Non-ferrous Prices

Methodology and price specifications – January 2021
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Mission statement

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

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

Introduction

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

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

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

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

If you have any questions, please contact Fastmarkets Editorial Director Alex Harrison at aharrison@fastmarkets.com.
Price discovery and methodology

Methodology rationale
Fastmarkets MB produces independent, fair and representative price assessments and indices of non-ferrous prices on a daily, bi-weekly, weekly or monthly basis.

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

During the price discovery process, the price reporter’s goal is to discover at what representative level market participants have concluded business, made offers or received bids over a certain defined trading period – this is generally the period since the conclusion of the previous price quotation (if, for instance, the last price assessment published by Fastmarkets MB 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 MB between Friday afternoon and the following Friday morning).

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

Data collection criteria
Fastmarkets MB reporters aim to talk to a broad sample of market participants specifically involved in the buying and selling of the non-ferrous product of interest, with a good representation of both sides of the market, including producers and consumers, as well as traders.

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

Fastmarkets MB encourages organisations to submit all their pricing data, especially all the concluded transactions.

Depending on market liquidity, Fastmarkets MB reserves the right to also base its prices on bids, offers, deals heard and market participants’ estimates or indications of prevailing values.

Fastmarkets MB welcomes organisations to submit transaction data from authorised back-office functions.

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

Fastmarkets MB’s 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 matches these specifications.

Guidelines that control the exercise of judgment by price reporters during the assessment process
To produce the price assessment, greater weighting is generally given to actual concluded transaction data; bids/offers are second in order of importance; followed by data sources’ own estimate of the market when they have no business to report. But other considerations might also intervene such as, the trustworthiness of a data source based on past data submissions or their willingness to provide data on a consistent basis.

All Fastmarkets MB 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 will typically carry more weight than a smaller-volume transaction. But price reporters will also consider, for instance, normalizing or discarding a price reported for a deal with an abnormally large or small volume.

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.
Calculation of averages

Fastmarkets produces independent, fair and representative price assessments and indices for ferrous, non-ferrous and scrap metal prices on a daily, bi-weekly, weekly, bi-monthly or monthly basis. Fastmarkets calculates and publishes monthly averages based on these independent, proprietary assessments and indices by using simple averages.

The simple monthly averages are calculated by dividing the sum of the price quotations by the number of quotations published during the calendar month. For assessments, Fastmarkets derives both the monthly average high price and the Fastmarkets monthly average low price using this method. For indices, a single monthly average price point is calculated.

For example, there were five weekly price quotations for Chrome Ore South Africa UG2 concentrates index basis 42% cif China, $ per tonne during the month of June 2018. Prices were published each Friday from June 1, 2018, with the assessments reading $206 per tonne, $208 per tonne, $210 per tonne, $211 per tonne and $208 per tonne during the period. The simple monthly average is calculated by taking the sum of the five assessments and dividing that by the number of total assessments over the period - in this case, five. The simple monthly average for June 2018 was $208.60 per tonne.

Most prices produced from the Americas prior to 2021 were calculated on a rolling-average basis. Rolling monthly averages were calculated by dividing the sum of the daily price quotations - including prices republished on non-assessment days - by the number of quotations published during the calendar month. Please contact pricing@fastmarkets.com, adding the subject heading ‘Re: calculation of averages’ for more information about Fastmarkets existing or legacy averages.

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.

Fastmarkets MB indices

Fastmarkets MB’s prices also include the following non-ferrous indices:

- Fastmarkets MB Alumina Index
- Fastmarkets MB Manganese Ore Indices
- Fastmarkets MB Copper Concentrates Index
- Fastmarkets MB Lithium Carbonate Index
- Fastmarkets MB Chrome Ore Index

The methodologies are available on the Fastmarkets website.
Base metals

Alumina

CHINA

**MB-ALU-0001**  Alumina metallurgical grade, ddp China, yuan/tonne
Quality:  Metallurgical-grade alumina
Quantity:  Min 1,000 tonnes
Location:  Delivered duty paid China
Unit:  RMB/tonne
Payment terms:  Cash, within one week
Publication:  Weekly, Thursday 2-5pm London

AUSTRALIA

**MB-ALU-0002**  Alumina index, fob Australia, $/tonne
Quality:  Smelter-grade alumina, minimum purity of 98.5% Al2O3
Quantity:  5,000 tonnes
Location:  fob Bunbury/Kwinana, Australia (other Pacific origins normalized)
Timing:  Within 2 months
Unit:  US$ 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 here.

BRAZIL

**MB-ALU-0003**  Alumina index adjustment to fob Australia index, Brazil, $/dmt
Quality:  Smelter-grade alumina, minimum purity of 98.5% Al2O3
Quantity:  Min 5,000 tonnes
Location:  fob Vila do Conde, Brazil (other Pacific origins normalized)
Timing:  Within two months
Unit:  US$ per dry metric tonne (dmt)
Payment terms:  30 days after loading
Publication:  Once every two weeks, Thursday 4pm London time
Notes:  Bulk carrier

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
Notes:  Full methodology available here.
**Non-ferrous Prices**

**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

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**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

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**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

**Form:** Ingot

**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

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**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

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**SOUTH KOREA**

**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

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**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

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**TAIWAN**

**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

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<tr>
<th><strong>SEASIA &amp; EAST ASIA</strong></th>
<th><strong>MB-AL-0333</strong></th>
<th>Aluminium P1020A warrant premium, in-whs Southeast Asia, $/tonne</th>
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</thead>
<tbody>
<tr>
<td>Quality:</td>
<td>P1020A or 99.7 % Minimum Al purity (Si 0.10% max, Fe 0.20% max). Ingot, T-bar, sow</td>
<td></td>
</tr>
<tr>
<td>Quantity:</td>
<td>Min 25 tonnes</td>
<td></td>
</tr>
<tr>
<td>Location:</td>
<td>In any LME-approved warehouse in Singapore and in Malaysia (Johor, Port Klang), premium on top of LME cash prices</td>
<td></td>
</tr>
<tr>
<td>Timing:</td>
<td>Prompt release</td>
<td></td>
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<tr>
<td>Unit:</td>
<td>USD/tonne other terms normalized</td>
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<tr>
<td>Payment terms:</td>
<td>Cash against documents (7 days after bill of lading date); other terms normalized</td>
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<tr>
<th><strong>MB-AL-0334</strong></th>
<th>Aluminium P1020A, warrant premium, in-whs East Asia, $/tonne</th>
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<tr>
<td>Quality:</td>
<td>P1020A or 99.7 % Minimum Al purity (Si 0.10% max, Fe 0.20% max). Ingot, T-bar, sow</td>
</tr>
<tr>
<td>Quantity:</td>
<td>Min 25 tonnes</td>
</tr>
<tr>
<td>Location:</td>
<td>In any LME-approved warehouse in Taiwan (Kaohsiung) and South Korea (Gwangyang, Busan or Incheon), premium on top of LME cash prices</td>
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<tr>
<td>Timing:</td>
<td>Prompt release</td>
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<tr>
<td>Unit:</td>
<td>USD/tonne</td>
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<tr>
<th><strong>EUROPE</strong></th>
<th><strong>MB-AL-0004</strong></th>
<th>Aluminium P1020A premium, in-whs dp Rotterdam, $/tonne</th>
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<tr>
<td>Quality:</td>
<td>P1020A or 99.7 % Minimum Al purity (Si 0.10% max, Fe 0.20% max). Ingot</td>
<td></td>
</tr>
<tr>
<td>Quantity:</td>
<td>Min 100 tonnes</td>
<td></td>
</tr>
<tr>
<td>Location:</td>
<td>In-warehouse Rotterdam duty-unpaid, premium on top of LME cash prices</td>
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<tr>
<td>Unit:</td>
<td>USD/tonne</td>
<td></td>
</tr>
<tr>
<td>Timing:</td>
<td>Within 4 weeks</td>
<td></td>
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<td>Payment terms:</td>
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<th><strong>MB-AL-0316</strong></th>
<th>Aluminium P1020A premium, fca dp Italy, $/tonne</th>
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<tr>
<td>Quality:</td>
<td>P1020A or 99.7 % Minimum Al purity (Si 0.10% max, Fe 0.20% max). Ingot</td>
</tr>
<tr>
<td>Quantity:</td>
<td>Min 100 tonnes</td>
</tr>
<tr>
<td>Location:</td>
<td>Free-carrier duty-paid Italy (north and south of country), premium on top of LME cash prices</td>
</tr>
<tr>
<td>Timing:</td>
<td>Within 4 weeks</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD/tonne</td>
</tr>
<tr>
<td>Payment terms:</td>
<td>Cash against documents (7 days after bill of lading date); other terms normalized</td>
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<th><strong>MB-AL-0319</strong></th>
<th>Aluminium P1020A premium, fca dp Spain, $/tonne</th>
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<tr>
<td>Quality:</td>
<td>P1020A or 99.7 % Minimum Al purity (Si 0.10% max, Fe 0.20% max). Ingot</td>
</tr>
<tr>
<td>Quantity:</td>
<td>Min 100 tonnes</td>
</tr>
<tr>
<td>Location:</td>
<td>free-carrier duty-paid Spain, premium on top of LME cash prices</td>
</tr>
<tr>
<td>Timing:</td>
<td>Within 4 weeks</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD/tonne</td>
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<td>Publication:</td>
<td>Once every two weeks. Tuesday 3-4pm London time</td>
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</table>
## TURKEY

**MB-AL-0337**  
**Aluminium P1020A premium, cif dup Turkey, $/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 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

**MB-AL-0355**  
**Aluminium P1020A premium, cif Baltimore, US cents/lb**  
**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

## UNITED STATES

**MB-AL-0338**  
**Aluminium P1020A warrant premium, in-whs US, $/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 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:** Weekly. Wednesday 3-4pm London time

**MB-AL-0022**  
**Aluminium P1020A premium, cif dup Brazilian main ports, $/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 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

**MB-AL-0232**  
**Aluminium P1020A premium, ddp Midwest US, cents/lb**  
**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

**MB-AL-0021**  
**Aluminium P1020A premium, delivered Sao Paulo region, $/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:** Delivered in Sao 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

## BRAZIL

**MB-AL-0022**  
**Aluminium P1020A premium, cif dup Brazilian main ports, $/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 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

**MB-AL-0021**  
**Aluminium P1020A premium, delivered Sao Paulo region, $/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:** Delivered in Sao 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 2 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-0300**  
Aluminium 6063 extrusion billet premium, ddp Spain, $/tonne  
Quality: Extrusion billet AA6063. Billet with diameter of 6", 7" and 8"  
Quantity: 25 tonnes  
Location: Delivered in Spain (Bilbao region) duty-paid premium on top of LME cash price  
Timing: Within 2 months  
Unit: USD/tonne  
Payment terms: 60-day payment, other payments terms normalized  
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 2 months  
Unit: USD/tonne  
Payment terms: 30-day payment terms, other payment terms normalized  
Publication: Weekly. Friday 3-4pm London time

UNITED STATES

**MB-AL-0052**  
Aluminium 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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<tr>
<th>Country</th>
<th>Product Description</th>
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<tbody>
<tr>
<td>SOUTHEAST ASIA</td>
<td>Aluminium 6063 extrusion billet premium, cif Thailand, $/tonne</td>
<td>Extrusion billet AA6063. Billet with diameter of 6”, 7” and 8”</td>
<td>100 tonnes</td>
<td>Cif delivery into main Thai ports, duty-paid premium on top of LME cash prices.</td>
<td>Within 2 months</td>
<td>Cash against documents (7 days after bill of lading date), other payments terms normalized</td>
<td>Every 28 days. Friday 3-4pm London time</td>
</tr>
<tr>
<td>TURKEY</td>
<td>Aluminium 6063 extrusion billet premium, cif Turkey (Marmara region), $/tonne</td>
<td>Extrusion billet AA6063. Billet with diameter of 6”, 7” and 8”</td>
<td>100 tonnes</td>
<td>cif Turkey (Marmara region), duty-paid premium on top of LME cash prices</td>
<td>Within 2 months</td>
<td>Cash, other payments terms normalized</td>
<td>Once every two weeks. Friday 3-4pm London time</td>
</tr>
<tr>
<td>JAPAN</td>
<td>Aluminium 6063 extrusion quarterly billet premium, cif MJP, $/tonne</td>
<td>Extrusion billet AA6063. Billet with diameter of 6”, 7” and 8”</td>
<td>Min 100 tonnes</td>
<td>cif in Major Japanese Ports (MJP), duty-paid premium on top of the P1020A ingot MJP premium and LME cash prices</td>
<td>Within 2 months</td>
<td>Cash against documents (7 days after bill of lading date), other payments terms normalized</td>
<td>Quarterly on the third Friday of the first month of the quarter. 3-4pm London time</td>
</tr>
<tr>
<td>BRAZIL</td>
<td>Aluminium 6063 &amp; 6060 extrusion billet premium, cif Brazilian main ports, $/tonne</td>
<td>Extrusion billet AA6063 and AA6060. Billet with diameter of 6”, 7” and 8”</td>
<td>100 tonnes</td>
<td>cif Brazil</td>
<td>Within 2 months</td>
<td>Cash against documents (7 days after bill of lading date), other payments terms normalized</td>
<td>Once every two weeks. Friday 3-4pm London time</td>
</tr>
</tbody>
</table>
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.
- **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.
- **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

**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.
- **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**

- **Quality:** Primary Foundry Alloy silicon 7 A356.2 for wheel production
- **Quantity:** Min 500 tonnes
- **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
## Copper concentrate

**ASIA PACIFIC**

<table>
<thead>
<tr>
<th>MB-CU-0287</th>
<th>Copper concentrates TC index, cif Asia Pacific, $/dmtu</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quality:</strong></td>
<td>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</td>
</tr>
<tr>
<td><strong>Quantity:</strong></td>
<td>Min 5,000 tonnes</td>
</tr>
<tr>
<td><strong>Location:</strong></td>
<td>cif Asia Pacific</td>
</tr>
<tr>
<td><strong>Unit:</strong></td>
<td>USD/dmtu</td>
</tr>
<tr>
<td><strong>Timing:</strong></td>
<td>Within 13 weeks</td>
</tr>
<tr>
<td><strong>Payment terms:</strong></td>
<td>Letter of credit, quotation period M+3</td>
</tr>
<tr>
<td><strong>Publication:</strong></td>
<td>Weekly. Friday at 4pm London time</td>
</tr>
<tr>
<td><strong>Notes:</strong></td>
<td>Full methodology available <a href="#">here</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MB-CU-0288</th>
<th>Copper concentrates RC index, cif Asia Pacific, $/dmtu</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quality:</strong></td>
<td>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</td>
</tr>
<tr>
<td><strong>Quantity:</strong></td>
<td>Min 5,000 tonnes</td>
</tr>
<tr>
<td><strong>Location:</strong></td>
<td>cif Asia Pacific</td>
</tr>
<tr>
<td><strong>Unit:</strong></td>
<td>USD/dmtu</td>
</tr>
<tr>
<td><strong>Timing:</strong></td>
<td>Within 13 weeks</td>
</tr>
<tr>
<td><strong>Payment terms:</strong></td>
<td>Letter of credit, quotation period M+3</td>
</tr>
<tr>
<td><strong>Publication:</strong></td>
<td>Weekly. Friday at 4pm London time</td>
</tr>
<tr>
<td><strong>Notes:</strong></td>
<td>Full methodology available <a href="#">here</a></td>
</tr>
</tbody>
</table>

## Blister copper

**CHINA**

<table>
<thead>
<tr>
<th>MB-CU-0408</th>
<th>Copper blister 98-99% RC spot, cif China, $/tonne</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quality:</strong></td>
<td>Blister copper of 98-99% copper content, with varying payables</td>
</tr>
<tr>
<td><strong>Location:</strong></td>
<td>CIF China</td>
</tr>
<tr>
<td><strong>Timing:</strong></td>
<td>Within 2 months</td>
</tr>
<tr>
<td><strong>Unit:</strong></td>
<td>USD per tonne</td>
</tr>
<tr>
<td><strong>Publication:</strong></td>
<td>Monthly. Last day of the month, 3-4pm London time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MB-CU-0409</th>
<th>Copper blister 98-99% RC annual benchmark, cif China, $/tonne</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quality:</strong></td>
<td>Blister copper of 98-99% copper content, with varying payables</td>
</tr>
<tr>
<td><strong>Location:</strong></td>
<td>CIF China</td>
</tr>
<tr>
<td><strong>Unit:</strong></td>
<td>USD per tonne</td>
</tr>
<tr>
<td><strong>Publication:</strong></td>
<td>Annually. January or February</td>
</tr>
</tbody>
</table>

## Refined copper

**CHINA**

<table>
<thead>
<tr>
<th>MB-CU-0405</th>
<th>Copper grade A cathode premium, in-whs Shanghai, $/tonne</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quality:</strong></td>
<td>Grade A cathode 99.9935% min copper conforming to LME specifications BS EN 1978:1998 – Cu-CATH-1</td>
</tr>
<tr>
<td><strong>Quantity:</strong></td>
<td>Min 25 tonnes</td>
</tr>
<tr>
<td><strong>Location:</strong></td>
<td>In-warehouse Shanghai port, duty-unpaid premium on top of LME cash prices</td>
</tr>
<tr>
<td><strong>Timing:</strong></td>
<td>Within 6 weeks</td>
</tr>
<tr>
<td><strong>Unit:</strong></td>
<td>USD/tonne</td>
</tr>
<tr>
<td><strong>Payment terms:</strong></td>
<td>Letter of credit, telegraphic transfer or documents against payment, other payment terms normalized</td>
</tr>
<tr>
<td><strong>Publication:</strong></td>
<td>Daily. 3-4pm London time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MB-CU-0383</th>
<th>Copper grade A cathode ER premium, bonded in-whs Shanghai, $/tonne</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quality:</strong></td>
<td>Electro-Refined Grade A cathode 99.9935% min conforming to LME specifications BS EN 1978:1998 (Cu-CATH-1).</td>
</tr>
<tr>
<td><strong>Quantity:</strong></td>
<td>Min 25 tonnes</td>
</tr>
<tr>
<td><strong>Location:</strong></td>
<td>In-warehouse Shanghai port, duty-unpaid premium on top of LME cash prices</td>
</tr>
<tr>
<td><strong>Timing:</strong></td>
<td>Within 6 weeks</td>
</tr>
<tr>
<td><strong>Unit:</strong></td>
<td>USD/tonne</td>
</tr>
<tr>
<td><strong>Payment terms:</strong></td>
<td>Letter of credit, telegraphic transfer or documents against payment, other payment terms normalized</td>
</tr>
<tr>
<td><strong>Publication:</strong></td>
<td>Daily. 3-4pm London time</td>
</tr>
</tbody>
</table>
### 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-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-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

### 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-0399
**Copper grade A cathode premium, cif Southeast Asia, $/tonne**

**Quality:** Grade A 99.9935% min copper 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

### Assessment
**Copper cathode equivalent grade, cif Shanghai**

**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
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-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: Weekly. Wednesday 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: Weekly. Wednesday 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

MB-CU-0385  Copper grade A cathode premium, cif Japan, $/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 main Japanese ports (Yokohama, Nagoya and Osaka), 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 terms normalized
Publication: Monthly. Last Tuesday of month, 3-4pm London time

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: Weekly. Tuesday 3-4pm London time
<table>
<thead>
<tr>
<th>Reference</th>
<th>Description</th>
<th>Quality</th>
<th>Quantity</th>
<th>Location</th>
<th>Timing</th>
<th>Unit</th>
<th>Payment terms</th>
<th>Publication</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MB-CU-0372</td>
<td>Copper grade A cathode premium, delivered Germany, $/tonne</td>
<td>Grade A cathode 99.9935% min copper conforming to LME specifications BS EN 1978:1998 – Cu-CATH-1</td>
<td>Min 25 tonnes</td>
<td>Delivered consumer works in Germany, duty unpaid premium on top of LME cash prices</td>
<td>Within 4 weeks</td>
<td>USD/tonne</td>
<td>Cash, other payment terms normalized</td>
<td>Once every two weeks. Tuesday 3-4pm London time</td>
<td></td>
</tr>
<tr>
<td>MB-CU-0406</td>
<td>Copper grade A cathode premium, cif Leghorn, $/tonne</td>
<td>Grade A cathode 99.9935% min copper conforming to LME specifications BS EN 1978:1998 – Cu-CATH-1</td>
<td>25 tonnes</td>
<td>cif delivery in Leghorn (Italy), duty unpaid premium on top of LME cash prices</td>
<td>Within 4 weeks</td>
<td>USD/tonne</td>
<td>Cash, other payment terms normalized</td>
<td>Once every two weeks. Tuesday 3-4pm London time</td>
<td>Assessed range and single number</td>
</tr>
<tr>
<td>MB-CU-0400</td>
<td>Copper grade A cathode warrant premium, in-whs North Europe, $/tonne</td>
<td>Grade A cathode 99.9935% min copper conforming to LME specifications BS EN 1978:1998 – Cu-CATH-1</td>
<td>Min 25 tonnes</td>
<td>In any LME-approved warehouse in North Europe (Belgium, Germany, the Netherlands, Sweden and the UK), premium on top of LME cash prices</td>
<td>Prompt release</td>
<td>USD/tonne</td>
<td>Cash, other payment terms normalized</td>
<td>Weekly. Wednesday 3-4pm London time</td>
<td></td>
</tr>
<tr>
<td>MB-CU-0401</td>
<td>Copper grade A cathode warrant premium, in-whs South Europe, $/tonne</td>
<td>Grade A cathode 99.9935% min copper conforming to LME specifications BS EN 1978:1998 – Cu-CATH-1</td>
<td>Min 25 tonnes</td>
<td>In any LME-approved warehouse in South Europe (Spain, Italy), premium on top of LME cash prices</td>
<td>Prompt release</td>
<td>USD/tonne</td>
<td>Cash, other payment terms normalized</td>
<td>Weekly. Wednesday 3-4pm London time</td>
<td></td>
</tr>
<tr>
<td>MB-CU-0002</td>
<td>Copper grade 1 cathode premium, ddp Midwest US, US cents/lb</td>
<td>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</td>
<td>Min 25 tonnes</td>
<td>Delivered consumer works Midwest US</td>
<td>Within 4 weeks</td>
<td>USD/lb</td>
<td>30 days, other payment terms normalized</td>
<td>Weekly. Tuesday 3-4pm London time</td>
<td></td>
</tr>
</tbody>
</table>

**Assessment:** Copper cathode equivalent grade, cif Europe
- 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

**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
**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 1978:998 – Cu-CATH-1

**Unit:** USD/tonne

**Quantity:** 25 tonnes

**Payment terms:** Cash, other payment terms normalized

**Timing:** Prompt release

**Publication:** Weekly. Wednesday 3-4pm London time

**Copper rod**

**UNITED STATES**

**Copper rod premium, ddp MidwestUS, US cents/lb**

**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**

**MB-PB-0104** Lead spot concentrate TC, high silver, cif China, $/tonne

**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

**MB-PB-0103** Lead spot concentrate TC, low silver, cif China, $/tonne

**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**

**MB-PB-0087** Lead 99.97% ingot premium, cif India, $/tonne

**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
### MB-PB-0086
**Lead 99.99% ingot premium, cif India, $/tonne**
- **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

### MB-PB-0084
**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 delivery 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-0107
**Lead 99.97% ingot premium, cif Southeast Asia, $/tonne**
- **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-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-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

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**Non-ferrous Prices**

www.fastmarkets.com
<table>
<thead>
<tr>
<th>MB-PB-0105</th>
<th>Lead min 99.97% ingot warrant premium, in-whs Southeast Asia $/tonne</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity:</td>
<td>25 tonnes</td>
</tr>
<tr>
<td>Location:</td>
<td>In any LME-approved warehouse in Singapore and in Malaysia (Johor, Port Klang), premium on top of LME cash prices</td>
</tr>
<tr>
<td>Timing:</td>
<td>Prompt release</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD/tonne</td>
</tr>
<tr>
<td>Payment terms:</td>
<td>Cash, other payment terms normalized</td>
</tr>
<tr>
<td>Publication:</td>
<td>Weekly, Wednesday 3-4pm London time</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>MB-PB-0106</th>
<th>Lead min 99.97% ingot warrant premium, in-whs East Asia $/tonne</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity:</td>
<td>25 tonnes</td>
</tr>
<tr>
<td>Location:</td>
<td>In any LME-approved warehouse in Taiwan (Kaohsiung) and South Korea (Gwangyang, Busan or Incheon), premium on top of LME cash prices</td>
</tr>
<tr>
<td>Timing:</td>
<td>Prompt release</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD/tonne</td>
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<tr>
<td>Payment terms:</td>
<td>Cash, other terms normalized</td>
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<tr>
<td>Publication:</td>
<td>Weekly, Wednesday 3-4pm London time</td>
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<table>
<thead>
<tr>
<th>MB-PB-0109</th>
<th>Lead 99.97% ingot warrant premium, in-whs North Europe, $/tonne</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location:</td>
<td>In any LME-approved warehouse in North Europe (Belgium, Germany, the Netherlands, Sweden and the UK), premium on top of LME cash prices</td>
</tr>
<tr>
<td>Quantity:</td>
<td>Min 25 tonnes</td>
</tr>
<tr>
<td>Timing:</td>
<td>Prompt release</td>
</tr>
<tr>
<td>Form:</td>
<td>Cathode</td>
</tr>
<tr>
<td>Publication:</td>
<td>Weekly, Wednesday 3-4pm London time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MB-PB-0110</th>
<th>Lead 99.97% ingot warrant premium, in-whs South Europe, $/tonne</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location:</td>
<td>In any LME-approved warehouse in South Europe (Spain, Italy), premium on top of LME cash prices</td>
</tr>
<tr>
<td>Quantity:</td>
<td>Min 25 tonnes</td>
</tr>
<tr>
<td>Timing:</td>
<td>Prompt release</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD/tonne</td>
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<tr>
<td>Payment terms:</td>
<td>Cash, other payment terms normalized</td>
</tr>
<tr>
<td>Publication:</td>
<td>Weekly, Wednesday 3-4pm London time</td>
</tr>
</tbody>
</table>
**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

**MB-PB-0097**

**Lead 99.97% ingot warrant premium, in-whs US, $/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 the USA, premium on top of LME cash prices

**Timing:** Prompt release

**Unit:** USD/tonne

**Payment terms:** Cash, other payment terms normalized

**Publication:** Weekly. Wednesday 3-4pm London time

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**China**

**MB-NI-0143**

**Nickel min 99.8% full plate premium, in-whs Shanghai, $/tonne**

**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 10 tonnes (under consultation to increase to 60 tonnes)

**Location:** In-warehouse iShanghai 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

**MB-NI-0143**

**Nickel min 99.8% full plate premium, cif Shanghai, $/tonne**

**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 10 tonnes (under consultation to increase to 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

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Please see **Ores** section.
## Non-ferrous Prices

<table>
<thead>
<tr>
<th>MB-NI-0245</th>
<th>Shanghai, Nickel premium, 99.80% purity, briquette, duty free, cif, $ per tonne</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality:</td>
<td>Nickel content 99.8% in line with LME specifications</td>
</tr>
<tr>
<td>Quantity:</td>
<td>Min 6 tonnes</td>
</tr>
<tr>
<td>Location:</td>
<td>cif China</td>
</tr>
<tr>
<td>Timing:</td>
<td>Within 8 weeks</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD/tonne</td>
</tr>
<tr>
<td>Payment terms:</td>
<td>Letter of credit and telegraphic transfer</td>
</tr>
<tr>
<td>Publication:</td>
<td>Last Tuesday of each month</td>
</tr>
<tr>
<td>Notes:</td>
<td>Origin = Australia and Madagascar</td>
</tr>
</tbody>
</table>

### SOUTHEAST ASIA & EAST ASIA

<table>
<thead>
<tr>
<th>MB-NI-0137</th>
<th>Nickel min 99.8% full plate warrant premium, in-whs Southeast Asia, $/tonne</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality:</td>
<td>Full-plate cathode. 99.80% min primary nickel conforming to LME specification: ASTM B39-79 (2013) or GB/T 6516-2010 - Ni9990 grade</td>
</tr>
<tr>
<td>Quantity:</td>
<td>6 tonnes</td>
</tr>
<tr>
<td>Location:</td>
<td>Any LME-approved warehouse in Singapore and Malaysia (Johor, Port Klang), premium on top of LME cash prices</td>
</tr>
<tr>
<td>Timing:</td>
<td>Prompt release</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD/tonne</td>
</tr>
<tr>
<td>Payment terms:</td>
<td>Cash, other terms normalized</td>
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<tr>
<td>Publication:</td>
<td>Weekly. Wednesday 3-4pm London time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MB-NI-0138</th>
<th>Nickel min 99.8% briquette warrant premium, in-whs Southeast Asia, $/tonne</th>
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</thead>
<tbody>
<tr>
<td>Quality:</td>
<td>Briquette. 99.80% min primary nickel conforming to LME specification: ASTM B39-79 (2013) or GB/T 6516-2010 - Ni9990 grade</td>
</tr>
<tr>
<td>Quantity:</td>
<td>6 tonnes</td>
</tr>
<tr>
<td>Location:</td>
<td>Any LME-approved warehouse in Singapore/Malaysia (Johor, Port Klang), premium on top of LME cash prices</td>
</tr>
<tr>
<td>Timing:</td>
<td>Prompt release</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD/tonne</td>
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<tr>
<td>Payment terms:</td>
<td>Cash, other payment terms normalized</td>
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<tr>
<td>Publication:</td>
<td>Weekly. Wednesday 3-4pm London time</td>
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### EUROPE

<table>
<thead>
<tr>
<th>MB-NI-0003</th>
<th>Nickel uncut cathode premium, in-whs Rotterdam, $/tonne</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality:</td>
<td>Full-plate cathode. 99.80% min primary nickel conforming to LME specification: ASTM B39-79 (2013) or GB/T 6516-2010 - Ni9990 grade</td>
</tr>
<tr>
<td>Quantity:</td>
<td>20 tonnes</td>
</tr>
<tr>
<td>Location:</td>
<td>In-warehouse Rotterdam, premium on top of LME cash prices</td>
</tr>
<tr>
<td>Timing:</td>
<td>Within one week</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD/tonne</td>
</tr>
<tr>
<td>Payment terms:</td>
<td>Cash, other payment terms normalized</td>
</tr>
<tr>
<td>Publication:</td>
<td>Weekly. Tuesday 3-4pm London time</td>
</tr>
</tbody>
</table>
### 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:**
Weekly. Wednesday 3-4pm London time

### UNITED STATES

### 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:**
USD/tonne

**Payment terms:**
Cash, 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:**
USD/tonne

**Payment terms:**
Cash, other payment terms normalized

**Publication:**
Weekly. Tuesday 3-4pm London time
Tin

CHINA

MB-SN-0032  Tin 99.9% ingot premium, cif Shanghai, $/tonne
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 Shanghai port, 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

Non-ferrous Prices

MB-SN-0042  Tin min 99.85% ingot warrant premium, in-whs Southeast Asia, $/tonne
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:  Weekly. Wednesday 3-4pm London time

EUROPE

MB-SN-0002  Tin 99.9% ingot premium, in-whs Rotterdam, $ per tonne
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:  Weekly. Tuesday 3-4pm London time

MB-SN-0029  Tin 99.9% low lead ingot premium, in-whs Rotterdam, $/tonne
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:  Weekly. Tuesday 3-4pm London time

SOUTHEAST ASIA & EAST ASIA

MB-SN-0038  Tin 99.9% ingot premium, cif Taiwan, $/tonne
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

MB-SN-0031  Tin 99.9% low lead ingot premium, cif Shanghai, $/tonne
Quality:  Ingot. 99.9% tin purity conforming to LME specification: BS EN 610:1996 with less than 100 ppm lead content
Quantity:  Min 5 tonnes
Location:  cif delivery basis Shanghai port, 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
### Tin Prices - United States

**MB-SN-0012**

**Tin grade A min 99.85% ingot all-in price, ddp Midwest US, $/tonne**

- **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

**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-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-ZN-0110**

**Zinc spot concentrate TC, cif China, $/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%), 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:** Monthly. Last Friday of every 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**

**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-0116**  
Zinc SHG 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 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**

**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

### 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

### MB-ZN-0099
**Zinc SHG min 99.995% ingot premium, dp fca Antwerp, $/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 Antwerp, duty-unpaid 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
<table>
<thead>
<tr>
<th>MB-ZN-0103</th>
<th>Zinc SHG min 99.995% ingot premium, fca dp Italy, $/tonne</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality:</td>
<td>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</td>
</tr>
<tr>
<td>Quantity:</td>
<td>Min 100 tonnes</td>
</tr>
<tr>
<td>Location:</td>
<td>Free-carrier basis delivery in Italy, duty-paid premium on top of LME cash prices</td>
</tr>
<tr>
<td>Timing:</td>
<td>Within 4 weeks</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD/tonne</td>
</tr>
<tr>
<td>Payment terms:</td>
<td>Cash, other payment terms normalized</td>
</tr>
<tr>
<td>Publication:</td>
<td>Weekly, Tuesday 3-4pm London time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MB-ZN-0102</th>
<th>Zinc SHG min 99.995% ingot premium, ddp Italy, $/per tonne</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality:</td>
<td>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</td>
</tr>
<tr>
<td>Quantity:</td>
<td>Min 100 tonnes</td>
</tr>
<tr>
<td>Location:</td>
<td>Delivered duty paid consumer works in Italy, premium on top of LME cash prices</td>
</tr>
<tr>
<td>Timing:</td>
<td>Within 4 weeks</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD/tonne</td>
</tr>
<tr>
<td>Payment terms:</td>
<td>Cash, other terms normalized</td>
</tr>
<tr>
<td>Publication:</td>
<td>Weekly, Tuesday 3-4pm London time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MB-ZN-0117</th>
<th>Zinc SHG min 99.995% warrant premium, in-whs North Europe, $/tonne</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality:</td>
<td>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</td>
</tr>
<tr>
<td>Quantity:</td>
<td>Min 100 tonnes</td>
</tr>
<tr>
<td>Location:</td>
<td>In any LME-approved warehouse in North European locations (Belgium, Germany, the Netherlands, Sweden and the UK), premium on top of LME cash prices</td>
</tr>
<tr>
<td>Timing:</td>
<td>Prompt release</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD/tonne</td>
</tr>
<tr>
<td>Payment terms:</td>
<td>Cash, other payment terms normalized</td>
</tr>
<tr>
<td>Publication:</td>
<td>Weekly, Wednesday 3-4pm London time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MB-ZN-0082</th>
<th>Zinc SHG min 99.995% ingot premium monthly average, delivered UK, £/tonne</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality:</td>
<td>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</td>
</tr>
<tr>
<td>Quantity:</td>
<td>Min 25 tonnes</td>
</tr>
<tr>
<td>Location:</td>
<td>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)</td>
</tr>
<tr>
<td>Unit:</td>
<td>GBP/tonne</td>
</tr>
<tr>
<td>Payment terms:</td>
<td>Cash, other payment terms normalized</td>
</tr>
<tr>
<td>Publication:</td>
<td>Monthly. 1st working day of the month between 1pm and 2pm London time</td>
</tr>
<tr>
<td>Notes:</td>
<td>This partly-assessed single number was launched in 2013 as a replacement to the Thyssenkrupp Metallurgie UK SHG zinc price, which had been discontinued.</td>
</tr>
</tbody>
</table>
**UNITED STATES**

**MB-ZN-0061**  
**Zinc SHG min 99.995% ingot all-in price, 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: USD/tonne  
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: Weekly. Wednesday 3-4pm London time
## Bulk alloys

### Ferro-chrome

#### CHINA

<table>
<thead>
<tr>
<th>Reference</th>
<th>Description</th>
<th>Quality</th>
<th>Quantity</th>
<th>Location</th>
<th>Unit</th>
<th>Payment terms</th>
<th>Publication</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MB-FEC-0011</td>
<td>Ferro-chrome 50% Cr import, cif main Chinese ports, $/lb contained Cr</td>
<td>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%.</td>
<td>Min 1,000 tonnes</td>
<td>cif main Chinese ports</td>
<td>USD per lb</td>
<td>LC at sight</td>
<td>Weekly, Tuesday 3pm London time</td>
<td>Data history from May 2012</td>
</tr>
</tbody>
</table>

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

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

#### JAPAN

<table>
<thead>
<tr>
<th>Reference</th>
<th>Description</th>
<th>Quality</th>
<th>Quantity</th>
<th>Location</th>
<th>Unit</th>
<th>Payment terms</th>
<th>Publication</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MB-FEC-0017</td>
<td>Ferro-chrome high carbon 57-65% Cr, cif dup Japan, $/lb</td>
<td>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</td>
<td>Min 100 tonnes</td>
<td>cif Japan</td>
<td>USD per lb of chrome contained</td>
<td>LC at sight and TT</td>
<td>Every other week. Thursday 2-3pm London time</td>
<td></td>
</tr>
</tbody>
</table>

#### SOUTHEAST ASIA & EAST ASIA

<table>
<thead>
<tr>
<th>Reference</th>
<th>Description</th>
<th>Quality</th>
<th>Quantity</th>
<th>Location</th>
<th>Unit</th>
<th>Payment terms</th>
<th>Publication</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MB-FEC-0018</td>
<td>Ferro-chrome high carbon 57-65% Cr, cif dup South Korea, $/lb</td>
<td>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</td>
<td>Min 100 tonnes</td>
<td>cif South Korea</td>
<td>USD per lb of chrome contained</td>
<td>LC at sight and TT</td>
<td>Every other week. Thursday 2-3pm London time</td>
<td></td>
</tr>
</tbody>
</table>

#### EUROPE

<table>
<thead>
<tr>
<th>Reference</th>
<th>Description</th>
<th>Quality</th>
<th>Quantity</th>
<th>Location</th>
<th>Unit</th>
<th>Payment terms</th>
<th>Publication</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MB-FEC-0004</td>
<td>Ferro-chrome high carbon 6-8.5% C, basis 60-70% Cr, max 1.5% Si, delivered Europe, $/lb Cr</td>
<td>Lump. Cr 60-70%, C 6-8.5%, Si 1.5%. High-carbon ferro-chrome of the following brands and origins: Kazakhstan (Kazchrome); Russia (Tikhvin, Chelyabinsk); Turkey (Eti Krom); Sweden (Vargon Alloys); Albania (Albchrome)</td>
<td>Min 24 tonnes</td>
<td>Delivered consumer works Europe</td>
<td>USD per lb of chrome contained</td>
<td>30 days, other payment terms normalized</td>
<td>Weekly, Tuesday between 2pm and 3pm London time</td>
<td>This price will be discontinued at the end of 2021</td>
</tr>
</tbody>
</table>
## Ferro-chrome, high carbon

**MB-FEC-0021**

**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.

**Notes:**
- Non-ferrous Prices
- 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.

**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.
**Non-ferrous Prices**

**Ferro-chrome lumpy Cr**  
**benchmark indicator, charge basis**  
52% (and high carbon), Europe, $/lb  

**Quality:** Ferro-chrome lumpy, basis 52% chrome content  
**Unit:** US cents per lb of chrome content to major European destinations  
**Publication:** Weekly. Tuesday 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.

**Ferro-chrome high carbon 6-8% C, basis 60-65% Cr, max 2% Si, in-whs Pittsburgh, US cents/lb**  

<table>
<thead>
<tr>
<th>Quality:</th>
<th>Cr min: 62.00%, si: max. 3.00%, C: 6.00- 8.00%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity:</td>
<td>Min 20 tons</td>
</tr>
<tr>
<td>Location:</td>
<td>fab Pittsburgh</td>
</tr>
<tr>
<td>Unit:</td>
<td>US cents per pound</td>
</tr>
<tr>
<td>Publication:</td>
<td>Weekly. Thursday</td>
</tr>
</tbody>
</table>

**Ferro-chrome low carbon 0.05%C, 65% Cr min, in-whs Pittsburgh, $/lb**  

<table>
<thead>
<tr>
<th>Quality:</th>
<th>Cr min: 65.00%, Ca: 0.05%, Si: max 1.00%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity:</td>
<td>20 tons</td>
</tr>
<tr>
<td>Location:</td>
<td>In-whs Pittsburgh</td>
</tr>
<tr>
<td>Unit:</td>
<td>US cents per pound</td>
</tr>
<tr>
<td>Publication:</td>
<td>Weekly. Thursday</td>
</tr>
</tbody>
</table>

**Ferro-chrome low carbon 0.10%C, 62% Cr min, in-whs Pittsburgh, $/lb**  

| 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 |

**EUROPE**

**Ferro-manganese basis 78% Mn max, standard 7.5% C, delivered Europe, €/tonne**  

<table>
<thead>
<tr>
<th>Quality:</th>
<th>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</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity:</td>
<td>Min 100 tonnes</td>
</tr>
<tr>
<td>Location:</td>
<td>Delivered consumer works Europe</td>
</tr>
<tr>
<td>Unit:</td>
<td>EUR/tonne</td>
</tr>
<tr>
<td>Payment terms:</td>
<td>Cash, other payment terms normalized</td>
</tr>
<tr>
<td>Publication:</td>
<td>Weekly. Friday between 2pm and 3pm London time</td>
</tr>
</tbody>
</table>

**CHINA**

**Ferro-manganese 65% Mn min, max 7% C, in-whs China, yuan/tonne**  

<table>
<thead>
<tr>
<th>Quality:</th>
<th>Lump. Mn 65-72%, Si 4.5% max, C 7.0% max, P 0.4% max, S 0.03% max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity:</td>
<td>Min 100 tonnes</td>
</tr>
<tr>
<td>Location:</td>
<td>In-whs China</td>
</tr>
<tr>
<td>Unit:</td>
<td>CNY/tonne, all Mn grades normalized to 65% on pro rata basis</td>
</tr>
<tr>
<td>Payment terms:</td>
<td>Cash, other payment terms normalized</td>
</tr>
<tr>
<td>Publication:</td>
<td>Weekly, Friday 2-3pm London time</td>
</tr>
</tbody>
</table>
**Non-ferrous Prices**

**UNITED STATES**

**MB-FEM-0001**

Ferro-manganese high carbon
78% Mn, standard 7.5% C, in-whs Pittsburgh, $/long ton

Quality:
- Mn 78%, C 7.5%

Quantity:
- Min 20 tons

Unit:
- US dollars per long ton

Location:
- In-warehouse Pittsburgh

Frequency:
- Weekly, 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-warehouse Pittsburgh

Frequency:
- Weekly, Thursday

---

**EUROPE**

**MB-FEH-0001**

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 time

**MB-FEH-0002**

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 payment terms normalized

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

---

**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% 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**

**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 time

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Non-ferrous Prices

China

**MB-SIM-0001**

- **Non-ferrous Prices**
  - **Quality:** Lump. Mn 65-72%, Si 16%, C 2%
  - **Quantity:** Min 100 tonnes
  - **Location:** fob India
  - **Unit:** USD/tonne
  - **Payment terms:** Letter of Credit
  - **Publication:** Weekly. Friday between 2pm and 3pm London time

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

India

**MB-SIM-0004**

- **Non-ferrous Prices**
  - **Quality:** Lump. Mn 65% Si 16% C: 2%
  - **Quantity:** Min 100 tonnes
  - **Location:** fob India
  - **Unit:** USD/tonne
  - **Payment terms:** Letter of Credit
  - **Publication:** Weekly. Friday between 2pm and 3pm London time

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

United States

**MB-SIM-0003**

- **Non-ferrous Prices**
  - **Quality:** Manganese min 65%, Si min 16%
  - **Quantity:** 20 tons
  - **Location:** In-warehouse Pittsburgh
  - **Unit:** US cents per pound
  - **Publication:** Weekly. Thursday

**Nickel Pig Iron**

China

**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

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### Noble alloys

#### Molybdenum

**EUROPE**

<table>
<thead>
<tr>
<th>MB-FEO-0003</th>
<th>Molybdenum drummed molybdic oxide 57% Mo min, in-whs Rotterdam, $/lb Mo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality:</td>
<td>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.</td>
</tr>
<tr>
<td>Quantity:</td>
<td>Min 10 tonnes (+/- 2%)</td>
</tr>
<tr>
<td>Location:</td>
<td>In-whs Rotterdam</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD per lb Mo</td>
</tr>
<tr>
<td>Payment terms:</td>
<td>Cash; other terms normalized</td>
</tr>
<tr>
<td>Publication:</td>
<td>Twice weekly. Wednesday and Friday between 2pm and 3pm London time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MB-FEO-0001</th>
<th>Ferro-molybdenum 65% Mo min, in-whs Rotterdam, $/kg Mo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality:</td>
<td>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 each be 0.10% max, with the exception of Fe</td>
</tr>
<tr>
<td>Quantity:</td>
<td>Min 10 tonnes (+/- 2%)</td>
</tr>
<tr>
<td>Location:</td>
<td>In-whs Rotterdam</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD per kg Mo</td>
</tr>
<tr>
<td>Payment terms:</td>
<td>Cash; other payment terms normalized</td>
</tr>
<tr>
<td>Publication:</td>
<td>Twice weekly. Wednesday and Friday between 2pm and 3pm London time</td>
</tr>
</tbody>
</table>

**UNITED STATES**

<table>
<thead>
<tr>
<th>MB-MO-0001</th>
<th>Molybdenum canned molybdic oxide, in-whs Pittsburgh, $/lb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality:</td>
<td>Mo min 57.00%, copper max 0.50%, phosphorus 0.05%, lead 0.05%, sulphur 0.10%, carbon 0.10%, moisture 0.10%</td>
</tr>
<tr>
<td>Quantity:</td>
<td>Min 10 tons</td>
</tr>
<tr>
<td>Location:</td>
<td>In-whs US</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD per pound</td>
</tr>
<tr>
<td>Publication:</td>
<td>Weekly. Thursday</td>
</tr>
</tbody>
</table>

### Titanium

**EUROPE**

<table>
<thead>
<tr>
<th>MB-FET-0001</th>
<th>Ferro-titanium 70% Ti, max 4.5% Al, ddp Europe, $/kg Ti</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality:</td>
<td>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%</td>
</tr>
<tr>
<td>Quantity:</td>
<td>Min 10-tonne lots (+/- 2%)</td>
</tr>
<tr>
<td>Location:</td>
<td>ddp Europe</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD per kg Ti</td>
</tr>
<tr>
<td>Payment terms:</td>
<td>Cash (other payment terms normalized)</td>
</tr>
<tr>
<td>Publication:</td>
<td>Weekly. Wednesday 2-3pm London time</td>
</tr>
</tbody>
</table>

### Tungsten

**EUROPE**

<table>
<thead>
<tr>
<th>MB-W-0001</th>
<th>Tungsten APT 88.5% WO3 min Europe, cif Rotterdam and Baltimore duty-free, $/mtu WO3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality:</td>
<td>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</td>
</tr>
<tr>
<td>Quantity:</td>
<td>Min 20 tonnes (+/- 2%)</td>
</tr>
<tr>
<td>Location:</td>
<td>cif Rotterdam and Baltimore, duty free</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD per mtu WO3</td>
</tr>
<tr>
<td>Payment terms:</td>
<td>Cash. Delivered up to three months in advance considered spot business</td>
</tr>
<tr>
<td>Publication:</td>
<td>Weekly. Friday 2-3pm London time</td>
</tr>
</tbody>
</table>
### CHINA

**MB-W-0003**  
*Tungsten APT 88.5% WO3 min, fob main ports China, $/mtu WO3*

**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 0.0001% max, Cr 0.0001% 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, Pb 0.0001% 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

---

**MB-W-0002**  
*Tungsten concentrate 65% WO3, in-whs China, yuan/tonne*

**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

---

### EUROPE

**MB-FEU-0001**  
*Ferro-tungsten basis 75% W, in-whs dup Rotterdam, $/kg W*

**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, Sl 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

---

**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, Na2+K2O 1.50% max

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

**Location:**  
In-warehouse Rotterdam

**Unit:**  
USD per lb V2O5

**Payment terms:**  
Cash, other terms normalized

**Publication:**  
Weekly. Friday 2-3pm London time
### 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

### 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

**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, Na2+K2O 1.50% max.
- **Quantity:** Min 5 tonnes (+/- 5%)
- **Location:** Fob China (other delivery terms normalized)
- **Timing:** Within 20 days
- **Unit:** $/lb V2O5
- **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, Na2+K2O 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
Ores

Bauxite

AFRICA

**MB-BX-0014** Bauxite, fob Kamsar, Guinea, $/dmtu

**Quality:**
- Total alumina 48.5% min, 53% max; total silica 1.20% min, 2.10% max;
- Reactive silica 3.2% max; Fe 22% max; Ti 4% max; organic carbon 0.15% max; moisture content 5.5% min, 7.5% max

**Quantity:** Minimum 20,000 tonnes

**Location:** fob Kamsar (other ports normalized)

**Timing:** Within two months

**Unit:** USD per dmtu

**Payment terms:** 30 days after loading (other payment terms normalized)

**Publication:** Monthly. Third Thursday of the month 2-3pm London time

**Notes:** Bulk carrier

LATIN AMERICA

**MB-BX-0015** Bauxite, fob Trombetas, Brazil, $/dmtu

**Quality:**
- Total alumina 50.5% min, 55% max; total silica 4.3% min, 5.6% max;
- Reactive silica 4% min, 5% max; Fe 12% max; Ti 1.5% max; moisture content 9% min, 10% max

**Quantity:** Min 20,000 tonnes

**Location:** fob Trombetas (other ports normalized)

**Timing:** Within two months

**Unit:** USD per dmtu

**Payment terms:** 30 days after loading (other payment terms normalized)

**Publication:** Monthly. Third Thursday of the month between 2pm and 3pm London time

**Notes:** Bulk carrier

Chrome ore

AFRICA

**MB-CHO-0003** Chrome ore South Africa UG2 concentrates index basis 42%, cif China, $/tonne

**Quality:**
- Up to 1mm (95% min); Cr base 42%, range 40-43%; Silica max 6%;
- Alumina max 18%; MgO max 15%; P max 0.01%; S max 0.01%; chrome-iron ratio 1.2:1 min

**Quantity:** Min 2,000 tonnes

**Location:** cif China

**Unit:** USD per tonne

**Payment terms:** Payment at sight

**Publication:** Weekly. Tuesday 3pm London time

**Notes:** Bulk (container deals normalized)

CHINA

**MB-CHO-0002** Chrome ore Turkish lumpy 40-42%, cfr main Chinese ports, $/tonne

**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)

**Quantity:** 1,000 tonnes

**Location:** cfr China main ports

**Unit:** USD per tonne

**Payment terms:** Payment at sight

**Publication:** Weekly. Tuesday Between 2pm and 3pm London time

**Notes:** Bulk (container deals normalized)
# Manganese ore

## SOUTH AFRICA

**MB-MNO-0002** Manganese ore 37% Mn, fob Port Elizabeth, $/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 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

**MB-MNO-0001** Manganese ore 44% Mn, cif Tianjin, $/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 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

**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-MNO-0003** Manganese ore index 37% Mn, cif Tianjin, $/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 5,000 tonnes

**Location:** cif Tianjin – normalized for other China mainland sea ports

**Timing:** Within nine weeks

**Unit:** US$ per dry metric tonne unit, cif Tianjin, China

**Payment:** Cash or equivalent

**Publication:** Friday, 3pm London

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www.fastmarkets.com
# Nickel ore

**CHINA**

<table>
<thead>
<tr>
<th>MB-NIO-0001</th>
<th>Nickel ore 1.8% basis 15-20% Fe water content: 30-35% Si:Mg ratio&lt;2 lot size 50,000 tonnes, cif China, $/tonne</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality:</td>
<td>1.8% Ni, 15-20% Fe, Water content 30-35%, Si:Mg ratio &lt;2</td>
</tr>
<tr>
<td>Quantity:</td>
<td>50,000 tonnes</td>
</tr>
<tr>
<td>Location:</td>
<td>cif China</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD per tonne</td>
</tr>
<tr>
<td>Payment terms:</td>
<td>Letter of Credit</td>
</tr>
<tr>
<td>Publication:</td>
<td>Weekly. Friday 2-3pm London time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MB-NIO-0002</th>
<th>Laterite ore with 1.5% Ni content, cif China, $/tonne</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality:</td>
<td>Nickel ore 1.5% Ni, 15-20% Fe, water content 30-35%</td>
</tr>
<tr>
<td>Quantity:</td>
<td>50,000 tonnes</td>
</tr>
<tr>
<td>Location:</td>
<td>cif China</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD per tonne</td>
</tr>
<tr>
<td>Payment terms:</td>
<td>Cash, other payment terms normalized</td>
</tr>
<tr>
<td>Publication:</td>
<td>Weekly. Friday 2-3pm London time</td>
</tr>
</tbody>
</table>
## Minor metals

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

### Antimony

**CHINA**

<table>
<thead>
<tr>
<th>MB-SB-0003</th>
<th>Antimony MMTA standard grade II, ddp China, yuan/tonne</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality:</td>
<td>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</td>
</tr>
<tr>
<td>Quantity:</td>
<td>1 tonne</td>
</tr>
<tr>
<td>Location:</td>
<td>Delivered duty paid China</td>
</tr>
<tr>
<td>Unit:</td>
<td>CNY/tonne</td>
</tr>
<tr>
<td>Payment terms:</td>
<td>Cash</td>
</tr>
<tr>
<td>Publication:</td>
<td>Weekly. Wednesday between 2pm and 3pm London time</td>
</tr>
</tbody>
</table>

**EUROPE**

<table>
<thead>
<tr>
<th>MB-SB-0001</th>
<th>Antimony max 100 ppm Bi, in-whs Rotterdam, $/tonne</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity:</td>
<td>Min 10 tonnes (+/-2%)</td>
</tr>
<tr>
<td>Quality:</td>
<td>Ingot. Sb Min 99.65% min, Bi 100ppm max, Se 50ppm max, Cu 200ppm max, Fe 200ppm max, Pb 0.2% max</td>
</tr>
<tr>
<td>Location:</td>
<td>In-whs Rotterdam</td>
</tr>
<tr>
<td>Timing:</td>
<td>Prompt, within ten calendar days</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD/tonne</td>
</tr>
<tr>
<td>Payment terms:</td>
<td>Cash, other payment terms normalized</td>
</tr>
<tr>
<td>Publication:</td>
<td>Twice weekly. Wednesday and Friday 2-3pm London time</td>
</tr>
<tr>
<td>Notes:</td>
<td>Original producer packaging, on pallets or in wooden cases</td>
</tr>
</tbody>
</table>

### Arsenic

**EUROPE**

<table>
<thead>
<tr>
<th>MB-AS-0001</th>
<th>Arsenic 99.7% min As, in-whs Rotterdam, $/Ib</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality:</td>
<td>Lumpy, fist-sized and smaller. As 99% min, no other elements specified</td>
</tr>
<tr>
<td>Quantity:</td>
<td>1 tonne (+/-2%)</td>
</tr>
<tr>
<td>Location:</td>
<td>In-whs Rotterdam</td>
</tr>
<tr>
<td>Timing:</td>
<td>Prompt release</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD per lb</td>
</tr>
<tr>
<td>Payment terms:</td>
<td>Cash, other payment terms normalized</td>
</tr>
<tr>
<td>Publication:</td>
<td>Twice weekly. Wednesday and Friday 2-3pm London</td>
</tr>
<tr>
<td>Notes:</td>
<td>Original producer poly-lined steel drums, each 50kg net, in accordance with the IMDG code and RID &amp; ADR rules</td>
</tr>
</tbody>
</table>
Bismuth

EUROPE

**MB-BI-0001**  
Bismuth 99.99% Bi min, in-whs Rotterdam, $/lb  
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

**MB-BI-0002**  
Bismuth 99.99% Bi min, in-whs China, yuan/tonne  
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

**MB-CD-0001**  
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

UNITED STATES

**MB-CD-0002**  
Cadmium 99.99% min ex-US warehouse $/lb  
Quality: Lump. Min 99% chromium  
Quantity: 3 tonnes  
Location: Ex-warehouse, US  
Unit: USD per pound  
Payment terms: Cash, other terms normalized  
Publication: Once a week every Thursday  
Notes: Packaged in drums

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 0.03% 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

**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  
Payment terms: Cash, other terms normalized  
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-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, Minara briquettes, Ambatovy briquettes, Norilsk grade 1 and grade 2 cut cathodes (production since January 2019) |
| Location: | Rotterdam, in-warehouse |
| Unit: | USD per lb |
| Quantity: | Minimum 1 tonne, maximum 100 tonnes |
| Timing: | Within 30 days, other terms normalized |
| Payment terms: | Cash; other terms normalized |
| Publication: | Daily. Monday to Friday, at 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: | USD 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’.

**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 |

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

| Quality: | Ingot. Ga: 99.99% min, no other elements specified |
| Quantity: | Min 100 kg (+/- 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 |

Cobalt sulfate

Please see Battery Raw Materials section.

Gallium

**EUROPE**

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

<p>| Quality: | Ingot. Ga: 99.99% min, no other elements specified |
| Quantity: | Min 100 kg (+/- 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 |</p>
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Country</th>
<th>Quantity</th>
<th>Location</th>
<th>Unit</th>
<th>Payment Terms</th>
<th>Publication</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MB-GA-0002</td>
<td>Gallium 99.99% Ga min, in-whs China, yuan/kg</td>
<td>China</td>
<td>Min 50kg</td>
<td>China</td>
<td>CNY/kg</td>
<td>Cash, other payment terms normalized</td>
<td>Weekly. Wednesday by 3pm London time</td>
<td></td>
</tr>
<tr>
<td>MB-GER-0001</td>
<td>Germanium dioxide, in-whs China, $/kg</td>
<td>China</td>
<td>Min 100 kg (+/- 2%)</td>
<td>In-whs China</td>
<td>USD/kg</td>
<td>Cash, other payment terms normalized</td>
<td>Twice-weekly. Wednesday and Friday between 2pm and 3pm London time</td>
<td>Original producer cases, normally 25kg each</td>
</tr>
<tr>
<td>MB-GER-0004</td>
<td>Germanium 99.999% Ge min, in-whs China, yuan/kg</td>
<td>China</td>
<td>Min 50 kg</td>
<td>In-whs China</td>
<td>CNY/kg</td>
<td>Cash, other payment terms normalized</td>
<td>Weekly. Wednesday by 3pm London time</td>
<td></td>
</tr>
<tr>
<td>MB-GER-0003</td>
<td>Germanium 99.99% Ge, in-whs Rotterdam, $/kg</td>
<td>Global</td>
<td>Min 100 kg (+/- 2%)</td>
<td>In-whs Rotterdam</td>
<td>USD/kg</td>
<td>Cash, other payment terms normalized</td>
<td>Fortnightly. Friday 2-3pm London time</td>
<td>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</td>
</tr>
<tr>
<td>MB-ZIR-0003</td>
<td>Hafnium, max 1% Zr, in-whs global locations, $/kg</td>
<td>Global</td>
<td>Min 50kg</td>
<td>Global</td>
<td>USD/per kg</td>
<td>Cash, other payment terms normalized</td>
<td>Fortnightly. Friday 2-3pm London time</td>
<td></td>
</tr>
</tbody>
</table>
# Non-ferrous Prices

## Indium

### EUROPE

**MB-IN-0002**  
**Indium 99.99%, in-whs Rotterdam, $/kg**  
- **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

**MB-IN-0003**  
**Indium 99.99% ex-works China CNY/kg**  
- **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/kg  
- **Payment terms:** Cash on spot  
- **Publication:** Weekly. Friday between 2pm and 3pm London time

## Magnesium

### EUROPE

**MB-MG-0001**  
**Magnesium 99.9%, in-whs Rotterdam, $/tonne**  
- **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

**MB-MG-0002**  
**Magnesium 99.9% Mg min, fob China main ports, $/tonne**  
- **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

**MB-MG-0003**  
**Magnesium 99.9% Mg min, exw China, yuan/tonne**  
- **Quality:** Ingot. Mg 99.9% min  
- **Quantity:** Min 20 tonnes (+/-2%)  
- **Location:** exw China  
- **Unit:** CNY/tonne  
- **Payment terms:** Cash on spot  
- **Publication:** Weekly. Friday between 2pm and 3pm London time

## Manganese

### EUROPE

**MB-MN-0001**  
**Manganese 99.7% electrolytic manganese flake, in-whs Rotterdam, $/tonne**  
- **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

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[www.fastmarkets.com](http://www.fastmarkets.com)
**Non-ferrous Prices**

**UNITED STATES**

**MB-MN-0006**

Manganese electrolytic metal 99.7% Mn min, ex-whs US, $/lb

<table>
<thead>
<tr>
<th>Quality:</th>
<th>Flake. Min 99.7% manganese</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity:</td>
<td>Min 10 tonnes</td>
</tr>
<tr>
<td>Location:</td>
<td>Ex-warehouse, US</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD per pound</td>
</tr>
<tr>
<td>Payment terms:</td>
<td>Cash, other terms normalized</td>
</tr>
<tr>
<td>Publication:</td>
<td>Weekly, every Thursday</td>
</tr>
<tr>
<td>Notes:</td>
<td>Bulk</td>
</tr>
</tbody>
</table>

**CHINA**

**MB-MN-0007**

Manganese 99.7% electrolytic manganese flake, fob China, $/tonne

<table>
<thead>
<tr>
<th>Quality:</th>
<th>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</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity:</td>
<td>Min 20 tonnes</td>
</tr>
<tr>
<td>Location:</td>
<td>fob China main ports</td>
</tr>
<tr>
<td>Timing:</td>
<td>Spot, within one week</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD per tonne</td>
</tr>
<tr>
<td>Payment terms:</td>
<td>TT or LC</td>
</tr>
<tr>
<td>Publication:</td>
<td>Weekly. Friday 2-3pm London time</td>
</tr>
<tr>
<td>Notes:</td>
<td>Uniform IMDG-approved containers, individually sealed and numbered</td>
</tr>
</tbody>
</table>

**Rhenium**

**EUROPE**

**MB-RE-0001**

Rhenium APR catalytic grade, in-whs dup Rotterdam, $/kg

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

**MB-RE-0002**

Rhenium metal pellets 99.9% Re min, in-whs dup, Rotterdam $/lb

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

**Mercury**

**GLOBAL**

**MB-HG-0001**

Mercury 99.99%, in-whs global locations, $/flask

<table>
<thead>
<tr>
<th>Quality:</th>
<th>Free-flowing liquid. Hg 99.99%, no other elements specified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity:</td>
<td>50 flasks with zero tolerance</td>
</tr>
<tr>
<td>Location:</td>
<td>Global</td>
</tr>
<tr>
<td>Timing:</td>
<td>Within one calendar month</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD per flask</td>
</tr>
<tr>
<td>Payment terms:</td>
<td>Cash, other terms normalized</td>
</tr>
<tr>
<td>Publication:</td>
<td>Fortnightly. Friday between 2pm and 3pm London time</td>
</tr>
<tr>
<td>Notes:</td>
<td>34.5kg UN-approved steel flasks</td>
</tr>
</tbody>
</table>

**Selenium**

**EUROPE**

**MB-SE-0002**

Selenium 99.5% Se min, in-whs Rotterdam, $/lb

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

### China

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Quality</th>
<th>Quantity</th>
<th>Location</th>
<th>Unit</th>
<th>Payment terms</th>
<th>Publication</th>
</tr>
</thead>
<tbody>
<tr>
<td>MB-SE-0003</td>
<td>Selenium 99.9% Se min, in-whs China, yuan/kg</td>
<td>Powder of minus 200 mesh or granules size 1-5 mm. Se 99.9% min, no other elements specified</td>
<td>Min 100 kg</td>
<td>In-whs China</td>
<td>CNY/kg</td>
<td>Cash, other payment terms normalized</td>
<td>Weekly, Friday by 3pm London time</td>
</tr>
<tr>
<td>MB-SI-0002</td>
<td>Silicon export 98.5% Si min, fob China, $/tonne</td>
<td>Lump. Si 98.5% min, Fe 0.5% max, Al 0.5% max, Ca 0.3% max</td>
<td>Min 20 tonnes</td>
<td>fob China main ports</td>
<td>USD/tonne</td>
<td>T</td>
<td>Weekly. Friday 2-3pm London time</td>
</tr>
</tbody>
</table>

### Europe

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Quality</th>
<th>Quantity</th>
<th>Location</th>
<th>Unit</th>
<th>Payment terms</th>
<th>Publication</th>
</tr>
</thead>
<tbody>
<tr>
<td>MB-SI-0001</td>
<td>Silicon grade 4-4-1 99% Si min, in-whs Rotterdam, €/tonne</td>
<td>10-100mm lump 90% min. Si 99% min, Fe 0.4% max, Al 0.4% max, Ca 0.1% max</td>
<td>Min 25 tonnes (+/- 2%)</td>
<td>In-whs Rotterdam</td>
<td>EUR/tonne</td>
<td>Cash, other terms normalized</td>
<td>Weekly, Friday between 2pm and 3pm London time</td>
</tr>
<tr>
<td>MB-SI-0004</td>
<td>Silicon grade 5-5-3 98.5% Si min, in-whs Rotterdam, €/tonne</td>
<td>10-100mm lump. Silicon 98.50%, iron 0.50% max, aluminium 0.50% max, calcium 0.30% max</td>
<td>Min 25 tonnes (+/- 2%)</td>
<td>In-whs Rotterdam</td>
<td>EUR/tonne</td>
<td>Cash, other terms normalized</td>
<td>Weekly, Friday between 2pm and 3pm London time</td>
</tr>
</tbody>
</table>

### United States

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Quality</th>
<th>Quantity</th>
<th>Location</th>
<th>Unit</th>
<th>Payment terms</th>
<th>Publication</th>
</tr>
</thead>
<tbody>
<tr>
<td>MB-SI-0003</td>
<td>Silicon, ddp US, US cents/lb</td>
<td>Si: 98.50%, Fe: 0.50%, Al: 0.50%, Ca: 0.30%</td>
<td>Min 20 tons</td>
<td>Delivered US</td>
<td>USD/lb</td>
<td>T</td>
<td>Weekly, Thursday 4-5pm New York time</td>
</tr>
</tbody>
</table>

### Tantalum

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Quality</th>
<th>Quantity</th>
<th>Location</th>
<th>Unit</th>
<th>Payment terms</th>
<th>Publication</th>
</tr>
</thead>
<tbody>
<tr>
<td>MB-TA-0001</td>
<td>Tantalite, basis min 25% Ta2O5, cif China</td>
<td>Lump 0-10mm grain concentrate; Ta2O5 25% min; Nb2O5 15% min; U3O8+ThO2 0.10% max</td>
<td>Minimum 10-tonne lots</td>
<td>cif main ports China</td>
<td>USD per lb Ta2O5</td>
<td>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.</td>
<td>Weekly; Fridays 2-3pm London time</td>
</tr>
</tbody>
</table>
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**

**MB-TE-0002**

Tellurium 99.99% Te min, in-whs China, yuan/kg

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

Quantity: Min 500kg

Location: In-whs China

Unit: CNY/kg

Payment terms: Cash, other terms normalized

Publication: Weekly. Friday 2-3pm London time

---

Battery raw materials

**Cobalt sulfate**

**CHINA**

**MB-CO-0017**

Cobalt sulfate 20.5% Co basis, exw China, yuan/tonne

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**

**MB-CO-0020**

Cobalt hydroxide index 30% Co min, cif China, $/lb

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.
Non-ferrous Prices

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 England and Wales, the assessment will be rolled over from previous pricing session.

Lithium

Lithium carbonate 99.5% Li2CO3 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: Li2CO3 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.

Lithium hydroxide monohydrate 56.5% LiOH.H2O 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.H2O 56.5% min; CO2 <0.35%; Ca 0.005% max; SO4 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

Lithium carbonate 99.5% Li2CO3 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: Li2CO3 99.5% min (Min. 99.2% Li2CO3 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: Weekly. Thursday by 4pm London

Lithium hydroxide monohydrate 56.5% LiOH.H2O 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.H2O 56.5% min; CO2 <0.35%; Ca 0.020% max; SO4 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: Weekly. Thursday by 4pm London
<table>
<thead>
<tr>
<th>MB-LI-0027</th>
<th>Lithium carbonate 99.5% Li₂CO₃ min, battery grade, contract price cif China, Japan &amp; Korea, $/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality:</td>
<td>Powder, accepted by buyer for use in battery applications and with the chemical composition: Li₂CO₃ 99.5% min (Min. 99.2% Li₂CO₃ 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</td>
</tr>
<tr>
<td>Quantity:</td>
<td>Min 20 tonnes</td>
</tr>
<tr>
<td>Location:</td>
<td>cif China, Japan &amp; South Korea</td>
</tr>
<tr>
<td>Timing:</td>
<td>Up to 1 year</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD/kg</td>
</tr>
<tr>
<td>Publication:</td>
<td>Monthly. Last Wednesday of the month between 3pm and 4pm London time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MB-LI-0031</th>
<th>Lithium hydroxide monohydrate 56.5% LiOH·H₂O min, battery grade, contract price cif China, Japan &amp; Korea, $/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality:</td>
<td>Powder, accepted by buyer for use in battery applications and with the chemical composition LiOH·H₂O 56.5% min; CO₂ &lt;0.35%; Ca 0.020% max; SO₄ 0.015% max; Cl⁻ 0.005% max</td>
</tr>
<tr>
<td>Quantity:</td>
<td>Min 20 tonnes</td>
</tr>
<tr>
<td>Location:</td>
<td>cif China, Japan &amp; South Korea</td>
</tr>
<tr>
<td>Timing:</td>
<td>Up to 1 year</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD/kg</td>
</tr>
<tr>
<td>Publication:</td>
<td>Monthly. Last Wednesday of the month, 3-4pm London time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MB-LI-0023</th>
<th>Lithium carbonate 99.5% Li₂CO₃ min, battery grade, spot price ddp Europe and US, $/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality:</td>
<td>Powder, accepted by buyer for use in battery applications and with the chemical composition: Li₂CO₃ 99.5% min (Min. 99.2% Li₂CO₃ 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</td>
</tr>
<tr>
<td>Quantity:</td>
<td>Min 5 tonnes</td>
</tr>
<tr>
<td>Location:</td>
<td>ddp US &amp; Europe</td>
</tr>
<tr>
<td>Timing:</td>
<td>30 days</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD/kg</td>
</tr>
<tr>
<td>Publication:</td>
<td>Weekly. Thursday 3-4pm London time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MB-LI-0025</th>
<th>Lithium hydroxide monohydrate 56.5% LiOH·H₂O min, battery grade, spot price ddp Europe and US, $/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality:</td>
<td>Powder, accepted by buyer for use in battery applications and with the chemical composition LiOH·H₂O 56.5% min; CO₂ &lt;0.35%; Ca 0.020% max; SO₄ 0.015% max; Cl⁻ 0.005% max</td>
</tr>
<tr>
<td>Quantity:</td>
<td>Min 5 tonnes</td>
</tr>
<tr>
<td>Location:</td>
<td>ddp US &amp; Europe</td>
</tr>
<tr>
<td>Timing:</td>
<td>30 days</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD/kg</td>
</tr>
<tr>
<td>Publication:</td>
<td>Weekly. Thursday 3-4pm London time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MB-LI-0022</th>
<th>Lithium carbonate 99.5% Li₂CO₃ min, battery grade, contract price ddp Europe and US, $/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality:</td>
<td>Powder, accepted by buyer for use in battery applications and with the chemical composition: Li₂CO₃ 99.5% min (Min. 99.2% Li₂CO₃ 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</td>
</tr>
<tr>
<td>Quantity:</td>
<td>Min 20 tonnes</td>
</tr>
<tr>
<td>Location:</td>
<td>ddp US &amp; Europe</td>
</tr>
<tr>
<td>Timing:</td>
<td>Up to 1 year</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD/kg</td>
</tr>
<tr>
<td>Publication:</td>
<td>Monthly. Last Wednesday of the month, 3-4pm London time</td>
</tr>
</tbody>
</table>
### Non-ferrous Prices

**Lithium hydroxide monohydrate**

<table>
<thead>
<tr>
<th>MB-LI-0024</th>
<th>Lithium hydroxide monohydrate 56.5% LiOH.H2O min, battery grade, contract price ddp Europe and US, $/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality:</td>
<td>Powder, accepted by buyer for use in battery applications and with the chemical composition LiOH.H2O 56.5% min; CO2 &lt;0.35%; Ca 0.020% max; SO4 0.015% max; Cl- 0.005% max</td>
</tr>
<tr>
<td>Quantity:</td>
<td>Min 20 tonnes</td>
</tr>
<tr>
<td>Location:</td>
<td>DDP US &amp; Europe</td>
</tr>
<tr>
<td>Timing:</td>
<td>Up to 1 year</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD/kg</td>
</tr>
<tr>
<td>Publication:</td>
<td>Monthly, last Wednesday of the month 3-4pm London time</td>
</tr>
</tbody>
</table>

**Graphite**

- **Graphite spherical 99.95% C, 15 microns, fob China, $/tonne**
  - MB-GRA-0036
  - Quality: 99.95% C, 15 microns, uncoated
  - Quantity: Min 20 tonnes
  - Location: fob China
  - Unit: USD/tonne
  - Publication: Weekly. Thursday by 4pm London

- **Graphite flake 94% C, -100 mesh, fob China, $/tonne**
  - MB-GRA-0042
  - Quality: Flake 94% C, -100 Mesh
  - Quantity: Min lot size: 20 tonnes
  - Location: fob China, FCL
  - Unit: US$ per tonne
  - Publication: Weekly, Thursday by 4pm, London

**Nickel Sulfate**

<table>
<thead>
<tr>
<th>MB-NI-0244</th>
<th>Nickel sulfate min 21%, max 22.5%; cobalt 10ppm max, exw China, yuan/tonne</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality:</td>
<td>Nickel content min 21%, max: 22.5%; cobalt 10ppm max</td>
</tr>
<tr>
<td>Quantity:</td>
<td>Min 1 tonne</td>
</tr>
<tr>
<td>Unit:</td>
<td>CNY/tonne</td>
</tr>
<tr>
<td>Payment terms:</td>
<td>Bank acceptance (other payments normalized)</td>
</tr>
<tr>
<td>Publication:</td>
<td>Weekly. Friday 3-4pm London time</td>
</tr>
</tbody>
</table>

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Non-ferrous Prices

Scrap

Copper scrap

CHINA

MB-CU-0360  Copper scrap No.2 copper (birch/cliff) imported into China 94-96%, LME/Comex discount, cif China, US cents/lb
Quality:  94-96% copper content, US or European origin; discount to LME or Comex
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

Aluminium scrap

UNITED KINGDOM

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 or 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

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

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<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>MB-AL-0012</td>
<td>Aluminium scrap commercial turnings, delivered consumer UK, £/tonne</td>
<td>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</td>
</tr>
<tr>
<td>MB-AL-0013</td>
<td>Aluminium scrap floated frag, delivered consumer Europe, €/tonne</td>
<td>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 &amp; plastics 1% max)</td>
</tr>
<tr>
<td>MB-AL-0014</td>
<td>Aluminium scrap group 1 pure 99% &amp; litho, delivered consumer UK, £/tonne</td>
<td>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%)</td>
</tr>
<tr>
<td>MB-AL-0015</td>
<td>Aluminium scrap group 7 turnings, delivered consumer UK, £/tonne</td>
<td>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</td>
</tr>
<tr>
<td>MB-AL-0016</td>
<td>Aluminium scrap loose old rolled cuttings, delivered consumer UK, £/tonne</td>
<td>Wrought scrap of alloyed and unalloyed aluminium. Maximum 2% calcarious and other non-metallic substances</td>
</tr>
<tr>
<td>MB-AL-0017</td>
<td>Aluminium scrap mixed turnings, delivered consumer Europe, €/tonne</td>
<td>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</td>
</tr>
<tr>
<td>MB-AL-0018</td>
<td>Aluminium scrap loose old rolled cuttings, delivered consumer UK, £/tonne</td>
<td>Wrought scrap of alloyed and unalloyed aluminium. Maximum 2% calcarious and other non-metallic substances</td>
</tr>
<tr>
<td>MB-AL-0019</td>
<td>Aluminium scrap mixed turnings, delivered consumer Europe, €/tonne</td>
<td>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</td>
</tr>
</tbody>
</table>

**Quantity:**
- MB-AL-0012: 5 tonnes
- MB-AL-0013: Min 25 tonnes
- MB-AL-0014: 5 tonnes
- MB-AL-0015: Min 5 tonnes
- MB-AL-0016: Min 5 tonnes
- MB-AL-0017: Min 5 tonnes
- MB-AL-0018: Min 5 tonnes
- MB-AL-0019: Min 25 tonnes

**Location:**
- Delivered consumer works, UK
- Delivered consumer works, Europe

**Timing:**
- Within 4 weeks

**Unit:**
- GBP/tonne
- EUR/tonne

**Payment terms:**
- Net monthly account
- 30 days, other payment terms normalized

**Publication:**
- Weekly. Wednesday 3-4pm London time
## Secondary aluminium

### EUROPE

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Quality</th>
<th>Quantity</th>
<th>Location</th>
<th>Timing</th>
<th>Unit</th>
<th>Payment terms</th>
<th>Publication</th>
</tr>
</thead>
<tbody>
<tr>
<td>MB-AL-0005</td>
<td>Aluminium pressure diecasting ingot DIN226/A380, delivered Europe, €/tonne</td>
<td>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</td>
<td>Min 25 tonnes</td>
<td>Delivered consumer works in Europe, most consumers in Northern Europe, in particular Germany</td>
<td>Within 2 months</td>
<td>EUR/tonne</td>
<td>30 days, other payment terms normalized</td>
<td>Weekly. Friday 3-4pm London time</td>
</tr>
</tbody>
</table>

### Titanium scrap

#### EUROPE

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Quality</th>
<th>Quantity</th>
<th>Location</th>
<th>Timing</th>
<th>Unit</th>
<th>Payment terms</th>
<th>Publication</th>
</tr>
</thead>
<tbody>
<tr>
<td>MB-TI-0001</td>
<td>Titanium scrap turnings, unprocessed type 96/6/4, 0.5% Sn max, cif Europe, $/lb</td>
<td>Turnings. Ti 90%, Al 6%, V 4%, Sn 0.5%</td>
<td>18-22 tonne lots</td>
<td>cif major European ports</td>
<td>Weekly. Wednesday 3-4pm London time</td>
<td>USD/per lb Ti</td>
<td>Cash. Other terms normalized</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Quality</th>
<th>Quantity</th>
<th>Location</th>
<th>Timing</th>
<th>Unit</th>
<th>Payment terms</th>
<th>Publication</th>
</tr>
</thead>
<tbody>
<tr>
<td>MB-TI-0002</td>
<td>Titanium scrap turnings, unprocessed type 96/6/4, 0.5-2% Sn max, cif Europe, $/lb</td>
<td>Turnings. Titanium 90%, Al 6%, V 4%, Sn 0.5-2%</td>
<td>18-22 tonne lots</td>
<td>cif major European ports</td>
<td>Weekly. Wednesday 3-4pm London time</td>
<td>USD/per lb Ti</td>
<td>Cash. Other terms normalized</td>
<td></td>
</tr>
</tbody>
</table>
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