

# Mineral Industry Surveys

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## MANGANESE IN APRIL 2017

Preliminary data for April 2017 indicated that domestic consumption of manganese ore containing more than 20% manganese, exclusive of that consumed at iron and steel plants, was 29,800 metric tons (t) (gross weight). This was 27% less than the amount consumed in March 2017 (40,700 t) (fig. 1). Manganese ore consumption during the first 4 months of 2017 was 123,000 t, which was slightly less than the amount consumed during the same period in 2016 (125,000 t). Industry stocks of ore at the end of April 2017 were 125,000 t, 7% less than the revised amount at the end of March 2017 (134,000 t).

On a gross-weight basis, U.S. imports of manganese ore in April 2017 were 52,500 t, up from zero in March 2017 (fig. 1, table 5).

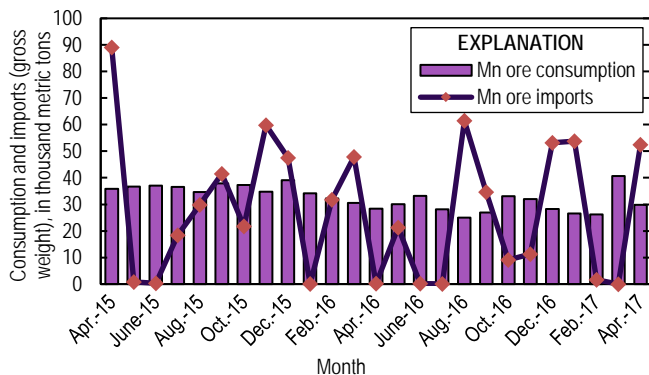


Figure 1. Monthly domestic consumption and imports of manganese (Mn) ore from April 2015 through April 2017. Sources: U.S. Census Bureau and U.S. Geological Survey.

In April 2017, the average monthly spot-market prices for manganese ore deliveries to China increased compared to those in March 2017. The average spot prices were 4.34 dollars per metric ton unit, 36%–39% grade and 5.07 dollars per metric ton unit, 44% grade (fig. 2, table 1). These were more than those in March 2017—33% for the 36%–39% grade and 23% for the 44% grade. They were also higher than those in April 2016—

15% for the 36%–39% grade and 32% for the 44% grade—and more than double those of April 2015.

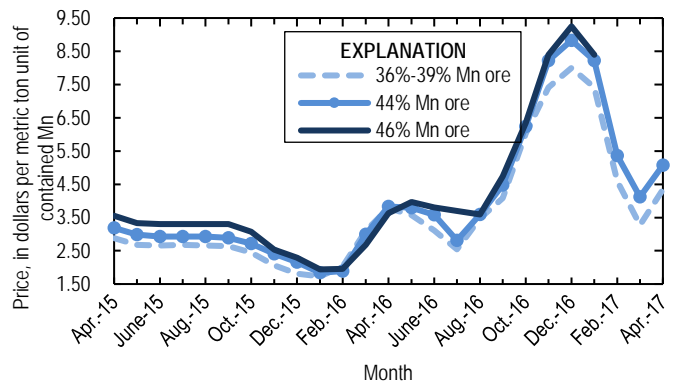


Figure 2. Average monthly spot prices for manganese (Mn) ore delivered to China from April 2015 through April 2017. Source: CRU Ryan’s Notes.

**Update**

According to McKenna (2017), U.S. silicomanganese producer Felman Production, LLC, temporarily shut its New Haven, WV, facility on July 16, 2017, after a transformer failed. The company had been operating two of its three electric arc furnaces prior to the failure. Felman expected repairs to take at least 3 weeks.

**Reference Cited**

McKenna, John, 2017, Felman Production reports on temporary shut down of its New Haven, W. Va. facility: ICR Inc., July 25. (Accessed August 22, 2017, at <http://www.businesswire.com/news/home/20170725006161/en/Felman-Production-Reports-Temporary-Shut-New-Haven.>)

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TABLE 1  
PRICES FOR MANGANESE FERROALLOYS, METAL, AND ORE IN APRIL 2017

		Low	Average	High
Manganese ferroalloys: <sup>1</sup>				
High-carbon ferromanganese, 75% manganese	dollars per long ton of contained manganese	1,400.00	1,415.63	1,435.00
Medium-carbon ferromanganese, 85% manganese	cents per pound of contained manganese	108.00	110.25	112.00
Silicomanganese, 65% manganese	do.	65.00	66.75	68.00
Manganese metal, 99.9% manganese flake <sup>2</sup>	cents per pound	107.00	111.00	115.00
Manganese ore: <sup>3,4</sup>				
36%–39% manganese	dollars per metric ton unit contained manganese	4.10	4.34	4.55
44% manganese	do.	4.00	5.07	5.55

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 Ryan's Notes 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 Ryan's Notes, 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
2016:						
April	292	23,400	23,700	7	1,040	1,050
January–April	48,500 <sup>r</sup>	132,000 <sup>r</sup>	180,000 <sup>r</sup>	70	6,380 <sup>r</sup>	6,450 <sup>r</sup>
2017:						
January	27,700	33,200	60,900	9	901	910
February	1,120	20,500	21,600	15	2,020	2,040
March	477	21,600	22,100	28	2,160	2,180
April	42,300	59,500	102,000	10	1,990	2,000
January–April	71,500	135,000	206,000	62	7,070	7,130

<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.

Source: U.S. Census Bureau.

TABLE 3  
U.S. IMPORTS FOR CONSUMPTION OF SILICOMANGANESE IN APRIL 2017<sup>1</sup>

(Metric tons)

Source	Gross weight	Mn content	Customs value <sup>3</sup>	January–April <sup>2</sup>		
				Gross weight	Mn content	Customs value <sup>3</sup>
Australia	6,030	3,990	\$8,490,000	20,400	13,500	\$26,700,000
France	--	--	--	2,300	1,390	3,680,000
Georgia	14,000	10,300	12,800,000	25,600	18,100	23,200,000
India	243	142	335,000	981	581	1,290,000
Malaysia	485	338	544,000	1,210	837	1,450,000
Mexico	6,110	3,400	4,260,000	14,700	8,990	13,700,000
Norway	2,820	1,740	4,120,000	4,800	2,850	6,950,000
Russia	--	--	--	8,910	5,980	11,400,000
South Africa	5,200	3,380	5,720,000	20,800	13,600	19,300,000
Spain	3,820	2,510	4,470,000	4,790	3,110	5,840,000
Total	38,700	25,800	40,700,000	105,000	68,900	114,000,000

-- 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 APRIL 2017<sup>1</sup>

(Metric tons)

Source	Gross weight	Mn content	Customs value <sup>3</sup>	January–April <sup>2</sup>		
				Gross weight	Mn content	Customs value <sup>3</sup>
<b>Low carbon:</b>						
China	1,470	1,370	\$3,010,000	2,950	2,750	\$5,350,000
France	--	--	--	3,300	2,680	5,410,000
Germany	72	69	171,000	118	113	296,000
Japan	--	--	--	15	12	34,800
Korea, Republic of	1,810	1,580	3,710,000	1,900	1,660	3,900,000
Mexico	57	48	63,200	357	288	440,000
Norway	5,130	4,170	9,020,000	9,610	7,810	16,400,000
South Africa	--	--	--	27	25	51,600
Total	8,540	7,240	16,000,000	18,300	15,300	31,900,000
<b>Medium carbon, 1%–2% C:</b>						
China	--	--	--	45	34	115,000
France	--	--	--	400	324	625,000
Germany	--	--	--	1	1	2,180
Korea, Republic of	6,160	4,930	9,670,000	6,650	5,320	10,400,000
Mexico	306	230	609,000	815	612	1,540,000
Norway	3,100	2,520	4,910,000	3,600	2,930	5,650,000
South Africa	4,450	3,530	7,130,000	6,990	5,600	10,500,000
Total	14,000	11,200	22,300,000	18,500	14,800	28,800,000
<b>High carbon:</b>						
Australia	--	--	--	19,000	11,300	19,800,000
Brazil	43	33	61,700	618	461	528,000
Canada	38	28	84,600	85	59	149,000
Georgia	1,500	1,160	1,350,000	1,600	1,240	1,500,000
Germany	--	--	--	3	2	3,710
Malaysia	504	386	594,000	504	386	594,000
Mexico	--	--	--	261	186	212,000
Norway	--	--	--	36	30	65,400
Russia	1,570	1,200	1,620,000	1,570	1,200	1,620,000
South Africa	10,500	7,860	12,200,000	13,700	10,300	16,000,000
Spain	2,900	2,190	3,160,000	2,900	2,190	3,160,000
Total	17,000	12,900	19,100,000	40,300	27,400	43,600,000
Grand total	39,600	31,300	57,400,000	77,100	57,500	104,000,000

-- 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 APRIL 2017<sup>1</sup>

(Metric tons)

Source	Gross weight	Mn content	Customs value <sup>3</sup>	January–April <sup>2</sup>		
				Gross weight	Mn content	Customs value <sup>3</sup>
More than 20%, but less than 47% manganese, South Africa	4,470	2,080	\$315,000	11,000	5,100	\$2,220,000
47% or more manganese:						
Australia	7,390	3,550	1,930,000	7,390	3,550	1,930,000
Brazil	53	26	36,200	254	155	132,000
Gabon	40,000	36,000	9,340,000	87,300	60,300	20,100,000
Korea, Republic of	--	--	--	20	14	12,800
Mexico	--	--	--	1,410	706	513,000
Morocco	--	--	--	39	22	50,900
South Africa	602	301	36,100	619	309	40,200
Total	48,000	39,900	11,300,000	97,100	65,100	22,800,000
Grand total	52,500	42,000	11,700,000	108,000	70,200	25,000,000

-- 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 6  
U.S. IMPORTS FOR CONSUMPTION OF MANGANESE DIOXIDE IN APRIL 2017<sup>1</sup>

(Metric tons, gross weight)

Source	Quantity	Customs value <sup>3</sup>	January–April <sup>2</sup>	
			Quantity	Customs value <sup>3</sup>
Belgium	22	\$38,100	22	\$38,100
Canada	--	--	3	3,380
China	2	2,750	17	50,300
Germany	--	--	3	17,900
India	--	--	35	64,600
Japan	468	960,000	2,070	4,270,000
Singapore	38	45,800	79	107,000
Ukraine	6	10,800	13	21,600
Total	537	1,060,000	2,240	4,570,000

-- 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 7  
U.S. IMPORTS FOR CONSUMPTION OF MANGANESE METAL IN APRIL 2017<sup>1</sup>

(Metric tons)

Source	Gross weight	Customs value <sup>3</sup>	January–April <sup>2</sup>	
			Gross weight	Customs value <sup>3</sup>
<b>Unwrought flake:</b>				
China	474	\$907,000	677	\$1,320,000
Gabon	--	--	200	356,000
Hong Kong	50	96,300	50	96,300
Japan	34	183,000	117	664,000
South Africa	477	1,170,000	2,950	7,190,000
<b>Total</b>	<b>1,040</b>	<b>2,350,000</b>	<b>4,000</b>	<b>9,630,000</b>
<b>Unwrought powder:</b>				
China	40	82,000	80	183,000
Mexico	57	193,000	86	290,000
South Africa	169	478,000	625	1,700,000
<b>Total</b>	<b>267</b>	<b>753,000</b>	<b>791</b>	<b>2,170,000</b>
<b>Unwrought, other:</b>				
Belgium	--	--	19	37,600
China	854	1,690,000	2,580	5,360,000
Germany	135	274,000	490	996,000
South Africa	61	135,000	347	718,000
Spain	--	--	46	90,500
<b>Total</b>	<b>1,050</b>	<b>2,090,000</b>	<b>3,480</b>	<b>7,200,000</b>
<b>Other manganese, wrought:</b>				
Germany	24	240,000	60	596,000
India	--	--	(4)	2,110
Japan	--	--	3	14,000
Mexico	--	--	6	23,600
<b>Total</b>	<b>24</b>	<b>240,000</b>	<b>70</b>	<b>635,000</b>
<b>Metallic waste and scrap:</b>				
Canada	20	5,580	161	48,800
Mexico	--	--	3	3,210
United Kingdom	--	--	2	5,530
<b>Total</b>	<b>20</b>	<b>5,580</b>	<b>166</b>	<b>57,600</b>
<b>Grand total</b>	<b>2,400</b>	<b>5,450,000</b>	<b>8,510</b>	<b>19,700,000</b>

-- 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 OF DESTINATION IN APRIL 2017<sup>1, 2</sup>

Source	Gross weight (metric tons)	F.a.s. <sup>4</sup> value (thousands)	January–April <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>				
China	15	\$14	15	\$19
Mexico	6	8	15	23
Netherlands	--	--	95	409
Total	20	22	125	451
<b>Ferromanganese:</b>				
2% or less carbon:				
Canada	581	1,040	2,170	3,720
Dominican Republic	--	--	9	22
France	--	--	9	18
Israel	--	--	5	9
Total	581	1,040	2,200	3,770
More than 2% carbon:				
Argentina	--	--	8	23
Brazil	--	--	21	59
Canada	944	1,390	1,610	2,410
China	--	--	1	4
Germany	--	--	(5)	4
Malaysia	--	--	1	4
Mexico	--	--	115	166
Singapore	1	3	5	15
United Arab Emirates	--	--	6	17
United Kingdom	5	14	9	27
Total	951	1,410	1,780	2,720
<b>Silicomanganese:</b>				
Canada	543	795	3,370	4,680
Georgia	--	--	128	120
Total	543	795	3,500	4,800
<b>Metal, including alloys and waste and scrap:<sup>6</sup></b>				
Argentina	--	--	1	9
Belgium	--	--	16	303
Canada	3	7	8	21
China	2	35	70	340
Costa Rica	--	--	3	79
Germany	(5)	6	8	38
Guyana	--	--	4	12
India	128	134	449	334
Malaysia	156	48	787	339
Mexico	135	225	148	344
Other (8 countries)	--	--	127	265
Total	424	456	1,620	2,080
Grand total	2,520	3,720	9,220	13,800

-- Zero.

<sup>1</sup>Presentation of monthly data is based on the "January–April" 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>Less than ½ unit.

<sup>6</sup>Includes manganese-aluminum, other alloys, and waste and scrap.

Source: U.S. Census Bureau.

TABLE 9  
U.S. FOREIGN TRADE IN SELECTED MANGANESE CHEMICALS  
IN APRIL 2017, 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–April <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	1,230	\$907	South Africa 645; \$306	6,210	\$4,600	South Africa 3,030; \$1,470
Manganites, manganates, and other permanganates						
Permanganates	(4)	7	Canada (4); \$7	(4)	10	Canada (4); \$10
Potassium permanganate	38	105	India 38; \$102	183	459	India 165; \$419
Sodium permanganate	112	253	China 95; \$212	260	590	China 190; \$423
Sulfates, basket category, including manganese sulfate						
	3,910	3,730	Mexico 1,940; \$1,500	19,500	17,800	China 7,450; \$5,430
<b>Exports:</b>						
Manganese dioxide	496	711	Canada 382; \$404	2,060	3,020	Canada 956; \$868
Manganese oxides other than dioxide	513	1,510	Canada 103; \$204	2,390	4,760	Netherlands 588; \$581
Manganites, manganates, and other permanganates						
	7	14	Canada 7; \$14	19	47	Canada 18; \$35
Potassium permanganate	240	654	Belgium 180; \$433	930	2,570	Belgium 452; \$1,090
Sodium permanganate	100	269	Belgium 57; \$119	202	694	Belgium 133; \$279
Sulfates, basket category, including manganese sulfate						
	1,670	1,490	Canada 1,320; \$692	7,220	7,780	Canada 5,630; \$2,660

-- 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.

<sup>4</sup>Less than ½ unit.

Source: U.S. Census Bureau.