

Mineral Industry Surveys

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MANGANESE IN MAY 2016

Preliminary data for May 2016 indicated that domestic consumption of manganese ore containing more than 20% manganese, exclusive of that consumed at iron and steel plants, was 30,100 metric tons (t) (gross weight). This was a 6% increase compared with the amount consumed in April 2016 (28,400 t). Manganese ore consumption during the first 5 months of 2016 was 155,000 t, 19% less than the revised amount consumed during the same period of 2015 (193,000 t). Industry stocks of ore at the end of May 2016 were 169,000 t, which was a slight decrease from the amount at the end of April 2016 (174,000 t).

On a gross-weight basis, U.S. imports of manganese ore were 144 times greater in May 2016 compared to the amount imported in April 2016 (148 t) (table 5). Manganese ore imports were 57% lower during the first 5 months of 2016 (101,000 t) compared with those during the same period in 2015 (236,000 t). The amounts of manganese ore that were consumed and imported since May 2014 are shown in figure 1.

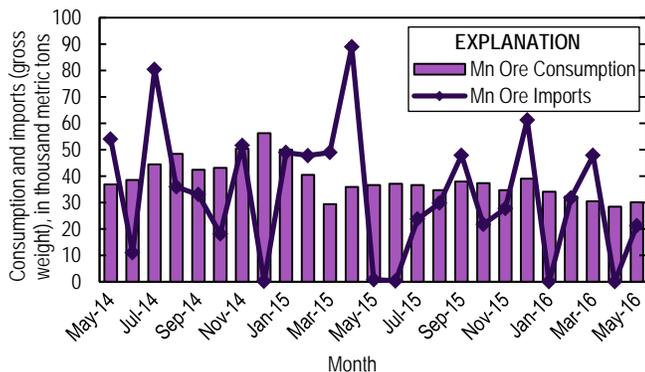


Figure 1. Monthly domestic consumption and imports of manganese (Mn) ore from May 2014 through May 2016. Sources: U.S. Census Bureau and U.S. Geological Survey.

Average spot-market prices for three grades of manganese ore delivered to China from May 2014 through May 2016 are shown in figure 2. In May 2016, the average spot prices were 3.57 dollars per metric ton unit, 36%–39% grade; 3.79 dollars per metric ton unit, 44% grade; and 3.97 dollars per metric ton unit, 46% grade (fig. 2, table 1). These were all higher than those manganese ore prices in May 2015—33% more than the 36%–39% grade, 27% more for the 44% grade, and 19% more for the 46% grade. Compared to May 2014, the average monthly prices are lower—7% less for the 36%–39% grade, 14% less for the 44% grade, and 20% less for the 46% grade.

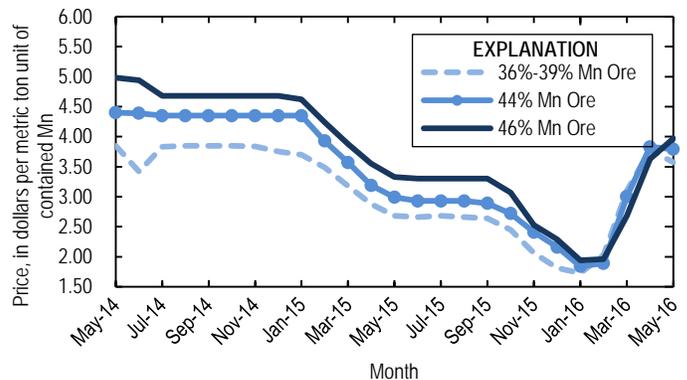


Figure 2. Average monthly spot prices for manganese (Mn) ore deliveries to China from May 2014 through May 2016. The prices shown are reported in dollars per metric ton unit of contained Mn. Source: CRU Ryan's Notes.

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TABLE 1
PRICES FOR MANGANESE FERROALLOYS, METAL, AND ORE IN MAY 2016

		Low	Average	High
Manganese ferroalloys:¹				
High-carbon ferromanganese, 75% manganese	dollars per long ton of contained manganese	800.00	820.00	840.00
Medium-carbon ferromanganese, 85% manganese	cents per pound of contained manganese	80.00	81.00	82.00
Silicomanganese, 65% manganese	do.	38.00	39.94	41.00
Manganese metal, 99.9% manganese flake ²	cents per pound	95.00	97.50	100.00
Manganese ore:^{3,4}				
36%-39% manganese	dollars per metric ton unit contained manganese	3.40	3.57	3.90
44% manganese	do.	3.60	3.79	4.10
46% manganese	do.	3.85	3.97	4.10

do. Ditto.

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

²CRU 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.

³CRU Ryan's Notes, cost and freight, China; average prices reported for the price range.

⁴To determine dollars per metric ton of ore (gross weight), multiply the manganese content percentage by the price; that is, by 46 when the manganese content is 46%.

TABLE 2
SELECTED U.S. FOREIGN TRADE IN MANGANESE¹

(Metric tons, manganese content)²

	Imports for consumption			Exports		
	Ore and dioxide	Ferroalloy and metal	Total	Ore	Ferroalloy and metal	Total
2015:						
May	625	67,900	68,500	25	235	260
January–May	115,000 ^r	240,000 ^r	355,000 ^r	125	2,380	2,510
2016:						
January	252	53,700	53,900	29	1,970	2,000
February	17,200	34,700	51,900	18	2,350	2,370
March	25,700	23,800	49,500	15	963	978
April	292	23,400	23,700	7	1,040	1,050
May	10,800	31,400	42,200	29	499	528
January–May	54,200	167,000	221,000	98	6,820	6,920

^rRevised.

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

²As 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 MAY 2016¹

(Metric tons)

Source	Gross weight	Mn content	Customs value ²	January–May		
				Gross weight	Mn content	Customs value ²
Australia	7,810	5,170 ³	\$5,540,000	23,900	15,800 ³	\$15,900,000
Brazil	513	338	316,000	3,260	2,200	1,990,000
Georgia	784	562	456,000	26,500	18,700	19,900,000
India	189	123	302,000	824	501	916,000
Mexico	3,350	2,200	2,080,000	12,800	8,380	8,150,000
Norway	8,030	5,300	6,110,000	15,200	10,000	11,400,000
Russia	--	--	--	14	7	20,400
South Africa	7	5	8,350	39,000	25,700	27,300,000
Spain	--	--	--	500	325	363,000
Total	20,700	13,700	14,800,000	122,000	81,700	86,000,000

-- Zero.

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

²Customs 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.

³Adjusted by the U.S. Geological Survey based on the stoichiometric ratio of silicomanganese (66.17%).

Source: U.S. Census Bureau.

TABLE 4
U.S. IMPORTS FOR CONSUMPTION OF FERROMANGANESE IN MAY 2016¹

(Metric tons)

Source	Gross weight	Mn content	Customs value ²	January–May		
				Gross weight	Mn content	Customs value ²
Low carbon:						
China	653	609	\$1,060,000	3,000	2,790	\$4,690,000
Germany	40	38	91,200	205	186	514,000
Korea, Republic of	--	--	--	1,350	1,250	2,160,000
Mexico	--	--	--	500	402	559,000
Norway	3,720	3,010	4,370,000	12,900	10,400	15,300,000
South Africa	--	--	--	50	46	82,000
Total	4,420	3,660	5,520,000	18,000	15,100	23,300,000
Medium carbon, 1%–2% C:						
Australia	3,910	3,130	2,430,000	6,860	5,440	5,670,000
China	--	--	--	60	46	122,000
Germany	--	--	--	8	6	15,400
Korea, Republic of	--	--	--	13,700	11,100	16,400,000
Mexico	950	763	1,080,000	2,880	2,290	3,460,000
Norway	1,190	968	1,260,000	2,220	1,800	2,310,000
South Africa	20	15	40,800	3,960	3,190	5,820,000
Turkey	59	45	113,000	79	60	143,000
Total	6,120	4,920	4,930,000	29,800	24,000	34,000,000
Medium carbon, 2%–4% C:						
China	--	--	--	323	254	160,000
South Africa	--	--	--	51	40	160,000
Total	--	--	--	374	294	320,000
High carbon:						
Australia	2,600	1,590	1,540,000	19,000	13,200	15,200,000
Brazil	62	48	89,300	126	98	208,000
Canada	20	13	22,000	92	62	138,000
China	2	1	2,510	2	1	2,510
Georgia	--	--	--	5,000	3,760	3,440,000
Korea, Republic of	184	143	265,000	1,420	1,110	2,050,000
Norway	--	--	--	7,590	5,450	4,970,000
Russia	282	220	407,000	1,830	1,200	1,420,000
South Africa	6,690	4,550	4,570,000	12,500	9,010	11,100,000
Spain	24	18	16,000	312	238	207,000
Ukraine	20	13	19,200	1,550	950	922,000
Total	9,880	6,600	6,930,000	49,400	35,100	39,600,000
Grand total	20,400	15,200	17,400,000	97,500	74,400	97,200,000

-- Zero.

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

²Customs 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 MAY 2016¹

(Metric tons)

Source	Gross weight	Mn content	Customs value ²	January–May		
				Gross weight	Mn content	Customs value ²
More than 20%, but less than 47% manganese, China	--	--	--	57	26	\$3,920
47% or more manganese:						
Australia	--	--	--	7,130	3,510	1,200,000
Belgium	18	11	\$86,600	18	11	86,600
Brazil	--	--	--	157	78	70,500
Gabon	10,000	4,820	496,000	82,400	43,600	11,100,000
Mexico	10,900	5,540	1,360,000	10,900	5,540	1,360,000
Morocco	39	22	49,700	116	66	152,000
South Africa	300	145	55,500	400	193	99,200
Total	21,300	10,500	2,050,000	101,000	53,000	14,100,000
Grand total	21,300	10,500	2,050,000	101,000	53,000	14,100,000

-- Zero.

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

²Customs 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 MAY 2016¹

(Metric tons, gross weight)

Source	Quantity	Customs value ²	January–May	
			Quantity	Customs value ²
Belgium	6	\$31,600	44	\$109,000
Brazil	--	--	31	52,600
China	22	36,900	22	36,900
France	--	--	18	33,300
Germany	2	8,540	3	17,100
India	--	--	17	33,900
Japan	358	788,000	1,760	3,900,000
Netherlands	11	19,400	11	19,400
Singapore	22	38,200	79	134,000
Ukraine	--	--	10	16,900
Total	421	923,000	1,990	4,350,000

-- Zero.

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

²Customs 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 MAY 2016¹

(Metric tons)

Source	Gross weight	Customs value ²	January–May	
			Gross weight	Customs value ²
Unwrought flake:				
China	104	\$168,000	1,340	\$3,170,000
Japan	32	110,000	125	411,000
Mexico	--	--	27	89,700
South Africa	584	1,100,000	2,750	5,000,000
Total	720	1,380,000	4,230	8,670,000
Unwrought powder:				
China	20	35,000	145	372,000
Mexico	20	63,900	86	279,000
New Zealand	--	--	3	2,500
South Africa	360	981,000	1,170	3,170,000
Total	400	1,080,000	1,400	3,830,000
Unwrought, other:				
China	1,200	2,210,000	4,060	7,520,000
Germany	122	218,000	203	371,000
South Africa	40	77,800	298	616,000
Spain	23	48,400	151	320,000
Total	1,390	2,560,000	4,720	8,820,000
Other manganese, wrought:				
China	(3)	8,960	109	182,000
Germany	12	122,000	52	522,000
Japan	--	--	(3)	11,100
Mexico	--	--	2	6,350
Total	12	131,000	164	721,000
Metallic waste and scrap, Canada	34	7,460	175	44,900
Grand total	2,550	5,160,000	10,700	22,100,000

-- Zero.

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

²Customs 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.

³Less 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 MAY 2016^{1,2}

Source	Gross weight (metric tons)	F.a.s. ³ value (thousands)	January–May	
			Gross weight (metric tons)	F.a.s. ³ value (thousands)
Ore and concentrates with 20% or more manganese:				
Canada	39	\$35	59	\$56
El Salvador	--	--	2	3
Guatemala	--	--	11	29
Korea, Republic of	--	--	3	17
Mexico	2	6	10	33
Netherlands	17	71	92	393
United Kingdom	--	--	20	17
Total	57	112	196	547
Ferromanganese:				
2% or less carbon:				
Brazil	--	--	7	14
Canada	75	115	1,640	2,010
Colombia	--	--	2	4
Mexico	19	51	85	176
Suriname	--	--	13	24
Total	94	166	1,750	2,230
More than 2% carbon:				
Canada	27	25	3,870	3,170
Chile	--	--	20	57
Italy	--	--	1	8
Korea, Republic of	6	23	6	23
Mexico	--	--	9	14
Total	33	48	3,910	3,270
Silicomanganese:				
Canada	211	178	481	487
Mexico	--	--	14	31
Venezuela	--	--	3	5
Total	211	178	498	523
Metal, including alloys and waste and scrap:⁴				
Canada	4	9	24	46
China	66	132	122	911
Germany	11	44	46	184
India	--	--	13	206
Japan	3	16	22	88
Macao	--	--	10	40
Malaysia	39	12	1,420	535
Mexico	112	332	309	889
Netherlands	--	--	18	71
Vietnam	21	4	21	4
Other (8 countries)	5	20	21	201
Total	260	568	2,020	3,180
Grand total	654	1,070	8,380	9,740

-- Zero.

¹Presentation of monthly data is based on the "January–May" quantities of the leading countries.

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

³Free alongside ship.

⁴Includes manganese-aluminum, other alloys, and waste and scrap.

Source: U.S. Census Bureau.

TABLE 9
U.S. FOREIGN TRADE IN SELECTED MANGANESE CHEMICALS
IN MAY 2016, BY CLASS¹

Class	Gross weight (metric tons)	Value ² (thousands)	Principal sources and destinations: gross weight (metric tons); value ² (thousands)	January–May		
				Gross weight (metric tons)	Value ² (thousands)	Principal sources and destinations: gross weight (metric tons); value ² (thousands)
Imports for consumption:						
Manganese oxides other than dioxide	2,930	\$1,730	South Africa 1,730; \$545	9,440	\$5,960	Brazil 3,100; \$933
Manganites, manganates, and other Permanganates	10	19	Canada 10; \$19	10	29	Canada 10; \$29
Potassium permanganate	72	181	India 72; \$181	289	730	India 289; \$730
Sodium permanganate	99	242	China 99; \$238	345	833	China 327; \$785
Sulfates, basket category, including manganese sulfate	5,990	5,100	China 1,880; \$1,130	27,300	22,800	Mexico 10,400; \$9,330
Exports:						
Manganese dioxide	341	459	Canada 172; \$184	1,720	3,250	Canada 788; \$694
Manganese oxides other than dioxide	449	1,350	Canada 135; \$138	2,470	5,370	Canada 553; \$735
Manganites, manganates, and other permanganates	14	27	Canada 14; \$27	38	85	Canada 36; \$72
Potassium permanganate	313	876	Belgium 162; \$378	1,300	3,810	Belgium 645; \$1,470
Sodium permanganate	32	559	Taiwan 20; \$521	272	1,210	Belgium 97; \$208
Sulfates, basket category, including manganese sulfate	1,740	1,760	Canada 1,330; \$659	9,440	7,790	Canada 7,470; \$3,090

¹Data are rounded to no more than three significant digits.

²For imports, customs value; for exports, free alongside ship value.

Source: U.S. Census Bureau.