

METALS DAILY

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BATTERY METALS

Seaborne lithium hydroxide price drops further on oversupply

Seaborne lithium hydroxide prices continued to drop on persistent oversupply, while lithium carbonate prices remained stable for the third week.

The Platts lithium hydroxide CIF North Asia weekly assessment fell another \$200 on the week to be assessed at \$12,700/mt Friday, while lithium carbonate was steady at \$10,100/mt. Both assessments reflected offers, bids and deals for battery-grade material delivered to the main ports of China, Japan and South Korea.

A South American producer source said the current lithium carbonate prices were "still comfortable," although added that his company was under pressure from Chinese buyers wanting lower prices.

"But orders from our customers are normal. We are shipping materials as per normal. Our inventory level is normal. Non-battery usage lithium carbonate prices have some changes, but battery grade prices do not have many changes," he said, adding that customer interest was expected to pick up at the end of July.

He put offers for battery grade lithium

(continued on page 2)

BATTERY METALS

Weekly Prices

Lithium Carbonate

CIF North Asia (\$/mt)	10100	+0	26-Jul-19
DDP China (Yuan/mt)	67500	-1000	26-Jul-19
CIF North Asia Import Parity (Yuan/mt)	78517	+184	26-Jul-19

Lithium Hydroxide

CIF North Asia (\$/mt)	12700	-200	26-Jul-19
DDP China (Yuan/mt)	80000	-2000	26-Jul-19
CIF North Asia Import Parity (Yuan/mt)	98729	-1320	26-Jul-19

Cobalt Sulfate

CIF North Asia (\$/mt)	6900	+0	25-Jul-19
DDP China (Yuan/mt)	35000	+0	25-Jul-19

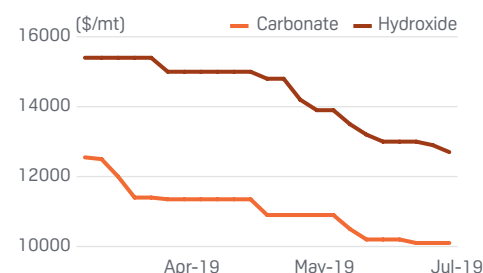
Monthly Prices

Lithium Spodumene

FOB Australia (\$/mt)	600	-15	28-Jun-19
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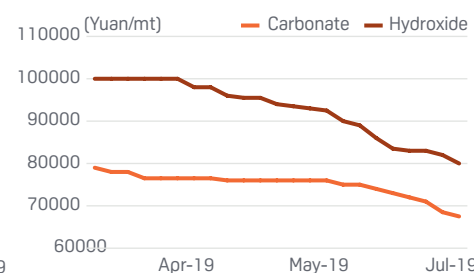
PLATTS LITHIUM CARBONATE AND LITHIUM HYDROXIDE

CIF North Asia



Source: S&P Global Platts

DDP China



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carbonate at \$9,500-\$10,000/mt CIF China and for industrial grade at \$8,800/mt CIF China, with offers on a CIF Japan and South Korea basis much higher, possibly around \$11,000/mt.

The producer source said his company had received some inquiries from South Korean customers, but these were still under discussion and the company had not decided offer prices yet.

He put South Korean inquiries for lithium carbonate "very low," at about \$10,900-\$11,000/mt.

A South Korean trader said lithium prices were stable and he expected them to remain so in the long term.

He said his company had entered into several index-linked contracts, although gave tradable spot values at \$10,000/mt CIF North Asia for lithium carbonate and \$12,000/mt CIF North Asia for lithium hydroxide.

"I talked to Chinese lithium suppliers who said prices are going to be stable and at most dip a little," he said, while indicating that he might buy from Chinese suppliers for battery-grade carbonate and hydroxide.

A market participant based in the Americas region chalked weak lithium prices up to the oversupply of Australian spodumene.

"When the Chinese increase their conversion capacity [to match the spodumene availability], there will be more lithium carbonate and hydroxide supply, so these prices will fall - and the same converters will pressure the Australian [producers] to

lower spodumene prices too," he said.

The Americas-based market participant said he believed spodumene prices could keep moving down until they neared a theoretical breakeven price of \$400/mt CIF China, which would allow lithium carbonate and hydroxide prices to bottom at around \$7,000/mt.

"For companies which have full control of the process, the cost to convert spodumene into carbonate or hydroxide is not significantly different," he added.

A market consultant in Asia said there is too much spodumene in China, but players were not able to convert all they wanted to and were trying to increase the conversion capacity.

He put the low-end of the spodumene price at \$560/mt CIF China, saying if the price reached \$500/mt CIF China, the cash cost to produce technical grade carbonate would be around \$6,500/mt.

"Those who have full control of this process will have virtually the same cost to produce battery-grade carbonate, and also pretty much the same for hydroxide," the consultant said.

Looking forward to next year, the consultant said he did not see either supply or demand increasing significantly and expected the low-end of prices to be set by Australian spodumene prices.

"I believe the supply will start to be limited when prices reach around \$400/mt CIF China - this would lead to a cash cost of \$6,000/mt for lithium carbonate or

hydroxide. Lithium prices could go to as low as \$6,500/mt, but if this happens, I believe the Chinese would lower their lithium production," he said.

The consultant added that if Chinese converters increased capacity, this would result in more lithium carbonate and hydroxide supply, leading to further price falls, with the same converters then likely to pressure Australian spodumene producer to lower prices too.

He was also of the opinion that prices would bottom out and stop falling at \$7,000/mt. Looking at hydroxide specifically, he said there was further room to fall below \$12,500/mt.

Meanwhile in the Chinese domestic market, both hydroxide and carbonate prices fell further this week.

Lithium carbonate fell Yuan 1,000 on the week to be assessed at Yuan 67,500/mt DDP China, while hydroxide dropped Yuan 2,000 to be assessed at 80,000/mt DDP China.

As such the Chinese domestic market was well below the seaborne on an import-parity basis. The Platts \$10,100/mt CIF mark for carbonate was equivalent to Yuan 78,517/mt, including 13% VAT, based on the Platts' import-parity formula, while hydroxide's price of \$12,700/mt was equivalent to Yuan 98,729/mt on the same basis. The Yuan was assessed at 6.8796 to the dollar at 4:30 pm Singapore time Friday.

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Lower offers weigh down Chinese domestic lithium prices

Chinese domestic lithium carbonate prices dropped again this week as sellers discounted their offers in an attempt to attract customers.

S&P Global Platts assessed battery grade lithium carbonate at Yuan 67,500/mt Friday, down Yuan 1,000 week on week, while lithium hydroxide lost Yuan 2,000 to Yuan 80,000/mt. Both assessments were on a delivered, duty-paid China basis.

The current downtrend continued to be driven by sluggish demand and ongoing oversupply, although some market participants were doubtful the drop could continue as prices approached conversion costs.

A Chinese cathode maker said he had been offered July-loading battery-grade lithium carbonate at Yuan 67,000/mt, adding that "producers are all saying it's hard to achieve sales." He reported purchasing industrial grade material at Yuan 61,000/mt, as he found the quality to be better than brine-converted battery-grade carbonate.

A second Chinese consumer source said lithium carbonate prices had fallen around Yuan 1,000/mt this week, as he had ordered 200-300 mt of battery-grade lithium carbonate at around Yuan 67,000-68,000/mt.

Two Chinese producers also put the tradable level for domestic lithium carbonate

at Yuan 67,000-68,000/mt, with one having sold at this level for over 100 mt of July-loading material and offering to regular customers at the upper end of the range.

"I don't feel there are better inquiries from downstream - small- and medium-sized cathode makers still put in no orders," he said. "I think the bad market situation will last to August and feel market fundamentals now are similar to June."

A third producer, however, said orders were getting better and his company had signed a contract last weekend at around Yuan 70,000/mt for July loading. He had not offered any August-loading cargoes, but put indicative offers at Yuan 69,000/mt, he said.

One Chinese producer said the spread between lithium carbonate and hydroxide was narrowing, with fine powder hydroxide tradable at Yuan 82,000-83,000/mt, which was equivalent to coarse sand at Yuan 75,000-76,000/mt. He added that the fee to process coarse sand to fine powder had also

come down to Yuan 7,000/mt from the previous Yuan 10,000/mt.

The second Chinese consumer source said he had paid Yuan 80,000/mt for lithium hydroxide fine powder.

Another producer said he had offered Yuan 75,000-76,000/mt, but hadn't received

any bids, saying that buying interest had been very low recently.

"The weak fundamentals continue," he said.

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China Co sulfate prices steady, despite higher producer offers

Seaborne and domestic Chinese cobalt sulfate prices were unchanged Thursday from the prior week, with higher offers from producers failing to lift prices due to continued slow demand.

S&P Global Platts assessed cobalt sulfate with 20.5% cobalt content at Yuan 35,000/mt delivered, duty-paid China on Thursday, unchanged on the week, while the seaborne market was also stable at \$6,900/mt CIF North Asia.

A source at a Chinese precursor and cathode maker said he had bought 2,000-3,000 mt of cobalt sulfate at Yuan 34,500/mt with a three-month letter of credit.

Unsurprisingly, producer sources saw prices higher, with most offering at higher levels around Yuan 36,000-37,000/mt.

One Chinese producer source, whose company has cut over 50% of capacity, said most producers had raised offers, with his company offering at Yuan 37,000/mt.

He had heard of deal done earlier in the week at Yuan 36,000/mt.

A source from an East China producer agreed offers were slightly higher on the week for prompt cargoes, adding that he had heard of a trade at Yuan 35,500/mt.

"Demand is there from our regular customers, those major precursor and cathode makers," he said. "But looking at the entire industry, demand is slow."

In the source's opinion, cobalt sulfate prices at Yuan 35,000/mt had reached their floor and weren't likely to decrease further. This echoed the sentiments of market participants last week, who said there was limited room for further price drops, as trades had been below the cost of production for several weeks.

A second East China producer source said the tradable value of domestic cobalt sulfate had stabilized at Yuan 35,000-36,000/mt, although he added that the weak fundamentals were putting "huge pressure on the entire industry," with manufacturers short of capital and facing unhealthy cash flows.

A trader in Shanghai agreed on the tradable level at Yuan 35,000-36,000/mt on a six-month letter of credit basis, although said Yuan 34,000/mt was doable on a cash or telegraphic transfer basis.

"Credit terms have prolonged this year on the lackluster fundamentals," he said, adding that he had bought a few hundred tons at slightly over Yuan 35,000, on a credit

term of six months.

In the seaborne market, a Chinese producer source saying export orders had been few and far between. He said he'd probably do \$6,000/mt for export spot tonnages, as \$7,000/mt was too high, although a European producer put seaborne offers at the latter price, stable week on week.

The first East China producer source said his company was not exporting at the moment, but if it was, the price would be \$6,000-\$7,000/mt, since at Yuan 10,000/mt above the China domestic price, the profit margin seemed good.

A Japanese trader said the weak cobalt market was expected to continue due to ongoing slow demand and oversupply, with Katanga and Eurasian Resource Group's Metalkol RTR Mining producing a lot of cobalt hydroxide.

"At the moment, cobalt consumers are taking a wait-and-see position in the market. They purchased a lot before, demand is slow and weak, but demand will come back in two or three years from the electric -vehicle battery industry," he said.

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Li miner Pilbara to push ahead with Pilgangoora expansion plan

Australian lithium miner, Pilbara Minerals, is pushing ahead with its plan to commission the 5-million mt/year stage 2 expansion of its Western Australian Pilgangoora project amid downstream constraints.

The miner announced a six-month delay to the expansion in the January-March quarter, which took the schedule to the current July-September period. It said Thursday that it was sticking to this despite the remaining downstream issues.

"Key customers have continued to

progress to build out commissioning of their chemical conversion facilities in China, albeit at a slower rate than expected," Pilbara Minerals' CEO Ken Brinsden said, adding that the investments are pivotal to the development of the supply chain.

Pilbara Minerals said that the "industry-wide phenomenon" of delays in the construction, commissioning and ramp-up of chemical conversion facilities is true for the company's stage 1 offtake customer group.

"In light of these changed market dynamics

and following discussions with both Ganfeng Lithium and General Lithium, Pilbara Minerals decided to respond proactively to current market conditions by moderating production at the Pilgangoora Project," the company said.

The situation led to a moderation of production in the June quarter, which is extending into the current September quarter.

The miner's shipments of spodumene concentrate for the June quarter was 43,214 dry mt, up 12% from the March quarter, but down 7% from the October-December period.

Pilbara Minerals had previously said it expects sales of 35,000-48,000 dmt in the current quarter and 65,000-80,000 dmt in the next.

During the June quarter, the company saw an average price of \$644/dmt (CIF).

Sales in the second half of 2019 are likely to rise after a recently announced agreement for additional offtake by China's largest sport utility vehicle and pickup maker, Great Wall Motor Company.

Great Wall has agreed to take an additional 20,000 dmt/year for six years, which is over and above their existing 150,000 dmt/year offtake agreement from stage 2.

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Chile to seek new lithium processors after Albemarle talks fail

The Chilean government is seeking more companies to produce value-added products from the country's huge lithium reserves after none of the groups chosen last year reached an agreement over supplies with producer Albemarle Corp.

Economic development agency CORFO made the announcement Thursday after China's Sichuan Fulin Transportation Group became the latest to announce it was pulling out of the program.

Under their contracts with CORFO — which holds the mining rights over the lithium-rich Salar de Atacama — lithium producers Albemarle and SQM are required to sell 25% of their lithium production to domestic industry at preferential prices.

Both firms are rapidly ramping up

production of the mineral to meet rising demand for batteries in electric vehicles and other applications.

Last year, Sichuan, a South Korean joint venture of Posco and Samsung, and Chilean metallurgical specialists Molymet won a tender run by CORFO to access part of Albemarle's lithium in exchange for building downstream lithium industries in northern Chile.

But one by one they have all withdrawn after failing to reach agreement with Albemarle. According to some reports, Albemarle was unable to provide the Posco-Samsung joint venture with the lithium hydroxide it required for its process.

In a statement, CORFO said that under the system it is responsible for choosing specialist producers to process lithium in Chile, but not

for negotiating the supply contract.

"After this selection, it is the companies [Albemarle and SQM] who must try to reach agreement with the selected specialized producers," CORFO said.

The failure marks a setback for Chile's ambitions to develop a manufacturing industry based on its lithium reserves which are the largest in the world.

But CORFO has already embarked on a tender to select companies to process lithium provided by SQM, the larger of the two producers in Chile.

"CORFO will continue to strive to add value to Chile's lithium output as the speed, transparency and in line with its commitments in the contract," the agency said.

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France's Eramet H1 Mn ore production up 6% on year

French mining and metallurgy group Eramet's production of manganese ore increased 6% year on year in the first half of 2019 to 2.1 million mt at its Comilog operations in Gabon, the company said Thursday.

The Paris-listed miner's production guidance for 2019 is at least 4.5 million mt of manganese ore, 1.5 million mt of nickel ore exports and 720,000 mt of mineral sand concentrates, Eramet said.

"In Argentina, Eramet's industrial lithium production could start at [the end of] 2021," the company added.

The miner is looking to produce 24,000 mt of lithium carbonate equivalent (LCE) a year at an estimated production cost of about \$3,500/mt LCE, including taxes and royalties, it said.

"Our strategic developments will contribute significantly to the momentum to

reposition the group: nickel production in Weda Bay, Indonesia, should start in [second half of] 2020, ahead of schedule, and our highly value-accretive projects to expand manganese production in Gabon and develop lithium in Argentina have taken a key step forward with their internal validation and active search for financing," CEO Christel Bories said in a statement.

Manganese alloy production in Gabon in the first six months of 2019 increased 5% year on year to a record high 376,000 mt, Eramet said.

The Moanda manganese mine is owned by Comilog, with Eramet (63.7%), the Gabon Republic (28.9%) and Carlo Tassara France (about 7%) acting as shareholders.

Nickel ore production for in H1 increased 7% year on year to 1.9 million mt at the company's Societe Le Nickel (SLN) Kouaoua nickel mine subsidiary in New Caledonia, it said.

The Kouaoua nickel mine is owned by SLN with Eramet (56%), Société Territoriale Calédonienne de Participation Industrielle (34%) and Nippon Steel France (10%) acting as shareholders.

Heavy Mineral Concentrates (zircon, ilmenite, leucoxene and rutile) production increased 1% year on year in H1 to a record high of 378,000 mt at the company's Grande Côte mineral sands mine in Senegal, it said.

Production of commercially pure titanium slag in H1 increased 19% year on year to a record high of 101,000 mt at Eramet's Tyssedal plant in Norway, the company said.

The Grande Côte project in Senegal, in which the Senegalese state holds a 10% stake, and the Tyssedal plant in Norway are part of TiZir, which is owned by Eramet.

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Vale sells nickel stocks in Q2, partially offsets output slump

Brazilian miner Vale's nickel sales rose 14.3% quarter on quarter in the second quarter of 2019 to 57,500 mt as the company sold regional stocks, it said in a production statement Monday.

Sales from stock, however, only partially offset a slump in the company's Q2 refined nickel production levels to 45,000 mt, a decline of 17.9% compared with the first three months of 2019, a slump of 32% from 66,200 mt in Q2 2018 and well below market expectations.

Refined nickel output was hit by scheduled and unscheduled maintenance work at refineries in the north Atlantic region, Vale said. This maintenance has now ended and production resumed at these

refineries at normal levels, it said.

Copper output up, misses market expectations

The company's copper production reached 98,300 mt in Q2, 4.8% above the previous quarter's total and 0.4% above the 97,900 mt produced in Q2 2018, Vale said.

Vale's copper output grew primarily due to the mining of higher grade ore at the Salobo mine in Brazil and an "excellent operational performance in mining, grinding and smelting," at the company's Canadian Sudbury mines, where output reached 24,400 mt, the highest Q2 production total since 2016, the company said. The company's copper sales rose 5.1% compared with Q1 to 95,000 mt in Q2, it said.

BMO Capital Markets analyst Edward Sterck noted that Vale's Q2 production results missed the bank's estimates by about 12% across the group, with total iron ore sales falling 11% short. The company's base metals production also saw a weaker-than-expected performance, Sterck said.

"Nickel production of 45,000 mt was 19% below our estimate of 56,000 mt due to planned/unplanned maintenance shutdowns. Copper production of [about] 98,000 mt was 5% below our estimates due to weaker performances at Sudbury and in Brazil. Cobalt production of 1,100 mt was 15% lower than our forecast," the analyst said.

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Battery Metals Weekly wrap-up

It was a quiet week in the European battery metals sector as temperatures rocketed to record levels across the continent.

In the UK, even the train network couldn't handle the heat, buckling under pressure.

In one positive for the electric-vehicle movement earlier in the week, a UK government study found air quality improvements in major cities could be hampered even with tighter emissions standards in place.

The Driver and Vehicle Standards Agency's tests found that some Euro 6 vehicles, the current highest level of emission standards, could be kicking out 20 times the amount of nitrogen oxide on the road as they do on a test track.

If this is the case, city policymakers across Europe who are using, or plan to use, Euro 6 as the basis for city access will be unable to stop over-emitting cars adding to poor urban air quality.

Tests carried out by the DVSA on a range of popular Euro 6 vehicles identified low and high emitters in line with the results of similar tests conducted for Allow Independent Road-testing (AIR) and published in the AIR Index.

AIR is not aware of a single Clean Air Zone (CAZ) or ULEZ operating in Europe that has implemented restrictions in a fashion that discriminates between clean and over-emitting Euro 6 vehicles.

Nick Molden, Co-Founder of the AIR Index, said: "Cities who in good faith are using or plan to use Euro 6 as the threshold for access policies will not deliver the air quality improvements expected and will not solve their breach of urban air quality in the time required. The DVSA's latest test results confirm the importance of independent testing to provide confidence and transparency about actual emissions during on-road driving."

Perhaps this will be another boost for the

clean energy movement.

Also, Volvo and Samsung announced they have joined forces to develop battery packs for electric trucks.

"The strategic alliance aims to accelerate the pace of development and strengthen Volvo Group's long-term electro-mobility offerings in different truck segments and markets," they said.

In the UK, meantime, a total of 190 electric vans entered service with Royal Mail, almost trebling the size of the company's pure EV fleet.

Operating in London and across the southeastern counties, the vans are a mix of Mercedes-Benz eVito and Peugeot Partner models.

Added as part of efforts to reduce the postal service and courier company's carbon emissions, the vans are wrapped in green rather than the company's traditional red.

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