

# American Metal Market

## FERRO-ALLOYS

DECEMBER 25, 2017

PRICE DESCRIPTION	LOCATION	CURRENT PRICE	ASSESSMENT DATE	PREVIOUS PRICE	ASSESSMENT DATE	CHANGE	% CHANGE
<b>BULK ORES AND ALLOYS</b>							
<b>CHROME ORE</b>							
Chrome Ore, South Africa, UG2 concentrates, 42% index basis, c.i.f. China, \$ per tonne	South Africa	204	22-Dec-17	179	15-Dec-17	▲ 25	▲ 13.97%
Chrome Ore, Turkish lumpy 40-42%, c.f.r. main Chinese ports, \$ per tonne	Turkey	295 - 305	22-Dec-17	265 - 280	15-Dec-17	▲ 27.5	▲ 10.09%
<b>FERRO-CHROME</b>							
<b>High carbon</b>							
Ferro-chrome 6-8% C, max. 60-65% Cr basis, 2% Si, United States in-warehouse Pittsburgh, \$ per lb Cr	USA	1.40 - 1.48	21-Dec-17	1.40 - 1.48	14-Dec-17	0	0%
Ferro-chrome 6-8% C, max. 60% Cr basis, 1.5% Si, major European destinations, \$ per lb Cr	EU	1.22 - 1.33	22-Dec-17	1.22 - 1.30	15-Dec-17	▲ 0.015	▲ 1.19%
Ferro-chrome low phosphorous, min. 65% Cr, max. 7% C, max. 1% Si, max. 0.015% P, max. 0.05% Ti, \$ per lb	EU	1.35 - 1.40	15-Dec-17	1.35 - 1.40	01-Dec-17	0	0%
Ferro-chrome Japan import, 8-9% C, basis 60% Cr, c.i.f. Japan, duty unpaid, \$ per lb Cr	Japan	0.9 - 0.96	21-Dec-17	0.89 - 0.95	14-Dec-17	▲ 0.01	▲ 1.09%
Ferro-chrome South Korea import, 8-9% C, basis 60% Cr, c.i.f. South Korea, duty unpaid, \$ per lb Cr	South Korea	0.9 - 0.95	21-Dec-17	0.88 - 0.94	14-Dec-17	▲ 0.015	▲ 1.65%
Ferro-chrome China import, charge chrome 50% Cr index, c.i.f. Shanghai, duty unpaid, \$ per lb Cr	China	0.89	22-Dec-17	0.88	15-Dec-17	▲ 0.01	▲ 1.14%
Ferro-chrome China spot, 6-8% C, basis 50% Cr, delivered duty paid, RMB per tonne	China	7,300 - 7,600	22-Dec-17	7,300 - 7,600	15-Dec-17	0	0%
Ferro-chrome China contract, 6-8% C, basis 50% Cr, delivered duty paid, RMB per tonne	China	6,900 - 7,100	22-Dec-17	6,900 - 7,100	15-Dec-17	0	0%
Ferro-chrome European Benchmark Indicator, Lumpy Cr, charge basis 52% (and high carbon), \$ per lb	EU	1.15	22-Dec-17	1.11	15-Dec-17	▲ 0.04	▲ 3.6%
Ferro-chrome lumpy Cr, charge basis 52% Cr, quarterly, major European destinations, \$ per lb Cr	EU	1.18	15-Dec-17	1.39	01-Oct-17	▼ 0.21	▼ 15.11%
<b>Low carbon</b>							
Ferro-chrome 0.10% C, min. 62% Cr, United States low-carbon, duty paid, f.o.b. Pittsburgh, \$ per lb Cr	USA	2.2 - 2.25	21-Dec-17	2.11 - 2.15	14-Dec-17	▲ 0.07	▲ 3.25%
Ferro-chrome 0.05% C, min. 65% Cr, United States low-carbon, duty paid, f.o.b. Pittsburgh, \$ per lb Cr	USA	2.3 - 2.35	21-Dec-17	2.25 - 2.30	14-Dec-17	▲ 0.05	▲ 2.2%
Ferro-chrome 0.15% C, min. 60% Cr, United States low-carbon, duty paid, f.o.b. Pittsburgh, \$ per lb Cr	USA	2.1 - 2.15	21-Dec-17	2.06 - 2.10	14-Dec-17	▲ 0.045	▲ 2.16%
Ferro-chrome 0.10% C, average 60-70% Cr, major European destinations, \$ per lb Cr	EU	2.23 - 2.33	15-Dec-17	2.23 - 2.33	01-Dec-17	0	0%
Ferro-chrome 0.06% C, max. 65% Cr, European low-carbon, in warehouse, \$ per lb Cr	EU	2.3 - 2.4	15-Dec-17	2.3 - 2.4	01-Dec-17	0	0%
<b>MANGANESE ORE</b>							
Manganese Ore Index 44% Mn, c.i.f. Tianjin, \$ per dmtu Mn	China	6.93	22-Dec-17	6.61	15-Dec-17	▲ 0.32	▲ 4.84%
Manganese Ore Index 37% Mn, f.o.b. Port Elizabeth, \$ per dmtu Mn	South Africa	5.79	22-Dec-17	5.55	15-Dec-17	▲ 0.24	▲ 4.32%
<b>FERRO-MANGANESE</b>							
<b>High carbon</b>							
Ferro-manganese 78% Mn, standard 7.5% C, United States in-warehouse Pittsburgh, \$ per long ton	USA	1,425 - 1,500	21-Dec-17	1,425 - 1,500	14-Dec-17	0	0%
Ferro-manganese basis 78% Mn (Scale pro rata), Standard 7.5% C, major European destinations, € per tonne	EU	1,050 - 1,100	22-Dec-17	1,050 - 1,100	15-Dec-17	0	0%
Ferro-manganese MB Chinese free market, min. 65% Mn, max. 7.0% C, in-warehouse, RMB per tonne	China	7,400 - 8,500	22-Dec-17	8,000 - 9,000	15-Dec-17	▼ 550	▼ 6.47%
<b>Medium carbon</b>							
Ferro-manganese medium carbon, max. 80% Mn, max. 1.5% C, ex-U.S. warehouse, \$ per lb	USA	1.08 - 1.1	21-Dec-17	1.08 - 1.1	14-Dec-17	0	0%
<b>Low carbon</b>							
Ferro-manganese low carbon, max. 80% Mn, max. 0.80% C, ex-U.S. warehouse, ¢ per lb	USA	114 - 116	21-Dec-17	114 - 116	14-Dec-17	0	0%
<b>SILICO-MANGANESE</b>							
Silico-manganese United States in-warehouse Pittsburgh, \$ per lb	USA	0.60 - 0.62	21-Dec-17	0.60 - 0.62	14-Dec-17	0	0%
Silico-manganese lumpy 65-75% Mn basis 15-19% Si (Scale pro rata), major European destinations, € per tonne	EU	1,000 - 1,035	22-Dec-17	975 - 1,035	15-Dec-17	▲ 12.5	▲ 1.24%
Silico-manganese min. 65% Mn, min. 16% Si, \$ per tonne f.o.b. India	India	1,150 - 1,220	22-Dec-17	1,150 - 1,200	15-Dec-17	▲ 10	▲ 0.85%
Silico-manganese MB Chinese, min. 65% Mn, max. 17% Si, in-warehouse, RMB per tonne	China	8,400 - 9,000	22-Dec-17	8,500 - 9,500	15-Dec-17	▼ 300	▼ 3.33%

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<b>BULK ORES AND ALLOYS (cont'd)</b>							
<b>FERRO-SILICON</b>							
Ferro-silicon, lumpy basis, 75% Si, United States free market, imported, in-warehouse Pittsburgh, \$ per lb	USA	1.08 - 1.12	21-Dec-17	1.08 - 1.13	14-Dec-17	▼ 0.005	▼ 0.45%
Ferro-silicon, lumpy basis, 75% Si (Scale pro rata), major European destinations, € per tonne	EU	1,550 - 1,650	22-Dec-17	1,600 - 1,650	15-Dec-17	▼ 25	▼ 1.54%
Ferro-silicon, export from mainland China, min. 75% Si, 7.5% C, \$ per tonne f.o.b.	China	1,900 - 2,000	22-Dec-17	1,900 - 2,200	15-Dec-17	▼ 100	▼ 4.88%
Ferro-silicon, MB Chinese free market, min. 75% Si, in-warehouse, RMB per tonne	China	8,000 - 11,000	22-Dec-17	8,500 - 11,000	15-Dec-17	▼ 250	▼ 2.56%
<b>NOBLE ORES AND ALLOYS</b>							
<b>MOLYBDENUM</b>							
<b>Molybdenum oxide</b>							
Molybdenum, canned molybdic oxide, United States free market, in-warehouse, \$ per lb Mo	USA	9.7 - 9.95	21-Dec-17	9.2 - 9.4	14-Dec-17	▲ 0.525	▲ 5.65%
Molybdenum, drummed molybdic oxide, free market, in-warehouse, \$ per lb Mo	EU	9.8 - 9.9	22-Dec-17	9.7 - 9.8	20-Dec-17	▲ 0.1	▲ 1.03%
<b>Molybdenum concentrate</b>							
Molybdenum concentrate, MB Chinese free market, 45% Mo, RMB per mtu	China	1,430 - 1,450	20-Dec-17	1,380 - 1,410	13-Dec-17	▲ 45	▲ 3.23%
<b>FERRO-MOLYBDENUM</b>							
Ferro-molybdenum 65-70% Mo, United States free market, in-warehouse Pittsburgh, \$ per lb	USA	10.7 - 11	21-Dec-17	10.5 - 10.85	14-Dec-17	▲ 0.175	▲ 1.64%
Ferro-molybdenum min. 65% basis, in-warehouse Rotterdam, \$ per kg Mo	EU	24.5 - 25.1	22-Dec-17	24.4 - 25.1	20-Dec-17	▲ 0.05	▲ 0.2%
<b>FERRO-TITANIUM</b>							
Ferro-titanium 70% (max. 4.5% Al), MB free market, Europe, delivered duty paid, \$ per kg Ti	EU	4.8 - 5.6	20-Dec-17	4.9 - 5.55	13-Dec-17	▼ 0.025	▼ 0.48%
Ferro-titanium 68-72%, ex-U.S. warehouse, \$ per lb	USA	2.4 - 2.55	21-Dec-17	2.4 - 2.55	14-Dec-17	0	0%
<b>TUNGSTEN</b>							
<b>APT</b>							
Tungsten APT, European free market, \$ per mtu	EU	294 - 301	22-Dec-17	295 - 300	15-Dec-17	0	0%
Tungsten APT, export from mainland China, Chinese No. 1 grade, min. 88.5% WO <sub>3</sub> , \$ per mtu f.o.b.	China	300 - 305	20-Dec-17	300 - 306	13-Dec-17	▼ 0.5	▼ 0.17%
<b>Concentrate</b>							
Tungsten concentrate, MB Chinese free market, 65% WO <sub>3</sub> , in-warehouse, RMB per tonne	China	112,000 - 113,000	20-Dec-17	110,000 - 112,000	13-Dec-17	▲ 1,500	▲ 1.35%
<b>FERRO-TUNGSTEN</b>							
Ferro-tungsten, basis 75% W, in-warehouse Rotterdam, duty unpaid, \$ per kg W	EU	37 - 38	22-Dec-17	37 - 38	20-Dec-17	0	0%
Ferro-tungsten, China export, min. 75%, f.o.b. China, \$ per kg W	China	37.5 - 38.5	20-Dec-17	37.5 - 38.5	13-Dec-17	0	0%
<b>VANADIUM PENTOXIDE</b>							
Vanadium pentoxide, min. 98%, in-warehouse Rotterdam, \$ per lb V2O <sub>5</sub>	EU	9.6 - 9.9	22-Dec-17	9.25 - 9.9	15-Dec-17	▲ 0.175	▲ 1.83%
<b>FERRO-VANADIUM</b>							
Ferro-vanadium, United States free market, 70-80% V, in-warehouse Pittsburgh, \$ per lb	USA	20.75 - 21.5	21-Dec-17	20 - 20.75	14-Dec-17	▲ 0.75	▲ 3.68%
Ferro-vanadium, min. 78% basis, free delivered duty paid, consumer plant, 1st grade Western Europe, \$ per kg V	EU	43.25 - 45	22-Dec-17	42.9 - 44	20-Dec-17	▲ 0.675	▲ 1.55%
<b>MINOR METALS</b>							
<b>CHROMIUM METAL</b>							
Chromium, alumino-thermic, min. 99%, ex-U.S. warehouse, \$ per lb	USA	4 - 4.1	21-Dec-17	4 - 4.1	14-Dec-17	0	0%
Chromium, alumino-thermic, World MB free market, in-warehouse, min. 99%, \$ per tonne	EU	7,700 - 8,000	22-Dec-17	7,700 - 8,000	15-Dec-17	0	0%
<b>MANGANESE</b>							
Manganese Electrolytic Metal, min. 99.7%, ex-U.S. warehouse, \$ per lb	USA	0.98 - 1.02	21-Dec-17	1.02 - 1.04	14-Dec-17	▼ 0.03	▼ 2.91%
Manganese, min. 99.7% electrolytic manganese flake, MB free market, in-warehouse, \$ per tonne C	EU	1,740 - 1,820	22-Dec-17	1,740 - 1,820	20-Dec-17	0	0%
<b>SILICON METAL</b>							
Silicon, United States free market, ¢ per lb	USA	135 - 140	11-Dec-17	135 - 138	10-Nov-17	▲ 1	▲ 0.73%
Silicon, MB free market, € per tonne	EU	2,215 - 2,325	22-Dec-17	2,215 - 2,325	15-Dec-17	0	0%
Silicon, export from mainland China, 98.5%, \$ per tonne f.o.b.	China	1,800 - 1,870	22-Dec-17	1,800 - 1,870	15-Dec-17	0	0%

Source: AMM sister publication *Metal Bulletin*.