,000	213,000,000
Grand total, general imports	86,400	58,600	51,100,000	286,000	209,000	213,000,000

-- 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 4  
U.S. IMPORTS OF MANGANESE ORE (20% OR MORE Mn) IN AUGUST 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
Belgium	--	--	18	13	18	13
Gabon	--	--	6,000	3,480	6,000	3,480
India	--	--	3	1	3	1
Poland	--	--	109	86	109	86
Total	--	--	6,130	3,580	6,130	3,580
Year to date:						
Australia	--	--	30,500	16,100	30,500	16,100
Belgium	--	--	109	76	109	76
Brazil	--	--	6	6	6	6
China	18	8	3,950	2,100	3,960	2,110
Gabon	1,540	706	230,000	116,000	231,000	116,000
Georgia	--	--	21	16	21	16
India	--	--	41	37	41	37
Mexico	2,900	1,100	--	--	2,900	1,100
Poland	--	--	109	86	109	86
Total	4,450	1,810	264,000	134,000	269,000	136,000

-- 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.

Source: U.S. Census Bureau.

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

(Metric tons, gross weight)

Source	Manganese dioxide			
	Quantity	Customs value	Year to date	
			Quantity	Customs value
Australia	--	--	4,440	\$5,400,000
Austria	--	--	--	--
Belgium	92	\$224,000	471	980,000
Brazil	40	21,600	548	324,000
China	585	577,000	7,650	7,700,000
France	--	--	--	--
Germany	28	80,400	73	210,000
Greece	486	631,000	1,740	2,190,000
India	--	--	--	--
Japan	118	170,000	1,080	1,330,000
Netherlands	--	--	--	--
Poland	--	--	--	--
South Africa	39	71,200	491	686,000
Spain	--	--	20	24,500
United Kingdom	--	--	1	9,250
Total	1,390	1,770,000	16,500	18,900,000
Total, general imports	1,390	1,770,000	16,500	18,900,000

-- 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 AUGUST 2004<sup>1</sup>

(Metric tons)

Source	Gross weight	Customs value	Year to date	
			Gross weight	Customs value
<b>Unwrought flake:</b>				
China	996	\$1,330,000	5,810	\$9,500,000
South Africa	721	1,020,000	5,230	7,200,000
Total	1,720	2,360,000	11,000	16,700,000
<b>Unwrought powder:</b>				
China	700	1,020,000	3,090	4,080,000
Germany	3	4,700	16	41,900
South Africa	502	801,000	2,800	4,210,000
Total	1,210	1,830,000	5,900	8,330,000
<b>Unwrought, other:</b>				
China	20	41,100	39	69,600
Germany	--	--	38	80,100
Poland	77	112,000	112	159,000
Spain	150	257,000	598	1,040,000
South Africa	382	596,000	2,000	2,950,000
Total	629	1,010,000	2,790	4,300,000
<b>Other manganese, wrought:</b>				
Austria	--	--	(2)	10,700
China	20	27,000	299	460,000
France	3	34,000	7	65,800
Germany	(2)	50,800	8	135,000
Japan	--	--	4	14,400
India	--	--	8	12,000
Netherlands	--	--	9	20,900
Poland	--	--	40	26,300
Spain	--	--	169	410,000
United Kingdom	--	--	(2)	5,100
South Africa	4	2,160	4	2,160
Total	27	114,000	548	1,160,000
Grand total	3,580	5,300,000	20,300	30,500,000

-- 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 112 tons, all of which was from Canada, to give a year-to-date total of 1,120 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>	
	August	Year to date	August	Year to date	August	Year to date	August	Year to date
Australia	99	142	--	--	--	3	--	--
Belgium	--	--	--	--	--	--	--	130
Brazil	664	888	--	--	--	26	--	6
Canada	287	3,220	375	2,590	--	46	58	676
Chile	--	19	--	--	--	--	--	--
China	--	42,400	--	23	--	--	--	--
Colombia	--	--	--	--	--	--	1	1
Costa Rica	--	--	--	--	--	--	--	2
Croatia	--	--	--	19	--	--	--	--
Dominican Republic	--	--	--	--	--	--	--	14
Estonia	--	--	--	54	--	--	--	--
France	--	242	--	--	--	24	--	4
Germany	602	4,590	--	--	--	--	32	150
Hong Kong	--	23	--	--	--	--	--	(3)
India	--	41	--	--	--	--	--	--
Indonesia	--	26	--	10	--	18	--	--
Israel	--	118	--	--	--	--	--	--
Italy	--	74	--	--	--	--	--	29
Japan	--	37	--	--	--	--	--	477
Korea, Republic of	--	25	--	--	--	--	--	64
Kuwait	--	434	--	--	--	--	--	--
Malaysia	--	--	--	--	--	--	--	2
Mexico	--	--	--	22	31	165	16	161
Netherlands	--	3,100	--	--	2	14	--	--
Norway	--	1,000	--	--	--	--	--	--
Peru	--	--	--	--	--	--	--	4
Philippines	464	464	--	--	--	--	--	--
Poland	--	513	--	--	--	--	--	--
Russia	--	21	--	--	--	--	--	--
Spain	--	--	--	--	--	8	--	--
Sweden	630	1,610	--	--	--	--	--	126
Switzerland	--	35	--	--	--	--	--	--
Taiwan	99	108	--	--	--	--	--	2
Trinidad and Tobago	--	--	--	--	--	38	--	--
Turkey	--	--	--	9	--	--	--	--
United Kingdom	1,040	1,140	--	--	--	--	--	4
Venezuela	--	34	--	390	--	--	--	--
Total	3,890	60,300	375	3,120	33	342	107	1,850

-- 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 148 tons, all of which went to Canada, to give a year-to-date total of 1,580 tons.

Source: U.S. Census Bureau.

TABLE 8  
U.S. FOREIGN TRADE IN SELECTED MANGANESE CHEMICALS IN AUGUST 2004, 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	283	\$384	Mexico 113; \$46	2,150	\$1,830	Mexico 891; \$372
Sulfates, basket category, including manganese sulfate	2,790	1,800	China 1,780; 806	25,200	13,900	China 12,200; \$5,280
Potassium permanganate	156	360	Czech Republic 76; \$150	790	1,580	Czech Republic 567; \$1,090
Manganites, manganates, and other permanganates	180	281	China 180; \$281	848	1,380	China 829; \$1,310
<b>Exports:</b>						
Manganese dioxide	261	264	Canada 120; \$51	2,310	2,250	Canada 1,030; \$445
Manganese oxides other than dioxide	565	585	Canada 419; \$164	3,590	3,060	Canada 2,220; \$876
Sulfates, basket category, including manganese sulfate	1,520	1,280	Canada 1,220; \$527	12,600	8,530	Canada 10,600; \$4,600
Potassium permanganate	231	368	Spain 90; \$139	2,280	3,450	Spain 1,490; \$2,310
Manganites, manganates, and other permanganates	20	83	Japan 15; \$54	375	1,470	Japan 204; \$835

<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.