

# 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 JULY 2005

On a gross-weight basis, reported consumption of manganese ore containing 35% or more manganese, exclusive of that consumed at iron and steel plants, was 18,500 metric tons (t) in July 2005, which was a 46% decrease from that in June 2005, according to the U.S. Geological Survey. This figure increases to 20,900 t when estimates for annual respondents are added on the basis of 2004 data. Corresponding industry stocks of ore at the end of the month were 206,500 t, which includes an estimate for annual respondents on the basis of 2004 data. This was a 25% increase over the amount of ending stocks in June 2005.

Foreign trade data for July will appear in a subsequent report. The following comparisons of trade data were made on the basis of manganese content. The data for June 2005 tabulated in this report indicate that the total exports of 1,820 t were 5% higher than those of the prior month, owing to increases in ferromanganese and silicomanganese exports. Manganese imports were 60,500 t, which was a decrease of 5% compared with those of May. The decrease in manganese imports was due to decreases in manganese metal and silicomanganese imports.

### Ferroalloy Prices, manganese content

	High-carbon ferromanganese <sup>1</sup> (dollars per gross ton)	Medium-carbon ferromanganese <sup>1</sup> (cents per pound)	Silicomanganese <sup>1</sup> (cents per pound)	Manganese metal <sup>2</sup> (cents per pound)
July 7	540.00-560.00	53.00-55.00	29.00-31.00	85.00-87.00
July 14	535.00-550.00	52.00-53.00	29.00-31.00	85.00-87.00
July 21	525.00-540.00	52.00-55.00	29.00-30.50	85.00-87.00
July 28	510.00-530.00	51.00-53.00	29.00-30.00	85.00-87.00

### Ore Prices, dollars per metric ton unit, manganese content<sup>3</sup>

	44% Manganese Ore <sup>2</sup>	48% Manganese Ore <sup>2</sup>
July 7	2.30-2.40	3.10-3.30
July 14	2.20-2.30	3.00-3.20
July 21	2.20-2.30	3.00-3.20
July 28	1.90-2.10	2.80-3.00

<sup>1</sup>Source: Platts Metals Week, dealer import price.

<sup>2</sup>Source: Ryan's Notes, North American transaction price.

<sup>3</sup>To determine dollars per metric ton, multiply the manganese content percentage by the price.

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
2004:						
June	23,800	45,200	69,000	3,210	507	3,720
January-June	140,000	227,000	368,000	20,900	4,550	25,500
2005:						
January	7,650	45,000	52,600	162	955	1,120
February	40,700	29,000	69,700	111	1,170	1,280
March	22,300	42,000	64,300	206	1,160	1,360
April	38,400	39,900	78,300	2,350	778	3,130
May	16,500	47,400	64,000	364	1,380	1,740
June	19,500	41,000	60,500	272	1,550	1,820
Total	145,000	244,000	389,000	3,470	6,990	10,500

<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 2  
U.S. IMPORTS FOR CONSUMPTION OF SILICOMANGANESE IN JUNE 2005<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	462	307	\$212,000	16,600	11,100	\$10,400,000
Canada	--	--	--	350	311	195,000
Kazakhstan	--	--	--	20	13	17,500
Korea, Republic of	--	--	--	216	156	305,000
Mexico	750	494	623,000	7,250	4,830	5,970,000
Norway	9,270	5,810	8,470,000	41,100	26,000	40,000,000
Romania	5,320	3,460	3,870,000	28,600	19,700	22,100,000
Russia	--	--	--	11,400	7,750	9,250,000
South Africa	5,190	3,430	2,640,000	54,200	35,900	35,300,000
Spain	--	--	--	4,000	2,670	2,770,000
Total	21,000	13,500	15,800,000	164,000	108,000	126,000,000
Total, general imports	21,000	13,500	15,800,000	164,000	108,000	126,000,000

-- 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 3  
U.S. IMPORTS FOR CONSUMPTION OF FERROMANGANESE IN JUNE 2005<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	2,030	1,670	\$3,190,000	11,400	9,730	\$18,900,000
Japan	--	--	--	1,800	1,450	2,170,000
Korea, Republic of	890	740	1,160,000	1,390	1,040	1,480,000
Mexico	841	678	938,000	2,770	2,230	3,200,000
Netherlands	--	--	--	17	14	29,800
Norway	--	--	--	221	181	369,000
South Africa	299	277	536,000	1,320	1,220	2,450,000
Spain	--	--	--	36	28	41,800
Total, low carbon	4,060	3,370	5,820,000	19,000	15,900	28,600,000
Total, general imports of low carbon	4,060	3,370	5,820,000	19,000	15,900	28,600,000
<b>Medium carbon, 1%-2% C:</b>						
China	1,280	1,040	1,850,000	3,130	2,490	4,460,000
Korea	4,500	3,600	3,300,000	9,000	7,200	7,430,000
Mexico	815	648	769,000	7,950	6,220	8,750,000
Norway	--	--	--	1,810	1,480	2,610,000
South Africa	4,190	3,380	4,410,000	19,500	15,800	23,700,000
Total, m.c., 1%-2% C	10,800	8,660	10,300,000	41,400	33,200	47,000,000
Total, general imports of m.c., 1%-2% C	10,800	8,660	10,300,000	41,400	33,200	47,000,000
<b>High carbon:</b>						
Australia	--	--	--	4,460	3,420	2,380,000
Brazil	1,600	981 <sup>3</sup>	810,000	10,800	8,360	8,140,000
Canada	--	--	--	18	13	17,000
China	--	--	--	5,500	4,200	3,850,000
France	--	--	--	4,100	3,200	2,830,000
Hong Kong	3,060	2,330	1,740,000	3,360	2,550	1,960,000
Mexico	3	2	3,670 <sup>3</sup>	790	618	717,000
South Africa	9,630	7,450	4,610,000	58,600	45,600	38,800,000
Ukraine	2,840	2,230	1,260,000	2,840	2,230	1,260,000
Total, high carbon	17,100	13,000	8,430,000	90,500	70,100	59,900,000
Total, general imports of high carbon	17,100	13,000	8,430,000	90,500	70,100	59,900,000
Grand total	32,000	25,000	24,600,000	151,000	119,000	135,000,000
Grand total, general imports	32,000	25,000	24,600,000	151,000	119,000	135,000,000

-- 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>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 FOR CONSUMPTION OF MANGANESE ORE (20% OR MORE Mn) IN JUNE 2005<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>						
China	5,110	1,040	\$23,400	5,140	1,050	\$35,100
Gabon	5,600	3,330 <sup>4</sup>	497,000	5,660	6,530	974,000
Ghana	18	7	2,340	18	7	2,340
Mexico	--	--	--	5,870	3,240	675,000
Namibia	--	--	--	26,000	10,400	1,950,000
United Kingdom	87	40	6,000	87	40	6,000
Total	10,800	4,420	529,000	42,800	21,300	3,640,000
<b>47% or more manganese:</b>						
Australia	--	--	--	22,500	11,800	2,810,000
Belgium	18	13 <sup>5</sup>	14,600	78	50	58,200
Brazil	80	68	71,100	8,710	5,000	1,230,000
China	60	29	66,300	8,600	4,300	781,000
France	--	--	--	60	56 <sup>5</sup>	6,670
Gabon	27,800	14,400	2,130,000	160,000	82,500	12,300,000
Ghana	--	--	--	72	50	4,320
India	--	--	--	82	39	8,620
South Africa	--	--	--	27,300	13,300	2,530,000
Total	28,000	14,500	2,280,000	228,000	117,000	19,700,000
Grand total	38,800	19,000	2,810,000	270,000	138,000	23,400,000

-- 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>All or part of these data have been referred to the U.S. Census Bureau for verification.

<sup>5</sup>All or part of these data have been referred to the U.S. Census Bureau for verification. Reported content is likely that of MnO<sub>2</sub> rather than Mn.

Source: U.S. Census Bureau.

TABLE 5  
U.S. IMPORTS FOR CONSUMPTION OF MANGANESE DIOXIDE IN JUNE 2005<sup>1</sup>

(Metric tons, gross weight)

Source	Quantity	Customs value <sup>2</sup>	Year to date	
			Quantity	Customs value <sup>2</sup>
Australia	--	--	4,910	\$6,440,000
Belgium	38	\$88,800	280	631,000
Brazil	--	--	371	414,000
China	405	413,000	3,550	3,610,000
Germany	8	30,500	63	208,000
Japan	365	523,000	1,860	2,540,000
Total	816	1,060,000	11,000	13,800,000
Total, general imports	816	1,060,000	11,000	13,800,000

-- 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 6  
U.S. IMPORTS FOR CONSUMPTION OF MANGANESE METAL IN JUNE 2005<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	775	\$1,110,000	6,400	\$9,950,000
Germany	--	--	7	28,200
South Africa	642	1,160,000	3,280	5,670,000
Total	1,420	2,270,000	9,690	15,600,000
<b>Unwrought powder:</b>				
China	--	--	110	206,000
South Africa	352	717,000	2,040	3,960,000
Total	352	717,000	2,150	4,170,000
<b>Unwrought, other:</b>				
China	--	--	100	204,000
Germany	445	882,000	1,790	3,540,000
Spain	245	593,000	1,670	3,660,000
South Africa	--	--	677	1,270,000
Total	690	1,480,000	4,240	8,670,000
<b>Other manganese, wrought:</b>				
Austria	--	--	1	53,300
China	60	92,100	300	488,000
France	1	14,700	19	193,000
Germany	--	--	4	42,300
Spain	--	--	37	77,600
United Kingdom	--	--	2	7,070
Total	61	107,000	363	862,000
Grand total	2,520	4,570,000	16,400	29,400,000

-- 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.

Note: Imports for consumption of metallic manganese waste and scrap totaled 23 tons, all of which was from Canada, to give a year-to-date total of 317 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 JUNE 2005<sup>1</sup>

(Metric tons, gross weight)

	Manganese ore		Ferromanganese, 2% or less C		Silicomanganese		Manganese metal <sup>2</sup>	
	June	Year to date	June	Year to date	June	Year to date	June	Year to date
Australia	--	--	--	--	--	--	--	5
Belgium	--	--	--	--	--	--	179	502
Brazil	--	--	--	--	--	5	(3)	18
Canada	437	1,910	1,280	5,280	205	242	3	191
Chile	--	4	--	1	--	--	--	--
China	51	4,600	--	--	--	--	--	--
Colombia	--	6	--	--	--	--	--	--
Denmark	--	17	--	--	--	--	--	--
France	--	--	--	--	--	92	--	--
Germany	17	70	--	--	--	--	21	158
Hong Kong	--	--	--	--	--	--	(3)	2
Indonesia	--	16	--	--	--	11	3	3
Italy	--	--	--	--	--	--	--	4
Japan	--	--	--	--	--	--	55	256
Korea, Republic of	--	--	--	--	--	--	--	20
Mexico	19	41	11	431	41	296	7	158
Netherlands	--	--	--	2	--	20	--	--
New Zealand	--	1	--	--	--	--	--	--
Peru	--	--	--	--	--	--	5	5
Poland	--	193	--	--	--	--	--	--
Russia	21	21	--	--	--	--	--	--
Spain	--	--	--	--	--	8	10	10
Sweden	--	57	--	--	--	--	--	63
Taiwan	--	--	--	--	--	--	--	(3)
Trinidad and Tobago	--	--	--	--	--	--	--	1
Venezuela	--	--	--	--	--	--	--	3
Total	545	6,940	1,290	5,710	246	675	284	1,400

-- 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 103 tons, of which 3 tons went to Canada and 100 tons went to Mexico, to give a year-to-date total of 802 tons.

Source: U.S. Census Bureau.

TABLE 8  
U.S. FOREIGN TRADE IN SELECTED MANGANESE CHEMICALS IN JUNE 2005, 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	232	\$185	Mexico 120; \$47	2,610	\$1,380	Mexico 1,130; \$446
Manganites, manganates, and other permanganates	--	--	--	38	123	Germany 38; \$123
Potassium permanganate	97	222	Czech Republic 61; \$150	538	1,120	Czech Republic 314; \$661
Sodium permanganate <sup>3</sup>	129	257	China 76; \$86	195	509	Germany 118; \$422
Sulfates, basket category, including manganese sulfate	3,970	2,400	Mexico 1,610; \$973	24,800	14,400	Mexico 12,800; \$6,710
<b>Exports:</b>						
Manganese dioxide	640	432	Canada 500; \$225	2,870	2,180	Canada 1,910; \$858
Manganese oxides other than dioxide	922	651	Canada 620; \$211	5,530	3,660	Canada 3,850; \$1,410
Manganites, manganates, and other permanganates	2	16	Canada 1; \$3	36	110	Canada 21; \$46
Potassium permanganate	42	99	Canada 33; \$68	1,810	3,630	Spain 799; \$1,380
Sodium permanganate <sup>3</sup>	44	105	Japan 40; \$100	240	653	Japan 164; \$460
Sulfates, basket category, including manganese sulfate	1,960	1,140	Canada 1,670; \$791	11,500	7,580	Canada 9,660; \$4,270

-- 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.

<sup>3</sup>In December 2004, the U.S. Harmonized Tariff Schedule was changed for manganites, manganates and permanganates to implement the United States-Australia Free Trade Agreement. Starting in 2005, sodium permanganate is tracked separately from the "manganites, manganates, and other permanganates" trade category.

Source: U.S. Census Bureau.