

## Lithium market summary May 2 - 5

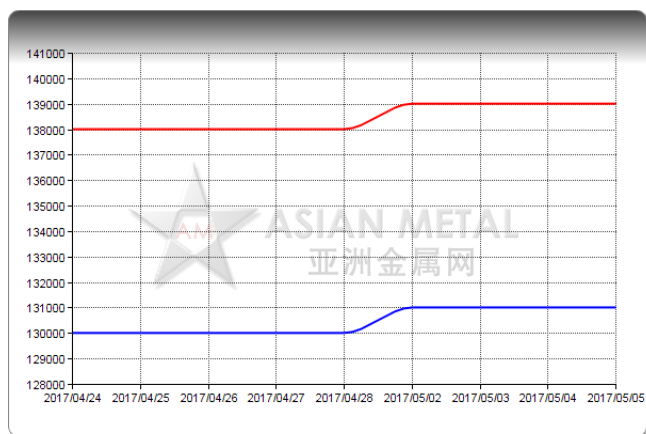
This week, as Tianqi Lithium and Ganfeng Lithium had not been able to resume their normal supply of lithium salts, while downstream demand continued to increase, prices for Chinese lithium carbonate and lithium hydroxide rose again, and prices for lithium metal and lithium chloride followed suit. But prices for cathode materials, lithium carbonate and lithium hydroxide's downstream products, did not rise accordingly.

With demand for cathode materials in China growing, the gap between high-end and low-end cathode materials, in terms of either demand or price, was widening too. This week, prices for Chinese NCM 523 fell back sharply but prices for NCM 622 still remained stable at a high level, and demand for it was stable too. Prices for ordinary 4.2V lithium cobalt oxide edged down, with demand for it declining too, while demand for 4.35V and 4.4V high-voltage lithium cobalt oxide were on the rise and their prices moved up too.

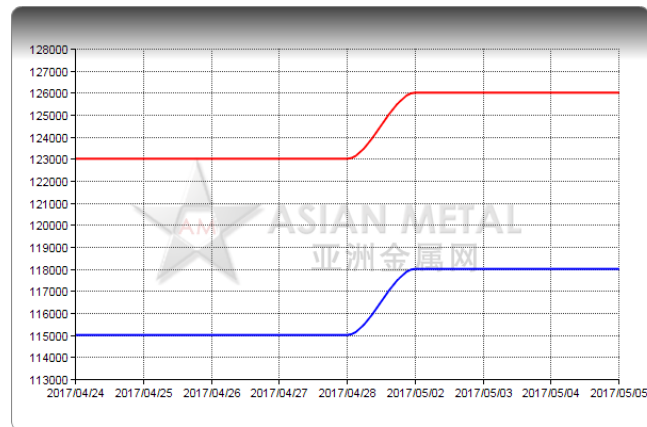
### Chinese market review

#### Lithium carbonate prices rebound slightly

This week, affected by tight supply of lithium carbonate and its recovering downstream market of lithium iron phosphate, prices for Chinese lithium carbonate rose slightly, with those for battery grade lithium carbonate 99.5%min up by RMB1,000/t to RMB131,000-139,000/t, and its mainstream transaction prices up to RMB135,000/t, and those for industrial grade lithium carbonate 99%min up by RMB3,000/t to 115,800-126,000/t. But most of downstream consumers attributed this round of price upticks to tight supply of the material which they believed only to be a short-term phenomenon, and therefore they were cautious in making purchases, leading to few transactions in the spot market.



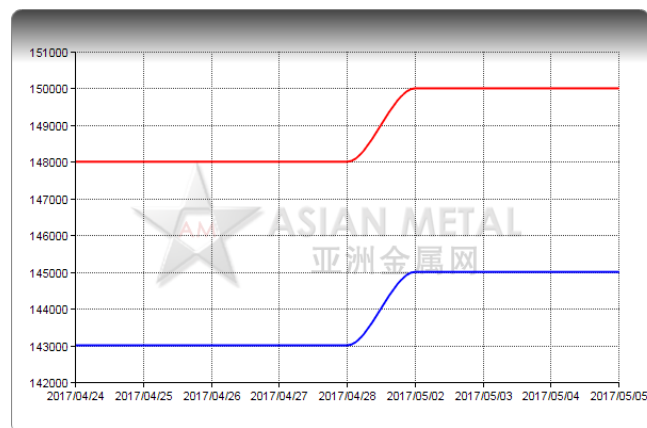
Chinese battery-grade lithium carbonate 99.5%min price trend (RMB/t)



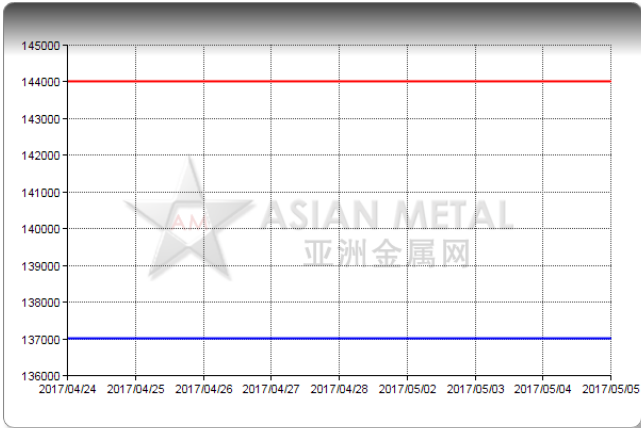
Chinese industrial-grade lithium carbonate 99%min price trend (RMB/t)

#### Lithium hydroxide monohydrate prices up

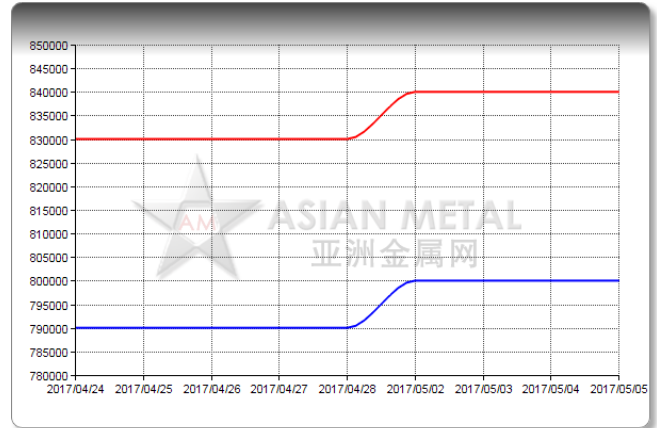
This week, affected by rising prices for lithium carbonate, prices for lithium hydroxide monohydrate rose too. This Friday, prices for Chinese battery grade lithium hydroxide monohydrate 96%min held at RMB145,000-150,000/t, up by RMB2,000/t from the previous week, and those for industrial grade 56.5% material unchanged at RMB137,000-144,000/t. Some producers even quoted their battery grade lithium hydroxide monohydrate at as high as RMB160,000/t, but downstream consumers were cautious in making purchases; and meanwhile, as demand did not pick up greatly, transaction prices for the material were not able to move to RMB160,000/t.



Chinese battery-grade lithium hydroxide monohydrate 96%min price trend (RMB/t)



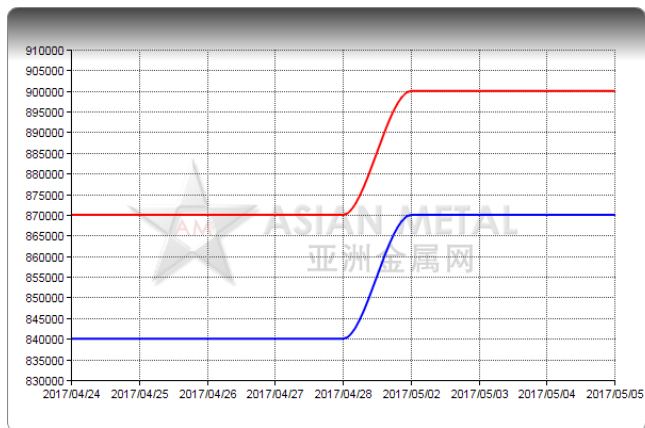
**Chinese industrial-grade lithium hydroxide monohydrate 56.5%min price trend (RMB/t)**



**Chinese industrial-grade lithium metal 99%min price trend (RMB/t)**

### Lithium metal prices up substantially

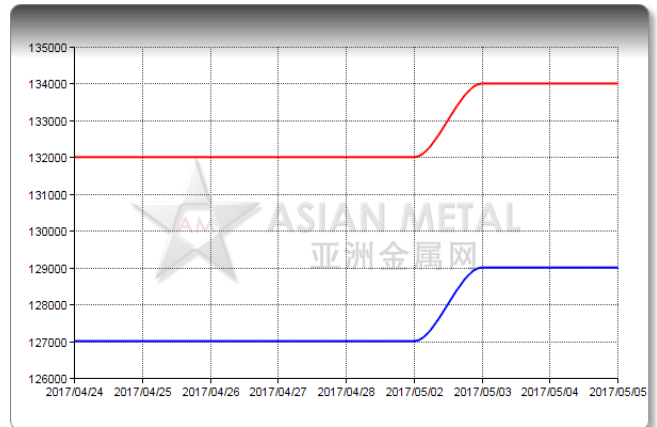
This week, as prices for lithium carbonate rose, prices for lithium chloride and lithium metal rebounded too. This Friday, prices for Chinese battery grade lithium metal 99.9%min held at RMB870,000-900,000/t, up by RMB30,000/t from the previous week, and those for industrial grade lithium metal 99%min at RMB800,000-840,000/t, up by RMB10,000/t from the previous week. As demand for industrial grade lithium salts and for lithium metal was relatively weak, their prices moved up slower than those for battery grade lithium salts. With producers further upgrading their production techniques, it was expected that supply of industrial grade lithium metal and lithium salts will decrease gradually in the future.



**Chinese battery-grade lithium metal 99.9%min price trend (RMB/t)**

### Lithium chloride prices up

This week, as prices for raw material lithium carbonate rose while demand for downstream product lithium metal picked up and its prices rebounded, prices for lithium chloride rose too. This Friday, prices for Chinese lithium chloride 99.3%min held at RMB129,000-134,000/t, up by RMB2,000/t from the previous week. But as prices for lithium carbonate did not rise as substantially as expected, and downstream consumers did not increase their purchase volumes sharply, market players anticipated that prices for lithium chloride will remain stable in the following week.

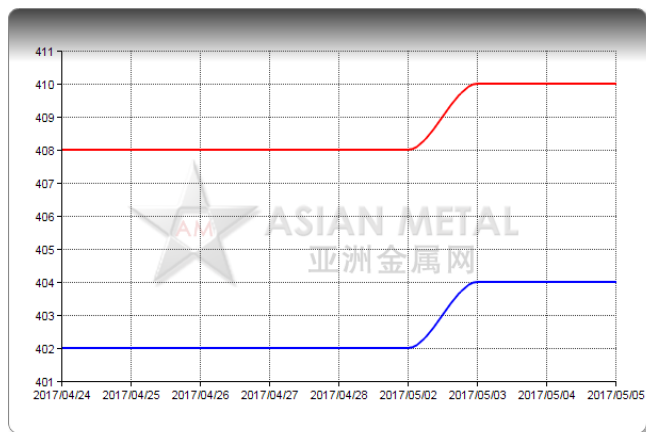


**Chinese lithium chloride 99.3%min price trend (RMB/t)**

### Price gap in lithium cobalt oxide widening

As cobalt prices rose too quickly in the previous time, driving prices for lithium cobalt oxide to move to a high level, downstream consumers therefore showed low interest in making purchases and shifted to other substitute cathode materials, since ordinary 4.2V lithium cobalt oxide is more replaceable by other materials. As a result, this week prices for ordinary lithium cobalt oxide edged down. As for 4.35V and 4.4V-above lithium cobalt oxide, as their production techniques are more complicated, they are not so easily replaced by other materials; and meanwhile, downstream demand for them picked up, so prices for high-voltage lithium

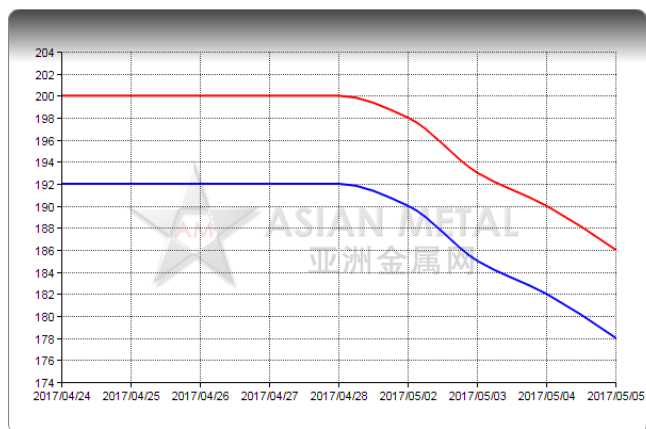
cobalt oxide rose this week. This Friday in the Chinese market, prices for 4.2V lithium cobalt oxide moved down by RMB5/kg to RMB397-403/kg, and some small-sized producers sold it at as low as RMB390/kg in order to recoup capital. And prices for 4.35V and 4.4V-above lithium cobalt oxide held at RMB404-410/kg, and some producers quoted them at as high as RMB420/kg.



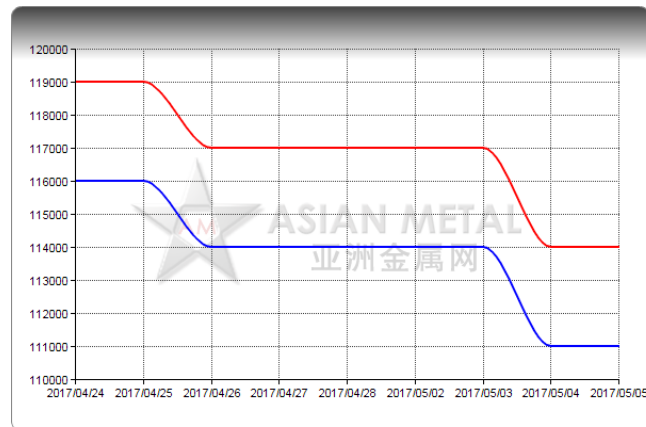
Chinese lithium cobalt oxide 60%min price trend (RMB/kg)

### Ternary material prices down

This week, as prices for nickel sulfate and cobalt sulfate moved down sharply, prices for NCM precursors wend down too, making prices for ternary materials unable to hold at a high level. This week, prices for NCM 622 and 811 remained stable, owing to tight supply in the market; but prices for NCM 523 fell back, a result from the facts that its supply rose dramatically in the market, prices for its raw materials moved down but downstream demand for it did not pick up greatly. This week, prices for Chinese NCM 523 precursors held at RMB111-114/kg, down by RMB3/kg from the previous week, and some producers sold it at RMB106/kg. This week, prices for NCM 523 dipped sharply by RMB14/kg from the previous week to RMB178-186/kg, and prices for NCM622 remained stable at RMB210-215/kg.



Chinese NCM523 price trend (RMB/kg)



Chinese NCM523 precursor price trend (RMB/t)

### Market outlook

Price trend for lithium carbonate 99.5%min

Trend — Chance 80% Range +/-0

Price trend for lithium hydroxide LioH 96%min Na 0.03%max

Trend — Chance 80% Range +/-0

Price trend for lithium metal 99.9%min

Trend — Chance 80% Range +/-0

Price trend for lithium chloride 99.3%min

Trend — Chance 80% Range +/-0

Price trend for lithium cobalt oxide 60%min

Trend — Chance 80% Range +/-0

Price trend for NCM

Trend — Chance 80% Range +/-0

This week, demand for cathode materials still remained stable. Meanwhile, as prices for cobalt salts already dipped to a low level, producers showed no intention to lower their prices further, while prices for lithium salts are likely to stick to the current level until end of this month, prices for Chinese ternary materials and lithium cobalt oxide may remain stable in the following week.

Tight supply of lithium salts was merely a short-term phenomenon, and most downstream consumers therefore did not set out to purchase large volumes of them, instead, only make hand-to-mouth purchases. Lithium salt producers tried to lift their prices further, to which downstream consumers showed low acceptance, and market players anticipated that in the following week prices for Chinese lithium salts will continue to remain stable.