

Mineral Industry Surveys

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MANGANESE IN OCTOBER 2017

Preliminary data for October 2017 indicated that domestic consumption of manganese ore containing more than 20% manganese, exclusive of that consumed at iron and steel plants, was 23,400 metric tons (t) (gross weight). This was slightly less than the amount consumed in September 2017 (23,500 t) (fig. 1). Manganese ore consumption during the first 10 months of 2017 was 305,000 t, which was 8% less the amount consumed during the same period in 2016. Industry stocks of ore at the end of October 2017 were estimated to be 195,000 t, 31% more than the amount at the end of September 2017 (149,000 t).

On a gross-weight basis, U.S. imports of manganese ore in October 2017 were 69,500 t, up from 351 t in September 2017 (fig. 1, table 5).

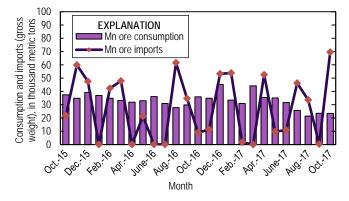


Figure 1. Monthly domestic consumption and imports of manganese (Mn) ore from October 2015 through October 2017. Sources: U.S. Census Bureau and U.S. Geological Survey.

In October 2017, the average monthly spot-market prices for manganese ore deliveries to China increased compared to those in September 2017. The average spot prices were 5.73 dollars per metric ton unit, 36%–39% grade, and 6.45 dollars per metric ton unit, 44% grade (fig. 2, table 1). Compared to October 2016, they were 5% less for the 36%–39% grade and 3% more for the 44% grade and about 134% and 137% more than those of October 2015, respectively. However, they were 28% and 27% less, respectively, than the 2-year-high prices of December 2016.

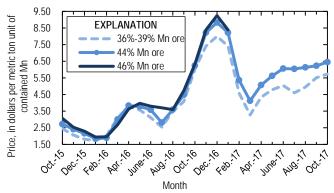


Figure 2. Average monthly spot prices for manganese (Mn) ore delivered to China from October 2015 through October 2017. Source: CRU Group.

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 TABLE 1

 PRICES FOR MANGANESE FERROALLOYS, METAL, AND ORE IN OCTOBER 2017

	Low	Average	High
dollars per long ton of contained manganese	1,550.00	1,575.00	1,600.00
cents per pound of contained manganese	110.00	112.50	115.00
do.	62.00	63.50	65.00
cents per pound	104.00	106.00	108.00
dollars per metric ton unit contained manganese	5.70	5.73	5.75
do.	6.30	6.45	6.60
	cents per pound of contained manganese do. cents per pound dollars per metric ton unit contained manganese	dollars per long ton of contained manganese1,550.00cents per pound of contained manganese110.00do.62.00cents per pound104.00dollars per metric ton unit contained manganese5.70	dollars per long ton of contained manganese1,550.001,575.00cents per pound of contained manganese110.00112.50do.62.0063.50cents per pound104.00106.00dollars per metric ton unit contained manganese5.705.73

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 44 when the manganese content is 44%.

TABLE 2 SELECTED U.S. FOREIGN TRADE IN MANGANESE¹

(Metric tons, manganese content)²

	Impo	orts for consumpti	on		Exports	
	Ore and	Ferroalloy			Ferroalloy	
	dioxide	and metal	Total	Ore	and metal	Total
2016:						
October	3,730 ^r	15,100	18,800 ^r	43 ^r	376 ^r	419 '
January–October	111,000 ^r	321,000 ^r	432,000 r	230 r	11,100 ^r	11,300 1
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
May	5,030	53,300	58,400	43	1,240	1,280
June	10,300	44,800	55,100	139	905	1,040
July	27,800	57,300	85,100	120	411	531
August	18,100	46,900	65,000	145	1,430	1,580
September	610	49,700	50,300	5	1,080	1,090
October	31,200	63,900	95,200	25	1,890	1,920
January–October	165,000	451,000	615,000	540	14,000	14,600

^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.

TABLE 3

U.S. IMPORTS FOR CONSUMPTION OF SILICOMANGANESE IN OCTOBER 2017^1

(Metric tons)

Gross weight 	Mn content 	Customs value ³	Gross weight 50,900	January–Octobe Mn content 33,800	Customs value ³ \$67,500,000
weight 	content 	value ³	50,900		
 			<i>,</i>	33,800	\$67 500 000
					007,500,000
			2,130	1,400	2,240,000
			76	36	48,600
			2,300	1,390	3,680,000
22,500	16,900	\$24,700,000	89,400	66,200	88,600,000
1,590	937	2,650,000	5,630	3,330	8,430,000
			189	112	257,000
3,000	1,980	3,350,000	10,100	6,680	11,800,000
4,240	2,780	5,140,000	25,000	15,800	25,800,000
2,360	1,410	3,610,000	15,300	9,230	23,200,000
			18,100	12,300	22,500,000
5,430	3,530	5,990,000	14,700	9,310	16,300,000
6,500	4,230	7,150,000	67,700	44,000	70,200,000
			14,700	9,630	19,300,000
45,600	31,800	52,600,000	316,000	213,000	360,000,000
	1,590 3,000 4,240 2,360 5,430 6,500 	1,590 937 3,000 1,980 4,240 2,780 2,360 1,410 5,430 3,530 6,500 4,230	1,590 937 2,650,000 3,000 1,980 3,350,000 4,240 2,780 5,140,000 2,360 1,410 3,610,000 5,430 3,530 5,990,000 6,500 4,230 7,150,000	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$

-- Zero.

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

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

³Customs 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 4 U.S. IMPORTS FOR CONSUMPTION OF FERROMANGANESE IN OCTOBER 2017^1

(Metric tons)

			-		January-October	
	Gross	Mn	Customs	Gross	Mn	Customs
Source	weight	content	value ³	weight	content	value ³
Low carbon:						
Belgium				24	23	\$56,900
China	4	3	\$7,840	7,890	7,350	15,400,000
France				3,300	2,680	5,410,000
Germany	50	47	120,000	305	286	751,000
Japan				15	12	34,800
Korea, Republic of	234	216	444,000	7,800	6,930	15,400,000
Mexico	498	406	752,000	2,150	1,750	2,860,000
Norway	5,020	4,060	8,730,000	27,100	22,000	46,400,000
Russia				24	23	56,900
Saudi Arabia				5	4	8,590
South Africa	54	50	99,100	216	201	403,000
Total	5,860	4,790	10,200,000	48,800	41,200	86,800,000
Medium carbon, 1%–2% C:						
China				45	34	115,000
France				400	324	625,000
Germany				1	1	2,180
Korea, Republic of	513	410	777,000	16,900	13,500	25,500,000
Mexico	1,170	937	1,750,000	2,720	2,110	4,760,000
Norway	4,900	4,000	7,680,000	18,600	15,100	29,200,000
South Africa				17,100	13,800	29,700,000
Total	6,590	5,350	10,200,000	55,800	44,900	90,000,000
High carbon:						
Australia				51,500	36,100	60,700,000
Brazil	753	576	883,000	3,870	2,950	4,330,000
Canada	19	12	33,000	174	116	266,000
Georgia				2,400	1,860	2,230,000
Germany				3	2	3,710
India	2,180	1,610	2,800,000	2,180	1,610	2,800,000
Malaysia	2,610	1,990	3,090,000	8,880	6,700	11,500,000
Mexico	·			264	188	217,000
Netherlands				344	265	373,000
Norway	916	712	1,070,000	1,640	1,280	1,780,000
Russia	330	254	335,000	5,980	4,570	5,770,000
Saudi Arabia	5,300	3,970	6,560,000	5,460	4,090	6,810,000
South Africa	4,510	3,480	6,650,000	56,300	42,900	74,000,000
Spain	5,310	4,030	6,620,000	17,600	13,400	20,800,000
Ukraine	3,010	2,280	3,000,000	14,000	10,700	14,900,000
United Kingdom				3	2	3,980
Total	24,900	18,900	31,000,000	171,000	127,000	206,000,000
Grand total	37,400	29,100	51,400,000	275,000	213,000	383,000,000

-- Zero.

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

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

³Customs 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 U.S. IMPORTS FOR CONSUMPTION OF MANGANESE ORE (20% OR MORE Mn) IN OCTOBER 2017¹

(Metric tons)

				January–October ²			
	Gross	Mn	Customs	Gross	Mn	Customs	
Source	weight	content	value ³	weight	content	value ³	
More than 20%, but less than 47% manganese:							
Cote d'Ivoire				332	133	\$19,800	
Gabon	13,100	5,640	\$2,390,000	13,100	5,640	2,390,000	
Mexico				13,200	5,100	2,480,000	
South Africa	22,000	8,140	4,040,000	33,000	13,200	6,250,000	
Total	35,100	13,800	6,420,000	59,600	24,100	11,100,000	
47% or more manganese:							
Australia				17,400	8,340	4,950,000	
Brazil				572	314	375,000	
Gabon	27,400	13,700	7,180,000	190,000	123,000	45,700,000	
Georgia				122	88	138,000	
Korea, Republic of				20	14	12,800	
Mexico	7,000	3,310	1,740,000	8,410	4,020	2,260,000	
Morocco				149	100	204,000	
South Africa	34	17	8,160	2,130	1,040	673,000	
Total	34,400	17,000	8,930,000	219,000	137,000	54,300,000	
Grand total	69,500	30,800	15,400,000	278,000	161,000	65,500,000	

-- Zero.

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

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

³Customs 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 6

U.S. IMPORTS FOR CONSUMPTION OF MANGANESE DIOXIDE IN OCTOBER 2017^1

				January-	-October ²
			Customs	· · · ·	Customs
	Source	Quantity	value ³	Quantity	value ³
Belgium		6	\$34,600	74	\$266,000
Brazil		11	18,000	52	77,500
Canada				3	3,380
China				64	109,000
Germany		42	72,000	89	176,000
India				35	64,600
Japan		669	1,450,000	5,950	12,600,000
Morocco				19	86,600
Netherlands				22	38,100
Singapore				79	107,000
Spain				12	20,500
Ukraine		7	11,700	60	102,000
Total		735	1,590,000	6,450	13,600,000
Total		735	1,590,000		6,450

(Metric tons, gross weight)

-- Zero.

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

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

³Customs 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 U.S. IMPORTS FOR CONSUMPTION OF MANGANESE METAL IN OCTOBER 2017^1

(Metric tons)

Gabon Hong Kong Japan Mexico South Africa	t ,660 59 	Customs value ³ \$2,520,000 284,000	Gross weight 6,440 200 50	-October ² Customs value ³ \$11,000,000 356,000
Unwrought flake: 1 China 1 Gabon 1 Hong Kong 1 Japan Mexico South Africa 1 Total 1 Unwrought powder: 1 China 1 Mexico 2 South Africa 1 Unwrought powder: 1 Unwrought, other: 2 Belgium 1 China 2 Octina 2 Germany 3 Japan 2 Portugal 2 Russia 3 South Africa 3 South Africa 3 Japan 3 Portugal 3 Russia 3 South Africa 3 Spain 3	,660 59 	\$2,520,000 	6,440 200 50	\$11,000,000
China1Gabon1Hong Kong1JapanMexicoSouth Africa1Total1Unwrought powder:1ChinaMexicoSouth Africa1Unwrought, other:1Belgium1China1Germany1JapanPortugalRussiaSouth AfricaSouth Africa1	 59 		200 50	\$11,000,000
GabonHong KongJapanMexicoSouth AfricaTotalUnwrought powder:ChinaMexicoSouth AfricaTotalUnwrought, other:BelgiumChinaGermanyJapanPortugalRussiaSouth AfricaSouth Africa	 59 		200 50	
Hong KongJapanMexicoSouth AfricaTotalUnwrought powder:ChinaMexicoSouth AfricaTotalUnwrought, other:BelgiumChinaGermanyJapanPortugalRussiaSouth AfricaSouth Africa	59 	 284,000	50	356,000
JapanMexicoSouth AfricaTotal1Unwrought powder:ChinaMexicoSouth AfricaTotalUnwrought, other:BelgiumChinaGermanyJapanPortugalRussiaSouth AfricaSouth Africa	59 	284,000		555,000
MexicoSouth AfricaTotal1Unwrought powder:ChinaMexicoSouth AfricaTotalUnwrought, other:BelgiumChinaGermanyJapanPortugalRussiaSouth AfricaSouth Africa		284,000		96,300
South AfricaTotal1Unwrought powder:1China1Mexico1South Africa1Total1Unwrought, other:1Belgium1China1Germany1Japan1Portugal1Russia2South Africa2Spain1			379	2,050,000
Total1Unwrought powder:1China1Mexico1South Africa1Total1Unwrought, other:1Belgium1China1Germany1Japan1Portugal1Russia2South Africa2Spain1	270		50	148,000
Unwrought powder: China Mexico South Africa Total Unwrought, other: Belgium China Germany Japan Portugal Russia South Africa South Africa	270	620,000	4,970	11,800,000
ChinaMexicoSouth AfricaTotalUnwrought, other:BelgiumChinaGermanyJapanPortugalRussiaSouth AfricaSpain	,980	3,420,000	12,100	25,500,000
Mexico South Africa Total Unwrought, other: Belgium China Germany Japan Portugal Russia South Africa Spain				
South AfricaTotalUnwrought, other:BelgiumChinaGermanyJapanPortugalRussiaSouth AfricaSpain	20	33,800	199	391,000
Total Unwrought, other: Belgium China Germany Japan Portugal Russia South Africa Spain			194	654,000
Unwrought, other: Belgium China Germany Japan Portugal Russia South Africa Spain	183	505,000	1,440	3,960,000
Belgium China Germany Japan Portugal Russia South Africa Spain	203	539,000	1,840	5,000,000
China Germany Japan Portugal Russia South Africa Spain				
Germany Japan Portugal Russia South Africa Spain			38	78,900
Japan Portugal Russia South Africa Spain	568	1,130,000	8,060	15,200,000
Portugal Russia South Africa Spain	118	243,000	1,350	2,800,000
Russia South Africa Spain			(4)	2,210
South Africa Spain			(4)	5,100
Spain			24	50,100
	108	238,000	601	1,280,000
Total			46	90,500
Total	793	1,610,000	10,100	19,500,000
Other manganese, wrought:				
Canada			22	6,520
Germany	51	584,000	205	2,230,000
India			(4)	2,110
Japan			4	30,400
Malaysia			(4)	3,650
Mexico	36	93,600	117	314,000
South Africa			10	19,400
Total	87	677,000	357	2,610,000
Metallic waste and scrap:				
Canada	27	7,500	740	195,000
China			36	60,100
Mexico			3	3,210
United Kingdom			2	5,530
Total	27	7,500	780	264,000
	.090	6,260,000	25,200	52,800,000

-- Zero.

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

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

³Customs 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.

⁴Less than ¹/₂ 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 OCTOBER 2017^{1, 2}

$\begin{tabular}{ c c c c c } \hline Gross weight value Gross weight value Gross weight (thousands) (metric tons) (met$				January–October ³		
Source (metric tons) (thousands) (metric tons) (thousands) Ore and concentrates with 20% or more manganese: 19 \$87 449 Canada 20 China 20 China 20 Mexico 28 Poland 18 Svitzerland 4 3 4 Taiwan 69 United Kingdom 59 Total 50 211 1.080 Ferromanganese: 35 China			F.a.s. ⁴		F.a.s. ⁴	
Ore and concentrates with 20% or more manganese: 19 587 449 Canada 20 China 20 China 20 Mexico 20 Mexico 39 Netherlands 28 120 238 Poland 18 Switzerland 4 3 4 Taiwan 59 Total 50 211 1,080 Ferromanganese: 35 Chile 12 Other (7 countries) 18 35 53 Total 898 1,350 4,850 More than 2% carbon: 10 United Kingdom 10 United Kingdom 14 Other (6 countrie		Gross weight	value	Gross weight	value	
Belgium 19 \$87 449 Canada - - 20 China - - 20 Mexico - - 20 Mexico - - 39 Netherlands 28 120 238 Poland - - 18 Switzerland 4 3 4 Taiwan - - 59 United Kingdom - - 59 Total 50 211 1,080 1 Canada 880 1,320 4,750 1 China - - 35 1 1 Other (7 countries) 18 35 53 1 1 Total - - 10 1	Source	(metric tons)	(thousands)	(metric tons)	(thousands)	
Canada 20 China 20 China 48 Germany 39 Netherlands 28 120 238 Poland 39 Switzerland 4 3 4 Taiwan (5) United Kingdom (5) Total 50 211 1.080 Ferromanganese: 35 Chile 35 Chila 12 Other (7 countries) 18 35 53 Total 898 1,320 4,850 Mexico 12 0 Mexico 10 10 United Kingdom 14 0 14 Other (8 countries) 14 0 1	Ore and concentrates with 20% or more manganese:					
China 48 Germany 205 Mexico 39 Netherlands 28 120 238 Poland 18 Switzerland 4 3 4 Taiwan 65 United Kingdom 59 Total 50 211 1.080 Perromanganese: 55 China 12 Other (7 countries) 18 35 5 Total 888 1,350 4,850 More than 2% carbon: 10 Canada 186 288 2,340 2 Mexico 60 62 277 5 Singapore 10 United Kingdom 43 Canada 877	Belgium	19	\$87	449	\$458	
Germany 205 Mexico 39 Netherlands 28 120 238 Poland 18 Switzerland 4 3 4 Taiwan 18 United Kingdom 59 Total 50 211 1.080 Perromanganese: 2% or less carbon: 2% or less carbon: 12 Other (7 countries) 18 35 53 Total 880 1.320 4.750 Mexico 60 62 277 Singapore 14 Other (8 countries) 14 Other (8 countries) 14 Other (8 countries) 43 Other (8 countries) 4 Georgia	Canada			20	19	
Mexico 39 Netherlands 28 120 238 Poland 18 34 Taiwan 18 Switzerland 4 3 4 Taiwan 65 United Kingdom 59 Total 50 211 1,080 Ferromanganese: 35 Chile 12 Other (7 countries) 18 35 53 Total 898 1,350 4,850 Canada 60 62 277 Singapore 10 14 Other (8 countries) 14 Canada 60 62 277 14 Other (8 countries) 14	China			48	61	
Netherlands 28 120 238 Poland 18 Switzerland 4 3 4 Taiwan (5) United Kingdom (5) Total 50 211 1,080 10 Ferromanganese: 59 10 Chile 35 10 11 1,080 10 China 35 12 18 35 53 Total 888 1,350 4,850 13 18 35 14 More than 2% carbon: 10 11	Germany			205	168	
Poland 18 Switzerland 4 3 4 Taiwan (5) United Kingdom 59 Total 50 211 1,080 1 Perromanganese: 59 1 Canada 880 1,320 4,750 1 Chile 12 1 1.080 1 Other (7 countries) 18 35 53 1 18 35 53 More than 2% carbon: 10 1 <t< td=""><td>Mexico</td><td></td><td></td><td>39</td><td>42</td></t<>	Mexico			39	42	
Switzerland 4 3 4 Taiwan (5) United Kingdom (5) Total 50 211 1,080 1 Ferromanganese: 59 1 2% or less carbon: 35 35 Chile 35 12 0	Netherlands	28	120	238	934	
Taiwan (5) United Kingdom 59 Total 50 211 1,080 Perromanganese: 2% or less carbon: 50 Canada 880 1,320 4,750 China 35 Other (7 countries) 18 35 53 Total 898 1,350 4,850 Mexico 60 62 277 Singapore 14 Other (8 countries) 14 Other (8 countries) 14 14 Other (8 countries) 14 14 Other (8 countries) 14 14 Other (8 countries) 14 14 Other (9 countries) 128	Poland			18	22	
United Kingdom 59 Total 50 211 1,080 1 Ferromanganese: 2% or less carbon: 50 211 1,080 1 2% or less carbon: Canada 880 1,320 4,750 7 Chile 35 53 7 Other (7 countries) 18 35 53 7 More than 2% carbon: 898 1,350 4,850 7 More than 2% carbon: 898 1,350 4,850 7 More than 2% carbon: 10 United Kingdom 10 United Kingdom 14 Other (8 countries) 14 Canada 877 1,180 6,980 9 Georgia 128 128 United Kingdom 16 16 Canada 6 57 13 16	Switzerland	4	3	4	3	
Total 50 211 1,080 1 Ferromanganese: 2% or less carbon: 2% or less carbon: 880 1,320 4,750 7 Canada $$ $$ 35 7	Taiwan			(5)	6	
Ferromanganese: 2% or less carbon: 2% or less carbon: 880 1,320 4,750 7 Chile 35 China 12 Other (7 countries) 18 35 53 Total 898 1,350 4,850 7 More than 2% carbon: 186 288 2,340 3 Metal 60 62 277 3 Singapore 10 10 United Kingdom 14 0 Other (8 countries) 128 0 Georgia 128 0 0 0 India 100 877 1,180 6,980 9 0 Georgia 128 0 0	United Kingdom			59	43	
2% or less carbon: 880 1,320 4,750 7 Chile 35 China 35 Other (7 countries) 18 35 53 Total 898 1,350 4,850 7 More than 2% carbon: 60 62 277 Singapore 10 United Kingdom 14 Other (8 countries) 14 Other (8 countries) 43 Total 246 351 2,680 4 Silicomanganese: 128 Canada 877 1,180 6,980 9 Georgia 128 United Kingdom 128 United Kingdom 128 Otal 877 1,180 7,110 9 Metal, including alloys and waste and scrap: ⁶ 6 57 13 Belgium </td <td>Total</td> <td>50</td> <td>211</td> <td>1,080</td> <td>1,760</td>	Total	50	211	1,080	1,760	
2% or less carbon: 880 1,320 4,750 7 Chile 35 China 35 Other (7 countries) 18 35 53 Total 898 1,350 4,850 7 More than 2% carbon: 60 62 277 Singapore 10 United Kingdom 14 Other (8 countries) 14 Other (8 countries) 43 Total 246 351 2,680 4 Silicomanganese: 128 Canada 877 1,180 6,980 9 Georgia 128 United Kingdom 128 United Kingdom 128 Otal 877 1,180 7,110 9 Metal, including alloys and waste and scrap: ⁶ 6 57 13 Belgium </td <td>Ferromanganese:</td> <td></td> <td></td> <td></td> <td></td>	Ferromanganese:					
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$						
$\begin{tabular}{ c c c c c c c } \hline China & & & 12 \\ \hline Other (7 countries) & 18 & 35 & 53 \\ \hline Total & 898 & 1,350 & 4,850 & 7 \\ \hline More than 2% carbon: & 186 & 288 & 2,340 & 3 \\ \hline Canada & 186 & 288 & 2,340 & 3 \\ \hline Mexico & 60 & 62 & 277 & -10 & $	Canada	880	1,320	4,750	7,490	
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	Chile			35	66	
Total 898 $1,350$ $4,850$ 2 More than 2% carbon: 60 62 277 Singapore 10 United Kingdom 14 Other (8 countries) 43 Total 246 351 2,680 2 Silicomanganese: 43 Canada 877 1,180 6,980 9 Georgia 128 128 United Kingdom 43 1,180 6,980 9 Georgia 1,180 6,980 9 1,28 1,28 1,28 1,180 7,110 9 1,40 1,6 1,6 1,6 1,6 1,6 1,6	China			12	18	
More than 2% carbon: Image: Canada Image: Red Prime	Other (7 countries)	18	35	53	108	
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	Total	898	1,350	4,850	7,680	
Mexico 60 62 277 Singapore 10 United Kingdom 14 Other (8 countries) 43 Total 246 351 2,680 4 Silicomanganese: 128 Canada 877 1,180 6,980 9 Georgia 128 United Kingdom 4 Total 877 1,180 6,980 9 Metal, including alloys and waste and scrap: ⁶ 877 1,180 7,110 9 Metal, including alloys and waste and scrap: ⁶ 6 57 13 India 256 90 985 985 Japan 7 22 92 92 Malaysia 121 39 1,750 Mexico 5 28 182 Pakistan 93 <	More than 2% carbon:					
Singapore 10 United Kingdom 14 Other (8 countries) 43 Total 246 351 2,680 4 Silicomanganese: 128 4 Canada 877 1,180 6,980 9 Georgia 128 4 United Kingdom 4 4 Total 877 1,180 6,980 9 Metal, including alloys and waste and scrap: ⁶ 877 1,180 7,110 9 Metal, including alloys and waste and scrap: ⁶ 16 Canada 15 20 40 40 Costa Rica 6 57 13 India 256 90 985 985 Japan 7 22 92 92 Malaysia 121 39 1,750 93 Mexico 5 28 182 93 Pakistan	Canada	186	288	2,340	3,580	
United Kingdom 14 Other (8 countries) 43 Total 246 351 2,680 4 Silicomanganese: 128 4 Canada 877 1,180 6,980 9 Georgia 128 4 United Kingdom 4 4 Total 877 1,180 7,110 9 Metal, including alloys and waste and scrap: ⁶ 877 1,180 7,110 9 Belgium 16 6 57 13 India 256 90 985 </td <td>Mexico</td> <td>60</td> <td>62</td> <td>277</td> <td>326</td>	Mexico	60	62	277	326	
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	Singapore			10	28	
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	United Kingdom			14	42	
Silicomanganese: 877 1,180 6,980 99 Georgia 128 United Kingdom 128 Total 877 1,180 7,110 9 Metal, including alloys and waste and scrap: 6 877 1,180 7,110 9 Metal, including alloys and waste and scrap: 6 16 Canada 15 20 40 Costa Rica 6 57 13 India 256 90 985 Japan 7 22 92 Malaysia 121 39 1,750 Mexico 5 28 182 Pakistan 93 Other (16 countries) 220 14 Total 410 257 3,400 440				43	126	
Canada 877 1,180 6,980 99 Georgia 128 United Kingdom 128 Total 877 1,180 7,110 9 Metal, including alloys and waste and scrap. ⁶ 877 1,180 7,110 9 Belgium 16 15 20 40 16 Canada 15 20 40 6 57 13 11 India 256 90 985 985 985 121 39 1,750 Mexico 5 28 182 121 39 1,750 Mexico 5 28 182 121 39 1,750 Mexico 5 28 182 121 139 1,750 Mexico 93 121 139 1,750 Mexico 93 121 139 1,750<	Total	246	351	2,680	4,100	
Georgia 128 United Kingdom 4 Total 877 1,180 7,110 9 Metal, including alloys and waste and scrap: ⁶ 16 Belgium 16 Canada 15 20 40 Costa Rica 6 57 13 India 256 90 985 Japan 7 22 92 Malaysia 121 39 1,750 Mexico 5 28 182 Pakistan 93 Other (16 countries) 220 1 Total 410 257 3,400 4	Silicomanganese:					
United Kingdom 4 Total 877 1,180 7,110 9 Metal, including alloys and waste and scrap. ⁶ 16 Belgium 16 Canada 15 20 40 Costa Rica 6 57 13 India 256 90 985 Japan 7 22 92 Malaysia 121 39 1,750 Mexico 5 28 182 Pakistan 93 Other (16 countries) 220 1 Total 410 257 3,400 4	Canada	877	1,180	6,980	9,810	
Total 877 1,180 7,110 9 Metal, including alloys and waste and scrap: ⁶ 16 Belgium 16 Canada 15 20 40 Costa Rica 6 57 13 India 256 90 985 Japan 7 22 92 Malaysia 121 39 1,750 Mexico 5 28 182 Pakistan 93 Other (16 countries) 220 14 Total 410 257 3,400 440	Georgia			128	120	
Metal, including alloys and waste and scrap: ⁶ Belgium 16 Canada 15 20 40 Costa Rica 6 57 13 India 256 90 985 Japan 7 22 92 Malaysia 121 39 1,750 Mexico 5 28 182 Pakistan 93 Other (16 countries) 220 14 Total 410 257 3,400 4	United Kingdom			4	6	
Belgium 16 Canada 15 20 40 Costa Rica 6 57 13 India 256 90 985 Japan 7 22 92 Malaysia 121 39 1,750 Mexico 5 28 182 Pakistan 93 Other (16 countries) 220 12 Total 410 257 3,400 440	Total	877	1,180	7,110	9,930	
Belgium 16 Canada 15 20 40 Costa Rica 6 57 13 India 256 90 985 Japan 7 22 92 Malaysia 121 39 1,750 Mexico 5 28 182 Pakistan 93 Other (16 countries) 220 12 Total 410 257 3,400 440	Metal, including alloys and waste and scrap: ⁶					
Costa Rica 6 57 13 India 256 90 985 Japan 7 22 92 Malaysia 121 39 1,750 Mexico 5 28 182 Pakistan 93 Other (16 countries) 220 14 Total 410 257 3,400 4				16	303	
India 256 90 985 Japan 7 22 92 Malaysia 121 39 1,750 Mexico 5 28 182 Pakistan 93 Other (16 countries) 220 12 Total 410 257 3,400 4	Canada	15	20	40	117	
Japan 7 22 92 Malaysia 121 39 1,750 Mexico 5 28 182 Pakistan 93 Other (16 countries) 220 11 Total 410 257 3,400 44	Costa Rica	6	57	13	173	
Malaysia 121 39 1,750 Mexico 5 28 182 Pakistan 93 Other (16 countries) 220 11 Total 410 257 3,400 440	India	256	90	985	643	
Mexico 5 28 182 Pakistan 93 Other (16 countries) 220 1 Total 410 257 3,400 4	Japan	7	22	92	316	
Pakistan 93 Other (16 countries) 220 1 Total 410 257 3,400 4	Malaysia	121	39	1,750	842	
Other (16 countries) 220 1 Total 410 257 3,400 4	Mexico	5	28	182	697	
Total 410 257 3,400 4	Pakistan			93	72	
	Other (16 countries)			220	1,030	
	Total	410	257	3,400	4,190	
Grand total 2,480 3,350 19,100 27	Grand total	2,480	3,350	19,100	27,700	

-- Zero.

¹Presentation of monthly data is based on the "January-October " quantities of the leading countries.

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

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

⁴Free alongside ship.

⁵Less than ¹/₂ unit.

⁶Includes manganese-aluminum, other alloys, and waste and scrap.

TABLE 9 U.S. FOREIGN TRADE IN SELECTED MANGANESE CHEMICALS IN OCTOBER 2017, BY CLASS¹

					January–O	October ²
			Principal sources			Principal sources
			and destinations:			and destinations:
	Gross weight	Value ³	gross weight (metric tons);	Gross weight	Value ³	gross weight (metric tons);
Class	(metric tons)	(thousands)	value ³ (thousands)	(metric tons)	(thousands)	value ³ (thousands)
Imports for consumption:						
Manganese oxides other than dioxide	2,390	\$2,070	South Africa 1,250; \$842	20,800	\$15,200	South Africa 11,300; \$5,950
Manganites, manganates, and other permanganates				(4)	12	Canada (4); \$12
Potassium permanganate	162	392	India 147; \$363	739	1,850	India 705; \$1,770
Sodium permanganate	120	258	China 120; \$258	1,140	2,610	China 1,000; \$2,280
Sulfates, basket category, including manganese sulfate	9,760	6,310	China 4,310; \$2,540	55,800	42,700	China 21,700; \$15,600
Exports:						
Manganese dioxide	399	710	Canada 252; \$256	4,540	7,400	Canada 2,280; \$2,080
Manganese oxides other than dioxide	381	616	Canada 80; \$101	5,710	10,400	Canada 1,050; \$1,490
Manganites, manganates, and other permanganates	6	15	Canada 5; \$11	86	370	Canada 82; \$167
Potassium permanganate	674	249	Belgium 399; \$164	7,300	2,680	Belgium 3,570; \$1,490
Sodium permanganate	109	452	Mexico 66; \$333	631	2,030	Belgium 317; \$672
Sulfates, basket category, including manganese sulfate	2,070	1,770	Canada 1,730; \$744	17,600	21,100	Canada 12,300; \$6,330
7						

-- Zero.

¹Data are rounded to no more than three significant digits. ²May include revised data that are not broken out by specific month(s). ³For imports, customs value; for exports, free alongside ship value.

⁴Less than ¹/₂ unit.