

# Non-ferrous Metals



Methodology and price  
specifications - September 2022

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## Mission statement

Fastmarkets Metals and Mining 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 with Fastmarkets MB and Fastmarkets AMM since 1913 and 1882 respectively. Fastmarkets Forest Products meanwhile is the leading global provider of pricing intelligence for the global forest products industry, incorporating Fastmarkets RISI, Fastmarkets FOEX and Random Lengths.

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' 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 price reporting teams for both metals and forest products. We have offices in London, New York, Boston, San Francisco, Eugene, Charlottesville, Atlanta, Pittsburgh, Beijing, Shanghai, Hong Kong, Singapore, Melbourne, Sao Paolo, Mumbai, Brussels, Helsinki, Dnipro and Istanbul. The aim of this document is to provide a clear overview of Fastmarkets' methodology and specifications for the prices it assesses. If you have any questions, please contact Fastmarkets Editorial Director Perrine Faye at [perrine.faye@fastmarkets.com](mailto:perrine.faye@fastmarkets.com) for metals, or Fastmarkets Forest Products' Senior VP of Indices, Matt Graves, at [mgraves@fastmarkets.com](mailto:mgraves@fastmarkets.com) for forest products.

## Price discovery and methodology

### Methodology rationale

Fastmarkets produces independent, fair and representative price assessments and indices of metals and forest products prices on a daily, bi-weekly, weekly, monthly or quarterly basis. Fastmarkets' rationale for adopting the price-discovery process described in this methodology document is to produce consistent and representative indicators of value for specific markets over defined trading periods.

### Assessment objective

The assessor's intended aim is to reflect Fastmarkets' assessment price definition:

'The prevailing level at which a commodity of stated specification has, or could be expected to have transacted over a defined period of time.'

We summarize this for effective use as the prevailing 'tradeable level' of the market.

### Time window

The time period, or window, identified to assess a market (e.g., daily, bi-weekly, weekly, fortnightly, monthly) is determined by Fastmarkets after considering the number of data points that Fastmarkets can reasonably expect to collect on a consistent basis over the selected period to support the price assessment process.

Unless otherwise specified, the assessed timeframe will be the period since the conclusion of the previous price quotation. If, for instance, the last price assessment published by Fastmarkets was on Friday 2-3pm London time and our next assessment is due on the following Friday at 2-3pm London time, we will accept price data for business conducted and reported to Fastmarkets between Friday afternoon of the last price assessment and the following Friday afternoon. Where deemed appropriate for a particular market, Fastmarkets may specify a narrower window of time closer to the publication date where activity is given greater consideration in the price assessment, though this is stated in the specifications relating to those prices.

### Data contribution

Fastmarkets reporters aim to collect data from a broad sample of market participants specifically involved in the buying and selling of the metal or forest product of interest, with a good representation of both sides of the market, including producers and consumers, as well as

traders and intermediaries.

Data is collected from industry participants directly involved in the relevant market primarily by telephone but also by email, digital messaging, face-to-face interaction or by direct submission. All data supplied to Fastmarkets is kept confidential and stored in our secure online pricing database system MInD (Market Information Database). Fastmarkets may sign a Data Submitter Agreement (DSA) with any data provider, if requested to do so, to maximize the number of data points collected for inclusion in the assessment process. Any data received subject to a DSA will be used in the pricing assessment but will not be commented on.

Market participants may contribute data following a review by Fastmarkets of their activities. The aim is to ensure that submitters have sufficient visibility and understanding of the market in question to be able to provide reliable price data. We expect that data submitters taking part in the pricing process are authorized to report market data on behalf of their organizations. Fastmarkets encourages organizations to submit all their pricing data, especially all the concluded transactions. Price reporters generally speak to, and collect data from, front office staff directly involved in the commercial activity of buying and selling the relevant product(s). Fastmarkets also welcomes organizations to submit transaction data from authorized back-office functions. Fastmarkets' **Data Submitter Policy** provides guidelines to ensure the high level of data quality and integrity we expect from contributing organizations providing pricing data. The policy can be found on Fastmarkets' website, or is available on request.

Depending on market liquidity, Fastmarkets reserves the right to also base its prices on bids, offers, deals heard and market participant indications of prevailing tradeable values or other indications such as trigger prices that might prompt a sale or purchase.

## Price specifications and reference units

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

Fastmarkets' specifications detail the material's characteristics or quality, location, incoterm, payment terms and the minimum volume accepted. These specifications are determined in consultation with market participants and follow industry convention. Reporters ensure that the information they receive meet these specifications. Any data that does not fall within the stated ranges of the specification will not be eligible for consideration in the assessment.

## Data analysis and producing the price assessment

### Establishing a data hierarchy

To produce the price assessment, a consideration hierarchy is established based on an evaluation of first, the reporter's confidence in the data's reliability, and second, the significance of the data.

The confidence level, or trustworthiness, of a data point is generally based on the transparency of the activity, whether it was reported by a party directly involved or was 'heard' activity, corroboration by other market participants and the level of detail provided by the data submitter, although there may be other contributory factors.

For indications of tradeable levels or other indication of willingness to sell or purchase, confidence may be determined based on the justification provided by the submitter, their visibility and activity level in the market, and their prior reliability. Factors that Fastmarkets may consider during times of low liquidity include, but are not limited to: market fundamentals such as changes in inventory levels, shipments, operating rates and export volumes; relative fundamentals of similar commodities in the same region; relative values of the same commodity in different regions; and changes in the value of the commodity's primary feedstock(s) or primary derived product(s).

The significance of a data point is determined based on its effectiveness in identifying the tradeable level of the market under assessment. Transactions are considered highest in the significance hierarchy, 'tight' bids/offers are of secondary importance, followed by data sources' own indications of a tradeable level when they have no business to report. Tight bids/offers are typically defined as those being within the range of transaction and/or indication data points, thereby helping narrow our assessment of the tradeable range. More speculative bids/offers, outside of the range of other data, would typically be of lowest significance. In some circumstances, firm bids higher than transactions or offers lower than transactions may be considered of high significance if deemed to demonstrate a clear directional change in market floor or ceiling levels.

The published assessment will typically be reflective of the highest-confidence and highest-significance data collected in that pricing session. In pricing sessions with little or no data of sufficient quality, extra caution will be applied and reporters may exercise their judgment to keep a price assessment unchanged as a fallback until activity can be confirmed with greater certainty.

All Fastmarkets price specifications define the minimum lot size accepted. When volume information is available, this is also taken into consideration in the assessment process. For instance, a deal with a bigger volume may typically be considered more significant than a smaller-volume transaction. But price reporters will also consider, for instance, normalizing or discarding a reported deal where it is suspected an abnormally large or small volume may have unduly distorted its price.

Fastmarkets will also 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 lower or higher indications than the consensus, Fastmarkets can still use the data for directional context without it unduly influencing the assessment.

### Normalization

Where necessary in certain assessments, data that falls within the stated specification ranges for consideration may be normalized to determine the equivalent price for the respective base specification if one exists. This may include, for instance, variances in material type or quality, delivery terms of location, payment terms or cargo size.

Data may be normalized to the base specification using either a statistical or judgement based method. Where

patterns can be established over time, such as for price differences between product qualities, data may be normalized using in-house developed models based on regression analysis of collected data. The analysis allows Fastmarkets to capture the value-in-use applied by the market to different qualities or terms and to normalize to a single base specification. Where a statistically derived adjustment factor is not possible for a particular variable, editorial judgment may be applied to normalize prices using third party data (such as broker rates for freight adjustments or exchange prices for QP adjustments), or by surveying market participants for an appropriate adjustment.

Where prices cannot be normalized with sufficient confidence or precision, such data may be discarded from the assessment. Fastmarkets' aim is to balance the requirement to keep assessments reflective of their base specifications with the need to source a sufficiently robust data set for consideration.

#### **Minimum data threshold**

Since 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.

In each pricing session, reporters aim to source data from a suitably diverse set of market participants. In the unlikely situation that more than half of the pricing data collected in a session is provided by a single source, the assessor may refer to data collected in the previous pricing session to avoid a dependency on a single entity providing an unacceptably significant (50% or more) proportion of data. In markets where, to satisfy their jurisdictional antitrust guidelines, certain companies require us to adhere to a maximum of 25% data concentration from a single entity, Fastmarkets will comply with this stricter threshold.

#### **Criteria for discarding pricing data and the removal of outliers**

Fastmarkets price assessments are intended to reflect the 'open and competitive' market level. Reporters therefore may apply expert judgment to exclude data deemed unrepresentative, questionable or unreliable prior to consideration in the final assessment. Data that falls outside of the respective assessment specifications, or which cannot be normalized to a base specification with sufficient confidence, is also discarded. Decisions to discard data points are recorded in the form of a written rationale in our internal pricing database, where they are reviewed and approved under the two-tier peer review process.

Data may be discarded as outliers based on the identification of external factors that may be distorting the price. Price-affecting side terms, inconsistencies in information reported, or suspected motivation to unfairly influence the price discovery process would typically be grounds for removal of data, as would activity not considered to have taken place at 'arm's length'. Outliers will be investigated; more detail may be requested to determine possible reasons behind an anomalous price, and efforts will be made to identify the counterparty to cross-verify information. Suspected attempts to influence the assessment unfairly may result in the data provider being warned or excluded. Fastmarkets reserves the right to see contracts and signed paperwork before inclusion of the data in the assessment. If this is refused, the data supplied may be excluded from the assessment process.

## Data publication

#### **Peer review process**

All Fastmarkets' price assessments are set by a first reporter who covers that specific market, peer reviewed by a second reporter, and always signed-off by a senior reporter or editor prior to publication. This peer review process, which takes place in Fastmarkets' MInD system and is fully auditable, 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. Relevant information, including all price inputs and editorial judgements, are securely retained in MInD for at least five years to maintain a full audit trail. Price reporters are formally trained in the price discovery process and must abide by a written Code of Conduct and Pricing Procedures.

For certain prices Fastmarkets also publishes pricing rationales to explain the assessment, describing why a particular price or range was determined based on the market information collected. These notes explain for instance whether any data has been excluded and why, information on the data collected and whether fallback procedures have been applied.

#### **Publication**

At the end of the peer review process, Fastmarkets MB and AMM publish their price assessments via MInD and on the Fastmarkets Dashboard and on product-specific websites and in the Price Book. Fastmarkets RISI, FOEX and Random Lengths publish their price assessments on the Intelligence Center, mobile app and in dedicated newsletters.

Most Fastmarkets assessments (aside from a small number of single-figure assessments) are quoted as ranges reflecting Fastmarkets' evaluation of the market's prevailing tradeable level over the observation window.

To enhance market transparency and to provide evidence of data inputs that support the price discovery process, Fastmarkets may publish trade logs in accordance with industry demand (while maintaining full counterparty confidentiality) detailing pricing data and volumes received from data contributors.

Fastmarkets' price assessments are published at the time and frequency stated under each individual specification. The pricing schedules vary according to markets and locations in which they are assessed. For more details on the pricing holiday calendar and alternative pricing dates for each assessment or index, refer to [Fastmarkets' Pricing Holidays](#) schedule on Fastmarkets.com or on the RISI, FOEX and Random Lengths websites.

#### **Corrections and delays**

If an assessment is published incorrectly, it will be rectified and republished as soon as possible. A pricing notice explaining the reasons for the correction will also be published promptly.

Fastmarkets uses several procedures and measures to avoid delays in the publication of its assessments. In the event of a delay, however, Fastmarkets will inform subscribers as soon as possible.

In the event of late publication, only data that has been received within the correct standard timeframe will be included in the assessment. No assessment will be amended due to the emergence of new data or market activity after the initial publication. Retrospective changes to the published values will only be made in cases of technical, administrative or interpretation error in line with [Fastmarkets' Correction Policy](#).

## Methodology and price specification review process

#### **Methodology review and pricing notices**

Fastmarkets aims to continually develop and periodically review its methodologies in consultation with industry participants, with the objective to adopt product specifications, trading terms and conditions that reflect and are representative of typical working practices in the industries it serves.

Fastmarkets carries out a formal review and approval of its methodology and price specifications on an annual basis. The process is initiated by Fastmarkets publishing on its website an open consultation at least one month (or around 20 working days) before the annual methodology review is due, inviting market feedback over the duration of that period. The timeframe for the consultation and method of submission are both clearly stated.

Following a review of market participants' feedback, comments and suggestions, Fastmarkets concludes the consultation by publishing a notice stating whether or not any methodology changes are proposed. If suggested, changes are classified either as 'material' or 'immaterial'. Material changes are those that, once implemented, may result in fundamental changes to the published price. These include specification changes or structural changes to assessments. Immaterial changes are those that will not result in a different price level once they are implemented.

If a material change to the methodology is required, Fastmarkets includes in its pricing notice: the outline of the proposed change; the rationale or motivation for proposing such a change; and a proposed timetable for the date on which, if the change goes ahead, it would be implemented. If received feedback is considered insufficient to support a material change, Fastmarkets publishes a new notice extending the consultation and inviting comments on the new proposal.

A record of the methodology review is sent to the Risk & Compliance team. All comments received from the market are assumed to be confidential and are treated as such unless stated otherwise.

When Fastmarkets proposes a change to the methodology, it should be understood that no decision has yet been made and that the proposal to make a

change should not automatically be understood as confirmation that the change will happen.

For prices subject to EU Benchmark Regulation (BMR), any change to the methodology requires approval from the Managing Director of our benchmark administrator, Fastmarkets Benchmark Administration Oy.

Outside of the formal methodology review process, editors may from time to time suggest changes or additions to reflect market developments. As with the formal review, changes to the existing methodology will either be classed as 'material' or 'immaterial'. The process for implementing the change will be the same as outlined above for formal reviews. The minimum duration of one month (or around 20 working days) for the consultation process normally provides market participants sufficient opportunity to analyze and comment on the impact of the proposed change.

For more details on the formal review of the methodology and the consultation process to propose changes to the methodology, refer to Fastmarkets' [Methodology Review and Change Consultation Process](#) available on the Fastmarkets website.

## Queries and complaints

Fastmarkets encourages engagement from the market on its pricing principles and methodology. The company promotes understanding of its pricing procedures and is committed to responding to requests for further information and clarification on a timely basis.

There are multiple channels for interaction with the pricing team including email, telephone and instant messenger services.

If a subscriber has an issue with the published prices, then they may contact the pricing team. In the event that the response is not satisfactory the issue may be escalated to the internal compliance department. For more details refer to Fastmarkets' [Complaint Handling Policy](#) available on Fastmarkets' website.

Fastmarkets takes all queries and complaints seriously and will seek to provide an explanation of the prices wherever possible. It is important to note, however, that input data remain confidential and cannot be provided to third parties.

## Become a contributor to the price discovery process

Fastmarkets continually seeks to increase the number of market sources willing to take part in the price discovery process. The main condition Fastmarkets requires from contributors is for them to be active participants in the relevant market being priced.

Fastmarkets' Data Submitter Policy provides guidelines defining the high level of data quality and integrity that Fastmarkets expects from contributing organizations providing pricing data. Market participants that wish to provide pricing data and be part of the price discovery process should first read the Data Submitter Policy available on the Fastmarkets website. The Policy is communicated to all data submitters at least on an annual basis.

All data sources are subject to review before their data submitted is fully taken into account in the pricing process. Our Contributor Approval Policy (CAP) requires this review or probation period to last no more than three months. 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.

## Third-party price data

Fastmarkets also publishes prices from external sources including: Exchange prices – London Metal Exchange, Comex and the Shanghai Futures Exchange

For contract specifications and pricing information on these prices please refer to the individual company's website.



## Base metals

# Alumina

### CHINA

**MB-ALU-0001 Alumina metallurgical grade, exw China, yuan/tonne**

Quality:	Metallurgical-grade alumina
Quantity:	Min 1,000 tonnes
Location:	Ex-works China
Unit:	RMB/tonne
Payment terms:	Cash, within one week
Publication:	Weekly. Thursday 2-3pm London

### AUSTRALIA

**MB-ALU-0002 Alumina index, fob Australia, \$/tonne**

Quality:	Smelter-grade alumina, minimum purity of 98.5% Al <sub>2</sub> O <sub>3</sub>
Quantity:	5,000 tonnes
Location:	fob Bunbury/Kwinana, Australia (other Pacific origins normalized)
Timing:	Within 2 months
Unit:	US\$ per dry metric tonne (dmt)
Payment Terms:	30 days after loading
Publication:	Daily at 4pm London time
Notes:	Bulk carrier. Data history from August 2010. Full methodology available <a href="#">here</a> .

### BRAZIL

**MB-ALU-0003 Alumina index adjustment to fob Australia index, Brazil, \$/dmt**

Quality:	Smelter-grade alumina, minimum purity of 98.5% Al <sub>2</sub> O <sub>3</sub>
Quantity:	Min 5,000 tonnes
Location:	fob Vila do Conde, Brazil (other Pacific origins normalized)
Timing:	Within two months
Unit:	US\$ per dry metric tonne (dmt)
Payment terms:	30 days after loading
Publication:	Once every two weeks. Thursday 4pm London time
Notes:	Bulk carrier Full methodology available <a href="#">here</a> .

**MB-ALU-0010 Alumina index inferred, fob Brazil, \$/dmt**

Quality:	Smelter grade alumina, minimum purity of 98.5% Al <sub>2</sub> O <sub>3</sub>
Quantity:	5,000 tonnes
Location:	fob Vila do Conde, Brazil (other ports normalized)
Timing:	Within 2 months
Unit:	USD/dry metric tonne
Payment terms:	30 days after loading
Publication:	Daily 4pm London time
Notes:	Bulk carrier. Full methodology available <a href="#">here</a> .

## Bauxite

Please see **Ores** section.

# Aluminium P1020A

### JAPAN

**MB-AL-0001 Aluminium P1020A (MJP) quarterly premium, cif Japan, \$/tonne**

Quality:	P1020A or 99.7 % Minimum Al purity (Si 0.10% max, Fe 0.20% max). Ingot, T-bar, sow
Quantity:	500 tonnes
Location:	cif main Japanese ports (Yokohama, Nagoya and Osaka), premium on top of LME cash prices
Timing:	Within the quarter
Unit:	USD/tonne
Payment terms:	Cash against documents (2 days after Bill of lading date)
Publication:	Quarterly
Note:	Full methodology available <a href="#">here</a> .

**MB-AL-0343 Aluminium P1020A (MJP) spot premium, cif Japan, \$/tonne**

Quality: P1020A or 99.7 % Minimum Al purity (Si 0.10% max, Fe 0.20% max) in line with LME specifications. Ingot, T-bar, sow

Quantity: Min 100 tonnes

Location: cif in main Japanese ports at Yokohama, Nagoya and Osaka, premium on top of LME cash prices

Timing: Within 6 weeks

Unit: USD/tonne

Payment terms: Cash against documents (2 days after Bill of lading date)

Publication: Twice weekly. Tuesday and Friday by 4pm London time

Notes: Excluding metal from LME warehouses and metal subject to international sanctions. Assessed by Fastmarkets' Singapore office. Full methodology available [here](#).

## SOUTH KOREA

**MB-AL-0344 Aluminium P1020A premium, cif South Korea, \$/tonne**

Quality: P1020A or 99.7 % Minimum Al purity (Si 0.10% max, Fe 0.20% max). Ingot, T-bar, sow

Quantity: Min 100 tonnes

Location: Cif in main South Korean ports (Gwangyang, Busan or Incheon), premium on top of LME cash prices

Timing: Within 4 weeks

Unit: USD/tonne

Payment terms: Cash against documents (2 days after Bill of lading date)

Publication: Weekly. Tuesday 3-4pm London time

**MB-AL-0307 Aluminium P1020A premium, fca South Korea, \$/tonne**

Quality: P1020A or 99.7 % Minimum Al purity (Si 0.10% max, Fe 0.20% max). Ingot, T-bar, sow

Quantity: Min 100 tonnes

Location: FCA South Korea (Gwangyang, Busan or Incheon), premium on top of LME cash prices

Timing: Within 4 weeks

Unit: USD/tonne

Payment terms: Cash against documents (2 days after Bill of lading date)

Publication: Weekly. Tuesday 3-4pm London time

## CHINA

**MB-AL-0345 Aluminium P1020A premium, cif Shanghai, \$/tonne**

Quality: P1020A or 99.7 % Minimum Al purity (Si 0.10% max, Fe 0.20% max). Ingot

Quantity: Min 100 tonnes

Location: cif Shanghai, premium on top of LME cash prices

Unit: USD/tonne

Timing: Within 4 weeks

Payment terms: Letter of Credit or Telegraphic Transfer, other payment terms normalized

Publication: Monthly, last Tuesday of the month 3-4pm London time

**MB-AL-0328 Aluminium P1020A premium, bonded in-whs, Shanghai, \$/tonne**

Quality: P1020A or 99.7 % Minimum Al purity (Si 0.10% max, Fe 0.20% max)

Quantity: 100 tonnes

Location: In-bonded warehouse in Shanghai, premium on top of LME cash prices

Unit: USD/tonne

Timing: Within 4 weeks

Form: Ingot

Payment terms: Letter of Credit or Telegraphic Transfer, other payment terms normalized

Publication: Monthly, last Tuesday of the month 3-4pm London time

## TAIWAN

**MB-AL-0329 Aluminium P1020A premium, cif Taiwan, \$/tonne**

Quality: P1020A or 99.7 % Minimum Al purity (Si 0.10% max, Fe 0.20% max). Ingot

Quantity: Min 100 tonnes

Location: Cif main Taiwanese ports (Taipei, Kaohsiung or Keelung), premium on top of LME cash prices

Unit: USD/tonne

Payment terms: Letter of Credit or Telegraphic Transfer, other payment terms normalized

Publication: Once every two weeks. Tuesday 3-4pm London time

### SOUTHEAST ASIA & EAST ASIA

**MB-AL-0333 Aluminium P1020A warrant premium, in-whs Southeast Asia, \$/tonne**

Quality: P1020A or 99.7 % Minimum Al purity (Si 0.10% max, Fe 0.20% max). Ingot, T-bar, sow  
 Quantity: Min 25 tonnes  
 Location: In any LME-approved warehouse in Singapore and in Malaysia (Johor, Port Klang), premium on top of LME cash prices  
 Timing: Prompt release  
 Unit: USD/tonne other terms normalized  
 Payment terms: Cash against documents (7 days after bill of lading date);  
 Publication: Fortnightly. Weds 3-4pm London time

**MB-AL-0334 Aluminium P1020A, warrant premium, in-whs East Asia, \$/tonne**

Quality: P1020A or 99.7 % Minimum Al purity (Si 0.10% max, Fe 0.20% max). Ingot, T-bar, sow  
 Quantity: Min 25 tonnes  
 Location: In any LME-approved warehouse in Taiwan (Kaohsiung) and South Korea (Gwangyang, Busan or Incheon), premium on top of LME cash prices  
 Timing: Prompt release  
 Unit: USD/tonne  
 Payment terms: Cash against documents (7 days after bill of lading date); other terms normalized  
 Publication: Fortnightly. Weds 3-4pm London time

### EUROPE

**MB-AL-0346 Aluminium P1020A premium, in-whs dup Rotterdam, \$/tonne**

Quality: P1020A or 99.7 % Minimum Al purity (Si 0.10% max, Fe 0.20% max). Ingot  
 Quantity: Min 100 tonnes  
 Location: In-warehouse Rotterdam duty-unpaid, premium on top of LME cash prices  
 Unit: USD/tonne  
 Timing: Within 4 weeks  
 Payment terms: Cash against documents (7 days after bill of lading date); other terms normalized  
 Publication: Daily.4pm London time  
 Note: Full methodology available [here](#).

**MB-AL-0004**

Quality: P1020A or 99.7 % Minimum Al purity (Si 0.10% max, Fe 0.20% max). Ingot  
 Quantity: Min 100 tonnes  
 Location: In-warehouse Rotterdam duty-paid, premium on top of LME cash prices USD/tonne  
 Unit: USD/tonne  
 Timing: Within 4 weeks  
 Payment terms: Cash against documents (7 days after bill of lading date); other terms normalized  
 Publication: Twice weekly. Tuesday and Friday 4pm London  
 Note: Full methodology available [here](#).

**MB-AL-0316**

**Aluminium P1020A premium, fca dp Italy, \$/tonne**

Quality: P1020A or 99.7 % Minimum Al purity (Si 0.10% max, Fe 0.20% max). Ingot  
 Quantity: Min 100 tonnes  
 Location: Free-carrier duty-paid Italy (north and south of country), premium on top of LME cash prices  
 Timing: Within 4 weeks  
 Unit: USD/tonne  
 Payment terms: Cash against documents (7 days after bill of lading date); other terms normalized  
 Publication: Weekly. Tuesday 3-4pm London time  
 Note: Full methodology available [here](#).

**MB-AL-0319**

**Aluminium P1020A premium, fca dp Spain, \$/tonne**

Quality: P1020A or 99.7 % Minimum Al purity (Si 0.10% max, Fe 0.20% max). Ingot  
 Quantity: Min 100 tonnes  
 Location: free-carrier duty-paid Spain, premium on top of LME cash prices  
 Timing: Within 4 weeks  
 Unit: USD/tonne  
 Payment terms: Cash against documents (7 days after bill of lading date); other terms normalized  
 Publication: Once every two weeks. Tuesday 3-4pm London time

### TURKEY

<b>MB-AL-0337</b>	<b>Aluminium P1020A premium, cif dup Turkey, \$/tonne</b>
Quality:	P1020A or 99.7 % Minimum Al purity (Si 0.10% max, Fe 0.20% max). Ingot
Quantity:	Min 100 tonnes
Location:	CIF duty-unpaid Turkey (Marmara region), premium on top of LME cash prices
Timing:	Within 4 weeks
Unit:	USD/tonne
Payment terms:	Cash against documents (7 days after bill of lading date); other terms normalized
Publication:	Once every two weeks. Tuesday, 3-4pm London time

### UNITED STATES

<b>MB-AL-0338</b>	<b>Aluminium P1020A warrant premium, in-whs US, \$/tonne</b>
Quality:	P1020A or 99.7 % Minimum Al purity (Si 0.10% max, Fe 0.20% max). Ingot, T-bar, sow
Quantity:	Min 25 tonnes
Location:	In any LME-approved warehouse in the USA (10 delivery points in June 2017), premium on top of LME cash prices
Timing:	Prompt Release
Unit:	USD per tonne
Payment terms:	Cash against documents (7 days after bill of lading date); other terms normalized
Publication:	Fortnightly. Weds 3-4pm London time

<b>MB-AL-0232</b>	<b>Aluminium P1020A premium, ddp Midwest US, cents/lb</b>
Quality:	LME specification, P1020A or 99.7% minimum Al purity (silicon 0.10% max, iron 0.20% max, zinc 0.03%, gallium 0.04%, vanadium 0.03%). Ingot, T-bar, Sow.
Quantity:	Min 100 tonnes
Location:	Delivered consumer works Midwest
Unit:	US cents per pound
Timing:	Within four weeks
Payment terms:	30 days, other payment terms normalized
Publication:	Twice weekly. Tuesday and Friday 3-4pm London time
Note:	Full methodology available <a href="#">here</a> .

<b>MB-AL-0355</b>	<b>Aluminium P1020A premium, cif Baltimore, US cents/lb</b>
Quality:	P1020A or 99.7% minimum aluminium purity (silicon 0.10% maximum, iron 0.20% maximum). Ingot, T-bar, Sow
Quantity:	Min 100 tonnes
Location:	Shipped to ports in Baltimore, Maryland, premium on top of London Metal Exchange cash prices, net back to Baltimore
Timing:	Within four weeks
Unit:	US cents per lb
Payment terms:	30 days, other payment terms normalized
Publication:	Weekly. Tuesday 3-4pm London time

### BRAZIL

<b>MB-AL-0022</b>	<b>Aluminium P1020A premium, cif dup Brazilian main ports, \$/tonne</b>
Quality:	P1020A or 99.7 % Minimum Al purity (Si 0.10% max, Fe 0.20% max). Ingot, T-bar, sow
Quantity:	Min 100 tonnes
Location:	cif Brazil ports duty unpaid, excluding VAT, premium on top of LME cash prices
Timing:	Within 30-60 days
Unit:	USD/tonne
Payment terms:	Cash against documents (7 days after bill of lading date), other payment terms normalized
Publication:	Once every two weeks. Tuesday 3-4pm London
Notes:	All origins except China

<b>MB-AL-0021</b>	<b>Aluminium P1020A premium, delivered Sao Paulo region, \$/tonne</b>
Quality:	P1020A or 99.7 % Minimum Al purity (Si 0.10% max, Fe 0.20% max). Ingot
Quantity:	Min 100 tonnes
Location:	Delivered in São Paulo region duty-paid, VAT not included, premium on top of LME cash prices
Timing:	Within 4 weeks
Unit:	USD/tonne
Payment terms:	Cash against documents (7 days after bill of lading date); other payment terms normalized
Publication:	Once every two weeks. Tuesday 3-4pm London

## Aluminium billet

### EUROPE

**MB-AL-0002 Aluminium 6063 extrusion billet premium, in-whs dp Rotterdam, \$/tonne**

Quality: Aluminium Assn specification AA6063: Si 0.2-0.6% max, Mg 0.45-0.9% max, Fe 0.35% max, Cu 0.1% max, Cr 0.1% max, Zn 0.1% max, Ti 0.1% max, Others each 0.05% max, total 0.15% max. Extrusion billet with outside diameter of 6", 7" and 8"

Quantity: Min 100 tonnes

Location: In-warehouse Rotterdam duty-paid premium on top of LME cash prices

Timing: Within 3 months

Unit: USD/tonne

Payment terms: Cash against documents (7 days after bill of lading date)

Publication: Weekly. Friday 3-4pm London time

**MB-AL-0302 Aluminium 6063 extrusion billet premium, ddp North Germany (Ruhr region), \$/tonne**

Quality: Extrusion billet AA6063: Si 0.2-0.6% max, Mg 0.45-0.9% max, Fe 0.35% max, Cu 0.1% max, Cr 0.1% max, Zn 0.1% max, Ti 0.1% max, others each 0.05% max, total 0.15% max. Billet with diameter of 6", 7" and 8"

Quantity: Min 100 tonnes

Location: Delivered in North Germany (Ruhr region) duty-paid premium on top of LME cash price

Timing: Within 3 months

Unit: USD/tonne

Payment terms: 30-day payment terms, other payment terms normalized

Publication: Weekly. Friday 3-4pm London time

Note: Full methodology available [here](#).

**MB-AL-0299**

Quality: Extrusion billet AA6063. Billet with diameter of 6", 7" and 8"

Quantity: Min 100 tonnes

Location: Delivered in Spain (Bilbao region), duty-paid premium on top of LME cash prices

Timing: Within 3 months

Unit: USD/tonne

Payment terms: 60-day payment, other payments terms normalized

Publication: Once every two weeks. Friday 3-4pm London time

**MB-AL-0300**

Quality: Extrusion billet AA6063: Si 0.2-0.6% max, Mg 0.45-0.9% max, Fe 0.35% max, Cu 0.1% max, Cr 0.1% max, Zn 0.1% max, Ti 0.1% max, others each 0.05% max, total 0.15% max. Billet with diameter of 6", 7" and 8"

Quantity: Min 100 tonnes

Location: Delivered in Italy (Brescia region) duty-paid premium on top of LME cash price

Timing: Within 3 months

Unit: USD/tonne

Payment terms: 30-day payment terms, other payment terms normalized

Publication: Weekly. Friday 3-4pm London time

Note: Full methodology available [here](#).

### UNITED STATES

**MB-AL-0052 Aluminum 6063 extrusion billet premium, delivered Midwest US, US cents/lb**

Quality: Extrusion billet AA6063. Billet with diameter of 6", 7" and 8"

Quantity: Min 100 tonnes

Location: Delivered into US Midwest region, duty-unpaid premium on top of the P1020A ingot Midwest premium and LME cash prices

Timing: Within 2 months

Unit: US cents/lb

Payment terms: 30-day payment, other payments terms normalized

Publication: Once every two weeks. Friday 3-4pm London time

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**SOUTHEAST ASIA**

<b>MB-AL-0297</b>	<b>Aluminium 6063 extrusion billet premium, cif Thailand, \$/tonne</b>
Quality:	Extrusion billet AA6063. Billet with diameter of 6", 7" and 8"
Quantity:	100 tonnes
Location:	Cif delivery into main Thai ports, duty-paid premium on top of LME cash prices.
Timing:	Within 2 months
Unit:	USD/tonne
Payment terms:	Cash against documents (7 days after bill of lading date), other payments terms normalized
Publication:	Every 28 days. Friday 3-4pm London time

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**JAPAN**

<b>MB-AL-0298</b>	<b>Aluminium 6063 extrusion quarterly billet premium, cif MJP, \$/tonne</b>
Quality:	Extrusion billet AA6063. Billet with diameter of 6", 7" and 8"
Quantity:	Min 100 tonnes
Location:	cif in Major Japanese Ports (MJP), duty-paid premium on top of the P1020A ingot MJP premium and LME cash prices
Timing:	Within 2 months
Unit:	USD/tonne
Payment terms:	Cash against documents (7 days after bill of lading date), other payments terms normalized
Publication:	Quarterly on the third Friday of the first month of the quarter. 3-4pm London time

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**TURKEY**

<b>MB-AL-0296</b>	<b>Aluminium 6063 extrusion billet premium, cif Turkey (Marmara region), \$/tonne</b>
Quality:	Extrusion billet AA6063. Billet with diameter of 6", 7" and 8"
Quantity:	100 tonnes
Location:	cif Turkey (Marmara region), duty unpaid premium on top of LME cash prices
Timing:	Within 3 months
Unit:	USD/tonne
Payment terms:	Cash, other payments terms normalized
Publication:	Once every two weeks. Friday 3-4pm London time

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**BRAZIL**

<b>MB-AL-0287</b>	<b>Aluminium 6063 &amp; 6060 extrusion billet premium, cif Brazilian main ports, \$/tonne</b>
Quality:	Extrusion billet AA6063 and AA6060. Billet with diameter of 6", 7" and 8"
Quantity:	100 tonnes
Location:	cif Brazil
Timing:	Within 2 months
Unit:	USD/tonne
Payment terms:	Cash against documents (7 days after bill of lading date), other payments terms normalized
Publication:	Once every two weeks. Friday 3-4pm London time

# Aluminium foundry alloys

## EUROPE

**MB-AL-0339 Aluminium foundry alloy silicon 7 ingot premium, ddp Germany, \$/tonne**

Quality: Primary Foundry Alloy silicon 7  
 AlSi7Mg0.3-0.6 for wheel production.  
 Ingot

Quantity: 100 tonnes

Location: Delivered in Germany, duty paid premium on top of LME cash prices

Timing: Within 2 months

Unit: USD/tonne

Payment terms: 30-day payment terms, other payments terms normalized

Publication: Monthly. 2nd Friday of the month between 3pm and 4pm London time

**MB-AL-0340 Aluminium primary foundry alloy silicon 7 ingot premium, ddp Eastern Europe, \$/tonne**

Quality: Primary Foundry Alloy silicon 7  
 AlSi7Mg0.3-0.6 for wheel production.  
 Ingot

Quantity: Min 100 tonnes

Location: Delivered in Eastern Europe (Poland, Slovakia, Austria, Hungary, Czech Republic), duty-paid premium on top of LME cash prices

Timing: Within 2 months

Unit: USD/tonne

Payment terms: 30-day payment terms, other payments terms normalized

Publication: Monthly. Second Friday of the month between 3pm and 4pm London time

## TURKEY

**MB-AL-0341 Aluminium primary foundry alloy silicon 7 ingot premium, cif dup over P1020A Turkey, \$/tonne**

Quality: Primary Foundry Alloy silicon 7  
 AlSi7Mg0.3-0.6 for wheel production.  
 Ingot

Quantity: 100 tonnes

Location: Cif in Turkey (Marmara region), duty-unpaid premium on top of P1020A ingot premium and LME cash prices

Timing: Within 2 months

Unit: USD/tonne

Payment terms: Cash, other terms normalized

Publication: Monthly. 2nd Friday of the month between 3pm and 4pm London time

## EAST ASIA

**MB-AL-0348 Aluminium primary foundry alloy silicon 7 ingot annual premium, cif main South Korean ports, \$/tonne**

Quantity: Min 500 tonnes

Quality: Primary Foundry Alloy silicon 7  
 A356.2 for wheel production

Location: cif in main South Korean ports at Busan, Gwangyang and Incheon, duty-unpaid premium on top of P1020 ingot premium and LME cash prices

Timing: Within 4 weeks

Unit: USD per tonne

Payment terms: Letter of Credit or Telegraphic Transfer, other payments terms normalized

Publication: Annual. After deals for long-term contracts completed between major South Korean buyers and international producers and traders with negotiations starting in October through to December

**MB-AL-0349**     **Aluminium primary foundry alloy silicon 7 ingot annual premium, cif MJP, \$/tonne**

Quality:            Primary Foundry Alloy silicon 7 A356.2 for wheel production

Quantity:            Min 500 tonnes

Location:            cif in main Japanese ports at Yokohama, Nagoya and Osaka, duty-unpaid premium on top of P1020 ingot premium and LME cash prices

Timing:              Within 4 weeks

Unit:                  USD per tonne

Payment terms:     Letter of Credit or Telegraphic Transfer, other payments terms normalized

Publication:        Annual. After deals for long-term contracts are completed between major Japanese buyers and international producers and traders with negotiations starting in October through to December

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**UNITED STATES**

**MB-AL-0342**     **Aluminium primary foundry alloy silicon 7 ingot/T-bar premium dlvd dup over P1020A Midwest US, US cents/lb**

Quality:            Primary Foundry Alloy silicon 7 A356.2 for wheel production. Ingot or T-bar

Quantity:            Min 100 tonnes

Location:            Delivered in US Midwest region, duty-unpaid premium on top of P1020A ingot Midwest premium and LME cash prices

Timing:              Within 2 months

Unit:                  US cents /lb

Payment terms:     7-30 day payment, other terms normalized

Publication:        Monthly. Second Friday of the month, 3-4pm London time

## Low-carbon aluminium differentials

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**EUROPE**

**MB-AL-0381**     **Aluminium low-carbon differential P1020A, Europe, \$/tonne**

Carbon limit:        4tCO<sub>2</sub>e per tonne of aluminium produced, Scope 1 and 2 emissions

Quality:              P1020A or 99.7% minimum Al purity (Si 0.10% max, Fe 0.20% max). Ingot

Quantity:            Min 100 tonnes

Location:            Europe

Unit:                  USD/tonne

Timing:              Within three months

Publication:        Monthly, first Friday of the month, 4pm London

**MB-AL-0382**     **Aluminium low-carbon differential value added product, Europe, \$/tonne**

Carbon limit:        4tCO<sub>2</sub>e per tonne of aluminium produced, Scope 1 and 2 emissions.

Type:                 Extrusion billet, primary foundry alloy, wire rod, slab

Quantity:            Min 100 tonnes

Location:            Europe

Unit:                  USD/tonne

Timing:              Within three months

Publication:        Monthly, first Friday of the month, 4pm London



## Copper concentrate

### ASIA PACIFIC

**MB-CU-0287** **Copper concentrates TC index, cif Asia Pacific, \$/dmu**

Quality:	Concentrate. Copper content 26%; Au 1.1g/dmt; Ag 75g/dmt; S 32%; Fe 28%; Pb 0.07%; Zn 1%; As 0.17%; Sb 0.018%; Hg 2.5ppm; Bi 145ppm
Quantity:	Min 5,000 tonnes
Location:	cif Asia Pacific
Unit:	USD/tonne
Timing:	Within 13 weeks
Payment terms:	Letter of credit, quotation period M+3
Publication:	Weekly. Friday at 4pm London time
Notes:	Full methodology available <a href="#">here</a> .

**MB-CU-0288** **Copper concentrates RC index, cif Asia Pacific, \$/dmu**

Quality:	Concentrate. Copper content 26%; Au 1.1g/dmt; Ag 75g/dmt; S 32%; Fe 28%; Pb 0.07%; Zn 1%; As 0.17%; Sb 0.018%; Hg 2.5ppm; Bi 145ppm
Quantity:	Min 5,000 tonnes
Location:	cif Asia Pacific
Unit:	US cents/lb
Timing:	Within 13 weeks
Payment terms:	Letter of credit, quotation period M+3
Publication:	Weekly. Friday at 4pm London time
Notes:	Full methodology available <a href="#">here</a> .

## Blister copper

### CHINA

**MB-CU-0408** **Copper blister 98-99% RC spot, cif China, \$/tonne**

Quality:	Blister copper of 98-99% copper content, with varying payables
Location:	CIF China
Timing:	Within 2 months
Unit:	USD per tonne
Publication:	Monthly. Last day of the month, 3-4pm London time

**MB-CU-0409**
**Copper blister 98-99% RC annual benchmark, cif China, \$/tonne**

Quality:	Blister copper of 98-99% copper content, with varying payables
Location:	CIF China
Unit:	USD per tonne
Publication:	Annually. January or February

## Refined copper

### CHINA

**MB-CU-0405** **Copper grade A cathode premium, in-whs Shanghai, \$/tonne**

Quality:	Grade A cathode 99.9935% min copper conforming to LME specifications BS EN 1978:1998 – Cu-CATH-1
Quantity:	Min 25 tonnes
Location:	In-warehouse Shanghai port, duty-unpaid premium on top of LME cash prices
Timing:	Within 6 weeks
Unit:	USD/tonne
Payment terms:	Letter of credit, telegraphic transfer or documents against payment, other payment terms normalized
Publication:	Daily. 3-4pm London time

**MB-CU-0383** **Copper grade A cathode ER premium, bonded in-whs Shanghai, \$/tonne**

Quality:	Electro-Refined Grade A cathode 99.9935% min conforming to LME specifications BS EN 1978:1998 (Cu-CATH-1).
Quantity:	Min 25 tonnes
Location:	In-warehouse Shanghai port, duty-unpaid premium on top of LME cash prices
Timing:	Within 6 weeks
Unit:	USD/tonne
Payment terms:	Letter of credit, telegraphic transfer or documents against payment, other payment terms normalized
Publication:	Daily. 3-4pm London time

**MB-CU-0382**     **Copper grade A cathode SX-EW premium, bonded in-whs Shanghai, \$/tonne**

Quality: Solvent Extraction-Electro winning Grade A cathode 99.9935% min conforming to LME specifications BS EN 1978:1998 (Cu-CATH-1)

Quantity: 25 tonnes

Location: In-warehouse Shanghai port, duty-unpaid premium on top of LME cash prices

Timing: Within 6 weeks

Unit: USD/tonne

Payment terms: Letter of credit, telegraphic transfer or documents against payment, other payment terms normalized

Publication: Daily. 3-4pm London time

**MB-CU-0403**     **Copper grade A cathode premium, cif Shanghai, \$/tonne**

Quality: Grade A cathode 99.9935% min copper conforming to LME specifications BS EN 1978:1998 – Cu CATH-1

Quantity: Min 25 tonnes

Location: CIF Shanghai port, duty-unpaid premium on top of LME cash prices

Timing: Within 6 weeks

Unit: USD/tonne

Payment terms: Letter of credit, telegraphic transfer or documents against payment, other payment terms normalized

Publication: Daily. 3-4pm London time

Notes: Full methodology available [here](#).

**MB-CU-0380**     **Copper grade A cathode ER premium, cif Shanghai, \$/tonne**

Quality: Electro-Refined Grade A 99.9935% min conforming to LME specifications BS EN 1978:1998 (Cu-CATH-1)

Quantity: Min 25 tonnes

Location: CIF Shanghai port, duty-unpaid premium on top of LME cash prices

Timing: Within 6 weeks

Unit: USD/tonne

Payment terms: Letter of credit, telegraphic transfer or documents against payment, other payment terms normalized

Publication: Daily. 3-4pm London time

**MB-CU-0384**     **Copper grade A cathode SX-EW premium, cif Shanghai, \$/tonne**

Quality: Solvent Extraction-Electro winning Grade A cathode 99.9935% min conforming to LME specifications BS EN 1978:1998 (Cu-CATH-1)

Quantity: Min 25 tonnes

Location: cif Shanghai port, duty-unpaid premium on top of LME cash prices

Timing: Within 6 weeks

Unit: USD/tonne

Payment terms: LC, TT or documents against payment, other terms normalized

Publication: Daily. 3-4pm London time

**MB-CU-0412**     **Copper EQ cathode premium, cif Shanghai, \$/tonne**

Quality: 99.9935% min copper conforming to LME specifications; Ag: 0.0025% max, As: 0.0005% max, Bi: 0.00020% max, Fe: 0.0010% max, Pb: 0.0005% max, S: 0.0015% max, Se: 0.00020% max, Te: 0.00020% max

Quantity: Min 25 tonnes

Location: cif Shanghai

Timing: Within 6 weeks

Unit: USD per tonne

Payment terms: LC, TT or DP other payments normalized to cash

Publication: Once every two weeks. Tuesday 4pm London time

### SOUTHEAST ASIA & EAST ASIA

**MB-CU-0399**     **Copper grade A cathode premium, cif Southeast Asia, \$/tonne**

Quality: Grade A 99.9935% min copper cathode conforming to LME specifications BS EN 1978:1998 – Cu-CATH-1

Quantity: Min 25 tonnes

Location: cif ports of Vietnam (Ho Chi Minh/Haiphong), Thailand (Bangkok, Laem Chabang), Malaysia (Johor, Port Klang), Indonesia (Jakarta), duty-unpaid premium on top of LME cash prices

Timing: Within 6 weeks

Unit: USD/tonne

Payment terms: Letter of credit, telegraphic transfer or documents against payment, other payment terms normalized

Publication: Weekly. Tuesday 3-4pm London time

**MB-CU-0386 Copper grade A cathode premium, cif Taiwan, \$/tonne**

Quality: Grade A 99.9935% min copper cathode conforming to LME specifications BS EN 1978:1998 – Cu-CATH-1

Quantity: Min 25 tonnes

Location: cif delivery in Taiwanese ports, duty-unpaid premium on top of LME cash prices

Timing: Within 6 weeks

Unit: USD/tonne

Payment terms: Letter of credit, telegraphic transfer or documents against payment, other payment terms normalized

Publication: Once every two weeks. Tuesday 3-4pm London time

**MB-CU-0397 Copper grade A cathode warrant premium, in-whs Southeast Asia, \$/tonne**

Quality: Grade A 99.9935% min copper cathode conforming to LME specifications BS EN 1978:1998 – Cu-CATH-1

Quantity: Min 25 tonnes

Location: In any LME-approved warehouse in Singapore and in Malaysia (Johor, Port Klang), premium on top of LME cash prices

Timing: Prompt release

Unit: USD/tonne

Payment terms: Cash, other payment terms normalized

Publication: Fortnightly. Weds 3-4pm London time

**MB-CU-0398 Copper grade A cathode warrant premium, in-whs East Asia \$/tonne**

Quality: Grade A cathode 99.9935% min copper conforming to LME specifications BS EN 1978:1998 – Cu-CATH-1

Quantity: Min 25 tonnes

Location: In any LME-approved warehouse in Taiwan (Kaohsiung) and South Korea (Gwangyang, Busan or Incheon), premium on top of LME cash prices

Timing: Prompt release

Unit: USD/tonne

Payment terms: Cash, other payment terms normalized

Publication: Fortnightly. Weds 3-4pm London time

**MB-CU-0404 Copper grade A cathode premium, cif South Korea, \$/tonne**

Quality: Grade A cathode 99.9935% min copper conforming to LME specifications BS EN 1978:1998 – Cu-CATH-1

Quantity: Min 25 tonnes

Location: Cif delivery in main South Korean ports (Busan, Incheon, Gwangyang, Onsan), duty-unpaid premium on top of LME cash prices

Timing: Within 6 weeks

Unit: USD/tonne

Payment terms: Letter of credit or telegraphic transfer, other payment terms normalized

Publication: Weekly. Tuesday 3-4pm London time

Notes: Assessed range and single number

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**EUROPE**


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**MB-CU-0369 Copper grade A cathode premium, cif Rotterdam, \$/tonne**

Quality: Grade A cathode 99.9935% min copper conforming to LME specifications BS EN 1978:1998 – Cu-CATH-1

Quantity: Min 25 tonnes

Location: cif delivery in Rotterdam, duty unpaid premium on top of LME cash prices

Timing: Within 4 weeks

Unit: USD/tonne

Payment terms: Cash, other payment terms normalized

Publication: Once every two weeks. Tuesday 3-4pm London time

**MB-CU-0406 Copper grade A cathode premium, cif Leghorn, \$/tonne**

Quality: Grade A cathode 99.9935% min copper conforming to LME specifications BS EN 1978:1998 – Cu-CATH-1

Quantity: 25 tonnes

Location: cif delivery in Leghorn (Italy), duty unpaid premium on top of LME cash prices

Timing: Within 4 weeks

Unit: USD/tonne

Payment terms: Cash, other payment terms normalized

Publication: Once every two weeks. Tuesday 3-4pm London time

Notes: Assessed range and single number

**MB-CU-0372 Copper grade A cathode premium, delivered Germany, \$/tonne**

Quality: Grade A cathode 99.9935% min copper conforming to LME specifications BS EN 1978:1998 – Cu-CATH-1

Quantity: Min 25 tonnes

Location: Delivered consumer works in Germany, duty unpaid premium on top of LME cash prices

Timing: Within 4 weeks

Unit: USD/tonne

Payment terms: Cash, other payment terms normalized

Publication: Once every two weeks. Tuesday 3-4pm London time

**MB-CU-0400 Copper grade A cathode warrant premium, in-whs North Europe, \$/tonne**

Quality: Grade A cathode 99.9935% min copper conforming to LME specifications BS EN 1978:1998 – Cu-CATH-1

Quantity: Min 25 tonnes

Location: In any LME-approved warehouse in North Europe (Belgium, Germany, the Netherlands, Sweden and the UK), premium on top of LME cash prices

Timing: Prompt release

Unit: USD/tonne

Payment terms: Cash, other payment terms normalized

Publication: Fortnightly. Weds 3-4pm London time

**MB-CU-0401 Copper grade A cathode warrant premium, in-whs South Europe, \$/tonne**

Quality: Grade A cathode 99.9935% min copper conforming to LME specifications BS EN 1978:1998 – Cu-CATH-1

Quantity: Min 25 tonnes

Location: In any LME-approved warehouse in South Europe (Spain, Italy), premium on top of LME cash prices

Timing: Prompt release

Unit: USD/tonne

Payment terms: Cash, other payment terms normalized

Publication: Fortnightly. Weds 3-4pm London time

**MB-CU-0411 Copper EQ cathode premium, cif Europe, \$/tonne.**

Quality: 99.9935% min copper conforming to LME specifications; Ag: 0.0025% max, As: 0.0005% max, Bi: 0.00020% max, Fe: 0.0010% max, Pb: 0.0005% max, S: 0.0015% max, Se: 0.00020% max, Te: 0.00020% max

Quantity: Min 25 tonnes

Location: cif Europe

Timing: Within 4 weeks

Unit: USD per tonne

Payment terms: Cash payment, other terms normalized

Publication: Once every two weeks. Tuesday 4pm London time

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**UNITED STATES**
**MB-CU-0002 Copper grade 1 cathode premium, ddp Midwest US, US cents/lb**

Quality: Grade A 99.9935% min copper cathode conforming to LME specifications BS EN 1978:1998 – Cu-CATH-1 or Grade 1 Electrolytic Copper Cathode ASTM B115-00

Quantity: Min 25 tonnes

Location: Delivered consumer works Midwest US

Timing: Within 4 weeks

Unit: USD/lb

Payment: 30 days, other payment terms normalized

Publication: Weekly. Tuesday 3-4pm London time

**MB-CU-0377 Copper grade A cathode warrant premium, in-whs US, \$/tonne**

Location: Any LME-approved warehouse in the US, premium on top of LME cash prices

Quality: Grade A 99.9935% min copper cathode conforming to LME specifications BS EN 1978:1998 – Cu-CATH-1

Unit: USD/tonne

Quantity: 25 tonnes

Payment terms: Cash, other payment terms normalized

Timing: Prompt release

Publication: Fortnightly. Weds 3-4pm London time

## Copper rod

### UNITED STATES

<b>MB-CU-0410</b>	<b>Copper rod premium, ddp MidwestUS, US cents/lb</b>
Quality:	Purity of 99.95-99.99%. Thicknesses of 8 millimeters or 0.3125 inches
Quantity:	Min 25,000 pounds
Location:	Delivered US Midwest
Unit:	US cents per pound
Publication:	Monthly. First Thursday

## Lead concentrate

### CHINA

<b>MB-PB-0104</b>	<b>Lead spot concentrate TC, high silver, cif China, \$/tonne</b>
Quality:	55-65% lead content concentrate, high silver 2-4kg, arsenic below 0.7%, mercury below 0.05%
Quantity:	Min 2,000 tonnes
Location:	Treatment Charge on cif basis delivery to Chinese ports
Timing:	Within 13 weeks
Unit:	USD/tonne
Payment terms:	Letter of Credit, quotation period M+3
Publication:	Monthly. Last Friday of the month, 3-4pm London time

<b>MB-PB-0103</b>	<b>Lead spot concentrate TC, low silver, cif China, \$/tonne</b>
Quality:	55-65% lead content concentrate, low silver below 1kg, arsenic below 0.7%, mercury below 0.05%
Quantity:	2,000 tonnes
Location:	Treatment Charge on cif basis delivery to Chinese ports
Timing:	Within 13 weeks
Unit:	USD/tonne
Payment terms:	Letter of Credit, quotation period M+3
Publication:	Monthly. Last Friday of the month, 3-4pm London time

## Refined lead

### INDIA

<b>MB-PB-0087</b>	<b>Lead 99.97% ingot premium, cif India, \$/tonne</b>
Quality:	Lead ingot 99.97% to 99.99% purity to LME specification BS EN 12659:1999, GB/T 469/2005 or ASTM B29-03 (2009)
Quantity:	Min 25 tonnes
Location:	cif delivery in Nhava Sheva (India), premium on top of LME cash prices
Timing:	Within 5 weeks
Unit:	USD/tonne
Payment terms:	Letter of credit, telegraphic transfer or cash against documents, other terms normalized
Publication:	Once every two weeks. Tuesday 3-4pm London time

<b>MB-PB-0086</b>	<b>Lead 99.99% ingot premium, cif India, \$/tonne</b>
Quality:	Lead ingot of 99.99% minimum purity conforming to LME specification BS EN 12659:1999, GB/T 469/2005 or ASTM B29-03 (2009)
Quantity:	Min 25 tonnes
Location:	cif Nhava Sheva (India), duty-unpaid premium on top of LME cash prices
Timing:	Within 5 weeks
Unit:	USD/tonne
Payment terms:	Letter of credit, telegraphic transfer or cash against documents, other terms normalized
Publication:	Once every two weeks. Tuesday 3-4pm London time

### SOUTHEAST ASIA & EAST ASIA

**MB-PB-0107**      **Lead 99.97% ingot premium, cif Southeast Asia, \$/tonne**

Quality:            Lead ingot of 99.97-99.99% purity conforming to LME specification BS EN 12659:1999, GB/T 469/2005 or ASTM B29-03 (2009)

Quantity:           25 tonnes

Location:           cif to ports of Vietnam (Ho Chi Minh/Haiphong), Thailand (Bangkok, Laem Chabang), Malaysia (Johor, Port Klang), Indonesia (Jakarta), duty-unpaid premium on top of LME cash prices

Timing:             Within 5 weeks

Unit:                 USD/tonne

Payment terms:   Letter of credit, telegraphic transfer or cash against documents, other terms normalized

Publication:       Once every two weeks. Tuesday 3-4pm London time

**MB-PB-0108**      **Lead 99.99% ingot premium, cif Southeast Asia, \$/tonne**

Quality:            Lead ingot of 99.99% min purity to LME specification BS EN 12659:1999, GB/T 469/2005 or ASTM B29-03 (2009)

Quantity:           25 tonnes

Location:           cif ports of Vietnam (Ho Chi Minh/Haiphong), Thailand (Bangkok, Laem Chabang), Malaysia (Johor, Port Klang), Indonesia (Jakarta), duty-unpaid premium on top of LME cash prices

Timing:             Within 5 weeks

Unit:                 USD/tonne

Payment terms:   Letter of credit, telegraphic transfer or cash against documents, other terms normalized

Publication:       Once every two weeks. Tuesday 3-4pm London time

**MB-PB-0084**      **Lead 99.97% ingot premium, cif Taiwan, \$/tonne**

Quality:            Lead of 99.97% to 99.99% purity conforming to LME specification BS EN 12659:1999, GB/T 469/2005 or ASTM B29-03 (2009)

Quantity:           25 tonnes

Location:           cif delivery main Taiwan ports (Taipei, Kaohsiung or Keelung), duty-unpaid premium on top of LME cash prices

Timing:             Within 5 weeks

Unit:                 USD/tonne

Payment terms:   Letter of credit, telegraphic transfer or cash against documents, other terms normalized

Publication:       Once every two weeks. Tuesday 3-4pm London time

**MB-PB-0083**      **Lead 99.99% ingot premium, cif Taiwan, \$/tonne**

Quality:            Lead ingot 99.99% min purity to LME specification BS EN 12659:1999, GB/T 469/2005 or ASTM B29-03 (2009)

Quantity:           25 tonnes

Location:           cif main Taiwanese ports (Taipei, Kaohsiung or Keelung), duty-unpaid premium on top of LME cash prices

Timing:             Within 5 weeks

Unit:                 USD/tonne

Payment terms:   Letter of credit, telegraphic transfer or cash against documents, other terms normalized

Publication:       Once every two weeks. Tuesday 3-4pm London time

**MB-PB-0105**      **Lead min 99.97% ingot warrant premium, in-whs Southeast Asia \$/tonne**

Quality:            Lead ingot of 99.97% to 99.99% purity conforming to LME specification BS EN 12659:1999, GB/T 469/2005 or ASTM B29-03 (2009)

Quantity:           25 tonnes

Location:           In any LME-approved warehouse in Singapore and in Malaysia (Johor, Port Klang), premium on top of LME cash prices

Timing:             Prompt release

Unit:                 USD/tonne

Payment terms:   Cash, other payment terms normalized

Publication:       Fortnightly. Weds 3-4pm London time

**MB-PB-0106**      **Lead min 99.97% ingot warrant premium, in-whs East Asia \$/tonne**

Quality:      Lead ingot of 99.97% to 99.99% purity conforming to LME specification BS EN 12659:1999, GB/T 469/2005 or ASTM B29-03 (2009)

Quantity:      25 tonnes

Location:      In any LME-approved warehouse in Taiwan (Kaohsiung) and South Korea (Gwangyang, Busan or Incheon), premium on top of LME cash prices

Timing:      Prompt release

Unit:      USD/tonne

Payment terms:      Cash, other terms normalized

Publication:      Fortnightly. Weds 3-4pm London time

**MB-PB-0110**      **Lead 99.97% ingot warrant premium, in-whs South Europe, \$/tonne**

Quality:      Lead cathode of 99.97% to 99.99% purity conforming to LME specification BS EN 12659:1999, GB/T 469/2005 or ASTM B29-03 (2009)

Quantity:      Min 25 tonnes

Location:      In any LME-approved warehouse in South Europe (Spain, Italy), premium on top of LME cash prices

Timing:      Prompt release

Unit:      USD/tonne

Payment terms:      Cash, other payment terms normalized

Publication:      Fortnightly. Weds 3-4pm London time

### EUROPE

**MB-PB-0109**      **Lead 99.97% ingot warrant premium, in-whs North Europe, \$/tonne**

Location:      In any LME-approved warehouse in North Europe (Belgium, Germany, the Netherlands, Sweden and the UK), premium on top of LME cash prices

Quality:      Lead of 99.97% to 99.99% purity conforming to LME specification BS EN 12659:1999, GB/T 469/2005 or ASTM B29-03 (2009)

Unit:      USD/tonne

Quantity:      Min 25 tonnes

Payment terms:      Cash, other payment terms normalized

Timing:      Prompt release

Form:      Cathode

Publication:      Fortnightly. Weds 3-4pm London time

### UNITED STATES

**MB-PB-0056**      **Lead 99.97% ingot premium ddp Midwest US, US cents/lb**

Quality:      Lead ingot of 99.97% to 99.99% purity conforming to LME specification BS EN 12659:1999, GB/T 469/2005 or ASTM B29-03 (2009)

Quantity:      Min 25 tonnes

Location:      Delivered consumer works, US Midwest

Timing:      Within 5 weeks

Unit:      US cents/lb

Payment terms:      30 days, other payment terms normalized

Publication:      Weekly. Tuesday 3-4pm London time

**MB-PB-0099**      **Lead 99.99% ingot premium, delivered Midwest US, US cents/lb**

Quality:      Lead ingot of 99.99% minimum purity conforming to LME specification BS EN 12659:1999, GB/T 469/2005 or ASTM B29-03 (2009)

Quantity:      Min 25 tonnes

Location:      Delivered consumer works, US Midwest

Timing:      Within 5 weeks

Unit:      US cents /lb

Payment terms:      30 days, other payment terms normalized

Publication:      Weekly. Tuesday 3-4pm London time

<b>MB-PB-0097</b>	<b>Lead 99.97% ingot warrant premium, in-whs US, \$/tonne</b>
Quality:	Lead cathode of 99.97% to 99.99% purity conforming to LME specification BS EN 12659:1999, GB/T 469/2005 or ASTM B29-03 (2009)
Quantity:	Min 25 tonnes
Location:	In any LME-approved warehouse in the USA, premium on top of LME cash prices
Timing:	Prompt release
Unit:	USD/tonne
Payment terms:	Cash, other payment terms normalized
Publication:	Fortnightly. Weds 3-4pm London time

## Nickel ore

Please see **Ores** section.

## Nickel

### CHINA

<b>MB-NI-0143</b>	<b>Nickel min 99.8% full plate premium, in-whs Shanghai, \$/tonne</b>
Quality:	Full plate. 99.80% min primary nickel conforming to LME specification: ASTM B39-79 (2013) or GB/T 6516-2010 - Ni9990 grade
Quantity:	Min 60 tonnes
Location:	In-warehouse Shanghai bonded zone, premium on top of LME cash prices
Timing:	Within 2 weeks
Unit:	USD/tonne
Payment terms:	Cash against document, Letter of credit, telegraphic transfer, other terms normalized
Publication:	Weekly. Tuesday 3-4pm London time
Notes:	Assessed range and single number

<b>MB-NI-0142</b>	<b>Nickel min 99.8% full plate premium, cif Shanghai, \$/tonne</b>
Type:	Assessed range and single number
Quality:	Full plate. 99.80% min primary nickel conforming to LME specification: ASTM B39-79 (2013) or GB/T 6516-2010 - Ni9990 grade
Quantity:	Min 60 tonnes
Location:	cif delivery basis Shanghai port, premium on top of LME cash prices
Timing:	Within 6 weeks
Unit:	USD/tonne
Payment terms:	Cash against document, Letter of credit, telegraphic transfer, and other terms normalized
Publication:	Weekly. Tuesday 3-4pm London time



**MB-NI-0245**      **Shanghai, Nickel premium, 99.80% purity, briquette, duty free, cif, \$ per tonne**

Quality:            Nickel content 99.8% in line with LME specifications

Quantity:            Min 6 tonnes

Location:            cif China

Timing:              Within 8 weeks

Unit:                  USD/tonne

Payment terms:    Letter of credit and telegraphic transfer

Publication:        Last Tuesday of each month

Notes:                Origin = Australia and Madagascar

**B-NI-0139**      **Nickel min 99.8% full plate warrant premium, in-whs East Asia, \$/tonne**

Quality:            Full-plate cathode. 99.80% min primary nickel conforming to LME specification: ASTM B39-79 (2013) or GB/T 6516-2010 - Ni9990 grade

Quantity:            6 tonnes

Location:            In any LME-approved warehouse in Taiwan (Kaohsiung) and South Korea (Gwangyang, Busan or Incheon), premium on top of LME cash prices

Timing:              Prompt release

Unit:                  USD/tonne

Payment terms:    Cash, other terms normalized

Publication:        Fortnightly. Weds 3-4pm London time

### SOUTHEAST ASIA & EAST ASIA

**MB-NI-0137**      **Nickel min 99.8% full plate warrant premium, in-whs Southeast Asia, \$/tonne**

Quality:            Full-plate cathode. 99.80% min primary nickel conforming to LME specification: ASTM B39-79 (2013) or GB/T 6516-2010 - Ni9990 grade

Quantity:            6 tonnes

Location:            Any LME-approved warehouse in Singapore and Malaysia (Johor, Port Klang), premium on top of LME cash prices

Timing:              Prompt release

Unit:                  USD/tonne

Payment terms:    Cash, other terms normalized

Publication:        Fortnightly. Weds 3-4pm London time

**MB-NI-0140**      **Nickel min 99.8% briquette warrant premium, in-whs East Asia, \$/tonne**

Quality:            Briquette. 99.80% min primary nickel conforming to LME specification: ASTM B39-79 (2013) or GB/T 6516-2010 - Ni9990 grade

Quantity:            6 tonnes

Location:            In any LME-approved warehouse in Taiwan (Kaohsiung) and South Korea (Gwangyang, Busan or Incheon), premium on top of LME cash prices

Timing:              Prompt release

Unit:                  USD/tonne

Payment terms:    Cash, other payment terms normalized

Publication:        Fortnightly. Weds 3-4pm London time

**MB-NI-0138**      **Nickel min 99.8% briquette warrant premium, in-whs Southeast Asia, \$/tonne**

Quality:            Briquette. 99.80% min primary nickel conforming to LME specification: ASTM B39-79 (2013) or GB/T 6516-2010 - Ni9990 grade

Quantity:            6 tonnes

Location:            Any LME-approved warehouse in Singapore/Malaysia (Johor, Port Klang), premium on top of LME cash prices

Timing:              Prompt release

Unit:                  USD/tonne

Payment terms:    Cash, other terms normalized

Publication:        Fortnightly. Weds 3-4pm London time

### EUROPE

**MB-NI-0003**      **Nickel uncut cathode premium, in-whs Rotterdam, \$/tonne**

Quality:            Full-plate cathode. 99.80% min primary nickel conforming to LME specification: ASTM B39-79 (2013) or GB/T 6516-2010 - Ni9990 grade

Quantity:            20 tonnes

Location:            In-warehouse Rotterdam, premium on top of LME cash prices

Timing:              Within one week

Unit:                  USD/tonne

Payment terms:    Cash, other payment terms normalized

Publication:        Weekly. Tuesday 3-4pm London time

**MB-NI-0001**      **Nickel 4x4 cathode premium, in-whs Rotterdam, \$/tonne**

Quality: 4x4 cut cathode. 99.80% min primary nickel conforming to LME specification: ASTM B39-79 (2013) or GB/T 6516-2010 - Ni9990 grade

Quantity: Min 20 tonnes

Location: In-warehouse Rotterdam, premium on top of LME cash prices

Timing: Within one week

Unit: USD/tonne

Payment terms: Cash, other payment terms normalized

Publication: Weekly. Tuesday 3-4pm London time

**MB-NI-0002**      **Nickel briquette premium, in-whs Rotterdam, \$/tonne**

Quality: Briquette. 99.80% min primary nickel conforming to LME specification: ASTM B39-79 (2013) or GB/T 6516-2010 - Ni9990 grade

Quantity: 20 tonnes

Location: In-warehouse Rotterdam, premium on top of LME cash prices

Timing: Within one week

Unit: USD/tonne

Payment terms: Cash, other payment terms normalized

Publication: Weekly. Tuesday 3-4pm London time

**MB-NI-0141**      **Nickel min 99.8% warrant premium, in-whs North Europe, \$/tonne**

Quality: Cathode (full-plate, cut), pellet or briquette. 99.80% min primary nickel conforming to LME specification: ASTM B39-79 (2013) or GB/T 6516-2010 - Ni9990 grade

Quantity: Min 6 tonnes

Location: Any LME-approved warehouse in North Europe (Belgium, Germany, the Netherlands, Sweden and the UK), premium on top of LME cash prices

Timing: Prompt release

Unit: USD/tonne

Payment terms: Cash, other terms normalized

Publication: Fortnightly. Weds 3-4pm London time

### UNITED STATES

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**MB-NI-0240**      **Nickel 4x4 cathode premium, delivered Midwest US, US cents/lb**

Quality: 4x4 cut cathode. 99.8% minimum primary nickel conforming to LME specification: ASTM B39-79 (2013) or GB/T 6516-2010 - Ni9990 grade

Quantity: Min 20 tonnes

Location: Delivered consumer works US

Timing: Within four weeks

Unit: US cents per lb

Payment terms: 30 days, other payment terms normalized

Publication: Weekly. Tuesday 3-4pm London time

**MB-NI-0241**      **Nickel briquette premium, delivered Midwest US, US cents/lb**

Quality: Briquette. 99.8% minimum primary nickel conforming to LME specification: ASTM B39-79 (2013) or GB/T 6516-2010 - Ni9990 grade

Quantity: Min 20 tonnes

Location: Delivered consumer works US

Timing: Within four weeks

Unit: US cents per lb

Payment terms: 30 days, other payment terms normalized

Publication: Weekly. Tuesday 3-4pm London time

# Tin

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**SOUTHEAST ASIA & EAST ASIA**


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<b>MB-SN-0038</b>	<b>Tin 99.9% ingot premium, cif Taiwan, \$/tonne</b>
Quality:	Ingot. 99.9% tin purity conforming to LME specification: BS EN 610:1996 with 100-300 ppm lead content
Quantity:	Min 5 tonnes
Location:	cif delivery basis Taiwanese ports (Taipei, Kaohsiung or Keelung), premium on top of LME cash prices
Timing:	Within 2 weeks
Unit:	USD/tonne
Payment terms:	Cash against document, telegraphic transfer, other terms normalized
Publication:	Once every two weeks. Tuesday 3-4pm London time

<b>MB-SN-0042</b>	<b>Tin min 99.85% ingot warrant premium, in-whs Southeast Asia, \$/tonne</b>
Quality:	Ingot. Minimum 99.85% tin purity conforming to LME specification: BS EN 610:1996, max 500ppm lead
Quantity:	Min 5 tonnes
Location:	In any LME-approved warehouse in Singapore and in Malaysia (Johor, Port Klang), premium on top of LME cash prices
Timing:	Prompt release
Unit:	USD/tonne
Payment terms:	Cash, other payment terms normalized
Publication:	Fortnightly. Weds 3-4pm London time

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**EUROPE**


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<b>MB-SN-0002</b>	<b>Tin 99.9% ingot premium, in-whs Rotterdam, \$ per tonne</b>
Quality:	Ingot. 99.9% tin purity conforming to LME specification: BS EN 610:1996 with 100-300 ppm lead content
Quantity:	Min 20 tonnes
Location:	In-warehouse Rotterdam, premium on top of LME cash prices
Timing:	Within 2 weeks
Unit:	USD/tonne
Payment terms:	Cash against conditional release, other payment terms normalized
Publication:	Once every two weeks. Tuesday 3-4pm London time

<b>MB-SN-0029</b>	<b>Tin 99.9% low lead ingot premium, in-whs Rotterdam, \$/tonne</b>
Quality:	Ingot. 99.9% tin purity conforming to LME specification: BS EN 610:1996 with less than 100 ppm lead content
Quantity:	Min 20 tonnes
Location:	In-warehouse Rotterdam, premium on top of LME cash prices
Timing:	Within 2 weeks
Unit:	USD/tonne
Payment terms:	Cash against conditional release, other payment terms normalized
Publication:	Once every two weeks. Tuesday 3-4pm London time

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**UNITED STATES**


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<b>MB-SN-0012</b>	<b>Tin grade A min 99.85% ingot all-in price, ddp Midwest US, \$/tonne</b>
Quality:	Ingot. Min 99.85% tin purity conforming to LME specification BS EN 610:1996 and ASTM grade A, max 500ppm lead
Quantity:	Min 20 tonnes
Location:	Delivered consumer works US
Timing:	Within 2 weeks
Unit:	USD/tonne
Payment terms:	30 days, other payment terms normalized
Publication:	Daily 3-4pm London time

**MB-SN-0036 Tin 99.85% ingot premium, in-whs Baltimore, \$/tonne**

Quality: Ingot. Min 99.85% tin purity conforming to LME specification: BS EN 610:1996, max 500ppm lead, total impurities must not exceed 0.15%

Quantity: Min 20 tonnes

Location: In-warehouse Baltimore, premium on top of LME cash prices

Unit: USD/tonne

Payment terms: Cash against documents, other payment terms normalized

Publication: Once every two weeks. Tuesday 3-4pm London

**MB-SN-0011 Tin grade A min 99.85% ingot premium, ddp Midwest US, \$/tonne**

Quality: Delivered premium over cost of tin of 99.85% purity (min) conforming to BS EN 610:1996

Quantity: Min 20 tonnes

Location: ddp US Midwest

Timing: Within 2 weeks

Unit: US dollars per tonne

Payment terms: 30-days, other terms normalized

Publication: Once every two weeks. Tuesday 3-4pm London time

## Zinc concentrate

**CHINA**


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**MB-ZN-0110 Zinc spot concentrate TC, cif China, \$/per tonne**

Quality: 45-55% zinc content, low silver (0-170g/t), silica 3.5-4.5%, copper below 3% (high copper 4-5%), lead below 3.5% (total copper, lead, silica at max 6-7%), arsenic below 0.6%, cadmium below 0.33% and mercury below 0.06%

Quantity: Min 2,000 tonnes

Location: cif Chinese ports

Timing: Within 13 weeks

Unit: USD/tonne

Payment terms: Letter of Credit, quotation period M+3

Publication: Second and last Friday of each month

**MB-ZN-0120 Zinc concentrate TC spot, delivered North China, yuan/tonne**

Quality: Concentrate. Zn 50%, As <0.4%, Hg <100ppm, Si <6%, S >26%, Pb <3%, Fe <8%.

Quantity: Min 100 tonnes

Location: Treatment Charge on delivered basis

Unit: CNY/tonne

Payment terms: Cash against document or prepayment

Publication: Monthly. Last Friday of every month.

**MB-ZN-0121 Zinc concentrate TC spot, delivered South China, yuan/tonne**

Quality: Concentrate. Zn content 50%, As <0.4%, Hg <100ppm, Si <6%, S >26%, Pb <3%, Fe <8%.

Quantity: Min 100 tonnes

Location: Treatment Charge on delivered basis

Unit: CNY/tonne

Payment terms: Cash against document or prepayments

Publication: Monthly. Last Friday of every month.

## Refined zinc

### CHINA

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**MB-ZN-0119 Zinc min 99.995% ingot premium, in-whs Shanghai, \$/tonne**

Quality:	Special High Grade zinc ingot of minimum 99.995% purity, conforming to LME specifications and relevant standards: BS EN 1179:2003, ISO 752:2004 - ZN-1 grade, ASTM B6-12 - LME grade or GB/T 470-2008
Quantity:	Min 25 tonnes
Location:	In-warehouse Shanghai bonded zone, premium on top of LME cash prices
Timing:	Within 4 weeks
Unit:	USD/tonne
Payment terms:	Letter of credit, telegraphic transfer or documents against payment, other payment terms normalized
Publication:	Weekly. Tuesday 3-4pm London time
Notes:	Assessed range and assessed single number

**MB-ZN-0106 Zinc SHG min 99.995% ingot premium, cif Shanghai, \$/per tonne**

Quality:	Special High Grade zinc ingot of minimum 99.995% purity, conforming to LME specifications and relevant standards: BS EN 1179:2003, ISO 752:2004 - ZN-1 grade, ASTM B6-12 - LME grade or GB/T 470-2008
Quantity:	Min 25 tonnes
Location:	cif Shanghai port, premium on top of LME cash prices
Timing:	Within 4 weeks
Unit:	USD/tonne
Payment terms:	Letter of credit, telegraphic transfer or documents against payment, other payment terms normalized
Publication:	Once every two weeks. Tuesday 3-4pm London time

**MB-ZN-0116**

Quality:	<b>Zinc SHG 99.995% ingot premium, cif Taiwan \$/tonne</b> Special High Grade zinc ingot of minimum 99.995% purity, conforming to LME specifications and relevant standards: BS EN 1179:2003, ISO 752:2004 - ZN-1 grade, ASTM B6-12 - LME grade or GB/T 470-2008
Quantity:	Min 25 tonnes
Location:	cif Taiwanese ports, premium on top of LME cash prices
Timing:	Within 4 weeks
Unit:	USD/tonne
Payment terms:	Letter of credit, telegraphic transfer or documents against payment, other payment terms normalized
Publication:	Once every two weeks. Tuesday 3-4pm London time

### SOUTHEAST ASIA & EAST ASIA

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**MB-ZN-0113 Zinc SHG 99.995% ingot premium, fca Singapore, \$/per tonne**

Quality:	Special High Grade zinc ingot of minimum 99.995% purity, conforming to LME specifications and relevant standards: BS EN 1179:2003, ISO 752:2004 - ZN-1 grade, ASTM B6-12 - LME grade or GB/T 470-2008
Quantity:	Min 25 tonnes
Location:	fca Singapore, premium on top of LME cash price
Timing:	Within 4 weeks
Unit:	USD/tonne
Payment terms:	Letter of credit or telegraphic transfer, other terms normalized
Publication:	Once every two weeks. Tuesday 3-4pm London time

**MB-ZN-0115 Zinc SHG 99.995% ingot premium, fca Malaysia, \$/per tonne**

Quality: Special High Grade zinc ingot of minimum 99.995% purity, conforming to LME specifications and relevant standards: BS EN 1179:2003, ISO 752:2004 - ZN-1 grade, ASTM B6-12 - LME grade or GB/T 470-2008

Quantity: Min 25 tonnes

Location: fca main Malaysian ports (Johor, Port Klang), premium on top of LME cash price

Timing: Within 4 weeks

Unit: USD/tonne

Payment terms: Letter of credit or telegraphic transfer, other terms normalized

Publication: Once every two weeks. Tuesday 3-4pm London time

**MB-ZN-0093 Zinc SHG min 99.995% ingot premium, cif Southeast Asia, \$/tonne**

Quality: Special High Grade zinc ingot of minimum 99.995% purity, conforming to LME specifications and relevant standards: BS EN 1179:2003, ISO 752:2004 - ZN-1 grade, ASTM B6-12 - LME grade or GB/T 470-2008

Quantity: Min 25 tonnes

Location: cif ports in Vietnam (Ho Chi Minh/ Haiphong), Thailand (Bangkok, Laem Chabang), Malaysia (Johor, Port Klang), Indonesia (Jakarta), duty-unpaid premium on top of LME cash prices

Timing: Within 4 weeks

Unit: USD/tonne

Payment terms: Letter of credit or telegraphic transfer, other terms normalized

Publication: Once every two weeks Tuesday 3-4pm London time

**MB-ZN-0123 Zinc SHG min 99.995% warrant premium, in-whs Southeast Asia, \$/tonne**

Quality: Special High Grade zinc ingot of minimum 99.995% purity, conforming to LME specifications and relevant standards: BS EN 1179:2003, ISO 752:2004 - ZN-1 grade, ASTM B6-12 - LME grade or GB/T 470-2008

Quantity: Min 100 tonnes

Location: Any LME-approved warehouse in Singapore/Malaysia (Johor, Port Klang), premium on top of LME cash prices

Timing: Prompt release

Unit: USD/tonne

Payment terms: Cash, other payment terms normalized

Publication: Fortnightly. Weds 3-4pm London time

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**EUROPE**
**MB-ZN-0001 Zinc SHG min 99.995% ingot premium, dp fca Rotterdam, \$/tonne**

Quality: Special High Grade zinc ingot of minimum 99.995% purity, conforming to LME specifications and relevant standards: BS EN 1179:2003, ISO 752:2004 - ZN-1 grade, ASTM B6-12 - LME grade or GB/T 470-2008

Quantity: Min 100 tonnes

Location: Free-carrier basis delivery in Rotterdam, duty-paid premium on top of LME cash prices

Timing: Within 4 weeks

Unit: USD/tonne

Payment terms: Cash, other payment terms normalized

Publication: Weekly. Tuesday 3-4pm London time

<b>MB-ZN-0099</b>	<b>Zinc SHG min 99.995% ingot premium, dp fca Antwerp, \$/tonne</b>	<b>MB-ZN-0117</b>	<b>Zinc SHG min 99.995% warrant premium, in-whs North Europe, \$/tonne</b>
Quality:	Special High Grade zinc ingot of minimum 99.995% purity, conforming to LME specifications and relevant standards: BS EN 1179:2003, ISO 752:2004 - ZN-1 grade, ASTM B6-12 - LME grade or GB/T 470-2008	Quality:	Special High Grade zinc ingot of minimum 99.995% purity, conforming to LME specifications and relevant standards: BS EN 1179:2003, ISO 752:2004 - ZN-1 grade, ASTM B6-12 - LME grade or GB/T 470-2008
Quantity:	Min 100 tonnes	Quantity:	Min 100 tonnes
Location:	Free-carrier basis delivery in Antwerp, duty-unpaid premium on LME cash prices	Location:	In any LME-approved warehouse in North European locations (Belgium, Germany, the Netherlands, Sweden and the UK), premium on top of LME cash prices
Timing:	Within 4 weeks	Timing:	Prompt release
Unit:	USD/tonne	Unit:	USD/tonne
Payment terms:	Cash, other terms normalized	Payment terms:	Cash, other payment terms normalized
Publication:	Weekly. Tuesday 3-4pm London time	Publication:	Fortnightly. Weds 3-4pm London time
<b>MB-ZN-0103</b>	<b>Zinc SHG min 99.995% ingot premium, fca dp Italy, \$/tonne</b>	<b>MB-ZN-0082</b>	<b>Zinc SHG min 99.995% ingot premium monthly average, delivered UK, £/tonne</b>
Quality:	Special High Grade zinc ingot of minimum 99.995% purity, conforming to LME specifications and relevant standards: BS EN 1179:2003, ISO 752:2004 - ZN-1 grade, ASTM B6-12 - LME grade or GB/T 470-2008	Quality:	Special High Grade zinc ingot of minimum 99.995% purity, conforming to LME specifications and relevant standards: BS EN 1179:2003, ISO 752:2004 - ZN-1 grade, ASTM B6-12 - LME grade or GB/T 470-2008
Quantity:	Min 100 tonnes	Quantity:	Min 25 tonnes
Location:	Free-carrier basis delivery in Italy, duty-paid premium on top of LME cash prices	Location:	Delivered customer works basis in the UK; all-in price including average of LME GBP cash settlements for the last ten days of the previous month and assessed term premiums for UK delivery (either delivered customer works or FCA Rotterdam plus transport, warehousing, delivery and financing costs)
Timing:	Within 4 weeks	Unit:	GBP/tonne
Unit:	USD/tonne	Payment terms:	Cash, other payment terms normalized
Payment terms:	Cash, other terms normalized	Publication:	Monthly. 1st working day of the month between 1pm and 2pm London time
Publication:	Fortnightly. Tuesday 3-4pm London time	Notes:	This partly-assessed single number was launched in 2013 as a replacement to the Thyssenkrupp Metallurgie UK SHG zinc price, which had been discontinued.
<b>MB-ZN-0102</b>	<b>Zinc SHG min 99.995% ingot premium, ddp Italy, \$/per tonne</b>		
Quality:	Special High Grade zinc ingot of minimum 99.995% purity, conforming to LME specifications and relevant standards: BS EN 1179:2003, ISO 752:2004 - ZN-1 grade, ASTM B6-12 - LME grade or GB/T 470-2008		
Quantity:	Min 100 tonnes		
Location:	Delivered duty paid consumer works in Italy, premium on LME cash prices		
Timing:	Within 4 weeks		
Unit:	USD/tonne		
Payment terms:	Cash, other terms normalized		
Publication:	Fortnightly. Tuesday 3-4pm London time		

## UNITED STATES

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**MB-ZN-0005**      **Zinc SHG min 99.995% ingot premium, ddp Midwest US, US cents/lb**

Quality:            Min 99.995% special high grade zinc ingot, conforming to LME specifications and relevant BS EN standards

Quantity:            Min 25 tonnes

Location:            Delivered consumer works Midwest US

Timing:              Within 4 weeks

Unit:                  US cents per pound

Payment terms:    30 days, other payment terms normalized

Publication:        Weekly. Tuesday 3-4pm London time

**MB-ZN-0104**      **Zinc SHG min 99.995% warrant premium, in-whs US, \$/per tonne**

Quality:            Special High Grade zinc ingot of minimum 99.995% purity, conforming to LME specifications and relevant standards: BS EN 1179:2003, ISO 752:2004 - ZN-1 grade, ASTM B6-12 - LME grade or GB/T 470-2008

Quantity:            25 tonnes

Location:            In any LME-approved warehouse in the US, premium on top of LME cash prices

Timing:              Prompt release

Unit:                  USD/tonne

Payment terms:    Cash, other payment terms normalized

Publication:        Fortnightly. Weds 3-4pm London time



## Bulk alloys

# Ferro-chrome

### CHINA

<b>MB-FEC-0011</b>	<b>Ferro-chrome 50% Cr import, cif main Chinese ports, \$/lb contained Cr</b>
Quality:	10-100mm lump. Chrome base 50%, range 48-52%; carbon base 7%, max 9%; silicon base 3%, max 6%; phosphorous max 0.03%; sulphur max 0.06%.
Quantity:	Min 1,000 tonnes
Location:	cif main Chinese ports
Timing:	Within 6 weeks
Unit:	USD per lb
Payment terms:	LC at sight
Publication:	Weekly. Tuesday 2-3pm London time
Notes:	Seaborne, all origins. Data history from May 2012

<b>MB-FEC-0005</b>	<b>Ferro-chrome contract 6-8% C, basis 50% Cr, ddp China, yuan/tonne</b>
Quality:	Lump. Cr 50% min; C 6-8%; Si: 5% max; P 0.04% max; S 0.04% max
Quantity:	Min 1,000 tonnes
Location:	ddp China
Unit:	CNY/tonne, normalized to Cr 50%
Payment terms:	Cash, other payment terms normalized
Publication:	Weekly. Tuesday between 2pm and 3pm London time

<b>MB-FEC-0006</b>	<b>Ferro-chrome spot 6-8% C, basis 50% Cr, ddp China, yuan/tonne</b>
Quality:	Lump. Cr 50% min, C 6-8%, Si 5% max, P 0.04% max, S 0.04% max
Quantity:	Min 1,000 tonnes
Location:	ddp China
Unit:	CNY/tonne, normalized to Cr 50%
Payment terms:	Cash, other payment terms normalized
Publication:	Weekly. Tuesday between 2pm and 3pm London time

### JAPAN

<b>MB-FEC-0017</b>	<b>Ferro-chrome high carbon 57-65% Cr, cif dup Japan, \$/lb</b>
Quality:	10-50mm lump. Cr 57% min, 65% max; C 6% min, 9% max; Si 2% min, 4% max; P 0.04% max; S 0.05% max
Quantity:	Min 100 tonnes
Location:	cif Japan
Unit:	USD per lb of chrome contained
Payment terms:	LC at sight and TT
Publication:	Every other week. Thursday 2-3pm London time

### SOUTHEAST ASIA & EAST ASIA

<b>MB-FEC-0018</b>	<b>Ferro-chrome high carbon 57-65% Cr, cif dup South Korea, \$/lb</b>
Quality:	10-50mm lump. Cr 57% min, 65% max; C 6% min, 9% max; Si 2% min, 4% max; P 0.04% max; S 0.05% max
Quantity:	Min 100 tonnes
Location:	cif South Korea
Unit:	USD per lb of chrome contained
Payment terms:	LC at sight and TT
Publication:	Every other week. Thursday 2-3pm London time

### EUROPE

<b>MB-FEC-0021</b>	<b>Ferro-chrome, high carbon, 6-8.5% C, basis 65-70% Cr, max 1.5% Si, delivered Europe, \$ per lb Cr</b>
Quality:	Lump, Cr 65-70%, C 6-8.5%, Si 1.5%.
Quantity:	Min 24 tonnes
Location:	Delivered consumer works Europe (other incoterms will be normalized)
Unit:	USD per lb of chrome contained
Payment terms:	30 days, other payment terms normalized
Publication:	Weekly, Tuesday at 2-3pm London time.

<p><b>MB-FEC-0020</b></p> <p>Quality: Lump, Cr 60-64.9%, C 6-8.5%, Si 3% max.</p> <p>Quantity: Min 24 tonnes</p> <p>Location: cif major European ports (other incoterms will be normalized)</p> <p>Unit: USD per lb of chrome contained</p> <p>Payment terms: 30 days, other payment terms normalized</p> <p>Publication: Weekly, Tuesday at 2-3pm London time.</p>	<p><b>Ferro-chrome, high carbon, 6-8.5% C, basis 60-64.9% Cr, max 3% Si, cif Europe, \$ per lb Cr</b></p>	<p><b>MB-FEC-0001</b></p> <p>Quality: Lump. Cr 65% min, Si 1% max, C 6-8%, P 0.015% max, Ti 0.05%</p> <p>Quantity: Min 25 tonnes</p> <p>Location: Delivered consumer works Europe</p> <p>Unit: USD per lb of chrome contained</p> <p>Payment terms: 30 days, other payment terms normalized</p> <p>Publication: Fortnightly. Tuesday 2-3pm London time</p>	<p><b>Ferro-chrome low phosphorous, min 65% Cr, max 0.015% P, delivered Europe, \$/lb</b></p>
<p><b>MB-FEC-0002</b></p> <p>Quality: Lump. Cr 65% basis (range 60-70% Cr), C 0.06% max, Si 1.5% max, P 0.05% max, S 0.05% max</p> <p>Quantity: Min 25 tonnes</p> <p>Location: Delivered consumer works Europe</p> <p>Unit: USD per lb of chrome contained</p> <p>Payment terms: 30 days, other payment terms normalized</p> <p>Publication: Fortnightly. Tuesday between 2pm and 3pm London time</p>	<p><b>Ferro-chrome low carbon, 65% Cr, max 0.06% C, delivered Europe, \$/lb Cr</b></p>	<p><b>MB-FEC-0016</b></p> <p>Quality: Lump. Basis 52% Cr, high carbon</p> <p>Quantity: Min not specified</p> <p>Location: Delivered consumer works Europe</p> <p>Unit: US cents per lb of chrome contained</p> <p>Payment terms: Not specified</p> <p>Publication: Quarterly as per industry announcement to Johannesburg Stock Exchange</p> <p>Notes: Fastmarkets does not independently assess this price, but publishes it as a reference. The price is settled every quarter by leading ferro-chrome producers and consumers and is then announced by a leading producer to the Johannesburg Stock Exchange. Fastmarkets obtains the benchmark number from market participants and/or from the official announcement.</p>	<p><b>Ferro-chrome lumpy Cr charge quarterly, basis 52% Cr (and high carbon), delivered Europe, \$/lb Cr</b></p>
<p><b>MB-FEC-0003</b></p> <p>Quality: Lump. Cr 65% basis (range 65-70% Cr), C 0.10% excluding material up to 0.06% C, Si 1.5% max, P 0.05% max, S 0.05% max</p> <p>Quantity: Min 25 tonnes</p> <p>Location: Delivered consumer works Europe</p> <p>Unit: USD per lb of chrome contained</p> <p>Payment terms: 30 days, other payment terms normalized</p> <p>Publication: Fortnightly. Tuesday 2-3pm London time</p>	<p><b>Ferro-chrome 0.10% C, average 65-70% Cr, delivered Europe, \$/lb Cr</b></p>		

<b>MB-FEC-0019</b>	<b>Ferro-chrome lumpy Cr benchmark indicator, charge basis 52% (and high carbon), Europe, \$/lb</b>
Quality:	Ferro-chrome lumpy, basis 52% chrome content
Unit:	US cents per lb of chrome content to major European destinations
Publication:	Weekly. Tuesday 2-3pm London time
Notes:	The price indicates a representative level for the European ferro-chrome benchmark if it were to be settled on that Friday. It does so by using a proprietary Fastmarkets formula based on the historical relationship between the European ferro-chrome benchmark and Fastmarkets market data.

## UNITED STATES

<b>MB-FEC-0007</b>	<b>Ferro-chrome high carbon 6-8% C, basis 60-65% Cr, max 2% Si, in-whs Pittsburgh, US cents/lb</b>
Quality:	Cr min: 62.00%, si: max. 3.00%, C: 6.00- 8.00%
Quantity:	Min 20 tons
Location:	fob Pittsburgh
Unit:	US cents per pound
Publication:	Weekly. Thursday

<b>MB-FEC-0013</b>	<b>Ferro-chrome low carbon 0.05%C, 65% Cr min, in-whs Pittsburgh, \$/lb</b>
Quality:	Cr min: 65.00%, Ca: 0.05%, Si: max 1.00%
Quantity:	20 tons
Location:	In-whs Pittsburgh
Unit:	US cents per pound
Publication:	Weekly. Thursday

<b>MB-FEC-0014</b>	<b>Ferro-chrome low carbon 0.10%C, 62% Cr min, in-whs Pittsburgh, \$/lb</b>
Type:	Assessed range
Currency:	US cents per pound
Location:	In-whs Pittsburgh
Quality:	Cr min 62.00%, C: 0.10%, Si max: 1.00%
Minimum lot size:	20 tons
Publication:	Weekly. Thursday

<b>MB-FEC-0015</b>	<b>Ferro-chrome low carbon 0.15%C, 60% Cr min, in-whs Pittsburgh, \$/lb</b>
Type:	Assessed range
Currency:	US cents per pound
Location:	In-whs Pittsburgh
Quality:	Cr: min. 60.00%, C: 0.15%, Si: max. 1.00%
Minimum lot size:	20 tons
Publication:	Weekly. Thursday

# Ferro-manganese

## EUROPE

<b>MB-FEM-0006</b>	<b>Ferro-manganese basis 78% Mn max, standard 7.5% C, delivered Europe, €/tonne</b>
Quality:	Lump in the range of 10-100mm, 90% min. Mn 75% min, 78% max; Si 2% max; C 6% min 8% max; P 0.35% max; S 0.04% max
Quantity:	Min 100 tonnes
Location:	Delivered consumer works Europe
Unit:	EUR/tonne
Payment terms:	Cash, other payment terms normalized
Publication:	Weekly. Friday between 2pm and 3pm London time

## CHINA

<b>MB-FEM-0007</b>	<b>Ferro-manganese 65% Mn min, max 7% C, in-whs China, yuan/tonne</b>
Quality:	Lump. Mn 65-72%, Si 4.5% max, C 7.0% max, P 0.4% max, S 0.03% max
Quantity:	Min 100 tonnes
Location:	In-whs China
Unit:	CNY/tonne, all Mn grades normalized to 65% on pro rata basis
Payment terms:	Cash, other payment terms normalized
Publication:	Weekly, Friday 2-3pm London time

## UNITED STATES

**MB-FEM-0001** **Ferro-manganese high carbon 78% Mn, standard 7.5% C, in-whs Pittsburgh, \$/long ton**

Quality: Mn 780%, C 7.5%  
 Quantity: Min 20 tons  
 Unit: US dollars per long ton  
 Location: In-warehouse Pittsburgh  
 Frequency: Weekly, Thursday

**MB-FEM-0002** **Ferro-manganese low carbon 80% Mn, max 0.80% C, in-whs Pittsburgh, US cents/lb**

Quality: Manganese min. 80.00%, carbon max. 0.80%  
 Quantity: Min 20 tons  
 Location: In-warehouse Pittsburgh  
 Unit: US cents per pound  
 Publication: Once a week, every Thursday

**MB-FEM-0003** **Ferro-manganese medium carbon 80% Mn, max 1.50% C, in-whs Pittsburgh, US cents/lb**

Quality: Manganese min 80%, carbon max 1.50%  
 Quantity: Min 20 tons  
 Unit: US cents per pound  
 Location: In-whs Pittsburgh  
 Frequency: Weekly, Thursday

## Ferro-silicon

### UNITED STATES

**MB-FES-0002** **Ferro-silicon 75% Si, in-whs Pittsburgh, US cents/lb**

Quality: Silicon 75.00%  
 Quantity: Min 20 tons  
 Location: In-warehouse Pittsburgh  
 Unit: US cents per pound  
 Publication: Weekly, Thursday

## CHINA

**MB-FES-0001** **Ferro-silicon 75% Si min, in-whs China, yuan/tonne**

Quality: Lump. Si 75-80%, Mn 0.4% max, Al: 2% max, Cr 0.3% max, P 0.035% max, S 0.02% max, C 0.1% max  
 Quantity: 100 tonnes  
 Location: In-whs China  
 Unit: CNY/tonne, price for all Si grades normalized to 75% on pro rata basis  
 Payment terms: Cash, other payment terms normalized  
 Publication: Weekly, Wednesday 2-3pm London

**MB-FES-0004** **Ferro-silicon 75% Si min export, fob China, \$/tonne**

Quality: Lump. Si 75-80%, Mn 0.4% max, Al: 2% max, Cr 0.3% max, P 0.035% max, S 0.02% max, C 0.1% max  
 Quantity: 100 tonnes  
 Location: fob China main ports  
 Unit: USD/tonne, normalized to 75% Si on pro rata basis  
 Payment terms: Cash, other payment terms normalized  
 Publication: Weekly, Wednesday 2-3pm London

## JAPAN

**MB-FES-0006** **Ferro-silicon 75% Si min, cif Japan, \$/tonne**

Quality: Lump. Si 75-80%; Al 2% max; P 0.05% max; S 0.02% max; C 0.2% max; size: 10-50mm  
 Quantity: Min 100 tonnes  
 Location: cif Japan  
 Unit: USD per tonne  
 Payment terms: Cash or letter of credit  
 Publication: Weekly, Wednesday 2-3pm London

## EUROPE

**MB-FES-0005** **Ferro-silicon lumpy basis 75% Si (scale pro rata), delivered Europe, €/tonne**

Quality: Lump. Si 75% basis (scale pro rata), Al 1.5% max, C 0.10-0.15% max, Ca 0.6% max, Ti 0.15% max, P 0.02% max, S 0.025% max

Quantity: Min 100 tonnes

Location: Delivered consumer works Europe

Unit: EUR/tonne

Payment terms: Cash, other terms normalized

Publication: Weekly. Friday 2-3pm London

# Silico-manganese

## EUROPE

**MB-SIM-0002** **Silico-manganese lumpy 65-75% Mn, basis 15-19% Si (scale pro rata), major European destinations €/tonne**

Quality: Lump. Mn 65-75% (Scale pro rata), Si 15-19%, C 2-2.5%, P 0.3%, S 0.03%

Quantity: Min 100 tonnes

Location: Delivered consumer works Europe

Unit: EUR/tonne

Payment terms: Cash, other terms normalized

Publication: Weekly. Friday 2-3pm London time

## CHINA

**MB-SIM-0001** **Silico-manganese 65% Mn min, max 17% Si, in-whs China, yuan/tonne**

Quality: Lump. Mn 65-72%, Si 17%, C 1.8% max, P 0.25% max, S 0.04% max

Quantity: Min 100 tonnes

Location: ddp China

Unit: CNY/tonne, all Mn grades normalized to 65% basis on pro rata basis

Payment terms: Cash, other terms normalized

Publication: Weekly. Friday 2-3pm London time

## INDIA

**MB-SIM-0004** **Silico-manganese 65% Mn min, min 16% Si, fob India, \$/tonne**

Quality: Lump. Mn: 65% Si: 16% C: 2% P:0.35% S:0.03%

Quantity: Min 100 tonnes

Location: fob India

Unit: USD/tonne

Payment terms: Letter of Credit

Publication: Weekly. Friday 2-3pm London time

## UNITED STATES

**MB-SIM-0003** **Silico-manganese 65% Mn min, min 16% Si, in-whs Pittsburgh, US cents/lb**

Quality: Manganese min 65%, Si min 16%

Quantity: 20 tons

Location: In-warehouse Pittsburgh

Unit: US cents per pound

Publication: Weekly. Thursday

# Ferro-nickel

## CHINA

**MB-FEN-0003** **Ferro-nickel premium/discount, 26-32% Ni contained, cif China, \$/tonne**

Quality: Ni typical 30% (range 26%-32%), P 0.0045% max, S 0.060% max

Quantity: Min 100 nickel metal tonnes per lot

Location: cif China

Unit: USD/tonne

Payment terms: Cash, other payment terms normalized

Publication: Last Monday of each month between 2pm to 3pm London time

Notes: Ferro-nickel price = (LME Ni price + premium/ discount) x nickel content

# Nickel Pig Iron

## CHINA

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**MB-FEN-0001**     **Nickel pig iron, high-grade NPI content 10-15%, contract, ddp China, yuan/nickel unit price**

Quality: Lump. Ni10-15%, Fe 80%, P 0.04% max, S 0.03% max, Si 4.5% max, C 4% max

Quantity: Min 1,000 tonnes

Location: Delivered duty paid China

Unit: Yuan/nickel unit

Payment terms: Cash

Publication: Weekly. Friday 2-3pm UK time

Notes: Packaged in 1-tonne big bags

**MB-FEN-0002**     **Nickel pig iron, high-grade NPI content 10-15%, spot, ddp China, yuan/nickel unit price**

Quality: Lump. Ni10-15%, Fe 80%, P 0.04% max, S 0.03% max, Si 4.5% max, C 4% max

Quantity: Min 500 tonnes

Location: ddp China

Unit: Yuan/nickel unit

Payment terms: Cash

Publication: Weekly. Friday 3-4pm UK time

Notes: Packaged in 1-tonne big bags

# Noble alloys

## Molybdenum

### EUROPE

**MB-FEO-0003 Molybdenum drummed molybdic oxide 57% Mo min, in-whs Rotterdam, \$/lb Mo**

Quality: Sandy powder (0-4mm). Mo 57% min, Cu 0.5% max, S 0.1% max, P 0.05% max, Pb 0.05% max, C 0.1% max. All other elements should each be 0.10% max, with the exception of Si, which should be 6% max.

Quantity: Min 10 tonnes (+/- 2%)

Location: In-whs Rotterdam

Unit: USD per lb Mo

Payment terms: Cash; other terms normalized

Publication: Twice weekly. Wednesday and Friday between 2pm and 3pm London time

**MB-FEO-0001 Ferro-molybdenum 65% Mo min, in-whs Rotterdam, \$/kg Mo**

Quality: Lump 5-50mm, 90% min, Mo 65% min, Si 1.50% max, Cu 0.50% max, C 0.10% max, S 0.10% max, P 0.05% max. All other elements should be each 0.10% max, with the exception of Fe

Quantity: Min 10 tonnes (+/- 2%)

Location: In-whs Rotterdam

Unit: USD per kg Mo

Payment terms: Cash; other payment terms normalized

Publication: Twice weekly. Wednesday and Friday 2-3pm London time

### UNITED STATES

**MB-MO-0001 Molybdenum canned molybdic oxide, in-whs Pittsburgh, \$/lb**

Quality: Mo min 57.00%, copper max 0.50%, phosphorus 0.05%, lead 0.05%, sulphur 0.10%, carbon 0.10%, moisture 0.10%

Quantity: Min 5 tonnes

Location: In-whs US

Unit: USD per pound

Publication: Weekly. Thursday

**MB-FEO-0002 Ferro-molybdenum 65-70% Mo, in-whs Pittsburgh, \$/lb**

Quality: Mo 65-70%

Quantity: Min 5 tonnes

Location: In-whs Pittsburgh

Unit: USD per pound

Publication: Weekly. Thursday

### SOUTH KOREA

**MB-FEO-0004 Drummed molybdic oxide, in-warehouse Busan \$/lb Mo**

Quality: Sandy powder (0-4 mm). Mo 57% min, Cu 0.5% max, S 0.1% max, P 0.05% max, Pb 0.05% max, C 0.1% max. All other elements should each be 0.10% max, with the exception of Si, which should be 6% max.

Quantity: 10 tonnes (+/- 2%)

Location: In-whs Busan

Timing: Spot

Unit: USD per lb Mo

Payment terms: Cash; other terms normalized

Publication: Twice weekly. Wednesday and Friday 2-3pm London time

# Titanium

### EUROPE

**MB-FET-0001 Ferro-titanium 70% Ti, max 4.5% Al, ddp Europe, \$/kg Ti**

Quality: Lump. Ti 70%, Al 4.5%, V 3%, O2 2%, C 0.2%, S 0.05%, P 0.05%, Si 0.5%, N 0.5%, Sn 0.5%, Ni 0.05%, Cr 0.5%, Pb 0.01%, Bi 0.01%

Quantity: Min 10-tonne lots (+/- 2%)

Location: ddp Europe

Unit: USD per kg Ti

Payment terms: Cash (other payment terms normalized)

Publication: Weekly. Wednesday 3pm London

# Tungsten

## EUROPE

<b>MB-W-0001</b>	<b>Tungsten APT 88.5% WO3 min Europe, cif Rotterdam and Baltimore duty-free, \$/mtu WO3</b>
Quality:	White finely divided free-flowing crystals. WO3 88.5% min, Al 0.001% max, As 0.0005% max, Bi 0.0005% max, Ca 0.001% max, Cd 0.0005% max, Co 0.0005% max, Cr 0.0005% max, Cu 0.0005% max, Fe 0.001% max, K 0.001% max, Mn 0.001% max, Mg 0.001% max, Mo 0.002% max, Na 0.001% max, Ni 0.0005% max, P 0.001% max, Pb 0.0005% max, S:0.001% max, Sb 0.0005% max, Si 0.001% max, Sn 0.0005% max, Ti 0.0005% max, V 0.0005% max
Quantity:	Min 20 tonnes (+/- 2%)
Location:	cif Rotterdam and Baltimore, duty free
Unit:	USD per mtu WO3
Payment terms:	Cash. Delivered up to three months in advance considered spot business
Publication:	Weekly. Friday 2-3pm London time

## CHINA

<b>MB-W-0003</b>	<b>Tungsten APT 88.5% WO3 min, fob main ports China, \$/mtu WO3</b>
Quality:	White finely divided free-flowing crystals. WO3 88.5% min, Al 0.0005% max, As 0.001% max, Bi 0.0001% max, Ca 0.001% max, Cd 0.001% max, Co 0.005% max, Cr 0.001% max, Cu 0.0005% max, Fe 0.001% max, K 0.001% max, Mn 0.0005% max, Mg 0.0005% max, Mo 0.002% max, Na 0.001% max, Ni 0.0005% max, P 0.0007% max, Pb 0.0001% max, S 0.0008% max, Sb 0.0002% max, Si 0.001% max, Sn 0.0002% max, Ti 0.0005% max, V 0.001% max
Quantity:	Min 17 tonnes
Location:	Fob China main ports
Unit:	USD per mtu WO3
Payment terms:	Cash or 30 days
Publication:	Weekly. Wednesday 2-3pm London

<b>MB-W-0002</b>	<b>Tungsten concentrate 65% WO3, in-whs China, yuan/tonne</b>
Quality:	Powder. WO3 65% min, S 0.8% max, P 0.10% max, As 0.15% max, Mo 0.05% max, Ca 5% max, Mn 1.5% max, Cu 0.25% max, Sn 0.25% max, SiO2 7.0% max
Quantity:	Min 50 tonnes
Location:	China
Unit:	CNY/tonne
Payment terms:	Cash or 30 days
Publication:	Weekly. Wednesday 2-3pm London time

# Ferro-tungsten

## EUROPE

<b>MB-FEU-0001</b>	<b>Ferro-tungsten basis 75% W, in-whs dup Rotterdam, \$/kg W</b>
Quality:	Lump. W 75.00% min, C 0.40% max, S 0.08% max, Mn 0.50% max, As 0.10% max, Sn 0.08% max, P 0.05% max, Si 0.70% max, Cu 0.15% max, Sb 0.05% max
Quantity:	Min 3-tonne lots
Location:	dup Rotterdam
Unit:	USD per kg W
Payment terms:	Cash, other payment terms normalized
Publication:	Twice weekly. Wednesday and Friday 2-3pm London
Notes:	Packaged in 1-tonne big bags

## CHINA

<b>MB-FEU-0003</b>	<b>Ferro-tungsten basis 75% W, fob main ports China, \$/kg W</b>
Quality:	Lump. Material produced from tungsten ore and concentrate; W: 75.00% min. C: 0.40% max. S: 0.08% max. Mn: 0.50% max. As: 0.10% max. Sn: 0.08% max. P: 0.05% max. Si: 0.70% max. Cu: 0.15% max. Sb: 0.05% max
Quantity:	Min 5 tonnes
Location:	fob China main ports
Unit:	USD per kg W
Payment terms:	Cash, other terms normalized
Publication:	Weekly. Wednesday 2-3pm London



# Vanadium

## EUROPE

**MB-FEV-0001** **Ferro-vanadium basis 78% V min, 1st grade, ddp Western Europe, \$/kg V**

Quality: Lump. V 78%, Al 1.5%, Si 1.5%, C 0.25%, S 0.05%, P 0.06%, Mn 0.5%. Other elements trace only, with the exception of Fe

Quantity: Min 5 tonnes

Location: Delivered consumer works Europe

Unit: USD per kg V

Payment terms: Cash, other terms normalized

Publication: Twice weekly. Wednesday and Friday at 2-3pm London time

**MB-V-0001** **Vanadium pentoxide 98% V2O5 min, in-whs Rotterdam, \$/lb V2O5**

Quality: Brown flake. V 98% min, Si 0.25% max, Fe 0.30% max, S 0.03% max, P 0.05% max, As 0.02% max, Na<sub>2</sub>+K<sub>2</sub>O 1.50% max

Quantity: Min 5 tonnes (+/- 5%)

Location: In-warehouse Rotterdam

Unit: USD per lb V<sub>2</sub>O<sub>5</sub>

Payment terms: Cash, other terms normalized

Publication: Weekly. Friday 2-3pm London time

## CHINA

**MB-FEV-0003** **Ferro-vanadium 78% V min, fob China, \$/kg V**

Quality: Lump. V 78% min, Al 1.5% max, Si 2% max, C 0.06%, S 0.05%, P 0.05%, As 0.06%, Mn 0.5%, Cu 0.1%, Ni 0.15%, Mesh size 10-50mm, 90% min.

Quantity: Min 5 tonnes (+/- 5%)

Location: fob China (other delivery terms normalized)

Timing: Within 20 days

Unit: \$/kg V

Payment terms: L/C, T/T, other payment terms normalized

Publication: Weekly, Thursday 2-3pm London time

Notes: Low-liquidity measures are applied when necessary

## UNITED STATES

**MB-FEV-0002** **Ferro-vanadium 70-80% V, in-whs Pittsburgh, \$/lb**

Quality: V 70-80%

Quantity: Min 10 tons

Location: In-warehouse Pittsburgh

Unit: USD per lb

Publication: Weekly. Thursday

**MB-V-0002** **Vanadium pentoxide 98% V2O5 min, fob China, \$/lb V2O5**

Quality: Brown flake. V 98% min, Si, 0.25% max, Fe 0.30% max, S 0.03% max, P 0.05% max, As 0.02% max, Na<sub>2</sub>+K<sub>2</sub>O 1.50% max.

Quantity: Min 5 tonnes (+/- 5%)

Location: fob China (other delivery terms normalized)

Timing: Within 20 days

Unit: \$/lb V<sub>2</sub>O<sub>5</sub>

Payment terms: L/C, T/T, other payment terms normalized

Publication: Weekly, Thursday, 2-3pm London time

Notes: Low-liquidity measures are applied when necessary

**MB-V-0003** **Vanadium nitrogen, basis 77%V, 16% N, ex-works China**

Quality: Lump. V 77-81%, N 14-18%, C 6% max, P 0.06% max, S 0.10% max

Quantity: Min 20 tonnes (+/- 5%)

Location: Ex-works China

Unit: CNY/tonne

Payment terms: Cash, other terms normalized

Publication: Weekly, Thursday, between 2pm and 3pm London time

**MB-V-0004** **Vanadium pentoxide 98% V2O5 min, ex-works China**

Quality: Brown flake. V 98% min, Si, 0.25% max, Fe 0.30% max, S 0.03% max, P 0.05% max, As 0.02% max, Na<sub>2</sub>+K<sub>2</sub>O 1.50% max.

Quantity: Min 20 tonnes (+/- 5%)

Location: Ex-works China

Unit: CNY/tonne

Payment terms: Cash, other terms normalized

Publication: Weekly, Thursday, between 2pm and 3pm London time

## Ferro-niobium

<b>MB-FN-0001</b>	<b>Ferro-niobium 63-67%, delivered consumer works Europe, duty paid, \$/kg Nb</b>
Quality:	10-50mm lump. Nb 63-67%, C 0.2% max, Si 3.0% max, Al 1-2%, S 0.15% max, P 0.20% max, Ta 0.5% max
Quantity:	Minimum 5-tonne lots
Location:	Delivered consumer works Europe
Unit:	USD per kg Nb
Payment terms:	Cash. Other payment terms normalized
Publication:	Weekly, Wednesday 2-3pm London time
Notes:	Packaged in 250kg drums or one-tonne big bags

## Ores

### Bauxite

#### CHINA

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<b>MB-BX-0016</b>	<b>Bauxite, cif China, \$ per dmt</b>
Quality:	Total alumina 50%; total silica 5%; Fe 20% max; moisture content 7% min, 10% max; organic carbon 0.15% max
Quantity:	Min 40,000 tonnes
Location:	cif China
Timing:	Within two months
Unit:	USD per dmt
Payment terms:	LC (other payment terms normalized)
Publication:	Monthly; third Thursday of the month, 3-4pm London time
Notes:	Bulk carrier; accepted origins - Guinea, Australia, Indonesia

#### LATIN AMERICA

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<b>MB-BX-0015</b>	<b>Bauxite, fob Trombetas, Brazil, \$/dmt</b>
Quality:	Total alumina 50%; total silica 5%; Fe 20% max; moisture content 7% min, 10% max; organic carbon 0.15% max
Quantity:	Min 40,000 tonnes
Location:	fob Trombetas (other ports normalized)
Timing:	Within two months
Unit:	USD per dmt
Payment terms:	30 days after loading (other payment terms normalized)
Publication:	Monthly; third Thursday of the month, 3-4pm London time
Notes:	Bulk carrier

## Chrome ore

### AFRICA

<b>MB-CHO-0003</b>	<b>Chrome ore South Africa UG2/MG concentrates index, cif China, \$/tonne</b>
Quality:	Up to 2mm (99% min); Cr range 40-42%; Silica max 6%; Alumina max 18%; MgO max 16%; P max 0.01%; S max 0.01%; chrome iron ratio 1.27:1-1.35, basis 1.27:1
Quantity:	Min 5,000 tonnes
Location:	cif Tianjin, China (normalized for any Chinese mainland sea port)
Unit:	USD per tonne
Payment terms:	Payment at sight
Publication:	Weekly. Tuesday 2-3pm London time
Notes:	Bulk (container deals normalized)

### CHINA

<b>MB-CHO-0002</b>	<b>Chrome ore Turkish lumpy 40-42%, cfr main Chinese ports, \$/tonne</b>
Quantity:	1,000 tonnes
Quality:	Lump. Cr 40-42; Silica 15% max; Alumina 16% max; MgO 26% max; S 0.02%; P 0.01%; chrome-iron ratio 2.6:1 (2.5:1 min)
Location:	cfr China main ports
Unit:	USD per tonne
Payment terms:	Payment at sight
Publication:	Weekly. Tuesday Between 2pm and 3pm London time

## Manganese ore

### SOUTH AFRICA

<b>MB-MNO-0002</b>	<b>Manganese ore 37% Mn, fob Port Elizabeth, \$/dmtu</b>
Quality:	5.5-75mm lump. Mn base 37%, range 35-39%; Fe base 5%, max 10%; Silica base 5.5%, max 12%; P base 0.025%, max 0.160%; alumina base 0.2%, max 2%. Moisture content base 4%, max 12%
Quantity:	Min 5,000 tonnes
Location:	fob Port Elizabeth (South Africa)
Timing:	Within nine weeks
Unit:	US\$ per dry metric tonne unit
Payment:	Cash or equivalent
Publication:	Friday, 3pm London

### CHINA

<b>MB-MNO-0001</b>	<b>Manganese ore 44% Mn, cif Tianjin, \$/dmtu</b>
Quality:	5.5-75mm lump. Mn base 44%, range 42-48%; Fe base 5%, max 16%; silica base 11%, max 12%; P base 0.10%, max 0.16%; alumina base 5%, max 14%. Moisture base 4%, max 12%
Quantity:	Min 5,000 tonnes
Location:	cif Tianjin – normalized for other mainland China sea ports
Timing:	Within nine weeks
Unit:	US\$ per dry metric tonne unit, cif Tianjin, China
Payment:	Cash or equivalent
Publication:	Friday, 3pm London

<b>MB-MNO-0003</b>	<b>Manganese ore index 37% Mn, cif Tianjin, \$/dmtu</b>
Quality:	5.5-75mm lump. Mn base 37%, range 35-39%; Fe base 5%, max 10%; Silica base 5.5%, max 12%; P base 0.025%, max 0.160%; alumina base 0.2%, max 2%. Moisture content base 4%, max 12%
Quantity:	Min 5,000 tonnes
Location:	cif Tianjin – normalized for other China mainland sea ports
Timing:	Within nine weeks
Unit:	US\$ per dry metric tonne unit,
Payment:	Cash or equivalent
Publication:	Friday, 3pm London

**MB-MNO-0005 Manganese ore port index, base 44% Mn, range 42-48%, fot Tianjin China, yuan/dmtu**

Quality: 5.5-75mm lump. Mn base 44%, range 42-48%; Fe base 5%, max 16%; silica base 11%, max 12%; P base 0.10%, max 0.16%; alumina base 5%, max 14%. Moisture base 4%, max 12%

Quantity: Min 1,000 tonnes

Location: fot Tianjin – normalized for other China mainland sea ports

Timing: Immediate

Unit: CNY per dry metric tonne,

Payment: Cash or equivalent

Publication: Friday, 3pm London

**MB-MNO-0004 Manganese ore port index, base 37% Mn, range 35-39%, fot Tianjin China, yuan/dmtu**

Quality: 5.5-75mm lump. Mn base 37%, range 35-39%; Fe base 5%, max 10%; Silica base 5.5%, max 12%; P base 0.025%, max 0.160%; alumina base 0.2%, max 2%. Moisture content base 4%, max 12%

Quantity: Min 1,000 tonnes

Location: fot Tianjin – normalized for other China mainland sea ports

Timing: Immediate

Unit: Yuan per dry metric tonne unit

Payment: Cash or equivalent

Publication: Friday, 3pm London

**MB-NIO-0002 Laterite ore with 1.5% Ni content, cif China, \$/tonne**

Quality: Nickel ore 1.5% Ni, 15-20% Fe, water content 30-35%

Quantity: 50,000 tonnes

Location: cif China

Unit: USD per tonne

Payment terms: Cash, other payment terms normalized

Publication: Weekly. Friday 2-3pm London time

## Nickel ore

### CHINA

**MB-NIO-0001 Nickel ore 1.8% basis 15-20% Fe water content: 30-35% Si:Mg ratio<2 lot size 50,000 tonnes, cif China, \$/tonne**

Quality: 1.8% Ni, 15-20% Fe, Water content 30-35%, Si:Mg ratio <2

Quantity: 50,000 tonnes

Location: cif China

Unit: USD per tonne

Payment terms: Letter of Credit

Publication: Weekly. Friday 2-3pm London time

## Minor metals

Fastmarkets' antimony, arsenic, bismuth, cadmium, chromium, gallium, hafnium, indium, manganese, rhenium and selenium prices are produced in line with the specifications published by the Minor Metals Trade Association.

## Antimony

### CHINA

#### **MB-SB-0003** Antimony MMTA standard grade II, ddp China, yuan/tonne

Quality:	Ingot. MMTA standard Grade II. Sb 99.65% min, As 0.1% max, Pb 0.2% max, Se 0.002% max, Cd 0.002% max, Sn 0.005% max, Te 0.005% max, Bi 0.01% max, Cu 0.02% max, Fe 0.02% max
Quantity:	1 tonne
Location:	Delivered duty paid China
Unit:	CNY/tonne
Payment terms:	Cash
Publication:	Weekly. Wednesday between 2pm and 3pm London time

### EUROPE

#### **MB-SB-0002** Antimony MMTA standard grade II, in-whs Rotterdam, \$/tonne

Quality:	Ingot. Sb 99.65% min, As 0.15% max, Se 50ppm max
Quantity:	10 tonnes (+/-2%)
Location:	In-whs Rotterdam
Timing:	Prompt, within 10 calendar days
Unit:	USD per tonne
Payment terms:	Cash, other payment terms normalized
Publication:	Twice weekly. Wednesday and Friday 2-3pm London time
Notes:	Original producer packaging, on pallets or in wooden cases

#### **MB-SB-0001**

#### **Antimony max 100 ppm Bi, in-whs Rotterdam, \$/tonne**

Quantity:	Min 10 tonnes (+/-2%)
Quality:	Ingot. Sb Min 99.65% min, Bi 100ppm max, Se 50ppm max, Cu 200ppm max, Fe 200ppm max, Pb 0.2% max
Location:	In-whs Rotterdam
Timing:	Prompt, within ten calendar days
Unit:	USD/tonne
Payment terms:	Cash, other payment terms normalized
Publication:	Twice weekly. Wednesday and Friday 2-3pm London time
Notes:	Original producer packaging, on pallets or in wooden cases

## Arsenic

### EUROPE

#### **MB-AS-0001** Arsenic 99.7% min As, in-whs Rotterdam, \$/lb

Quality:	Lumpy, fist-sized and smaller. As 99% min, no other elements specified
Quantity:	1 tonne (+/-2%)
Location:	In-whs Rotterdam
Timing:	Prompt release
Unit:	USD per lb
Payment terms:	Cash, other payment terms normalized
Publication:	Twice weekly. Friday 2-3pm London
Notes:	Original producer poly-lined steel drums, each 50kg net, in accordance with the IMDG code and RID & ADR rules

# Bismuth

## EUROPE

<b>MB-BI-0001</b>	<b>Bismuth 99.99% Bi min, in-whs Rotterdam, \$/lb</b>
Quality:	Ingot. Bi 99.99%, no other elements specified
Quantity:	Min 1 tonne
Location:	Rotterdam
Timing:	Prompt release
Unit:	USD/lb
Payment terms:	Cash, other payment terms normalized
Publication:	Twice weekly. Wednesday and Friday 2-3pm London time
Notes:	Original producer packaging

## CHINA

<b>MB-BI-0002</b>	<b>Bismuth 99.99% Bi min, in-whs China, yuan/tonne</b>
Quality:	Ingot. Bi 99.99% min, no other elements specified
Quantity:	1 tonne
Location:	In-whs China
Unit:	CNY/tonne
Payment terms:	Cash, other payment terms normalized
Publication:	Weekly. Friday 2-3pm London time

# Cadmium

## GLOBAL

<b>MB-CD-0001</b>	<b>Cadmium 99.95% min, cif global ports, cents/lb</b>
Quality:	Sticks or ingots. Cd 99.95%, no other elements specified
Quantity:	Min 10 tonnes
Location:	CIF global port basis
Timing:	Prompt release
Unit:	US cents per lb
Payment terms:	Cash, other payment terms normalized
Publication:	Twice weekly. Wednesday and Friday 2-3pm London

## MB-CD-0002

### Cadmium 99.99% min, cif global ports, cents/lb

Quality:	Sticks or ingots. Cd 99.99%, no other elements specified
Quantity:	Min 10 tonnes
Location:	cif global port basis
Timing:	Prompt release
Unit:	US cents per lb
Payment terms:	Cash, other terms normalized
Publication:	Twice weekly. Wednesday and Friday 2-3pm London time

# Chromium

## EUROPE

## MB-CR-0001

### Chromium alumino-thermic 99% min, in-whs Rotterdam, \$/tonne

Quality:	Lump conforming to MMTA Russian X99H4. Cr 99% min, Fe 0.5% max, Al 0.2% max, Si 0.2% max, C 0.03% max, S 0.02% max, Pb 0.0008% max, Cu 0.01% max, P 0.02% max, Zn 0.006% max, Sb 0.008% max, Sn 0.004% max, Bi 0.0005% max, As 0.01% max, Co 0.005% max, N 0.04% max
Quantity:	Min 10 tonnes (+/-2%)
Location:	In-whs Rotterdam
Timing:	Prompt release
Unit:	USD per tonne
Payment terms:	Cash, other terms normalized
Publication:	Weekly. Friday between 2pm and 3pm London time
Notes:	Steel drums of uniform net weight, usually 300kg

## UNITED STATES

## MB-CR-0002

### Chromium alumino-thermic 99% min ex-US warehouse \$/lb

Quality:	Lump. Min 99% chromium
Quantity:	3 tonnes
Location:	Ex-warehouse, US
Unit:	USD per pound
Publication:	Once a week every Thursday
Notes:	Packaged in drums

# Cobalt

## CHINA

**MB-CO-0012**     **Cobalt tetroxide 72.6% Co min, delivered China, yuan/tonne**

Quality:            Min 72.6% Co  
 Location:           Delivered China  
 Unit:                CNY/tonne  
 Quantity:           Min 1 tonne  
 Payment terms:    Cash  
 Publication:        Twice weekly. Wednesday and Friday between 2pm and 3pm London time

**MB-CO-0001**     **Cobalt 99.8% Co min, ex-works China, yuan/tonne**

Quality:            Cobalt metal, Co 99.8% min  
 Location:           Ex-works China  
 Unit:                CNY/tonne  
 Quantity:           Min 1 tonne  
 Form:               Cathode  
 Payment terms:    Cash  
 Publication:        Twice weekly. Wednesday and Friday between 2pm and 3pm London time

## EUROPE

**MB-CO-0004**     **Cobalt alloy grade, in-whs Rotterdam, \$/lb**

Quality:            Min 99.8% cobalt metal; standard specifications of the following brands in original packaging: Nikkelverk cut cathodes, Vale cobalt rounds, SMM cut cathodes, Jinchuan cut cathodes, Jiangsu (KLK) broken cathodes, Sherritt briquettes

Quantity:           Minimum 1 tonne, maximum 100 tonnes

Location:           Rotterdam, in-warehouse

Timing:             Within 30 days, other terms normalized

Unit:                US\$ per lb

Payment terms:    Cash; other terms normalized

Publication:        Daily. Monday to Friday, at 3pm London time

**MB-CO-0005**     **Cobalt standard grade, in-whs Rotterdam, \$/lb**

Quality:            Min 99.8% cobalt metal; standard specifications of the following brands in original packaging: Katanga cathodes, Chambishi broken cathodes, CTT broken cathodes, Minara briquettes, Ambatovy briquettes, Norilsk grade 1 and grade 2 cut cathodes (production since January 2019)

Quantity:           Minimum 1 tonne, maximum 100 tonnes

Location:           Rotterdam, in-warehouse

Timing:             Within 30 days, other terms normalized

Unit:                US\$ per lb

Payment terms:    Cash; other terms normalized

Publication:        Daily. Monday to Friday, at 3pm London time

*\* Fastmarkets MB changed the names of its benchmark in-warehouse Rotterdam assessments in January 2019. From January 2019, the name 'standard-grade' replaced the name 'low-grade'. The name 'alloy-grade' replaced the name 'high-grade'.*

# Cobalt sulfate

Please see **Battery Raw Materials** section.

# Gallium

## EUROPE

**MB-GA-0001**     **Gallium 99.99% Ga min, in-whs Rotterdam, \$/kg**

Quality:            Ingot. Ga: 99.99% min, no other elements specified

Quantity:           Min 100kg (+/- 2%)

Location:           In-whs Rotterdam

Timing:             Prompt release

Unit:                USD/kg

Payment terms:    Cash, other terms normalized

Publication:        Twice weekly. Wednesday and Friday 2-3pm London time

Notes:              Packed in plastic sleeves, original producer cases

**MB-GA-0002 Gallium 99.99% Ga min, in-whs China, yuan/kg**

Quality: Ingot. Ga: 99.99% min, no other elements specified

Quantity: Min 50kg

Location: China

Unit: CNY/kg

Payment terms: Cash, other payment terms normalized

Publication: Weekly. Wednesday by 3pm London time.

**MB-GER-0001 Germanium dioxide, in-whs China, \$/kg**

Quality: GeO<sub>2</sub> 99.99 % min, Ge 69 % approx. White powder

Quantity: Min 100 kg (+/- 2%)

Location: In-whs China

Timing: Prompt release

Unit: USD/kg

Payment terms: Cash, other payment terms normalized

Publication: Twice-weekly. Wednesday and Friday between 2pm and 3pm London time

Notes: Original producer cases, normally 25kg each

## Germanium

### CHINA

**MB-GER-0004 Germanium 99.999% Ge min, in-whs China, yuan/kg**

Quality: Ingots with no specific dimension or weight. Ge 99.99% min, 50ohm/cm; no other elements specified

Quantity: Min 50 kg

Location: In-whs China

Unit: CNY/kg

Payment terms: Cash, other payment terms normalized

Publication: Weekly. Wednesday by 3pm London time

### EUROPE

**MB-GER-0003 Germanium 99.99% Ge, in-whs Rotterdam, \$/kg**

Quality: Min 100 kg (+/- 2%)

Quality: Ingot. Ga 99.999%, no other elements specified

Location: In-whs Rotterdam

Timing: Prompt release

Unit: USD/kg

Payment: Cash, other payment terms normalized

Publication: Twice-weekly. Wednesday and Friday between 2pm and 3pm London time

Notes: Packed in plastic sleeves, original producer cases

## Hafnium

### GLOBAL

**MB-HF-0001 Hafnium, max 1% Zr, in-whs global locations, \$/kg**

Quality: Hf+Zr 99.8% min; Zr 1%. Uniform lots of 5kg max cut ingot, plate, sheet or bar

Quantity: Min 50kg

Location: Global

Unit: USD/per kg

Payment terms: Cash, other payment terms normalized

Publication: Fortnightly. Friday 2-3pm London time

Notes: Hafnium is classed as a 'dual use' metal under the Non-proliferation of Nuclear Weapons Treaty and may require end-user statements and import/export licences



# Indium

## EUROPE

<b>MB-IN-0002</b>	<b>Indium 99.99%, in-whs Rotterdam, \$/kg</b>
Quality:	In: 99.99%, no other elements specified. Ingots, usually between 0.5kg and 3.5 kg; also 10 kg ingots
Quantity:	Min 100kg
Location:	In-whs Rotterdam
Timing:	Prompt release
Unit:	USD/kg
Payment terms:	Cash, other terms normalized
Publication:	Twice-weekly. Wednesday and Friday 2-3pm London time
Notes:	Original producer wooden cases

## CHINA

<b>MB-IN-0003</b>	<b>Indium 99.99% ex-works China CNY/kg</b>
Quality:	500g ingot. In 99.995% min, Cu 0.0005% max, Pb 0.0005% max, Zn 0.0005% max, Cd 0.0005% max, Fe 0.0005% max, Ti 0.0005% max, Sn 0.0010% max, As 0.0005% max, Al 0.0005% max
Quantity:	Min 1kg
Location:	Ex-works China
Unit:	CNY per kg
Payment terms:	Cash on spot
Publication:	Weekly. Wednesday between 2pm and 3pm London time

# Magnesium

## EUROPE

<b>MB-MG-0001</b>	<b>Magnesium 99.9%, in-whs Rotterdam, \$/tonne</b>
Quality:	Ingots, free from oxidation, of uniform size and weight. Mg 99.9% min, Fe 0.04% max, Si 0.02% max, Ni 0.002% max, Cu 0.01% max, AL 0.02% max, Mo 0.03% max, Cl 0.05% max, others 0.1% max
Quantity:	20 tonnes (+/- 2%)
Location:	In-whs Rotterdam
Unit:	USD/tonne
Payment terms:	Cash, other terms normalized
Publication:	Weekly. Friday 2-3pm London time

## CHINA

<b>MB-MG-0003</b>	<b>Magnesium 99.9%, exw China, yuan/tonne</b>
Quality:	Ingot. Mg 99.9% min
Quantity:	Min 20 tonnes (+/- 2%)
Location:	Ex-works China
Unit:	CNY/tonne
Payment terms:	Cash on spot
Publication:	Weekly. Friday 2-3pm London time
<b>MB-MG-0002</b>	<b>Magnesium 99.9% Mg min, fob China main ports, \$/tonne</b>
Quality:	Ingot. Mg 99.9% min
Quantity:	Min 10 tonnes (+/-2%)
Location:	fob China main ports
Unit:	USD/tonne
Payment terms:	LC or TT
Publication:	Weekly. Friday between 2pm and 3pm London time

# Manganese

## EUROPE

<b>MB-MN-0001</b>	<b>Manganese 99.7% electrolytic manganese flake, in-whs Rotterdam, \$/tonne</b>
Quality:	Flake. Mn: 99.7% S: 500 ppm max P: 50 ppm max C: 400 ppm max Fe+Se+Si: 0.205% max
Quantity:	Min 25 tonnes (+/-2%)
Location:	Rotterdam
Timing:	Prompt, within ten calendar days
Unit:	USD/tonne
Payment terms:	Cash, other payment terms normalized
Publication:	Twice-weekly. Wednesday and Friday by 3pm London time
Notes:	Big bags or steel drums

### UNITED STATES

**MB-MN-0006 Manganese electrolytic metal 99.7% Mn min, ex-whs US, \$/lb**

Quality: Flake. Min 99.7% manganese  
 Quantity: Min 10 tonnes  
 Location: Ex-warehouse, US  
 Unit: **USD per pound**  
 Payment terms: Cash, other terms normalized  
 Publication: Weekly, every Thursday  
 Notes: Bulk

### CHINA

**MB-MN-0007 Manganese 99.7% electrolytic manganese flake, fob China, \$/tonne**

Quality: Flake; Mn: 99.7% basis; S: 500 ppm max; P: 50 ppm max; C: 400 ppm max; Fe+Se+Si: 0.205% max; packaged as big bags or steel drums  
 Quantity: Min 20 tonnes  
 Location: fob China main ports  
 Timing: Spot, within one week  
 Unit: USD per tonne  
 Payment terms: TT or LC  
 Publication: Weekly. Friday 2-3pm London time

## Rhenium

### EUROPE

**MB-RE-0001 Rhenium APR catalytic grade, in-whs dup Rotterdam, \$/kg**

Quality: White, free flowing powder/crystal ammonium perrenate, Re 68.5 - 69.8% min  
 Quantity: Min 20 kg (+/-2%)  
 Location: Duty unpaid Rotterdam  
 Unit: USD/kg  
 Delivery time: Within one calendar month  
 Payment terms: Cash, other terms normalized  
 Publication: Fortnightly. Friday 2-3pm London  
 Notes: Uniform IMDG-approved containers, individually sealed and numbered

**MB-RE-0002**
**Rhenium metal pellets 99.9% Re min, in-whs dup, Rotterdam \$/lb**

Quality: White, free flowing powder/crystal rhenium pellets, Re 99.9% min  
 Quantity: Min 10 kg (+/-2%)  
 Location: Rotterdam, duty unpaid  
 Timing: Within one calendar month  
 Unit: USD/lb  
 Payment terms: Cash, other terms normalized  
 Publication: Fortnightly. Friday by 3pm London time  
 Notes: In uniform IMDG approved containers, individually sealed and numbered

## Selenium

### EUROPE

**MB-SE-0002 Selenium 99.5% Se min, in-whs Rotterdam, \$/lb**

Quality: Powder of minus 200 mesh or granules sizing 1-5 mm. Se 99.5% min, no other elements specified  
 Quantity: Min 250kg (+/-2%)  
 Location: In-whs Rotterdam  
 Timing: Prompt release  
 Unit: USD/lb  
 Payment terms: Cash, other terms normalized  
 Publication: Twice-weekly. Wednesday and Friday 2-3pm London time  
 Notes: Original producer packaging, normally 25kg net

### CHINA

**MB-SE-0003 Selenium 99.9% Se min, in-whs China, yuan/kg**

Quality: Powder of minus 200 mesh or granules size 1-5 mm. Se 99.9% min, no other elements specified  
 Quantity: Min 100 kg  
 Location: In-whs China  
 Unit: CNY/kg  
 Payment terms: Cash, other payment terms normalized  
 Publication: Weekly. Friday by 3pm London time

## Silicon

### EUROPE

**MB-SI-0001 Silicon grade 4-4-1 99% Si min, in-  
whs Rotterdam, €/tonne**

Quality: 10-100mm lump 90% min. Si 99% min, Fe 0.4% max, Al 0.4% max, Ca 0.1% max

Quantity: Min 25 tonnes (+/- 2%)

Location: In-whs Rotterdam

Unit: EUR/tonne

Payment terms: Cash, other terms normalized

Publication: Weekly. Friday between 2pm and 3pm London time

Notes: 1 tonne big bag

**MB-SI-0004 Silicon grade 5-5-3 98.5% Si min,  
in-whs Rotterdam, €/tonne**

Quality: 10-100mm lump. Silicon 98.50%, iron 0.50% max, aluminium 0.50% max, calcium 0.30% max

Quantity: Min 25 tonnes (+/- 2%)

Location: In-whs Rotterdam

Timing: Prompt

Unit: EUR/Tonne

Payment terms: Cash, other terms normalized

Publication: Once a week. Friday between 2pm and 3pm London time

Notes: 1 tonne big bag

### CHINA

**MB-SI-0002 Silicon export 98.5% Si min, fob  
China, \$/tonne**

Quality: Lump. Si 98.5% min, Fe 0.5% max, Al 0.5% max, Ca 0.3% max

Quantity: Min 20 tonnes

Location: fob China main ports

Unit: USD/tonne

Payment terms: TT

Publication: Weekly. Friday 2-3pm London time

### UNITED STATES

**MB-SI-0003 Silicon, ddp US, US cents/lb**

Quality: Si: 98.50%, Fe: 0.50%, Al: 0.50%, Ca: 0.30%

Quantity: Min 20 tons

Location: Delivered US

Unit: US cents per lb

Publication: Weekly, Thursday 4-5pm New York time

## Tantalum

### CHINA

**MB-TA-0001 Tantalite, basis min 25% Ta2O5,  
cif China**

Quality: Lump 0-10mm grain concentrate; Ta2O5 25% min; Nb2O5 15% min; U3O8+ThO2 0.10% max

Quantity: Minimum 10-tonne lots

Location: cif main ports China

Unit: USD per lb Ta2O5

Payment terms: Provisional payment against scan copy of the full set of documents, balance upon finalization or DP or provisional payment after arrival at destination port, balance upon finalization; other payment terms normalized.

Publication: Weekly; Fridays 2-3pm London time.

## Tellurium

### EUROPE

**MB-TE-0001 Tellurium 99.9-99.99% Te min, in-  
whs Rotterdam, \$/kg**

Quality: Ingots, sticks or powder. Te 99.9-99.99%, no other elements specified

Quantity: Min 100 kg (+/-2%)

Location: In-whs Rotterdam

Timing: Prompt

Unit: USD/kg

Payment terms: Cash, other terms normalized

Publication: Twice-weekly. Wednesday and Friday between 2pm and 3pm London time

Notes: Original producer packaging

**CHINA**


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<b>MB-TE-0002</b>	<b>Tellurium 99.99% Te min, in-whs China, yuan/kg</b>
Quality:	Ingots, sticks or powder. Te 99.99% min, no other elements specified
Quantity:	Min 500kg
Location:	In-whsChina
Unit:	CNY/kg
Payment terms:	Cash, other terms normalized
Publication:	Weekly. Friday 2-3pm London time

## Battery raw materials

# Cobalt sulfate

**CHINA**


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<b>MB-CO-0017</b>	<b>Cobalt sulfate 20.5% Co basis, exw China, yuan/tonne</b>
Quality:	Crystal, feed from cobalt ores & concentrates, cobalt intermediates, such as crude cobalt hydroxide (materials produced from cobalt scrap are excluded). Co 20.5% basis, Ni 0.001% max, Cu 0.001% max, Fe 0.001% max, Zn 0.001% max
Quantity:	Min 1 tonne
Timing:	Within 30 days
Unit:	CNY/tonne
Payment terms:	On bank acceptance (other terms normalized)
Publication:	Twice weekly. Wednesday and Friday, 2-3pm London time

## Cobalt hydroxide

**CHINA**


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<b>MB-CO-0020</b>	<b>Cobalt hydroxide index 30% Co min, cif China, \$/lb</b>
Quality:	Units produced from large-scale mining activity, with the following chemical composition: Co 30% min, Mn 6.5% max, Mg 6.5% max, S 5% max; Cd 100ppm max; limited concentration of natural radioactivity: GB20664-2006 (suitable for customs clearance into China).
Quantity:	Min 50 tonnes (cobalt content)
Location:	cif China (other terms normalized)
Timing:	45 days
Unit:	\$/lb
Payment terms:	Letter of credit at sight, current price month ('M')
Publication time:	Between 2pm and 3pm London time, Friday, weekly
Note:	Where the pricing day falls on a public holiday in England and Wales, the index will be published on the closest working day preceding that date.

**MB-CO-0021 Cobalt hydroxide payable indicator, min 30% Co, cif China, % payable of Fastmarkets' standard-grade cobalt price (low-end)**

Quality:	Units produced from large-scale mining activity, with the following chemical composition: Co 30% min, Mn 6.5% max, Mg 6.5% max, S 5% max; Cd 100ppm max; limited concentration of natural radioactivity: GB20664-2006 (suitable for customs clearance into China).
Quantity:	Min 50 tonnes (cobalt content)
Location:	cif China (other terms normalized)
Timing:	45 days
Unit:	% payable of Fastmarkets' standard-grade cobalt price (low end, \$/lb)
Payment terms:	Letter of credit at sight, current and following price month ('M' and 'M+1')
Publication:	Twice weekly, Wednesday and Friday, 3pm London time.
Notes:	Where the publication day falls on a public holiday in China, the assessment will be rolled over from previous pricing session.

## Lithium

### CHINA

**MB-LI-0036 Lithium carbonate 99.5% Li<sub>2</sub>CO<sub>3</sub> min, battery grade, spot price range exw domestic China, yuan/tonne**

**MB-LI-0042 Lithium carbonate index, min 99.5% Li<sub>2</sub>CO<sub>3</sub>, battery grade, exw China, yuan/tonne**

Quality:	Powder, accepted by buyer for use in battery applications and with the chemical composition: Li <sub>2</sub> CO <sub>3</sub> 99.5% min; Na 0.025% max; Ca 0.005% max; Mg 0.008% max; magnetic impurities 300ppb max
Quantity:	Min 5 tonnes
Location:	China ex-works, VAT included
Timing:	30 days
Unit:	CNY/tonne
Publication:	Weekly. Thursday by 4pm London
Notes:	Index and assessment. The tonnage-weighted index is intended to run in parallel with the existing assessment.

**MB-LI-0040 Lithium hydroxide monohydrate 56.5% LiOH.H<sub>2</sub>O min, battery grade, spot price range exw domestic China, yuan/tonne**

Quality:	Powder, accepted by buyer for use in battery applications and with the chemical composition LiOH.H <sub>2</sub> O 56.5% min; CO <sub>2</sub> <0.35%; Ca 0.005% max; SO <sub>4</sub> 0.01% max; Cl- 0.002% max
Quantity:	Min 5 tonnes
Location:	China ex-works, VAT included
Timing:	30 days
Unit:	CNY/tonne
Publication:	Weekly. Thursday by 4pm London

### EAST ASIA, SOUTHEAST ASIA

**MB-LI-0029 Lithium carbonate 99.5% Li<sub>2</sub>CO<sub>3</sub> min, battery grade, spot prices cif China, Japan & Korea, \$/kg**

Quality:	Powder, accepted by buyer for use in battery applications and with the chemical composition: Li <sub>2</sub> CO <sub>3</sub> 99.5% min (Min. 99.2% Li <sub>2</sub> CO <sub>3</sub> accepted if it can be normalized to 99.5%); Na 0.060% max; Ca 0.016% max; Mg 0.008% max; magnetic impurities 300ppb max
Quantity:	Min 5 tonnes
Location:	cif main Chinese Japanese & South Korean ports (other ports normalized)
Timing:	60 days
Unit:	USD/kg
Publication:	Daily, 1pm London time

**MB-LI-0033 Lithium hydroxide monohydrate LiOH.H<sub>2</sub>O, 56.5% LiOH min, battery grade, spot price cif China, Japan & Korea, \$/kg**

Quality:	Powder, accepted by buyer for use in battery applications and with the chemical composition LiOH 56.5% min; CO <sub>2</sub> <0.35%; Ca 0.020% max; SO <sub>4</sub> 0.015% max; Cl- 0.005% max
Quantity:	Min 5 tonnes
Location:	cif main Chinese Japanese & South Korean ports (other ports normalized)
Timing:	60 days
Unit:	USD/kg Form: Powder
Publication:	Daily, 1pm London time

**MB-LI-0027**      **Lithium carbonate 99.5% Li<sub>2</sub>CO<sub>3</sub> min, battery grade, contract price cif China, Japan & Korea, \$/kg**

Quality: Powder, accepted by buyer for use in battery applications and with the chemical composition: Li<sub>2</sub>CO<sub>3</sub> 99.5% min (Min. 99.2% Li<sub>2</sub>CO<sub>3</sub> accepted if it can be normalized to 99.5%); Na 0.060% max; Ca 0.016% max; Mg 0.008% max; magnetic impurities 300ppb max

Quantity: Min 20 tonnes

Location: cif China, Japan & South Korea

Timing: Up to 1 year

Unit: USD/kg

Publication: Monthly. Last Wednesday of the month between 3pm and 4pm London time

**MB-LI-0031**      **Lithium hydroxide monohydrate LiOH.H<sub>2</sub>O, 56.5% LiOH min, battery grade, contract price cif China, Japan & Korea, \$/kg**

Quality: Powder, accepted by buyer for use in battery applications and with the chemical composition LiOH 56.5% min; CO<sub>2</sub> <0.35%; Ca 0.020% max; SO<sub>4</sub> 0.015% max; Cl<sup>-</sup> 0.005% max

Quantity: Min 20 tonnes

Location: cif China, Japan & South Korea

Timing: Up to 1 year

Unit: USD/kg

Publication: Monthly. Last Wednesday of the month, 3-4pm London time

**EUROPE & US**

**MB-LI-0023**      **Lithium carbonate 99.5% Li<sub>2</sub>CO<sub>3</sub> min, battery grade, spot price ddp Europe and US, \$/kg**

Quality: Powder, accepted by buyer for use in battery applications and with the chemical composition: Li<sub>2</sub>CO<sub>3</sub> 99.5% min (Min. 99.2% Li<sub>2</sub>CO<sub>3</sub> accepted if it can be normalized to 99.5%); Na 0.060% max; Ca 0.016% max; Mg 0.008% max; magnetic impurities 300ppb max

Quantity: Min 5 tonnes

Location: ddp US & Europe

Timing: 30 days

Unit: USD/kg

Publication: Weekly. Thursday 3-4pm London time

**MB-LI-0025**      **Lithium hydroxide monohydrate LiOH.H<sub>2</sub>O, 56.5% LiOH min, battery grade, spot price ddp Europe and US, \$/kg**

Quality: Powder, accepted by buyer for use in battery applications and with the chemical composition LiOH 56.5% min; CO<sub>2</sub> <0.35%; Ca 0.020% max; SO<sub>4</sub> 0.015% max; Cl<sup>-</sup> 0.005% max

Quantity: Min 5 tonnes

Location: ddp US & Europe

Timing: 30 days

Unit: USD/kg

Publication: Weekly. Thursday 3-4pm London time

**MB-LI-0022**      **Lithium carbonate 99.5% Li<sub>2</sub>CO<sub>3</sub> min, battery grade, contract price ddp Europe and US, \$/kg**

Quality: Powder, accepted by buyer for use in battery applications and with the chemical composition: Li<sub>2</sub>CO<sub>3</sub> 99.5% min (Min. 99.2% Li<sub>2</sub>CO<sub>3</sub> accepted if it can be normalized to 99.5%); Na 0.060% max; Ca 0.016% max; Mg 0.008% max; magnetic impurities 300ppb max

Quantity: Min 20 tonnes

Location: ddp US & Europe

Timing: Up to 1 year

Unit: USD/kg

Publication: Monthly. Last Wednesday of the month, 3-4pm London time

<b>MB-LI-0024</b>	<b>Lithium hydroxide monohydrate LiOH.H<sub>2</sub>O, 56.5% LiOH min, battery grade, contract price ddp Europe and US, \$/kg</b>
Quality:	Powder, accepted by buyer for use in battery applications and with the chemical composition LiOH 56.5% min; CO <sub>2</sub> <0.35%; Ca 0.020% max; SO <sub>4</sub> 0.015% max; Cl- 0.005% max
Quantity:	Min 20 tonnes
Location:	DDP US & Europe
Timing:	Up to 1 year
Unit:	USD/kg
Publication:	Monthly, last Wednesday of the month 3-4pm London time

## Graphite

### CHINA

<b>MB-GRA-0036</b>	<b>Graphite spherical 99.95% C, 15 microns, fob China, \$/tonne</b>
Quality:	99.95% C, 15 microns, uncoated
Quantity:	Min 20 tonnes
Location:	fob China
Unit:	USD/tonne
Publication:	Weekly, Thursday by 4pm London
<b>MB-GRA-0042</b>	<b>Graphite flake 94% C, -100 mesh, fob China, \$/tonne</b>
Quality:	Flake 94% C, -100 Mesh
Quantity:	Min lot size: 20 tonnes
Location:	fob China, FCL
Unit:	US\$ per tonne
Publication:	Weekly, Thursday by 4pm, London

## Nickel Sulfate

### CHINA

<b>MB-NI-0244</b>	<b>Nickel sulfate min 21%, max 22.5%; cobalt 10ppm max, exw China, yuan/tonne</b>
Quality:	Nickel content min 21%, max: 22.5%; cobalt 10ppm max
Quantity:	Min 1 tonne
Location:	ex-works mainland China – excludes Taiwan Region, HK SAR and Macao SAR
Timing:	Within 30 days
Unit:	CNY/tonne
Payment terms:	Bank acceptance (other payments normalized)
Publication:	Weekly, Friday 3-4pm London time

### EAST ASIA, SOUTHEAST ASIA

<b>MB-NI-0246</b>	<b>Nickel sulfate, cif China, Japan and South Korea, \$/tonne</b>
Quality:	Accepted by buyer for use in battery applications with chemical composition: Ni content, base 22.3% max, min 22%, cobalt 50ppm max
Quantity:	Min 1 tonne
Location:	cif major ports China, Japan, Korea (other ports normalized)
Timing:	Within 60 days
Unit:	USD/tonne
Publication:	Monthly, first working day of each month, 4pm London time
<b>MB-NI-0247</b>	<b>Nickel sulfate premium, cif China, Japan and South Korea, \$/tonne</b>
Quality:	Accepted by buyer for use in battery applications with chemical composition: Ni content, base 22.3% max, min 22%, cobalt 50ppm max
Quantity:	Min 1 tonne
Location:	cif major ports China, Japan, and Korea, on top of monthly average LME nickel cash price
Timing:	Within 60 days
Unit:	USD/tonne
Publication:	Monthly, first working day of each month, 4pm London time

# Manganese Sulfate

## CHINA

**MB-MN-0008**     **Manganese sulfate 32% Mn min, battery grade, ex-works mainland China, yuan/tonne**

Quality: Powder, accepted by buyer for use in battery applications and with the chemical composition Mn 32% min, Fe 0.001% max, Zn 0.001% max, Cu 0.001% max, Pb 0.001% max, Cd 0.0005% max, K 0.01% max, Na 0.01% max, Ca 0.01% max, Mg 0.01% max, Ni 0.005% max, Co 0.005% max, insoluble residue 0.01% max, PH 4.0-6.5

Quantity: Min 32 tonnes

Location: ex-works mainland China-excludes Taiwan Region, Hong Kong SAR and Macao SAR

Timing: Within 30 days

Unit: yuan/tonne

Payment terms: Cash, other terms normalized

Publication: Weekly. Thursday 2-3pm London time

**MB-CU-0360**

Quality:

Quantity:

Location:

Timing:

Unit:

Payment:

Publication:

**No2 copper material, RCu-2B (birch/cliff), cif China, LME/Comex discount, US cents per lb**

Minimum copper content 99% with a min recovery rate of 94%. Clean copper tube, belt, plate, rod, wire and other shapes. Includes burned copper wires of 1.6mm and above, attachments and surface plating. Coated material should consist no more than 5% of the total mass of No 2 copper material. Particles of non-metallic contamination in the form of dust, sludge, crystalline salts, metal oxides and fiber should not exceed 2mm in diameter, and these particles should not exceed 0.1% of the total content, as defined by China's State Administration for Market Regulation.

Quantity: Min 25 tonnes

Location: cif Chinese ports (Shanghai, Guangdong, Zhejiang, Tianjin and Shandong)

Timing: Within 5 weeks

Unit: US cents/lb

Payment: Cash against documents, letter of credit, telegraphic transfer; other terms normalized

Publication: Monthly. Last Monday of each month 3-4pm London time

## Scrap

# Copper scrap

## CHINA

**MB-CU-0512**     **No1 copper material, RCu-2A,1B (candy/berry), cif China, LME/Comex discount, US cents per lb**

Quality: Definitions of RCu-2A and RCu-1B as stipulated in China's GB per tonne 38471-2019 document. Both RCu-2A and RCu-1B require a metal recycling rate of not less than 97%.

Quantity: Min 25 tonnes

Location: cif Chinese ports (Shanghai, Guangdong, Zhejiang, Tianjin, Shandong)

Timing: Within 5 weeks

Unit: US cents/lb

Payment: Cash against documents, letter of credit, telegraphic transfer; other terms normalized

Publication: Monthly. Last Monday of each month 3-4pm London time

## UNITED KINGDOM

**MB-AL-0282**     **Aluminium scrap baled old rolled, LME discount, delivered consumer UK, £/tonne**

Quality: Wrought scrap of alloyed and unalloyed aluminium. Maximum 2% calcareous and other non-metallic substances

Quantity: Min 5 tonnes

Location: Delivered consumer works, UK

Timing: Within 4 weeks

Unit: GBP/tonne

Payment terms: Net monthly account

Publication: Weekly. Wednesday 3-4pm London time



**MB-AL-0007 Aluminium scrap cast wheels, delivered consumer UK, £/tonne**

Quality: Cast aluminium wheels  
 Quantity: Min 5 tonnes  
 Location: Delivered consumer works, UK  
 Timing: Within 4 weeks  
 Unit: GBP/tonne  
 Payment terms: Net monthly account  
 Publication: Weekly. Wednesday 3-4pm London

**MB-AL-0009 Aluminium scrap clean HE9 extrusions, delivered consumer UK, £/tonne**

Quality: Clean HE9 extrusion scrap. Cu 0.1% max, Zn 0.1% max, free from deleterious materials, oil, grease, non-metallic coatings max 1%  
 Quantity: Min 5 tonnes  
 Location: Delivered consumer works, UK  
 Timing: Within 4 weeks  
 Unit: GBP/tonne  
 Payment terms: Net monthly account  
 Publication: Weekly. Wednesday 3-4pm London

**MB-AL-0010 Aluminium scrap commercial cast, delivered consumer UK, £/tonne**

Quality: Whole or broken aluminium castings of all kinds  
 Quantity: Min 5 tonnes  
 Location: Delivered consumer works, UK  
 Timing: Within 4 weeks  
 Unit: GBP/tonne  
 Payment terms: Net monthly account  
 Publication: Weekly. Wednesday 3-4pm London

**MB-AL-0011 Aluminium scrap commercial pure cuttings, delivered consumer UK, £/tonne**

Quality: New, uncoated, mixed alloys, pure sheet scrap. May contain proportion of one of more aluminium alloys, none of which shall contain more than 0.1% Cu and 0.1% each of Pb, Zn, Sn, antimony, bismuth. Mg 0.5% max. No 2000 or 7000 series metal  
 Quantity: Min 5 tonnes  
 Location: Delivered consumer works, UK  
 Timing: Within 4 weeks  
 Unit: GBP/tonne  
 Payment terms: Net monthly account  
 Publication: Weekly. Wednesday 3-4pm London

**MB-AL-0012 Aluminium scrap commercial turnings, delivered consumer UK, £/tonne**

Quality: Clean, uncorroded aluminium borings, millings and turnings of two or more specified alloys. Zn 2% max, Fe fines 3% max, oil/moisture/free iron 10% max  
 Quantity: 5 tonnes  
 Location: Delivered consumer works, UK  
 Timing: Within 4 weeks  
 Unit: GBP/tonne  
 Payment terms: Net monthly account  
 Publication: Weekly. Wednesday 3-4pm London time

**MB-AL-0015 Aluminium scrap group 7 turnings, delivered consumer UK, £/tonne**

Quality: Clean, uncorroded aluminium borings, millings and turnings of two or more specified alloys. Zn 7.5% max, Fe fines 3% max, oil/moisture/free iron 10% max  
 Quantity: Min 5 tonnes  
 Location: Delivered consumer works, UK  
 Timing: Within 4 weeks  
 Unit: GBP/Tonne  
 Payment terms: Net monthly account  
 Publication: Weekly. Wednesday 3-4pm London time

**MB-AL-0014 Aluminium scrap group 1 pure 99% & litho, delivered consumer UK, £/tonne**

Quality: New, uncoated, unalloyed aluminium sheet, wire and cable scrap, not burnt or corroded, baled. Al content minimum 99.9% (oil, grease, non-metallic coatings max 1%)

Quantity: 5 tonnes

Location: Delivered consumer works, UK

Timing: Within 4 weeks

Unit: GBP/tonne

Payment terms: Net monthly account

Publication: Weekly. Wednesday 3-4pm London time

**MB-AL-0019 Aluminium scrap mixed turnings, delivered consumer Europe, €/tonne**

Quality: Clean, uncorroded aluminium borings, millings and turnings of two or more specified alloys. Zn 2% max. Fines 3% max, oil/moisture/free iron 10% max

Quantity: Min 25 tonnes

Location: Delivered consumer works, Europe

Timing: Within 4 weeks

Unit: EUR/tonne

Payment terms: 30 days, other payment terms normalized

Publication: Weekly. Friday 3-4pm London time

**MB-AL-0018 Aluminium scrap loose old rolled cuttings, delivered consumer UK, £/tonne**

Quality: Wrought scrap of alloyed and unalloyed aluminium. Maximum 2% calcarious and other non-metallic substances

Quantity: Min 5 tonnes

Location: Delivered consumer works, UK

Timing: Within 4 weeks

Unit: GBP/tonne

Payment terms: Net monthly account

Publication: Weekly. Wednesday 3-4pm London time

**MB-AL-0008 Aluminium scrap cast, delivered consumer Europe, €/tonne**

Quality: Whole or broken aluminium castings of all kinds. Oil and grease not to total more than 2%

Quantity: Min 25 tonnes

Location: Delivered consumer works, Europe

Timing: Within 4 weeks

Unit: EUR/tonne

Payment terms: 30 days, other payment terms normalized

Publication: Weekly. Friday 3-4pm London time

### EUROPE

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**MB-AL-0013 Aluminium scrap floated frag, delivered consumer Europe, €/tonne**

Quality: Twitch floated fragmentiser aluminium scrap (from automobile shredders). Free Zn 1% max, free Mg 1% max, analytical Fe 1% max. Non-metallics 2% max (of which rubber & plastics 1% max)

Quantity: Min 25 tonnes

Location: Delivered consumer works, Europe

Timing: Within 4 weeks

Unit: EUR/tonne

Payment terms: 30 days, other payment terms normalized

Publication: Weekly. Friday 3-4pm London time

# Secondary aluminium

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**EUROPE**
**MB-AL-0005 Aluminium pressure diecasting ingot DIN226/A380, delivered Europe, €/tonne**

Quality: Ingot. Cu 2-4%, Mg 0.15-0.55%, Si 8-11%, Fe 0.6-1.1%, Mn 0.55% max, Ni 0.55% max, Zn 1.2% max, Cr 0.15% max, others each 0.05% max/total 0.25% max

Quantity: Min 25 tonnes

Location: Delivered consumer works in Europe, most consumers in Northern Europe, in particular Germany

Timing: Within 2 months

Unit: EUR/tonne

Payment terms: 30 days, other payment terms normalized

Publication: Weekly. Friday 3-4pm London time

Notes: [Full methodology available here](#)

**MB-AL-0016 Aluminium scrap LM24 pressure diecasting ingot, delivered consumer UK, £/tonne**

Quality: Ingot. Cu 3-4%, Mg 0.1% max, Si 7.5-9.5%, Fe 2% max, Mn 0.5% max, Ni 0.5% max, Zn 3% max.

Quantity: Min 5 tonnes

Location: Delivered consumer works, UK

Timing: Within 2 months

Unit: GBP/tonne

Payment terms: Net monthly account

Publication: Weekly. Wednesday 3-4pm London time

**MB-AL-0017 Aluminium scrap LM6/LM25 gravity diecasting ingot, delivered consumer UK, £/tonne**

Quality: LM6 - Cu 0.1%, Mg 0.1% max, Si 10-13%, Fe 0.06% max, Mn 0.5% max, Ni 0.1% max, Zn 0.1% max, Pb 0.1% max, Tin 0.05% max, Ti 0.2% max. LM25 - Cu 0.2%, Mg 0.2-0.4%, Si 6.5-7.5% max, Fe 0.2% max, Mn 0.1% max, Zn 0.1% max

Quantity: Min 5 tonnes

Location: Delivered consumer works, UK

Timing: Within 2 months

Unit: GBP/tonne

Payment terms: Net monthly account

Publication: Weekly. Wednesday 3-4pm London time

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**JAPAN**
**MB-AL-0292 Aluminium ingot ADC12 spot (MJP), cfr Japan, \$ per tonne**

Quality: Secondary aluminium alloy ingot: Cu: 1.5-3.5%, Si: 9.6-12%, Mg: 0.3% Max, Zn: 1.0% Max, Fe: 0.9% Max, Mn: 0.5% Max, Ni: 0.5% Max, Ti: 0.3% Max, Pb: 0.2% Max, Sn: 0.2% Max

Quantity: min 20 tonnes

Location: CFR Main Japanese ports at Yokohama, Nagoya, Osaka, Tokyo and Kobe

Unit: USD/tonne

Payment terms: Cash against documents within 7 days

Publication: Weekly. Wednesday 3-4pm London time

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**CHINA**
**MB-AL-0350 Aluminium ingot ADC12 ex-works China, duty-paid, yuan/tonne**

Quality: Secondary aluminium alloy ingot: Cu: 1.5-3.5%, Si: 9.6-12%, Mg: 0.3% Max, Zn: 1.0% Max, Fe: 0.9% Max, Mn: 0.5% Max, Ni: 0.5% Max, Ti: 0.3% Max, Pb: 0.2% Max, Sn: 0.2% Max,

Quantity: min 20 tonnes

Location: Ex-works China, duty-paid price in both south and north of China

Unit: RMB/tonne

Payment terms: Cash against documents within 7 days

Publication: Weekly. Wednesday 3-4pm London time

# Titanium scrap

## EUROPE

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**MB-TI-0001**      **Titanium scrap turnings,  
unprocessed type 90/6/4, 0.5% Sn  
max, cif Europe, \$/lb**

Quality:            Turnings. Ti 90%, Al 6%, V 4%, Sn  
0.5%  
Quantity:          18-22 tonne lots  
Location:          cif major European ports  
Unit:                USD/per lb Ti  
Payment terms:    Cash. Other terms normalized  
Publication:        Weekly. Wednesday 3pm London  
time

**MB-TI-0002**      **Titanium scrap turnings,  
unprocessed type 90/6/4, 0.5-2%  
Sn max, cif Europe, \$/lb**

Quality:            Turnings. Titanium 90%, Al 6%, V  
4%, Sn 0.5-2%  
Quantity:          18-22 tonne lots  
Location:          cif major European ports  
Unit:                USD/per lb Ti  
Payment terms:    Cash. Other terms normalized  
Publication:        Weekly. Wednesday 3pm London  
time

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