

# Mineral Industry Surveys

**For information, contact:**

Lisa A. Corathers, Manganese Commodity Specialist  
 National Minerals Information Center  
 U.S. Geological Survey  
 989 National Center  
 Reston, VA 20192  
 Telephone: (703) 648-4973, Fax: (703) 648-7757  
 Email: lcorathers@usgs.gov

Hodan A. Fatah (Data)  
 Telephone: (703) 648-4971  
 Fax: (703) 648-7975  
 Email: hfatah@usgs.gov

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

## MANGANESE IN JUNE 2018

Preliminary data for June 2018 indicated that domestic consumption of manganese ore containing more than 20% manganese, exclusive of that consumed at iron and steel plants, was (gross weight). This was the amount consumed in May 2018 (fig. 1). Manganese ore consumption in the first 6 months of 2018 was this was that during the same period in 2017 (211,000 t) (fig. 1). Industry stocks of ore at the end of June 2018 were estimated to be, 4% less than the amount at the end of May 2018 (166,000 t).

On a gross-weight basis, U.S. imports of manganese ore in June 2018 were 934 t, down from 79,100 t in May 2018 (fig. 1, table 5).

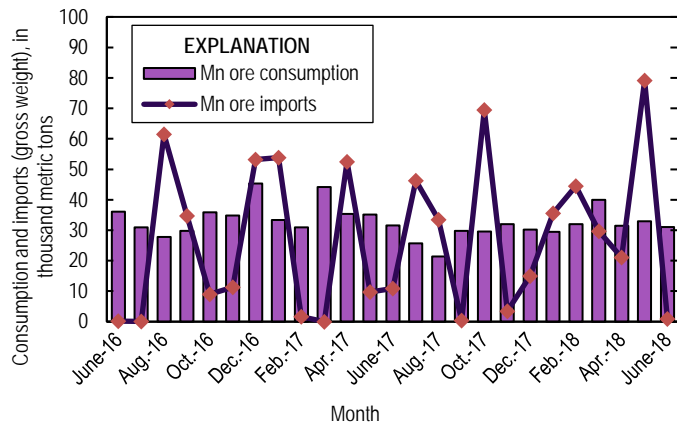


Figure 1. Monthly domestic consumption and imports of manganese (Mn) ore from June 2016 through June 2018. Sources: U.S. Census Bureau and U.S. Geological Survey.

In June 2018, the average spot prices for manganese ore deliveries to China were \$6.30 per metric ton unit, 36%–39% grade and \$6.56 per metric ton unit, 44% grade (fig. 2, table 1). Compared with May 2018 prices, they were essentially unchanged for the 36%–39% grade and 9% less for the 44% grade. Compared with the prices of December 2016, they were 21% lower for the 36%–39% grade and 26% lower for the 44% grade. However, they were both more than double those of June 2016.

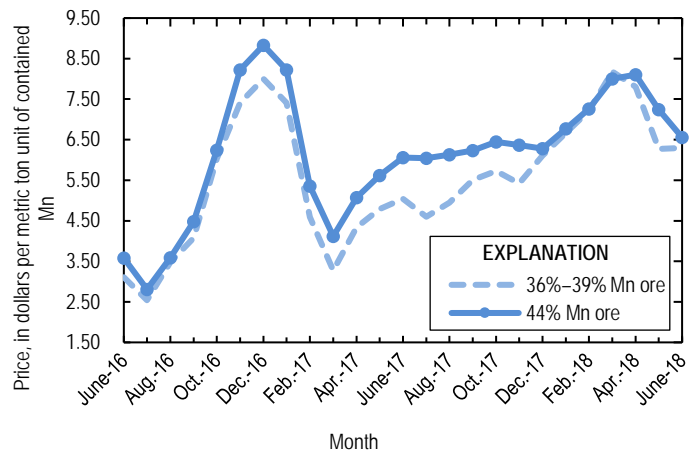


Figure 2. Average monthly spot prices for manganese (Mn) ore delivered to China from June 2016 through June 2018. Source: CRU Group.

List services and web feed subscribers are the first to receive notification of USGS minerals information publications and data releases. For information on how to subscribe, go to <http://minerals.usgs.gov/minerals/>.

TABLE 1  
PRICES FOR MANGANESE FERROALLOYS, METAL, AND ORE IN JUNE 2018

		Low	Average	High
<u>Manganese ferroalloys:<sup>1</sup></u>				
High-carbon ferromanganese, 75% manganese	dollars per long ton of contained manganese	1,550.00	1,595.00	1,640.00
Medium-carbon ferromanganese, 85% manganese	cents per pound of contained manganese	112.00	113.80	116.00
Silicomanganese, 65% manganese	do.	63.00	67.20	69.00
<u>Manganese metal, 99.9% manganese flake<sup>2</sup></u>	cents per pound	128.00	131.13	138.00
<u>Manganese ore:<sup>3,4</sup></u>				
36%–39% manganese	dollars per metric ton unit contained manganese	6.05	6.30	6.50
44% manganese	do.	6.40	6.56	6.80

do. Ditto.

<sup>1</sup>Platts Metals Week; in U.S. warehouse; average prices reported for all transactions during the month.

<sup>2</sup>CRU Group North American transaction prices, electrolytic manganese metal flake, 99.99% manganese, free-on-board producing point or Chicago/Pittsburgh warehouse; Average prices reported for the price range.

<sup>3</sup>CRU Group, cost and freight, China; average prices reported for the price range.

<sup>4</sup>To determine dollars per metric ton of ore (gross weight), multiply the manganese content percentage by the price; that is, by 44 when the manganese content is 44%.

TABLE 2  
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
2017:						
June	10,300	44,800	55,100	139	905	1,040
January–June	86,900	233,000	320,000	245	9,210	9,460
2018:						
January	17,300	66,800	84,000	18	221	239
February	23,200	34,700	57,900	47	805	852
March	10,600	59,300	69,900	25	993	1,020
April	10,500	41,700	52,200	16	1,250	1,270
May	36,500	67,700	104,000	30	1,240	1,270
June	753	56,800	57,500	30	1,800	1,830
January–June	98,900	327,000	426,000	166	6,310	6,480

<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 3  
U.S. IMPORTS FOR CONSUMPTION OF SILICOMANGANESE IN JUNE 2018<sup>1</sup>

(Metric tons)

Source	Gross weight	Mn content	Customs value <sup>3</sup>	January–June <sup>2</sup>		
				Gross weight	Mn content	Customs value <sup>3</sup>
Australia	--	--	--	45,400	29,500	\$57,600,000
Belgium	--	--	--	1,890	1,240	2,300,000
Brazil	--	--	--	2,970	1,980	3,100,000
Georgia	20,800	15,000	\$26,900,000	64,000	46,400	75,000,000
India	216	128	333,000	1,570	931	2,290,000
Malaysia	4,400	2,860	5,430,000	10,400	6,760	12,400,000
Mexico	1,640	1,280	1,860,000	13,900	9,340	15,700,000
Norway	3,150	1,970	4,610,000	13,200	8,750	18,600,000
Russia	3,000	2,000	3,920,000	6,000	4,010	7,660,000
Saudi Arabia	--	--	--	5,010	3,310	4,810,000
South Africa	--	--	--	29,000	18,900	32,000,000
Spain	5,250	3,430	6,300,000	7,260	4,830	9,330,000
Taiwan	200	132	237,000	200	132	237,000
Total	38,700	26,800	49,600,000	201,000	136,000	241,000,000

-- Zero.

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

<sup>2</sup>May include revised data that are not broken out by specific month(s).

<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 4  
U.S. IMPORTS FOR CONSUMPTION OF FERROMANGANESE IN JUNE 2018<sup>1</sup>

(Metric tons)

Source	Gross weight	Mn content	Customs value <sup>3</sup>	January–June <sup>2</sup>		
				Gross weight	Mn content	Customs value <sup>3</sup>
<b>Low carbon:</b>						
China	1,590	1,480	\$3,550,000	2,340	2,190	\$5,020,000
France	--	--	--	19	15	58,900
Germany	30	24	86,100	225	199	554,000
Japan	--	--	--	100	80	165,000
Korea, Republic of	599	551	1,390,000	4,600	4,230	9,280,000
Mexico	318	256	475,000	1,500	1,220	2,240,000
Norway	6,150	4,980	10,300,000	25,900	21,000	43,600,000
South Africa	--	--	--	82	71	138,000
Vietnam	--	--	--	240	216	529,000
Total	8,690	7,290	15,800,000	35,000	29,200	61,600,000
<b>Medium carbon, 1%–2% C:</b>						
China	51	46	111,000	145	119	319,000
France	--	--	--	2,900	2,360	4,600,000
Korea, Republic of	3,000	2,400	4,860,000	16,700	13,400	26,500,000
Mexico	494	396	726,000	3,090	2,440	4,980,000
Norway	3,620	2,940	5,640,000	8,830	7,160	13,700,000
South Africa	500	397	834,000	17,400	14,000	29,500,000
Total	7,670	6,180	12,200,000	49,100	39,400	79,600,000
<b>High carbon:</b>						
Australia	--	--	--	33,800	25,800	44,700,000
Brazil	516	387	740,000	2,620	1,540	2,780,000
France	--	--	--	4	3	8,120
Georgia	--	--	--	3,100	2,410	3,930,000
India	--	--	--	3,420	1,270	4,040,000
Korea, Republic of	140	106	1,770,000	1,540	1,170	3,410,000
Malaysia	6,870	5,240	8,470,000	33,600	25,500	43,000,000
Mexico	--	--	--	110	88	159,000
Norway	--	--	--	3,090	2,390	3,870,000
Russia	4,390	3,360	4,470,000	13,900	10,600	14,100,000
Saudi Arabia	140	90	196,000	237	151	361,000
South Africa	6,600	5,060	8,540,000	24,200	18,400	32,200,000
Spain	--	--	--	18,700	14,200	22,800,000
Ukraine	--	--	--	6,040	4,610	6,040,000
Total	18,700	14,200	24,200,000	144,000	108,000	181,000,000
Grand total	35,000	27,700	52,200,000	228,000	177,000	322,000,000

-- Zero.

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

<sup>2</sup>May include revised data that are not broken out by specific month(s).

<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 ORE (20% OR MORE Mn)  
IN JUNE 2018<sup>1</sup>

(Metric tons)

Source	Gross weight	Mn content	Customs value <sup>3</sup>	January-June <sup>2</sup>		
				Gross weight	Mn content	Customs value <sup>3</sup>
<b>More than 20%, but less than 47% manganese:</b>						
Cote d'Ivoire	--	--	--	27	12	\$11,000
Gabon	--	--	--	9,610	4,130	1,910,000
Mexico	--	--	--	1,520	560	367,000
South Africa	58	26	\$13,800	59,400	21,100	12,400,000
Total	58	26	13,800	70,500	25,800	14,700,000
<b>47% or more manganese:</b>						
Australia	--	--	--	7,510	3,590	3,100,000
Brazil	128	80	68,500	597	370	310,000
China	--	--	--	2	2	4,400
Gabon	--	--	--	128,000	65,300	37,300,000
Mexico	114	79	101,000	2,050	1,090	1,100,000
Morocco	--	--	--	39	22	50,900
South Africa	634	308	272,000	1,910	924	800,000
Turkey	--	--	--	19	15	9,110
Total	876	467	441,000	140,000	71,300	42,700,000
Grand total	934	493	454,000	211,000	97,200	57,400,000

-- Zero.

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

<sup>2</sup>May include revised data that are not broken out by specific month(s).

<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 6  
U.S. IMPORTS FOR CONSUMPTION OF MANGANESE DIOXIDE  
IN JUNE 2018<sup>1</sup>

(Metric tons, gross weight)

Source	Quantity	Customs value <sup>3</sup>	January–June <sup>2</sup>	
			Quantity	Customs value <sup>3</sup>
Belgium	--	--	40	\$71,700
Brazil	--	--	21	36,100
China	--	--	37	82,000
Germany	--	--	19	32,100
India	5	\$8,490	5	8,490
Japan	430	952,000	2,600	5,770,000
Mexico	--	--	(4)	2,210
Morocco	--	--	19	86,600
Spain	--	--	44	75,000
Ukraine	--	--	23	38,700
Total	435	961,000	2,810	6,210,000

-- Zero.

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

<sup>2</sup>May include revised data that are not broken out by specific month(s).

<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>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 7  
U.S. IMPORTS FOR CONSUMPTION OF MANGANESE METAL  
IN JUNE 2018<sup>1</sup>

(Metric tons)

Source	Gross weight	Customs value <sup>3</sup>	January–June <sup>2</sup>	
			Gross weight	Customs value <sup>3</sup>
<b>Unwrought flake:</b>				
China	171	\$332,000	2,590	\$4,200,000
Hong Kong	22	49,700	42	90,700
Japan	10	262,000	141	1,110,000
South Africa	363	809,000	2,160	4,860,000
Vietnam	--	--	100	221,000
Total	566	1,450,000	5,030	10,500,000
<b>Unwrought powder:</b>				
China	2	5,170	42	86,800
Mexico	33	114,000	102	345,000
South Africa	80	210,000	662	1,790,000
Total	116	329,000	805	2,220,000
<b>Unwrought, other:</b>				
China	1,400	2,670,000	6,900	12,800,000
Germany	88	187,000	682	1,390,000
Poland	(4)	6,310	(4)	6,310
South Africa	61	152,000	428	978,000
Spain	--	--	3	4,280
Total	1,550	3,020,000	8,010	15,200,000
<b>Other manganese, wrought:</b>				
China	6	14,900	13	35,200
France	--	--	(4)	2,150
Germany	19	208,000	162	1,900,000
Japan	--	--	(4)	142,000
Malaysia	--	--	(4)	3,040
Mexico	--	--	74	203,000
Poland	--	--	(4)	9,250
Sweden	--	--	9	85,600
Total	25	223,000	258	2,380,000
Metallic waste and scrap, Canada	56	19,000	246	78,500
Grand total	2,310	5,040,000	14,300	30,400,000

-- Zero.

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

<sup>2</sup>May include revised data that are not broken out by specific month(s).

<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>Less than ½ unit.

Source: U.S. Census Bureau.



TABLE 8  
U.S. EXPORTS OF MANGANESE ORE (20% OR MORE Mn), FERROMANGANESE,  
SILICOMANGANESE, AND MANGANESE METAL BY COUNTRIES OR LOCALITIES OF DESTINATION  
IN JUNE 2018<sup>1,2</sup>

Source	Gross weight (metric tons)	F.a.s. <sup>4</sup> value (thousands)	January-June <sup>3</sup>	
			Gross weight (metric tons)	F.a.s. <sup>4</sup> value (thousands)
<b>Ore and concentrates with 20% or more manganese:</b>				
Belgium	--	--	19	\$75
Canada	19	\$19	156	146
Mexico	10	6	39	38
Netherlands	31	132	118	553
Total	60	157	332	811
<b>Ferromanganese:</b>				
<b>2% or less carbon:</b>				
Canada	577	1,020	700	1,210
Honduras	--	--	2	11
Mexico	--	--	38	104
Morocco	--	--	4	8
Taiwan	--	--	10	18
Total	577	1,020	753	1,350
<b>More than 2% carbon:</b>				
Australia	--	--	1	4
Canada	1,130	1,600	2,860	4,090
Costa Rica	--	--	4	18
Germany	--	--	1	3
Mexico	--	--	105	100
Total	1,130	1,600	2,970	4,210
<b>Silicomanganese:</b>				
Canada	215	305	1,980	2,820
Mexico	2	3	2	3
Total	217	308	1,980	2,820
<b>Metal, including alloys and waste and scrap:<sup>5</sup></b>				
Canada	--	--	12	47
China	1	21	3	53
Costa Rica	(6)	5	1	35
France	9	36	9	36
Germany	(6)	7	1	11
India	30	57	207	196
Japan	--	--	59	196
Korea, Republic of	--	--	(6)	4
Malaysia	239	81	1,400	822
Mexico	10	209	145	970
South Africa	19	17	216	184
Venezuela	--	--	7	6
Other (5 countries)	(6)	3	2	17
Total	309	436	2,070	2,580
Grand total	2,290	3,520	8,100	11,800

-- Zero.

<sup>1</sup>Presentation of monthly data is based on the "January-June" quantities of the leading countries.

<sup>2</sup>Data rounded to no more than three significant digits; may not add to totals shown.

<sup>3</sup>May include revised data that are not broken out by specific month(s).

<sup>4</sup>Free alongside ship.

<sup>5</sup>Includes manganese-aluminum, other alloys, and waste and scrap.

<sup>6</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 9  
U.S. FOREIGN TRADE IN SELECTED MANGANESE CHEMICALS  
IN JUNE 2018, BY CLASS<sup>1</sup>

Class	Gross weight (metric tons)	Value <sup>3</sup> (thousands)	Principal sources and destinations: gross weight (metric tons); value <sup>3</sup> (thousands)	January–June <sup>2</sup>		
				Gross weight (metric tons)	Value <sup>3</sup> (thousands)	Principal sources and destinations: gross weight (metric tons); value <sup>3</sup> (thousands)
<b>Imports for consumption:</b>						
Manganese oxides other than dioxide	3,460	\$2,970	South Africa 1,450; \$735	20,200	\$16,200	South Africa 10,600; \$6,340
Manganites, manganates, and other permanganates	--	--	--	20	42	Hong Kong 20; \$42
Potassium permanganate	139	364	India 138; \$361	732	1,910	India 712; \$1,850
Sodium permanganate	110	241	China 110; \$241	706	1,590	China 688; \$1,550
Sulfates, basket category, including manganese sulfate	5,920	4,720	Mexico 1,710; \$1,250	31,200	27,300	China 11,800; \$9,940
<b>Exports:</b>						
Manganese dioxide	622	1,090	Canada 347; \$339	3,600	5,280	Canada 2,310; \$2,030
Manganese oxides other than dioxide	464	808	Mexico 131; \$307	3,250	5,920	United Kingdom 572; \$727
Manganites, manganates, and other permanganates	63	228	Mexico 57; \$208	143	538	Mexico 117; \$477
Potassium permanganate	367	1,050	Belgium 202; \$487	1,750	4,930	Belgium 786; 1,920
Sodium permanganate	32	96	Belgium 19; \$40	417	1,240	Belgium 152; \$302
Sulfates, basket category, including manganese sulfate	1,560	1,940	Canada 1,290; \$704	10,500	15,500	Canada 7,320; \$5,310

-- Zero.

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

<sup>2</sup>May include revised data that are not broken out by specific month(s).

<sup>3</sup>For imports, customs value; for exports, free alongside ship value.

Source: U.S. Census Bureau.