

Graphite



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 Our products include Fastmarkets MB, Fastmarkets AMM, Fastmarkets IM, Fastmarkets RISI, Fastmarkets 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 MB is the leading global provider of pricing intelligence for the non-ferrous metal, steel, steelmaking raw materials, industrial minerals, ferrous and non-ferrous scrap markets, producing price assessments since 1913.

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

We are the world's largest dedicated metals price reporting team. We have offices in London, New York, Pittsburgh, Shanghai, Hong Kong, Sao Paulo, Melbourne, Singapore, Mumbai, Dnepr, Istanbul and five other US locations.

The aim of this document is to provide a clear overview of Fastmarkets MB's graphite methodology and specifications for the prices it assesses.

If you have any questions, please contact Fastmarkets editorial director Alex Harrison at aharrison@fastmarkets.com.

Price discovery and methodology

Methodology rationale

Fastmarkets MB produces independent, fair and representative price assessments of graphite prices on a weekly basis.

The Fastmarkets MB rationale is to adopt and develop the price discovery process and the methodology described in the present guide to produce assessments that are a consistent and representative indicator of the value of the market to which they relate, for the trading period they measure.

During the price discovery process, the goal of the price reporters is to discover at what representative level market participants have concluded business, made offers or received bids over a certain defined trading period – generally the period since the conclusion of the previous price quotation (for instance, if data is submitted to a weekly price after 4pm on the day of the assessment, it will be included in the following week's assessment'). The time period, or window, identified to assess a market (eg, daily, bi-weekly, weekly) is determined by Fastmarkets MB after considering the number of data points that Fastmarkets MB can reasonably expect to collect on a consistent basis over the selected period to support the price assessment process.

Data collection

Data collection and quality

Fastmarkets MB 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 MB encourages organisations to submit all their pricing data, especially all the concluded transactions. Depending on market liquidity Fastmarkets MB reserves the right to base its prices also on bids,

offers, deals heard and market participant assessments or indications of prevailing values.

Fastmarkets MB'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 Fastmarkets MB's website or is available upon request.

Fastmarkets MB 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 MB is kept strictly confidential and Fastmarkets MB may sign Data Submitter Agreements (DSAs) 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 MB 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 MB 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 MB 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. Although, 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. Yet, 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.

Normalisation

Occasionally, Fastmarkets MB 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 MB normalises data to our typical specification.

A typical example would be a price that is either net-back or net-forward due to delivery terms different from Fastmarkets MB's specification.

Criteria to discard pricing data

Fastmarkets MB 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.

When required, for instance when a transaction appears questionable or outside the range reported by other market participants, Fastmarkets MB may seek to confirm information on deals either by requesting a signed copy of the contract or other materials as evidence of claimed deals, or by checking the deal information with the counterparty. If no evidence of the deal is provided, Fastmarkets MB may discard the data from the pricing process.

Consistency in the price discovery procedures

All Fastmarkets MB 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 ensures 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.

Publication

At the end of the pricing session, from the information that Fastmarkets MB receives and reviews it sets a price range, to reflect the representative spread of prices at which business has been transacted, offered or bid.

Methodology and price specifications review process

Fastmarkets MB 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 MB 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 MB 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 MB will publish a correction of a price only where it has established that undeniably there has been an error. Fastmarkets MB 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 MB continually seeks to increase the number of market sources willing to take part in the price discovery process. The main condition Fastmarkets MB requires from contributors is to be active participants in the spot market. Fastmarkets MB's Data Submitter Policy provides guidelines defining the high level of data quality and integrity that Fastmarkets MB expects from a contributing organisation providing pricing data. The policy can be found on Fastmarkets MB's 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 MB pricing, or have questions or comments about the methodology and price specifications, please contact contact the graphite pricing team (see Contacts section at end of this document).

Graphite

CHINA

Assessment:	Graphite spherical 99.95% C, 15 microns uncoated
	Price: US\$ per tonne
Location:	China
Basis:	FOB
Price type:	Assessment
Min lot size:	20 tonnes
Quality	99.95% C, 15 microns, uncoated
Publication	Weekly, Thursday by 4pm London

CHINA

Assessment:	Graphite flake 94-97% C, -100 Mesh, FCL, FOB Qingdao, China
	Price: US\$ per tonne
Location:	China
Basis:	FOB
Price type:	Assessment
Min lot size:	20 tonnes
Quality	94-97% C, -100 Mesh
Publication	Weekly, Thursday by 4pm London

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Your investment actions should be solely based upon your own decisions and research and appropriate independent advice should be obtained from a suitably qualified independent adviser before any such decision is made.