

# **Mineral Industry Surveys**

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## **MANGANESE IN APRIL 2012**

Preliminary domestic data (gross weight) for April 2012 indicated that consumption of manganese ore containing 35% or more manganese, exclusive of that consumed at iron and steel plants, was 41,100 metric tons (t). This was a slight increase from the amount consumed in March 2012. Manganese ore consumption during the first 4 months of 2012 was 173,000 t. This was an 8% increase from the revised amount that was consumed during the same period in 2011 (160,000 t). Industry stocks of ore at the end of April 2012 were 216,000 t, which was the same as those at the end of March 2012.

Included in this Mineral Industry Surveys are U.S. spot market prices and U.S. foreign trade data for selected manganese-containing materials in April 2012.

## TABLE 1 PRICES FOR MANGANESE FERROALLOYS, METAL, AND ORE IN APRIL 2012

					Average low,
		High	Low	Average	mid, and high
Manganese ferroalloys: <sup>1</sup>					
High-carbon ferromanganese, 75% manganese	dollars per long ton of contained manganese	1,350.00	1,275.00	1,312.50	XX
Medium-carbon ferromanganese, 85% manganese	cents per pound of contained manganese	96.00	95.00	95.50	XX
Silicomanganese, 65% manganese	do.	75.00	73.00	74.00	XX
Manganese metal, 99.9% manganese flake <sup>2</sup>	cents per pound	162.00	157.00	XX	158.25-159.94-161.63
Manganese ore: <sup>3, 4</sup>					
36%-39% manganese	dollars per metric ton unit contained manganese	4.40	4.10	XX	4.23-4.28-4.33
44% manganese	do.	5.00	4.45	XX	4.64-4.74-4.85
46% manganese	do.	5.25	4.80	XX	4.93-5.01-5.10

do. Ditto. XX Not applicable.

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

<sup>2</sup>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>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 46 when the manganese content is 46%.

## TABLE 2 SELECTED U.S. FOREIGN TRADE IN MANGANESE<sup>1</sup>

	Imports	for consumpti	on	Exports			
	Ore and	Ferroalloy					
	dioxide	and metal	Total	Ore	and metal	Total	
2011:							
April	1,720	27,800	29,500	61	1,150	1,210	
January–April	90,700	172,000	262,000	218 r	5,210	5,420	
2012:							
January	11,800	53,000	64,800	36	603	639	
February	12,400	34,900	47,300	158	616	775	
March	24,500	54,000	78,400	352	848	1,200	
April	3,960	59,500	63,400	106	816	922	
Total	52,600	201,000	254,000	652	2,880	3,540	

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

<sup>r</sup>Revised.

<sup>1</sup>Data 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 2012 $^{\rm 1}$

#### (Metric tons)

				January–April		
	Gross	Mn	Customs	Gross	Mn	Customs
Source	weight	content	value <sup>2</sup>	weight	content	value <sup>2</sup>
Australia	1,460	988	\$1,220,000	4,390	2,940	\$3,630,000
Azerbaijan				1,500	984	1,700,000
Canada				16	11	9,400
Georgia	22,800	15,700	22,300,000	38,500	26,800	35,900,000
India	182	101	260,000	941	533	1,430,000
Korea, Republic of	600	359	1,050,000	620	372	1,070,000
Mexico	1,630	1,060	1,880,000	3,650	2,380	3,870,000
Norway	5,600	3,450	10,200,000	14,100	8,760	24,100,000
Russia				3,180	2,150	4,290,000
South Africa	12,500	8,230	14,200,000	42,300	28,300	44,100,000
Spain				1,650	992	2,660,000
Total	44,700	29,900	51,100,000	111,000	74,200	123,000,000

-- Zero.

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

<sup>2</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 4 U.S. IMPORTS FOR CONSUMPTION OF FERROMANGANESE IN APRIL $2012^1$

#### (Metric tons)

					oril	
	Gross	Mn	Customs	Gross	Mn	Customs
Source	weight	content	value <sup>2</sup>	weight	content	value <sup>2</sup>
Low carbon:						
China	992	925	\$2,800,000	2,310	2,160	\$6,410,000
India	917	738	1,520,000	2,520	2,050	4,370,000
Korea, Republic of	1,000	900	2,770,000	1,040	936	2,870,000
Mexico	500	403	865,000	1,720	1,390	2,930,000
Norway	1,400	1,140	2,220,000	4,100	3,310	6,600,000
South Africa				20	16	59,400
Vietnam				1,040	899	2,040,000
Total	4,810	4,100	10,200,000	12,700	10,800	25,300,000
Medium carbon, 1%–2% C:						
Korea, Republic of	6,780	5,480	10,000,000	10,900	8,820	16,200,000
Mexico	200	150	406,000	1,010	770	2,030,000
Norway	2,850	2,310	3,930,000	7,230	5,870	9,870,000
South Africa	1,350	1,060	1,770,000	6,640	5,360	10,300,000
Total	11,200	9,000	16,100,000	25,800	20,800	38,400,000
Medium carbon, 2%–4% C, South Africa	18	16	44,200	36	32	88,900
High carbon:						
Australia				13,000	10,100	12,500,000
China				83	60	69,700
France				2,500	1,910	3,000,000
India				297	223	248,000
Korea, Republic of	100	75	114,000	120	90	135,000
Norway	3,420	2,620	3,640,000	5,720	4,430	5,720,000
Saudi Arabia				1,400	1,010	1,180,000
South Africa	11,900	8,970	11,100,000	73,500	56,400	74,300,000
Ukraine	2,580	2,020	2,840,000	7,180	5,590	7,440,000
Total	18,000	13,700	17,700,000	104,000	79,800	105,000,000
Grand total	34,000	26,800	44,100,000	142,000	111,000	168,000,000

-- Zero.

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

<sup>2</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

## U.S. IMPORTS FOR CONSUMPTION OF MANGANESE ORE (20% OR MORE Mn) IN APRIL 2012<sup>1, 2</sup>

#### (Metric tons)

				January–April			
	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				2,580	682	\$669,000	
Gabon				19,500	8,360	2,600,000	
Mexico	1,530	551	\$306,000	3,040	1,100	602,000	
Total	1,530	551	306,000	25,100	10,100	3,870,000	
47% or more manganese:							
Australia				20,700	10,300	3,120,000	
Belgium	1,380	689	82,700	1,450	742	174,000	
Brazil	2,640	1,400	842,000	2,690	1,430	861,000	
Gabon				49,000	25,000	11,700,000	
Morocco	823	411	49,400	1,050	556	285,000	
Poland	7	4	5,760	7	4	5,760	
Total	4,840	2,510	980,000	74,900	38,000	16,100,000	
Grand total	6,380	3,060	1,290,000	100,000	48,100	20,000,000	

-- Zero.

<sup>1</sup>Quantities for general imports and imports for consumption are identical.

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

<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 2012<sup>1</sup>

#### (Metric tons, gross weight)

 12  600	Customs value <sup>2</sup>  \$20,100 	Quantity 486 24 25	Customs value <sup>2</sup> \$271,000 40,200 20,500
 12 	 \$20,100 	486 24	\$271,000 40,200
12 	\$20,100	24	\$271,000 40,200
			- ,
 600		25	20,500
600			= • ,• • •
000	1,480,000	2,490	6,000,000
13	21,700	13	21,700
		40	35,100
260	197,000	260	197,000
11	19,400	46	77,500
463	1,160,000	3,790	9,280,000
145	69,100	379	180,000
500	2,970,000	7,550	16,100,000
	11 463 145	11         19,400           463         1,160,000           145         69,100	11         19,400         46           463         1,160,000         3,790           145         69,100         379

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

<sup>2</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

#### U.S. IMPORTS FOR CONSUMPTION OF MANGANESE METAL IN APRIL $2012^1$

#### (Metric tons)

			Janua	ary–April
	Gross	Customs	Gross	Customs
Source	weight	value <sup>2</sup>	weight	value <sup>2</sup>
Unwrought flake:				
Brazil	21	\$61,400	21	\$61,400
China	511	1,470,000	5,250	14,600,000
Japan			1	2,960
Mexico	9	43,200	53	248,000
South Africa	295	1,110,000	791	2,850,000
Vietnam			200	547,000
Total	836	2,690,000	6,310	18,300,000
Unwrought powder:				
China	20	58,900	238	679,000
Mexico			53	252,000
South Africa	199	795,000	796	3,130,000
Spain			1	2,220
Total	219	854,000	1,090	4,060,000
Unwrought, other:				
China	1,490	4,150,000	7,710	21,100,000
Germany			13	44,900
South Africa	57	207,000	267	974,000
Spain	75	246,000	310	1,280,000
Total	1,620	4,610,000	8,300	23,400,000
Other manganese, wrought:				
China			3	13,800
Germany			1	71,900
Japan			(3)	39,200
Mexico	4	15,700	7	31,300
Total	4	15,700	12	156,000
Grand total	2,680	8,160,000	15,700	46,000,000

-- Zero.

<sup>1</sup>Data rounded to no more than three significant digits; may not add to totals shown. <sup>2</sup>Customs value generally represent 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>3</sup>Less than <sup>1</sup>/<sub>2</sub> unit.

Note: Imports for consumption of metallic waste and scrap totaled 146 metric tons (t), all of which was from Canada, to give a January–April total of 267 t.

#### TABLE 8

# U.S. EXPORTS OF MANGANESE ORE (20% OR MORE Mn), FERROMANGANESE, SILICOMANGANESE, AND MANGANESE METAL BY COUNTRIES OF DESTINATION IN APRIL 2012<sup>1, 2</sup>

			January–April		
Source	Gross weight (metric tons)	F.a.s. <sup>3</sup> value (thousands)	Gross weight (metric tons)	F.a.s. <sup>3</sup> value (thousands)	
Ore and concentrates with 20% or more manganese:	(metric tons)	(ulousalius)	(metric tons)	(mousanus)	
Aruba			78	\$20	
Canada	109	\$131	240	257	
China		φ151 	51	66	
Denmark			77	32	
Hong Kong			11	39	
Indonesia			3	3	
Korea, Republic of	68	88	170	220	
Netherlands	35	122	671	551	
United Arab Emirates			3	10	
Total	212	341	1,310	1,200	
Ferromanganese:		011	1,010	1,200	
2% or less carbon:	_				
Canada	50	76	392	564	
Guatemala	23	43	23	43	
Hungary			3	5	
Japan	40	94	80	190	
Mexico	60	125	104	186	
Turkey			60	154	
Total	172	339	661	1,140	
More than 2% carbon:			001	1,110	
Brazil	1	3	13	37	
Canada	20	27	211	262	
Chile	15	43	15	43	
Japan			4	11	
Mexico			59	76	
Norway			1	6	
Singapore	2	6	11	32	
United Arab Emirates	3	8	3	8	
United Kingdom			1	3	
Total	41	87	319	477	
Silicomanganese:			• • •		
Brazil		95	156	380	
Canada	327	446	1,140	1,560	
Dominican Republic			9	21	
Indonesia			3	5	
Mexico	98	139	362	514	
Total	464	680	1,670	2,480	
Metal, including alloys and waste and scrap: <sup>4</sup>			-,		
Belgium			24	52	
Canada	11	27	24	69	
China	91	198	341	1,090	
France	- 62 <sup>5</sup>			278	
Germany	33	73	42	91	
Guatemala		30	17	30	
India			171	391	
Japan			54	160	
Mexico	52	172	162	461	
Norway	- 62 5			278	
Other (6 countries)	- 12	30	46	105	
Total	341	1,090	1,010	3,010	
Grand total	1,230	2,530	4,960	8,300	
Grand IOtai	1,230	2,530	4,900	0,500	

-- Zero.

<sup>1</sup>Presentation of monthly data is based on the year-to-date quantities (gross weight) 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>Free alongside ship.

<sup>4</sup>Includes manganese-aluminum, other alloys, and waste and scrap.

<sup>5</sup>All or part of these data have been referred to the U.S. Census Bureau for verification.

# TABLE 9 U.S. FOREIGN TRADE IN SELECTED MANGANESE CHEMICALS IN APRIL 2012, BY $\rm CLASS^1$

					Janua	ry–April
	Gross weight	Value <sup>2</sup>	Principal sources and destinations: gross weight (metric tons);	Gross weight	Value <sup>2</sup>	Principal sources and destinations: gross weight (metric tons)
Class	(metric tons)	(thousands)	value <sup>2</sup> (thousands)	(metric tons)	(thousands)	value <sup>2</sup> (thousands)
Imports for consumption:	. ,					(
Manganese oxides other than dioxide	141	\$276	Brazil 57; \$65	1,020	\$1,260	Brazil 333; \$443
Manganites, manganates, and						
other permanganates	27	312	China 18; \$45	27	325	China 18; \$45
Potassium permanganate	92	297	India 91; \$287	635	2,040	India 576; \$1,835
Sodium permanganate	10	25	China 10; \$25	66	166	China 66; \$166
Sulfates, basket category, including manganese sulfate	3,530	3,370	China 1,550; \$1,710	18,000	16,800	Mexico 5,460; \$4,650
Exports:						
Manganese dioxide	720	1,110	Canada 422; \$394	3,020	4,870	Canada 1,790; \$1,530
Manganese oxides other than dioxide	960	1,500	Canada 197; \$304	3,200	4,890	Canada 807; \$961
Manganites, manganates, and						
other permanganates	32	113	Canada 29; \$75	101	300	Canada 97; \$254
Potassium permanganate	331	828	Belgium 248; \$558	1,130	2,880	Belgium 781; \$1,760
Sodium permanganate	98	209	Belgium 56; \$100	333	750	Belgium 152; \$275
Sulfates, basket category,						
including manganese sulfate	889	1,020	Canada 667; \$467	5,070	4,590	Canada 4,080; \$2,390

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

<sup>2</sup>For imports, Customs value; for exports, free alongside ship value.