

# Battery Raw Materials Prices



Methodology and price  
specifications – January 2019

## Mission statement

Fastmarkets is a leading commodity price reporting agency (PRA) covering the metals, mining, minerals and forestry products industries. Our products include Metal Bulletin (Fastmarkets MB), American Metal Market (Fastmarkets AMM), Industrial Minerals (Fastmarkets IM), RISI, FOEX and Random Lengths. For more than 100 years we have been providing commodities price reporting services for use by market participants in their day-to-day commercial activities. These services include assessments and indices of commodity prices as well as news, research and commentary on the underlying markets.

Our mission is to meet the market's data requirements honestly and independently, acting with integrity and care to ensure that the trust and confidence placed in the reliability of our pricing methodologies is maintained. We do not have a vested interest in the markets on which we report.

## Introduction

Fastmarkets IM is the leading global provider of information and prices for the industrial minerals markets, and has been producing price assessments since the 1980s.

Fastmarkets IM employs a team of reporters located in Europe, Asia and North America to cover a wide variety of markets across the world.

The reporters are required to abide by a code of conduct and clear pricing procedures during their market reporting and pricing activities. Fastmarkets IM is completely independent and has no vested commercial interest in any of the markets it prices.

The aim of this document is to provide a clear overview of the Fastmarkets IM Battery Raw Materials methodology and the specifications of the prices it assesses.

If you have any questions, please contact Fastmarkets IM Editor, Davide Ghilotti at [davide.ghilotti@fastmarkets.com](mailto:davide.ghilotti@fastmarkets.com)

## Price discovery and methodology

### Data collection and quality

Fastmarkets IM reporters aim to talk to a broad sample of market participants specifically involved in the buying and selling of the mineral of interest, with a good representation of both sides of the market, including producers and consumers, as well as traders.

Data is collected from market participants directly involved in spot and contract business primarily by telephone, but also by email, digital messaging or direct submission. All input data received is kept confidential and stored in a secure network.

Fastmarkets IM encourages organisations to submit all their pricing data, especially all the concluded transactions. Depending on market liquidity Fastmarkets IM reserves the right to base its prices also on bids, offers, deals heard and market participant assessments or indications of prevailing values.

Fastmarkets IM's Data Submitter Policy provides guidelines to ensure the high level of data quality and integrity that we expect from contributing organisations providing pricing data. The policy can be found on the Fastmarkets IM website or is available upon request.

Fastmarkets IM encourages data sources to provide data on all their concluded transactions and welcomes provision of data from employees in back office functions.

All data supplied to Fastmarkets IM is kept strictly confidential and Industrial Minerals may sign Data Submitter Agreements (DSA) with any data provider, if requested to do so.

Our price reporters use a number of methods to collect data, including phone calls, email, and digital messenger service.

Fastmarkets IM has clear specifications for all the price points that it covers. All the reference units, such as currency and volume, are in line with recognised metals markets trading conventions.

Fastmarkets IM specifications detail the material's characteristics or quality, location and the incoterm accepted. The specifications are determined in consultation with market participants and follow

industry conventions. Reporters ensure the information they receive matches these specifications.

## Pricing guidelines

### The exercise of judgment by price reporters

To produce the price assessment greater weighting is given to actual concluded transaction data, bids/offers are second in order of importance, followed by data sources' own assessment of the market when they have no business to report. Yet, other considerations might also intervene such as, the trustworthiness of a data source, based on past data submissions or their willingness to provide data on a consistent basis.

Fastmarkets IM seeks price information for trades with a relevant minimum lot size. When volume information is available, this is also taken into consideration in the assessment process, for instance typically a deal with a bigger volume will carry more weight in the price reporter judgement than a smaller volume transaction. Yet, price reporters will also consider, for instance, to normalise or discard a price reported for a deal with an abnormally large or small volume.

As commodity markets differ in liquidity levels at different periods, the methodology does not set any minimum number, or threshold, of transactions to be gathered on which to base the assessment.

A pricing session typically includes bids/offers, contributors' assessment as well as concluded transactions. This means that market data will typically be contributed by several separate sources and that there is no key submitter dependency. However, should a significant proportion of the data (defined as more than 50% of the data points) on which the assessment is based be provided by a single source, the reporter, peer reviewer and the senior editorial person signing-off the price prior to publication will analyse the data and consider, if it is the case, to publish an assessment based on the data collected or rather not to move the price and roll it over from the previous session.

## Data collection

### Collection window

During the price discovery process, the price reporter aims to discover at what representative level market participants have concluded business, made offers or received bids over a defined time period, or window.

The window for lithium was determined after considering the number of data points that Fastmarkets IM can reasonably expect to collect on a consistent basis over the selected period to support the price assessment process, ensuring that the assessments produced is a reliable indicator for the physical market they relate to.

The price assessments are published at 4pm London time and the deadline for data submission is 3pm London time on Thursday for the spot market assessments and 3pm London time on the last Wednesday of each month for the contract market assessments. Data received after this time will not be included in the price assessment.

### Data normalisation

Occasionally, Fastmarkets IM might receive price data for material where specifications differ in some element from our specifications – for instance, different material quality, delivery terms or delivery location, different cargo size or payment terms. In such cases, when appropriate, Fastmarkets IM normalises data to our typical specification.

A typical example is a data point that is adjusted due to Incoterms (International Commercial Terms) being different from Fastmarkets IM's specifications. For example, a data contributor will report a transaction done with an lithium consumer on a delivered basis, as opposed to the ex-works incoterm specified in Fastmarkets IM's methodology. In which case Fastmarkets IM will normalise the transaction's value by subtracting the cost of moving material to the consumer. To calculate that cost, Fastmarkets IM will ask the data contributor to net back the transaction to an ex-works basis as well as using its own cost estimate, which is regularly assessed and reviewed by its dedicated price reporters. Fastmarkets IM reserves the right to exercise editorial judgment to net transactions back to typical commercial terms.

Full details of data inputs prior and post normalisation are stored in Fastmarkets IM's electronic database MInD and may be accessed at any time for internal review and auditing purposes.

## Data analysis

### Assessment using specifications and expert judgment

Once data collection is complete, Fastmarkets IM reviews the data points applying its methodology and its expert judgment to set the price range to reflect

the representative spread of prices at which business has been transacted, offered or bid, or indicated in the absence of business.

Before making an assessment, the following factors must be considered:

- Is the information received credible? If questionable: have we seen signed contracts (preferable), or has it been confirmed on both sides of the deal?
- If credible: were all the prices in a similar range? Were all the deals reported of a similar size?
- Do the reported deals all have the same terms and specifications?
- Did all the sources indicate the market was headed in the same direction? If not, why not?
- It is not unusual for different sources to report slightly different numbers but it is important, as far as possible, to understand why they are different.
- In the absence of trade, what are the prevailing bids/offers in the market? Did the source provide firm bids/offers or indicative numbers?
- What are the positions of the contributors?
- Are we confident about the freight or free-on-charge costs?
- Has an adequate sample been obtained which correctly represents the market?

Once the above factors have been considered, Fastmarkets IM will produce a price assessment and set the price following the guidelines below.

Fastmarkets IM does not treat all collected information equally, but has a justification and rationale for how each piece of information obtained has been used. Greater weighting is given to actual concluded transaction data, but other data is also used: bids and offers are second behind transactions in order of importance, followed by deals indirectly reported to Fastmarkets IM (referred to as deals heard) and lastly by data sources' own assessments of the market when they have no business to report.

Other considerations might also intervene in the price assessment such as, the trustworthiness of a data source based on past data submissions, or their willingness to provide data on a consistent basis.

When no actual transactions can be collected, extra caution is applied during the price assessment process. Price reporters are encouraged to keep the price unchanged until actual transactions back up a change.

As a general rule, larger deals carry more weight,

but Fastmarkets IM tries and ascertains what sort of discount a large lot size carries or what sort of premium a smaller deal would carry.

Fastmarkets IM will compare the information received from a single source with the information provided by the same source in the previous pricing cycle. This way, if a source consistently gives low or high numbers, Fastmarkets IM can still use the data without it unduly influencing its assessment.

### Criteria to discard pricing data

Fastmarkets IM will use its expert judgment to exclude outlying or unrepresentative numbers, and discount or discard prices that it believes may otherwise be questionable and unreliable.

Outliers will be investigated, and suspected attempts to unfairly influence the price assessments may result in the data provider being warned or excluded.

When a transaction appears questionable or well outside the range reported by other market participants, Fastmarkets IM may seek confirmation of the claimed deal by requesting to see contracts or other signed paperwork before inclusion of the data in the price assessments. If this is refused, Fastmarkets IM will seek to corroborate the information it receives by matching trades. So if a seller tells us he has sold a certain amount at a certain level, we then try to speak to the buyer involved in the transaction to confirm the transaction.

If this is not possible, the data supplied may be excluded from the assessment process.

Fastmarkets IM reserves the right to exclude data that is not fairly presented or is believed may be an effort to distort the price assessments.

## Data publication

### Peer review process

All Fastmarkets IM's price assessments are set by a first reporter who covers that specific market, peer reviewed by a second reporter, and always signed-off and approved by a senior reporter or editor prior to publication.

This peer review process, which takes place in MInD is fully auditable and is in place to make sure that pricing procedures and methodologies are correctly and

consistently applied and to ensure integrity and quality of the published prices.

Price reporters are formally trained in the price discovery process and must abide by a written Code of Conduct and pricing procedures.

Consistency in the price discovery procedures  
At the end of the peer review process, Fastmarkets IM publishes its price assessments via MInD and onto its website and price book.

To enhance market transparency and to provide evidence of data inputs that support the price discovery process, Fastmarkets IM may publish trade logs for its lithium prices, while maintaining full counterparty confidentiality, pricing data and volume received from data contributors.

Fastmarkets IM also publishes weekly pricing rationales to explain price settlement and editorial judgement. These notes explain, for instance, why price reporters may conclude whether anomalous or suspicious data should be excluded; when reporters determine a price and a price range based on market information; or when judgement is applied when the dataset collected is not considered suitably robust so that fall-back procedures need to be applied.

## Methodology and price specifications review process

Fastmarkets IM continually develops and revises its methodologies in consultation with industry participants, aiming to adopt product specifications and trading terms and conditions that actually reflect and are representative of typical working practices in the industry.

Changes to the methodology and/or price specification are implemented following a consultation process which starts with Fastmarkets IM posting on its website an advance pricing notice providing clear details and a timeframe for the change proposed. The objective of the consultation process is to give market participants sufficient time and opportunity to provide feedback and views about the change proposed.

## **Price correction policy**

Publication of price errors can occasionally happen for reasons that may include technical, input errors or incorrect application of the methodology.

To minimise as much as possible the inconvenience to our subscribers, Fastmarkets IM aims to investigate each error immediately as it becomes aware of it and to publish a correction promptly on its website through a pricing notice with an explanation of the reason for the correction.

Fastmarkets IM will publish a correction of a price only where it has established that undeniably there has been an error. Fastmarkets IM price assessments are produced based on the best data available at the time of the assessment. It will not retroactively change a price based on new information or additional submission of data received after a respective pricing session has closed.

## **Become a contributor to the price discovery process**

Fastmarkets IM continually seeks to increase the number of market sources willing to take part in the price discovery process. The main condition Fastmarkets IM requires from contributors is to be active participants in the spot market. Fastmarkets IM's Data Submitter Policy provides guidelines defining the high level of data quality and integrity that Fastmarkets IM expects from a contributing organisation providing pricing data. The policy can be found on the Fastmarkets IM website or upon request.

All data sources are subject to review before their data submitted is fully taken into account in the pricing process. The aim is to make sure that submitters are trustworthy and have sufficient visibility and understanding of the market to be able to provide viable price data.

If you want to become a contributor to Fastmarkets IM pricing, or have questions or comments about the methodology and price specifications, please contact the editor of Fastmarkets IM, Davide Ghilotti, [davide.ghilotti@fastmarkets.com](mailto:davide.ghilotti@fastmarkets.com).

## Lithium carbonate Li<sub>2</sub>CO<sub>3</sub> spot prices

### CHINA

Assessment:	<b>Min 99% Li<sub>2</sub>CO<sub>3</sub> technical &amp; industrial, yuan per tonne</b>
Quality:	Min 99% Li <sub>2</sub> CO <sub>3</sub> (qualified for use in technical and industrial applications)
Quantity:	5 tonnes
Location:	Ex-works China
Timing:	30 days
Unit:	CNY/tonne
Form:	Powder
Publication:	Weekly, Thursday between 3pm and 4pm London time

### CHINA

Assessment:	<b>Min 99.5% Li<sub>2</sub>CO<sub>3</sub> battery grade, yuan per tonne</b>
Quality:	Min 99.5% Li <sub>2</sub> CO <sub>3</sub> (delivery of min 99.2% Li <sub>2</sub> CO <sub>3</sub> also accepted, qualified for use in battery applications)
Quantity:	5 tonnes
Location:	Ex-works China
Unit:	CNY/tonne
Delivery:	30 days
Form:	Powder
Publication:	Weekly, Thursday between 3pm and 4pm London time

### CHINA, JAPAN & SOUTH KOREA

Assessment:	<b>Min 99% Li<sub>2</sub>CO<sub>3</sub> technical &amp; industrial, US\$ per kg</b>
Quality:	Min 99% Li <sub>2</sub> CO <sub>3</sub> (qualified for use in technical and industrial applications)
Quantity:	5 tonnes
Location:	CIF China, Japan & South Korea
Unit:	USD/kg
Delivery:	60 days
Form:	Powder
Publication:	Weekly, Thursday between 3pm and 4pm London time

### CHINA, JAPAN & SOUTH KOREA

Assessment:	<b>Min 99.5% Li<sub>2</sub>CO<sub>3</sub> battery grade, US\$ per kg</b>
Quality:	Min 99.5% Li <sub>2</sub> CO <sub>3</sub> (delivery of Min 99.2% Li <sub>2</sub> CO <sub>3</sub> also accepted, qualified for use in battery applications)
Quantity:	5 tonnes
Location:	CIF China, Japan & South Korea
Unit:	USD/kg
Delivery:	60 days
Form:	Powder
Publication:	Weekly, Thursday between 3pm and 4pm London time

### UNITED STATES & EUROPE

Assessment:	<b>Min 99% Li<sub>2</sub>CO<sub>3</sub> technical &amp; industrial, US\$ per kg</b>
Quality:	Min 99% Li <sub>2</sub> CO <sub>3</sub> (qualified for use in technical and industrial applications)
Quantity:	5 tonnes
Location:	DDP US & Europe
Unit:	USD/kg
Delivery:	30 days
Form:	Powder
Publication:	Weekly, Thursday between 3pm and 4pm London time

### Assessment: **Min 99.5% Li<sub>2</sub>CO<sub>3</sub> battery grade, US\$ per kg**

Quality:	Min 99.5% Li <sub>2</sub> CO <sub>3</sub> (delivery of Min 99.2% Li <sub>2</sub> CO <sub>3</sub> also accepted, qualified for use in battery applications)
Quantity:	5 tonnes
Location:	DDP US & Europe
Delivery window:	30 days
Unit:	USD/kg
Form:	Powder
Publication:	Weekly, Thursday between 3pm and 4pm London time

## Lithium carbonate Li<sub>2</sub>CO<sub>3</sub> contract prices

### CHINA, JAPAN & SOUTH KOREA

Assessment:	<b>Min 99% Li<sub>2</sub>CO<sub>3</sub> technical &amp; industrial, US\$ per kg</b>
Location:	CIF China, Japan & South Korea
Quantity:	20 tonnes
Quality:	Min 99% Li <sub>2</sub> CO <sub>3</sub> (qualified for use in technical and industrial applications)
Unit:	USD/kg
Form:	Powder
Publication:	Monthly, last Wednesday of month between 3pm and 4pm London time

Assessment:	<b>Min 99.5% Li<sub>2</sub>CO<sub>3</sub> battery grade, US\$ per kg</b>
Location:	CIF China, Japan & South Korea
Quantity:	20 tonnes
Quality:	Min 99.5% Li <sub>2</sub> CO <sub>3</sub> (delivery of min 99.2% Li <sub>2</sub> CO <sub>3</sub> also accepted, qualified for use in battery applications)
Unit:	USD/kg
Form:	Powder
Publication:	Monthly, last Wednesday of month between 3pm and 4pm London time

### UNITED STATES & EUROPE

Assessment:	<b>Min 99% Li<sub>2</sub>CO<sub>3</sub>, technical &amp; industrial, US\$ per kg</b>
Location:	DDP US & Europe
Quantity:	20 tonnes
Quality:	Min 99% Li <sub>2</sub> CO <sub>3</sub> (qualified for use in technical and industrial applications)
Form:	Powder
Publication:	Monthly, last Wednesday of month between 3pm and 4pm London time

Assessment:	<b>Min 99.5% Li<sub>2</sub>CO<sub>3</sub> battery grade, US\$ per kg</b>
Location:	DDP US & Europe
Quantity:	20 tonnes
Quality:	Min 99.5% Li <sub>2</sub> CO <sub>3</sub> (delivery of min 99.2% also accepted, qualified for use in battery applications)
Unit:	USD/kg
Form:	Powder
Publication:	Monthly, last Wednesday of month between 3pm and 4pm London time

### UNITED STATES

Assessment:	<b>99-99.5% Li<sub>2</sub>CO<sub>3</sub> del continental US, large biannual contracts, US\$ per kg</b>
Location:	Delivered continental US
Quantity:	20 tonnes
Quality:	Min 99% Li <sub>2</sub> CO <sub>3</sub>
Unit:	USD/kg
Form:	Powder
Publication:	Monthly, last Wednesday of month between 3pm and 4pm London time

### ASIA

Assessment:	<b>99-99.5% Li<sub>2</sub>CO<sub>3</sub>, large contracts, US\$ per kg</b>
Location:	CIF Asia
Quantity:	20 tonnes
Quality:	Min 99% Li <sub>2</sub> CO <sub>3</sub>
Unit:	USD/kg
Form:	Powder, packed in bags
Publication:	Monthly, last Wednesday of month between 3pm and 4pm London time

## Lithium hydroxide monohydrate LiOH.H<sub>2</sub>O spot prices

### CHINA

Assessment:	<b>Min 56.5% LiOH.H<sub>2</sub>O, technical &amp; industrial grade, yuan per tonne</b>
Location:	Ex-works China, VAT included
Delivery window:	30 days
Quantity:	5 tonnes
Quality:	Min 56.5% LiOH.H <sub>2</sub> O (qualified for use in technical and industrial applications)
Unit:	CNY/tonne
Form:	Powder
Publication:	Weekly, Thursday between 3pm and 4pm London time

**Assessment:** **Min 56.5% LiOH.H<sub>2</sub>O, battery grade, yuan per tonne**  
**Location:** Ex-works China, VAT included  
**Delivery window:** 30 days  
**Quantity:** 5 tonnes  
**Quality:** Min 56.5% LiOH.H<sub>2</sub>O (qualified for use in battery applications)  
**Form:** Powder  
**Publication:** Weekly, Thursday between 3pm and 4pm London time

**Assessment:** **Min 56.5% LiOH.H<sub>2</sub>O monohydrate, battery grade, US\$ per kg**  
**Location:** DDP Europe & US  
**Delivery window:** 30 days  
**Quantity:** 5 tonnes  
**Quality:** Min 56.5% LiOH.H<sub>2</sub>O (qualified for use in battery applications)  
**Unit:** USD/kg  
**Form:** Powder  
**Publication:** Weekly, Thursday between 3pm and 4pm London time

## CHINA, JAPAN & SOUTH KOREA

**Assessment:** **Min 56.5% LiOH.H<sub>2</sub>O, technical & industrial grade, US\$ per kg**  
**Location:** CIF China, Japan & South Korea  
**Delivery window:** 60 days  
**Quantity:** 5 tonnes  
**Quality:** Min 56.5% LiOH.H<sub>2</sub>O (qualified for use in technical and industrial applications)  
**Unit:** USD/kg  
**Form:** Powder  
**Publication:** Weekly, Thursday between 3pm and 4pm London time

**Assessment:** **Min 56.5% LiOH.H<sub>2</sub>O, battery grade, US\$ per kg**  
**Location:** CIF China, Japan & South Korea  
**Delivery window:** 60 days  
**Quantity:** 5 tonnes  
**Quality:** Min 56.5% LiOH.H<sub>2</sub>O (qualified for use in battery applications)  
**Form:** Powder  
**Publication:** Weekly, Thursday between 3pm and 4pm London time

## UNITED STATES & EUROPE

**Assessment:** **Min 56.5% LiOH.H<sub>2</sub>O monohydrate, technical & industrial grade, US\$ per kg**  
**Location:** DDP Europe & US  
**Delivery window:** 30 days  
**Quantity:** 5 tonnes  
**Quality:** Min 56.5% LiOH.H<sub>2</sub>O (qualified for use in technical and industrial applications)  
**Form:** Powder  
**Publication:** Weekly, Thursday between 3pm and 4pm London time

## CHINA, JAPAN & SOUTH KOREA

**Assessment:** **Min 56.5% LiOH.H<sub>2</sub>O, technical & industrial grade, US\$ per kg**  
**Location:** CIF China, Japan & South Korea  
**Quantity:** 20 tonnes  
**Quality:** Min 56.5% LiOH.H<sub>2</sub>O (qualified for use in technical and industrial applications)  
**Form:** Powder  
**Publication:** Monthly, last Wednesday of the month, 3-4pm London time

**Assessment:** **Min 56.5% LiOH.H<sub>2</sub>O, battery grade, US\$ per kg**  
**Location:** CIF China, Japan & South Korea  
**Quantity:** 20 tonnes  
**Quality:** Min 56.5% LiOH.H<sub>2</sub>O (qualified for use in battery applications)  
**Form:** Powder  
**Publication:** Monthly, last Wednesday of the month between 3pm and 4pm London time

# Lithium hydroxide monohydrate LiOH.H<sub>2</sub>O contract prices

## UNITED STATES & EUROPE

Assessment: **Min 56.5% LiOH.H<sub>2</sub>O, technical & industrial grade, US\$ per kg, spot**

Location: DDP Europe & US

Quantity: 20 tonnes

Quality: Min 56.5% LiOH.H<sub>2</sub>O (qualified for use in technical and industrial applications)

Unit: USD/kg

Form: Powder

Publication: Monthly, last Wednesday of the month between 3pm and 4pm London time

Assessment: **Min 56.5% LiOH.H<sub>2</sub>O, battery grade, US\$ per kg, spot**

Quality: Min 56.5% LiOH.H<sub>2</sub>O (qualified for use in battery applications)

Quantity: 20 tonnes

Location: DDP Europe & US

Unit: USD/kg

Form: Powder

Publication: Monthly, last Wednesday of the month between 3pm and 4pm London time

Assessment: **56.5-57.5% LiOH.H<sub>2</sub>O, large contracts, US\$ per kg**

Quality: 56.5-57.5% LiOH.H<sub>2</sub>O

Quantity: 20 tonnes

Location: DDP Europe & US

Unit: USD/kg

Form: Powder, packed in drums or bags

Publication: Monthly, last Wednesday of the month between 3pm and 4pm London time

## Lithium minerals

### CHINA

Assessment: **Spodumene 7-7.5% Li<sub>2</sub>O, US\$ per kg**

Quality: 7-7.5% Li<sub>2</sub>O

Location: CIF China

Unit: USD/kg

Publication: Monthly, last Wednesday of the month between 3pm and 4pm London time

Assessment: **Spodumene 5-6% Li<sub>2</sub>O, US\$ per kg**

Quality: 5-6% Li<sub>2</sub>O

Location: CIF China

Unit: USD/kg

Publication: Monthly, last Wednesday of the month between 3pm and 4pm London time

### AUSTRALIA

Assessment: **Spodumene 5-6% Li<sub>2</sub>O, US\$ per kg**

Quality: 5-6% Li<sub>2</sub>O

Location: FOB Australia

Unit: USD/kg

Publication: Monthly, last Wednesday of the month between 3pm and 4pm London time

## Graphite

### CHINA

Assessment: **Spherical graphite 99.95% C, 15 microns, US\$ per tonne**

Quality: 99.95% C, 15 microns

Quantity: 150-200 tonnes

Location: FOB China

Unit: USD/tonne

Publication: Weekly, Thursday by 4pm London time

Assessment: **Graphite Flake, 94-97% C, +80 Mesh, FCL, US\$ per tonne**

Quality: 94-97% C, +80 Mesh

Quantity: 500 tonnes

Location: FOB China (Qingdao)

Unit: USD/tonne

Publication: Weekly, Thursday by 4pm London time

Assessment: **Graphite Flake, 94-97% C, +100 Mesh, -80 Mesh, FCL, US\$ per tonne**

Quality: 94-97% C, +100 Mesh, -80 Mesh

Quantity: 500 tonnes

Location: FOB China (Qingdao)

Unit: USD/tonne

Publication: Weekly, Thursday by 4pm London time

Assessment: **Graphite Flake, 94-97% C, -100 Mesh, FCL, US\$ per tonne**  
 Location: FOB China (Qingdao)  
 Quality: 94-97% C, -100 Mesh  
 Quantity: 500 tonnes  
 Unit: USD/tonne  
 Publication: Weekly, Thursday by 4pm London time

Assessment: **Graphite Flake, 97% C, -100 Mesh US\$ per tonne**  
 Quality: 97% C, -100 Mesh  
 Quantity: 500 tonnes  
 Location: FOB China (Henan)  
 Unit: USD/tonne  
 Publication: Weekly, Thursday by 4pm London time

## EUROPE

Assessment: **Graphite Flake, 94-97% C, +80 Mesh, FCL, US\$ per tonne**  
 Quality: 94-97% C, +80 Mesh  
 Location: CIF Europe  
 Quantity: 500 tonnes  
 Unit: USD/tonne  
 Publication: Weekly, Thursday by 4pm London time

## Cobalt

### EUROPE

Assessment: **Cobalt low-grade, US\$ per lb**  
 Quality: Low-grade cobalt metal, 99.3% minimum cobalt content. Katanga cathodes, Chambishi broken cathodes, CTT broken cathodes, Norilsk ingots (K1A and K1AY), Tocantins broken cathodes, Minara briquettes, Ambatovy briquettes.  
 Quantity: Min 1 tonne, max 100 tonnes  
 Location: in-warehouse Rotterdam  
 Unit: USD/lb  
 Delivery: Within 30 days, other terms normalised  
 Form: Broken cathodes, ingots, briquettes  
 Packaging: Original packaging  
 Payment terms: Cash; other terms normalised  
 Publication: Twice weekly. Wednesday and Friday between 2pm and 3pm London time

## Contacts

### **Martim Facada**

Price Reporter

[martim.facada@fastmarkets.com](mailto:martim.facada@fastmarkets.com)

+ 44 20 7779 8363

### **Davide Ghilotti**

Fastmarkets IM Editor

+ 44 20 7827 6444

[davide.ghilotti@fastmarkets.com](mailto:davide.ghilotti@fastmarkets.com)

### **Charlotte Radford**

Minors, Ore & Alloys Editor, Europe

[charlotte.radford@fastmarkets.com](mailto:charlotte.radford@fastmarkets.com)

+44 20 7827 6463

### **Prahashini Kunapalan**

Risk & Compliance Manager

[prahashini.kunapalan@fastmarkets.com](mailto:prahashini.kunapalan@fastmarkets.com)

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