

# Mineral Industry Surveys

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### **MANGANESE IN SEPTEMBER 2019**

On a gross-weight basis, U.S. imports of manganese ore in September 2019 decreased to 16,000 metric tons (t) from 57,500 t in August 2019 (fig. 1, table 5). Imports for the year through September totaled 244,000 t, 36% less compared with imports in the same period in 2018.

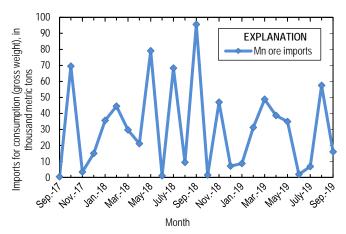


Figure 1. Monthly imports of manganese (Mn) ore from September 2017 through September 2019. Source: U.S. Census Bureau.

In September 2019, the average spot prices for manganese ore deliveries to China were \$4.93 per metric ton unit, 36%–39% grade, and \$5.49 per metric ton unit, 44% grade (fig. 2, table 1). Compared with August 2019 prices, the 36%–39%-grade price was 7% less and the 44%-grade price was 5% less. Compared with the monthly average prices in September 2018, the 36%–

39%-grade price was 25% less and the 44%-grade price was 22% less.

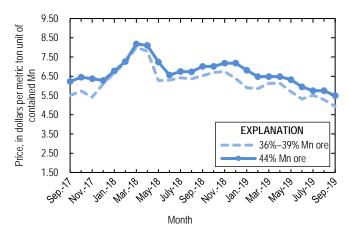


Figure 2. Average monthly spot prices for manganese (Mn) ore delivered to China from September 2017 through September 2019. Source: CRU Group.

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https://www.usgs.gov/centers/nmic/minerals-information-publication-list-services.

 ${\it TABLE~1}$  PRICES FOR MANGANESE FERROALLOYS, METAL, AND ORE IN SEPTEMBER 2019

	Low	Average	High
dollars per long ton of contained manganese	1,330.00	1,358.75	1,387.50
cents per pound of contained manganese	112.00	112.50	113.00
do.	63.00	63.88	64.75
cents per pound	98.00	101.75	105.00
dollars per metric ton unit contained manganese	4.70	4.93	5.10
do.	4.95	5.49	5.85
	cents per pound of contained manganese do. cents per pound dollars per metric ton unit contained manganese	dollars per long ton of contained manganese cents per pound of contained manganese do. cents per pound do. cents per pound 98.00  dollars per metric ton unit contained manganese 4.70	dollars per long ton of contained manganese

do. Ditto.

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

<sup>&</sup>lt;sup>2</sup>CRU Ryan's Notes North American transaction prices, electrolytic manganese metal flake, 99.7% manganese, ex-works; average prices reported for the price range.

<sup>&</sup>lt;sup>3</sup>CRU Ryan's Notes, cost and freight, China; average prices reported for the price range.

<sup>&</sup>lt;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%.

 $\label{eq:table 2} \textbf{TABLE 2}$  SELECTED U.S. FOREIGN TRADE IN MANGANESE  $^1$ 

(Metric tons, manganese content)<sup>2</sup>

	Imp	orts for consumpti		Exports			
	Ore and	Ore and Ferroalloy			Ferroalloy		
	dioxide	and metal	Total	Ore	and metal	Total	
2018:							
September	40,600	33,600 <sup>r</sup>	74,300	35	1,080	1,110	
January-September	178,000	482,000 <sup>r</sup>	659,000 <sup>r</sup>	1,410	10,300 <sup>r</sup>	11,700 <sup>r</sup>	
2019:							
January	4,670	27,000	31,600	19	1,690	1,710	
February	12,300	66,700	79,100	94	1,840	1,930	
March	25,600	55,700	81,300	45	1,330	1,370	
April	27,000	46,300	73,400	20	1,140	1,160	
May	17,500	59,300	76,800	27	1,090	1,120	
June	924	50,800	51,700	31	946	977	
July	3,400	28,800	32,200	96	1,610	1,700	
August	30,500	52,900	83,400	11	1,260	1,270	
September	10,100	45,100	55,100	76	1,330	1,410	
January-September	132,000	433,000	565,000	419	12,200	12,600	

<sup>&</sup>lt;sup>r</sup>Revised

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

<sup>&</sup>lt;sup>2</sup>As reported except as estimated for imports of manganese dioxide and manganese waste and scrap and for exports from gross weights.

 ${\it TABLE~3}$  U.S. IMPORTS FOR CONSUMPTION OF SILICOMANGANESE IN SEPTEMBER  $2019^1$ 

### (Metric tons)

					January-Septem	ber <sup>2</sup>
	Gross	Mn	Customs	Gross	Mn	Customs
Source	weight	content	value <sup>3</sup>	weight	content	value <sup>3</sup>
Australia	16,200	10,800	\$20,700,000	54,700	36,300	\$69,300,000
Brazil				631	413	639,000
Georgia	887	640	1,010,000	67,500	50,000	83,900,000
India				267	157	388,000
Malaysia	3,640	2,370	4,140,000	26,600	17,300	28,100,000
Mexico	4,180	2,720	4,190,000	22,200	14,400	24,000,000
Norway	5,750	3,840	6,740,000	38,600	25,600	46,000,000
Russia				1	1	2,720
Saudi Arabia				4,550	2,870	4,470,000
South Africa	5,200	3,380	5,720,000	62,400	40,500	68,600,000
Spain	500	309	711,000	6,510	4,200	7,710,000
Thailand				25	9	38,800
Zambia	<del></del>			140	92	106,000
Total	36,400	24,000	43,200,000	284,000	192,000	333,000,000

<sup>--</sup> Zero.

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

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

<sup>&</sup>lt;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.

 ${\it TABLE~4}$  U.S. IMPORTS FOR CONSUMPTION OF FERROMANGANESE IN SEPTEMBER  $2019^1$ 

### (Metric tons)

				January–September <sup>2</sup>			
	Gross	Mn	Customs	Gross	Mn	Customs	
Source	weight	content	value <sup>3</sup>	weight	content	value <sup>3</sup>	
Low carbon:							
China				927	871	\$1,810,000	
Germany	59	56	\$145,000	296	275	738,000	
Japan	96	75	163,000	865	680	1,480,000	
Korea, Republic of	1,000	864	1,730,000	11,000	9,590	21,500,000	
Mexico	18	15	47,200	2,230	1,760	3,950,000	
Norway	700	566	1,150,000	30,800	24,900	52,200,000	
South Africa	100	81	158,000	625	522	1,010,000	
Spain	2,400	1,930	4,080,000	9,390	7,580	15,500,000	
Vietnam				1	1	3,220	
Total	4,380	3,590	7,480,000	56,100	46,200	98,200,000	
Medium carbon, 1%–2% C:							
China				21	16	28,000	
India				228	181	376,000	
Korea, Republic of	1,000	800	1,660,000	13,400	10,700	21,600,000	
Malaysia				21	16	30,700	
Mexico	298	228	530,000	4,130	3,210	6,700,000	
Norway	800	648	1,220,000	10,500	8,540	16,000,000	
South Africa				18,000	14,400	31,300,000	
Spain				300	242	488,000	
Total	2,100	1,680	3,410,000	46,600	37,300	76,600,000	
High carbon:							
Australia	13,600	10,300	15,200,000	72,500	55,400	80,800,000	
Brazil	670	509	727,000	1,980	1,460	2,150,000	
France	1,980	1,510	2,130,000	3,770	2,870	4,110,000	
India	250	191	262,000	700	532	781,000	
Korea, Republic of	2,000	1,520	2,130,000	3,600	2,750	4,070,000	
Malaysia	108	82	112,000	35,200	26,600	31,900,000	
Mexico	1	1	2,180	11	8	18,500	
Norway				776	602	945,000	
Russia				24,300	18,500	21,700,000	
Saudi Arabia				60	44	98,200	
South Africa	153	94	142,000	19,800	15,000	22,500,000	
Spain				19	14	38,70	
Ukraine				5,740	4,370	5,060,000	
Total	18,700	14,200	20,700,000	168,000	128,000	174,000,000	
Grand total	25,200	19,500	31,600,000	271,000	212,000	349,000,000	

<sup>--</sup> Zero.

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

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

<sup>&</sup>lt;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.

TABLE 5  $\mbox{U.S. IMPORTS FOR CONSUMPTION OF MANGANESE ORE (20% OR MORE Mn) } \\ \mbox{IN SEPTEMBER 2019}^1$ 

### (Metric tons)

				January–September <sup>2</sup>			
	Gross	Mn	Customs	Gross	Mn	Customs	
Source	weight	content	value <sup>3</sup>	weight	content	value <sup>3</sup>	
More than 20%, but less than 47% manganese:							
Brazil				9,410	4,120	\$1,900,000	
China				7	3	3,600	
Mexico	8,810	3,360	\$1,810,000	27,300	10,400	5,770,000	
South Africa	216	86	52,500	34,300	13,200	8,820,000	
Total	9,030	3,450	1,860,000	71,000	27,700	16,500,000	
47% or more manganese:						_	
Brazil	103	51	78,800	667	356	509,000	
Gabon	16	8	22,100	165,000	95,000	55,300,000	
Mexico	6,600	5,940	944,000	6,600	5,940	944,000	
Morocco				77	44	102,000	
South Africa	280	136	123,000	1,360	658	585,000	
Turkey				4	3	2,380	
Total	7,000	6,130	1,170,000	173,000	102,000	57,400,000	
Grand total	16,000	9,580	3,030,000	244,000	130,000	73,900,000	

<sup>--</sup> Zero.

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

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

<sup>&</sup>lt;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.

### $\label{eq:table 6} \text{U.S. IMPORTS FOR CONSUMPTION OF MANGANESE DIOXIDE} \\ \text{IN SEPTEMBER 2019}^{\text{I}}$

(Metric tons, gross weight)

			January–	September <sup>2</sup>
		Customs		Customs
Source	Quantity	value <sup>3</sup>	Quantity	value <sup>3</sup>
Belgium			37	\$173,000
Brazil			104	155,000
China			51	119,000
Germany	3	\$18,100	23	119,000
Greece	99	223,000	371	943,000
India	423	719,000	477	818,000
Japan	180	419,000	2,590	5,760,000
Morocco	80	122,000	246	404,000
Slovakia			13	22,500
Total	785	1,500,000	3,910	8,510,000

<sup>--</sup> Zero.

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

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

<sup>&</sup>lt;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.

### TABLE 7 $\mbox{U.s. IMPORTS FOR CONSUMPTION OF MANGANESE METAL } \mbox{IN SEPTEMBER $2019$}^{\mbox{1}}$

### (Metric tons)

			January–September <sup>2</sup>		
	Gross	Customs	Gross	Customs	
Source	weight	value <sup>3</sup>	weight	value <sup>3</sup>	
Unwrought flake:					
China	262	\$593,000	6,070	\$12,200,000	
Gabon			50	122,000	
Hong Kong			33	66,300	
Japan	(4)	189,000	2	1,800,000	
Mexico			6	24,500	
South Africa	262	570,000	3,240	8,420,000	
Switzerland	20	39,500	20	39,500	
Total	544	1,390,000	9,420	22,700,000	
Unwrought powder:					
China	<del></del>		79	182,000	
Mexico	51	176,000	194	722,000	
South Africa	40	132,000	944	2,700,000	
Total	92	309,000	1,220	3,600,000	
Unwrought, other:					
Belgium	13	36,400	36	86,800	
China	540	1,030,000	14,700	29,700,000	
Germany	224	537,000	1,710	4,050,000	
Japan			(4)	6,260	
Poland	<del></del>		(4)	6,310	
South Africa	61	156,000	761	1,950,000	
Spain	<del></del>		143	245,000	
Total	839	1,750,000	17,400	36,100,000	
Other manganese, wrought:					
Austria			(4)	6,040	
China			(4)	27,300	
Germany	29	361,237	289	3,530,000	
Japan	(4)	20	(4)	67,700	
Korea, Republic of			(4)	51,000	
Mexico	39	110,860	478	1,380,000	
Sweden			4	56,300	
United Kingdom			(4)	2,090	
Total	69	491,953	772	5,120,000	
Metallic waste and scrap, Canada	47	21,100	341	111,000	
Grand total	1,660	4,090,000	29,100	67,600,000	

<sup>--</sup> Zero.

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

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

<sup>&</sup>lt;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>&</sup>lt;sup>4</sup>Less than ½ unit.

#### TABLE 8

## U.S. EXPORTS OF MANGANESE ORE (20% OR MORE Mn), FERROMANGANESE, SILICOMANGANESE, AND MANGANESE METAL BY COUNTRIES OR LOCALITY OF DESTINATION IN SEPTEMBER $2019^{1,2}$

		4	January–Se	ptember <sup>3</sup>
		F.a.s. <sup>4</sup>		F.a.s. <sup>4</sup>
	Gross weight	value	Gross weight	value
Source	(metric tons)	(thousands)	(metric tons)	(thousands)
Ore and concentrates with 20% or more manganese:				
Bahamas			6	\$6
Canada	134	\$116	422	393
India			(5)	5
Mexico	3	6	16	19
Netherlands	16	83	306	647
Singapore			86	132
Total	153	205	837	1,200
Ferromanganese:				
2% or less carbon:				
Canada	<del></del>		1,120	2,000
China	<del></del>		28	54
Taiwan			6	11
United Kingdom			29	55
Other [5 countries and (or) localities]			26	49
Total			1,210	2,170
More than 2% carbon:			· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·
Canada	123	233	3,680	4,790
China			16	46
Hong Kong	<del></del>		1	3
United Kingdom			26	73
Total	123	233	3,720	4,910
Silicomanganese:		233	3,720	1,510
Canada	206	237	846	973
Mexico	4	8	8	18
Total	210	246	854	991
Metal, including alloys and waste and scrap. <sup>6</sup>		240	634	771
Australia			8	8
Brazil		<del></del>	(5)	8
Canada		12	69	275
Costa Rica		5		39
	(5)		1	
Dominican Republic	21	15	21	15
France	15	5	15	5
Germany	(5)	6	1	14
Guatemala	<del></del>		2	19
Guyana			4	13
Hungary			(5)	4
India	<del></del>	<del></del>	139	78
Japan	<del></del>	<del></del>	85	319
Malaysia	1,020	401	6,410	3,190
Mexico	1	32	43	409
New Zealand	<del></del>		(5)	5
Norway	8	427	25	494
Pakistan	<u></u>		900	263
Turkey		12	36	22
Other [5 countries and (or) localities]	<del></del>		12	65
Total	1,100	916	7,770	5,250
Grand total	1,580	1,600	14,400	14,500

<sup>--</sup> Zero.

<sup>&</sup>lt;sup>1</sup>Presentation of monthly data is based on the "January–September" quantities of the leading countries.

 $<sup>^2\</sup>mathrm{Data}$  rounded to no more than three significant digits; may not add to totals shown.

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

<sup>&</sup>lt;sup>4</sup>Free alongside ship.

<sup>&</sup>lt;sup>5</sup>Less than ½ unit.

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

TABLE 9  $\mbox{U.S. FOREIGN TRADE IN SELECTED MANGANESE CHEMICALS } \\ \mbox{IN SEPTEMBER 2019, BY CLASS}^{1}$ 

						–September <sup>2</sup>
			Principal sources			Principal sources
			and destinations:			and destinations:
	Gross weight	Value <sup>3</sup>	gross weight (metric tons);	Gross weight	Value <sup>3</sup>	gross weight (metric tons);
Class	(metric tons)	(thousands)	value <sup>3</sup> (thousands)	(metric tons)	(thousands)	value <sup>3</sup> (thousands)
Imports for consumption:						
Manganese oxides other than dioxide	1,810	\$1,220	Republic of Korea 674; \$388	12,800	\$9,260	South Africa 5,320; \$3,300
Manganites, manganates, and other permanganates				38	90	China 38; \$87
Potassium permanganate	119	285	India 119; \$285	934	2,330	India 927; \$2,300
Sodium permanganate	125	237	China 125; \$237	738	1,570	China 719; \$1,520
Sulfates, basket category, including manganese sulfate	4,620	5,450	Mexico 2,036; \$1,990	39,800	36,100	Mexico 16,900; \$13,200
Exports:						
Manganese dioxide	423	454	Canada 310; \$243	4,510	7,110	Canada 2,350; \$2,200
Manganese oxides other than dioxide	453	1,090	Poland 60; \$79	3,710	7,320	Poland 601; \$789
Manganites, manganates, and other permanganates	29	58	Canada 29; \$58	155	455	Canada 113; \$225
Potassium permanganate	391	117	Belgium 89; \$36	7,250	2,550	Belgium 2,630; \$1,090
Sodium permanganate	57	141	Spain 38; \$82	573	1,410	Belgium 344; \$744
Sulfates, basket category, including manganese sulfate	2,020	2,880	Canada 1,610; \$993	18,900	27,200	Canada 14,600; \$8,670

<sup>--</sup> Zero.

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

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

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