Non-ferrous Prices

Methodology and price specifications – May 2019
Contents

3 Mission statement
   Introduction
4 Price discovery and methodology
6 Price specifications
   Base metals
   6 Alumina
   6 Calcined pet coke (petroleum)
   6 Aluminium
10 Aluminium billet
11 Aluminium extrusion products
12 Aluminium flat-rolled products
12 Aluminium foundry alloys
13 Copper concentrate
13 Blister copper
14 Refined copper
17 Copper rod
18 Lead concentrate
18 Refined lead
21 Nickel
23 Tin
24 Zinc concentrate
24 Refined zinc

Bulk alloys
29 Ferro-chrome
31 Ferro-manganese
32 Ferro-silicon
32 Silico-manganese
33 Ferro-nickel
33 Nickel Pig Iron

Noble alloys
34 Molybdenum
34 Titanium
35 Tungsten
35 Ferro-tungsten
36 Vanadium

Ores
37 Bauxite
37 Chrome ore
38 Manganese ore
38 Manganese ore stocks
38 Nickel ore

Minor metals
40 Antimony
40 Arsenic
41 Bismuth
41 Cadmium
41 Chromium
42 Cobalt
42 Cobalt sulfate
42 Gallium
43 Germanium
43 Hafnium
44 Indium
44 Magnesium
44 Manganese
45 Mercury
45 Rhenium
45 Selenium
46 Silicon
47 Tellurium

Battery Raw Materials
47 Aluminium
47 Copper
48 Lead
48 Tin

Scrap
49 Copper scrap
49 Aluminium scrap
51 Secondary aluminium
51 Titanium
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’ assessments 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 assessment 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 of ferrous, non-ferrous and scrap metal prices on a daily, biweekly, weekly, bi-monthly or monthly basis.

Fastmarkets calculates and publishes monthly averages based on these independent, proprietary assessments and indices in two distinct ways: simple averages and rolling averages.

Simple average
Fastmarkets’ simple monthly averages, traditionally published by Fastmarkets MB, 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 outside of the Americas are typically calculated on a simple-average basis.

Rolling average
Fastmarkets’ rolling monthly averages, traditionally published by Fastmarkets AMM, are calculated by dividing the sum of the daily price quotations by the number of the quotations published during the calendar month. In a rolling average scenario, prices are published on a daily basis, regardless of how frequently they are updated. Daily price quotations are rolled for working days until the following price change, excluding holidays and weekends. No pricing input is published on holidays or weekends.

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, with the first price update made on Friday, June 1. According to Fastmarkets’ calculation, the price assessment from Friday is rolled over and republished on the Monday, Tuesday, Wednesday and Thursday of the following week, with the newly updated price published each Friday. The rolling monthly average is then calculated by taking the sum of all daily published prices and dividing it by the 21 total inputs over the period. The rolling monthly average price for June 2018 is therefore $208.71 per tonne.

Most prices produced from the Americas are typically calculated on a rolling-average basis.

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 Ferro-chrome Index
- Fastmarkets MB Chrome Ore Index

The methodologies are available on the Fastmarkets MB website.
Base metals

Alumina

CHINA

Assessment: Alumina metallurgical grade DDP China
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

Assessment: Alumina fob Bunbury, Australia, Index, single figure
Grade: Smelter-grade alumina, minimum purity of 98.5% Al2O3
Quantity: 10,000 tonnes
Location: FOB Bunbury/Kwinana (other ports normalized)
Timing: Within 2 months
Unit: USD/dry metric tonne
Timing: Bulk carrier
Payment Terms: 30 days after loading
Publication: Daily at 4pm London time
Notes: Full methodology available here:

BRAZIL

Assessment: Alumina fob Vila do Conde, Brazil (Adjustment), index, single figure
Grade: Smelter grade alumina, minimum purity of 98.5% Al2O3
Quantity: 10,000 tonnes
Location: FOB Vila do Conde, Brazil (other ports normalized)
Timing: Within 2 months
Timing: Bulk carrier
Unit: USD/dry metric tonne
Payment terms: 30 days after loading
Publication: Fortnightly. Thursday at 4pm London time
Notes: Full methodology available here:

Calcined pet coke (petroleum)

UNITED STATES

Assessment: Calcined petroleum coke, fob US Gulf coast
Grade: Aluminium anode grade, 3% sulfur
Quantity: Min 5,000 tonnes
Unit: USD/tonne
Location: FOB US Gulf coast
Timing: Within 4 weeks
Publication: Monthly, first Thursday of the month, 3-4pm London time

CHINA

Assessment: Calcined petroleum coke, fob China.
Grade: Aluminium anode grade, 3% sulfur
Quantity: Min 5,000 tonnes
Location: FOB China
Unit: USD/tonne
Timing: Within 4 weeks
Publication: Monthly, first Thursday of the month, 3-4pm London time

Aluminium

JAPAN

Assessment: Aluminium P1020A quarterly cif main Japanese ports (MJP), single number or range
Grade: P1020A or 99.7 % Minimum Al purity (Si 0.10% max, Fe 0.20% max)
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
Form: Ingot, T-bar, saw
Payment terms: Cash against documents (2 days after Bill of lading date)
Publication: Quarterly
Notes: Full methodology available here:

Bauxite

Please see Ores section.

www.fastmarkets.com
### SOUTH KOREA

**Assessment**

**Aluminium P1020A, spot cif main Japanese ports (MJP)**

**Grade:** P1020A or 99.7 % Minimum Al purity (Si 0.10% max, Fe 0.20% max) in line with LME specifications

**Quantity:** 100 tonnes

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

**Unit:** USD/tonne

**Origin:** Excluding metal from LME warehouses and metal subject to international sanctions

**Timing:** Within 4 weeks

**Form:** Ingot, T-bar, sow

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

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

**Notes:** Assessed by Fastmarkets’ Singapore office

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### CHINA

**Assessment**

**Aluminium P1020A cif Shanghai**

**Type:** Assessed single number and range

**Location:** Cif Shanghai, premium on top of LME cash prices

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

**Unit:** USD/tonne

**Quantity:** 100 tonnes

**Timing:** Within 4 weeks

**Form:** Ingot

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

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

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### SOUTH KOREA

**Assessment**

**Aluminium P1020A cif South Korea, single number and range**

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

**Quantity:** 100 tonnes

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

**Unit:** USD/tonne

**Timing:** Within 4 weeks

**Form:** Ingot, T-bar, sow

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

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

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### TAIWAN

**Assessment**

**Aluminium P1020A fca South Korea**

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

**Quantity:** 100 tonnes

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

**Unit:** USD/tonne

**Timing:** Within 4 weeks

**Form:** Ingot

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

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

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**Assessment**

**Aluminium P1020A bonded in-warehouse Shanghai**

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

**Quantity:** 100 tonnes

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

**Unit:** USD/tonne

**Timing:** Within 4 weeks

**Form:** Ingot

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

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

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**Assessment**

**Aluminium P1020A cif Taiwan**

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

**Quantity:** 100 tonnes

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

**Unit:** USD/tonne

**Timing:** Within 4 weeks

**Form:** Ingot

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

**Publication:** Weekly. Tuesday 3-4pm London
SOUTHEAST ASIA
Assessment Aluminium P1020A in-warehouse Southeast Asian warrants
Grade: P1020A or 99.7 % Minimum Al purity (Si 0.10% max, Fe 0.20% max)
Quantity: 25 tonnes
Location: In any LME-approved warehouse in Singapore and in Malaysia (Johor, Port Klang), premium on top of LME cash prices
Unit: USD/tonne
Timing: Prompt release
Form: Ingot, T-bars, Sow
Payment terms: Cash against documents (7 days after bill of lading date); other terms normalised
Publication: Weekly, Tuesday 3-4pm London time

EAST ASIA
Assessment Aluminium P1020A in-warehouse East Asian warrants
Location: In any LME-approved warehouse in Taiwan (Kaohsiung) and South Korea (Gwangyang, Busan or Incheon), premium on top of LME cash prices
Grade: P1020A or 99.7 % Minimum Al purity (Si 0.10% max, Fe 0.20% max)
Unit: USD/tonne
Quantity: 25 tonnes
Timing: Prompt release
Form: Ingot, T-bars, Sow
Payment terms: Cash against documents (7 days after bill of lading date); other terms normalised
Publication: Weekly, Tuesday 3-4pm London time

EUROPE
Assessment Aluminium P1020A in-warehouse Rotterdam duty-unpaid
Type: Assessed single number and range
Grade: P1020A or 99.7 % Minimum Al purity (Si 0.10% max, Fe 0.20% max)
Quantity: 100 tonnes
Location: In-warehouse Rotterdam duty-unpaid, premium on top of LME cash prices
Unit: USD/tonne
Timing: Within 4 weeks
Form: Ingot
Payment terms: Cash against documents (7 days after bill of lading date); other terms normalised
Publication: Daily, 3-4pm London time
### TURKEY

**Assessment**
- Aluminum P1020A cif duty-unpaid Turkey

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

**Quantity:**
- 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 normalised

**Form:** Ingot

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

### UNITED STATES

**Assessment**
- Aluminium P1020A in-warehouse US warrants

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

**Location:**
- In any LME-approved warehouse in the USA (10 delivery points in June 2017), premium on top of LME cash prices

**Quantity:**
- 25 tonnes

**Unit:** USD per tonne

**Timing:**
- Prompt Release

**Form:** Ingot, T-bars, Sow

**Payment terms:**
- Cash against documents (7 days after bill of lading date); other terms normalised

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

### BRAZIL

**Assessment**
- Aluminium P1020A cif Brazil main ports

**Location:**
- Shipped to ports in Baltimore, Maryland, premium on top of London Metal Exchange cash prices, net back to Baltimore

**Grade:**
- P1020A or 99.7 % minimum aluminium purity (silicon 0.10% maximum, iron 0.20% maximum)

**Origin:**
- Except China

**Unit:** USD/tonne

**Min quantity:**
- 100 tonnes

**Timing:**
- Within 4 weeks

**Payment terms:**
- 30 days, other payment terms normalized

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

### UNITED STATES

**Assessment**
- Aluminum P1020A delivered US Midwest

**Location:**
- Delivered consumer works Midwest USA, premium on top of LME cash prices

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

**Unit:** USD per lb

**Quantity:**
- 25 tonnes

**Timing:**
- Within 4 weeks

**Form:** Ingot

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

### UNITED STATES

**Assessment**
- Aluminum P1020A cif Baltimore ports premium

**Location:**
- Shipped to ports in Baltimore, Maryland, premium on top of London Metal Exchange cash prices, net back to Baltimore

**Grade:**
- P1020A or 99.7 % minimum aluminium purity (silicon 0.10% maximum, iron 0.20% maximum)

**Unit:** US cents per lb

**Min quantity:**
- 100 tonnes

**Timing:**
- Within 4 weeks

**Payment terms:**
- 30 days, other payment terms normalized

**Publication:** Weekly. Tuesday 3-4pm London
Aluminium billet

**EUROPE**

**Assessment**
Aluminium 6063 extrusion billet in-warehouse Rotterdam

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

**Grade:**
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

**Unit:**
USD/tonne

**Quantity:**
100 tonnes

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

**Timing:**
Within 2 months

**Form:**
Extrusion billet with outside diameter of 6", 7" and 8"

**Publication:**
Weekly. Friday 3-4pm London

**Assessment**
Aluminium 6063 extrusion billet DDP North Germany

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

**Grade:**
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

**Unit:**
USD/tonne

**Quantity:**
100 tonnes

**Payment terms:**
30-day payment terms, other payment terms normalised

**Timing:**
Within 2 months

**Form:**
Billet with diameter of 6", 7" and 8"

**Publication:**
Weekly. Friday between 3pm and 4pm London time

**Assessment**
Aluminium 6063 extrusion billet DDP Spain

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

**Grade:**
Extrusion billet AA6063

**Unit:**
USD/tonne

**Quantity:**
100 tonnes

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

**Timing:**
Within 2 months

**Form:**
Billet with diameter of 6", 7" and 8"

**Publication:**
Fortnightly. Friday 3-4pm London time

**UNITED STATES**

**Assessment**
Aluminium 6063 extrusion billet delivered US Midwest

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

**Grade:**
Extrusion billet AA6063

**Currency:**
US cents

**Unit:**
lb

**Quantity:**
100 tonnes

**Payment terms:**
30-day payment, other payments terms normalised

**Timing:**
Within 2 months

**Form:**
Billet with diameter of 6", 7" and 8"

**Publication:**
Fortnightly. Friday between 3pm and 4pm London time

**SOUTHEAST ASIA**

**Assessment**
Aluminium 6063 extrusion billet cif Thailand

**Location:**
Cif delivery into main Thai ports, duty-paid premium on top of LME cash prices

**Grade:**
Extrusion billet AA6063

**Unit:**
USD/tonne

**Quantity:**
100 tonnes

**Payment terms:**
Cash against documents (7 days after bill of lading date), other payments terms normalised

**Timing:**
Within 2 months

**Form:**
Billet with diameter of 6", 7" and 8"

**Publication:**
Every 28 days. Friday between 3pm and 4pm London time
JAPAN
Assessment: Aluminium 6063 extrusion billet cif MJP
Grade: Extrusion billet AA6063
Location: CIF in Major Japanese Ports (MJP), duty-paid premium on top of the P1020A ingot MJP premium and LME cash prices
Unit: USD/tonne
Quantity: 100 tonnes
Payment terms: Cash against documents (7 days after bill of lading date), other payments terms normalised
Timing: Within 2 months
Form: Billet with diameter of 6", 7" and 8"
Publication: Monthly. 3rd Friday of the month between 3pm and 4pm London time

TURKEY
Assessment: Aluminium 6063 extrusion billet cif Turkey
Location: Cif delivery in Turkey (Marmara region), duty-paid premium on top of LME cash prices
Grade: Extrusion billet AA6063
Unit: USD/tonne
Quantity: 100 tonnes
Payment terms: Cash, other payments terms normalised
Timing: Within 2 months
Form: Billet with diameter of 6", 7" and 8"
Publication: Fortnightly. Friday between 3pm and 4pm London time

BRAZIL
Assessment: Aluminium extrusion billet 6063 and 6060 cif Brazilian ports
Location: CIF Brazil
Grade: Extrusion billet AA6063 and AA6060
Unit: USD/tonne
Quantity: 100 tonnes
Payment terms: Cash against documents (7 days after bill of lading date), other payments terms normalised
Timing: Within 2 months
Form: Billet with diameter of 6", 7" and 8"
Publication: Fortnightly. Friday between 3pm and 4pm London time

EUROPE
Assessment: Aluminium 6063 extrusion conversion margin, ex-works Germany
Grade: Standard extruded shapes and dimensions
Quantity: Min 500kg
Location: Ex-works Germany
Unit: USD/tonne
Timing: Within 4 weeks
Payment terms: 30-day payment terms, other terms normalized
Publication: Monthly, first Thursday of the month, 3-4pm London time
Notes: Margins are on top of LME cash prices and Fastmarkets MB's all-in-in-warehouse Rotterdam duty-paid extrusion billet premium, which includes the P1020A premium and the billet premium for converting metal to billet

UNITED STATES
Assessment: Aluminium 6063 extrusion conversion margin ex-works US Midwest
Grade: Standard extruded shapes and dimensions
Quantity: Min 500kg
Location: Ex-works US Midwest
Unit: US cents/lb
Timing: Within 4 weeks
Payment terms: 30-day payment terms, other terms normalized
Publication: Monthly, first Thursday of the month, 3-4pm London time
Notes: Margins are on top of LME cash prices, Fastmarkets MB's US Midwest billet premium and Fastmarkets MB's US Midwest P1020A premium
Aluminium flat-rolled products

EUROPE
Assessment: Aluminium FRP 1050 sheet conversion margin ex-works Germany
Grade: 1050 H14 sheet 1.25-1.5 by 2m; Gauge 1.0-3mm. Margins for coil accepted and netted back to sheet if possible
Quantity: Min 5 tonnes
Location: Ex-works Germany
Unit: USD/tonne
Timing: Within 4 weeks
Payment terms: 30-day payment terms, other terms normalized
Publication: Monthly, first Thursday of the month, 3-4pm London time
Notes: Margins are on top of LME cash prices and Fastmarkets MB’s P1020A in-warehouse Rotterdam duty-paid premium

UNITED STATES
Assessment: Aluminium FRP 5052 sheet conversion margin ex-works US
Grade: 5052 H32 smooth sheet 1.25-1.5x2m; gauge: 1.0-3mm. Margins for coil accepted and netted back to sheet if possible
Quantity: Min 5 tonnes
Location: Ex-works US; other locations normalized if possible
Unit: US cents/lb
Timing: Within 4 weeks
Payment terms: 30-day payment terms, other terms normalized
Publication: Monthly, first Thursday of the month, 3-4pm London time
Notes: Margins are on top of LME cash prices and Fastmarkets MB’s P1020A US Midwest P1020A duty-paid premium

China
Assessment: Aluminium FRP 5000 sheet conversion margin ex-works China
Grade: 5000 export indicator price. H32 1.25-1.5 by 2m; Gauge 1.0-3mm. Margins for coil accepted and netted back to sheet if possible
Quantity: Min 5 tonnes
Location: Ex-works China
Unit: USD/tonne
Timing: Within 4 weeks
Payment terms: 30-day payment terms, other payment terms normalized
Publication: Monthly, first Thursday of the month, 3-4pm London time
Notes: Margins are on top of LME cash prices

Aluminium foundry alloy

EUROPE
Assessment: Aluminium wheel alloy silicon 7 DDP Germany
Location: Delivered in Germany, duty paid premium on top of LME cash prices
Grade: Primary Foundry Alloy silicon 7 AlSi7Mg0.3-0.6 for wheel production
Unit: USD/tonne
Quantity: 100 tonnes
Payment terms: 30-day payment terms, other payments terms normalized
Timing: Within 2 months
Form: Ingot
Publication: Monthly, 2nd Friday of the month between 3pm and 4pm London time
Non-ferrous Prices

Copper concentrate

ASIA PACIFIC

Index: Copper Concentrate TC/RC Index
Grade: Copper content 28%; Au 1.1g/dmt; Ag 75g/dmt; S 32%; Fe 28%; Pb 0.07%; Zn 2%; As 0.17%; Sb 0.018%; Hg 2.5ppm; Bi 145ppm
Quantity: 5,000 tonnes
Location: Treatment and refining charge (TC/RC) on cif basis delivery in Asia Pacific region
Unit: TC in USD/tonne, RC in US cents/lb
Timing: Within 13 weeks
Form: Concentrate
Payment terms: Letter of Credit, quotation period M+3
Publication: Twice-monthly. Every 15th and last day of the month 3pm London time
Notes: Full methodology available here.

Blister copper

CHINA

Assessment: Blister copper 98-99% spot RC cif China
Type: Single number and range
Chemistry: Blister copper of 98-99% copper content, with varying payables
Location: CIF China
Unit: USD per tonne
Delivery: Within 2 months
Publication: Monthly, last day of the month, 3-4pm London time

Assessment: Blister copper 98-99% annual benchmark RC cif China
Type: Single number and range
Chemistry: Blister copper of 98-99% copper content, with varying payables
Location: CIF China
Unit: USD per tonne
Publication: Annually, January or February
### Refined copper

#### CHINA

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Copper Grade A cathode in-warehouse Shanghai</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type:</td>
<td>Assessed range and assessed single number</td>
</tr>
<tr>
<td>Location:</td>
<td>In-warehouse Shanghai port, duty-unpaid premium on top of LME cash prices</td>
</tr>
<tr>
<td>Grade:</td>
<td>Grade A 99.9935% min copper conforming to LME specifications BS EN 1978:1998 – Cu-CATH-1</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD/tonne</td>
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<tr>
<td>Quantity:</td>
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<td>Timing:</td>
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<tr>
<td>Form:</td>
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<tr>
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<td>Daily, Between 3pm and 4pm London time</td>
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<th>Assessment</th>
<th>Copper Grade A ER cathode in-warehouse Shanghai</th>
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<tbody>
<tr>
<td>Grade:</td>
<td>Electro-Refined Grade A 99.9935% min conforming to LME specifications BS EN 1978:1998 (Cu-CATH-1)</td>
</tr>
<tr>
<td>Unit:</td>
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<tr>
<td>Quantity:</td>
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<th>Copper Grade A SX-EW cathode in-warehouse Shanghai</th>
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<tbody>
<tr>
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</tr>
<tr>
<td>Location:</td>
<td>In-warehouse Shanghai port, duty-unpaid premium on top of LME cash prices</td>
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<td>Unit:</td>
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<tr>
<td>Quantity:</td>
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<tr>
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<td>Type:</td>
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<td>Location:</td>
<td>Cif delivery in main South Korean ports (Busan, Incheon, Gwangyang, Onsan), duty-unpaid premium on top of LME cash prices</td>
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<td>Grade:</td>
<td>Grade A 99.9935% min copper conforming to LME specifications BS EN 1978:1998 – Cu-CATH-1</td>
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<tr>
<td>Assessment</td>
<td>Copper Grade A cathode in-warehouse Southeast Asian warrants</td>
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<tr>
<td>------------</td>
<td>-------------------------------------------------------------</td>
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<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>Grade:</td>
<td>Grade A 99.9935% min copper conforming to LME specifications BS EN 1978:1998 – Cu-CATH-1</td>
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<tr>
<td>Payment terms:</td>
<td>Cash, other payment terms normalised</td>
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<th>Assessment</th>
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<td>Location:</td>
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<tr>
<th>Assessment</th>
<th>Copper Grade A cathode in-warehouse East Asian warrants</th>
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<tbody>
<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>Grade:</td>
<td>Grade A 99.9935% min copper conforming to LME specifications BS EN 1978:1998 – Cu-CATH-1</td>
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<tr>
<td>Location:</td>
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<td>Grade:</td>
<td>Grade A 99.9935% min copper conforming to LME specifications BS EN 1978:1998 – Cu-CATH-1</td>
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<tr>
<td>Unit:</td>
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<td>Quantity:</td>
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<td>Payment terms:</td>
<td>Cash, other payment terms normalised</td>
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<tr>
<td>Timing:</td>
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<td>Type:</td>
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<tr>
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<td>Cif delivery in Leghorn (Italy), duty unpaid premium on top of LME cash prices</td>
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<td>Grade A 99.9935% min copper conforming to LME specifications BS EN 1978:1998 – Cu-CATH-1</td>
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<tr>
<td>Unit:</td>
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</tr>
<tr>
<td>Quantity:</td>
<td>25 tonnes</td>
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<td>Payment terms:</td>
<td>Cash, other payment terms normalised</td>
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<tr>
<th>Assessment</th>
<th>Copper Grade A cathode delivered Germany</th>
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<tbody>
<tr>
<td>Location:</td>
<td>Delivered consumer works in Germany, duty unpaid premium on top of LME cash prices</td>
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<tr>
<td>Grade:</td>
<td>Grade A 99.9935% min copper conforming to LME specifications BS EN 1978:1998 – Cu-CATH-1</td>
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<tr>
<td>Unit:</td>
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<tr>
<td>Quantity:</td>
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<td>Payment terms:</td>
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<tr>
<td>Publication:</td>
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</table>
### Copper Grade A cathode in-warehouse North European warrants

**Location:** In any LME-approved warehouse in North Europe (Belgium, Germany, the Netherlands, Sweden and the UK), premium on top of LME cash prices  
**Grade:** Grade A 99.9935% min copper conforming to LME specifications BS EN 1978:1998 – Cu-CATH-1  
**Unit:** USD/tonne  
**Quantity:** 25 tonnes  
**Payment terms:** Cash, other payment terms normalised  
**Timing:** Prompt release  
**Form:** Cathode  
**Publication:** Weekly. Tuesday 3-4pm London time

### Copper Grade A cathode in-warehouse South European warrants

**Location:** In any LME-approved warehouse in South Europe (Spain, Italy), premium on top of LME cash prices  
**Grade:** Grade A 99.9935% min copper conforming to LME specifications BS EN 1978:1998 – Cu-CATH-1  
**Unit:** USD/tonne  
**Quantity:** 25 tonnes  
**Payment terms:** Cash, other payment terms normalised  
**Timing:** Prompt release  
**Form:** Cathode  
**Publication:** Weekly. Tuesday 3-4pm London time

### Copper Grade A cathode US warrants

**Location:** Any LME-approved warehouse in the US, premium on top of LME cash prices  
**Grade:** Grade A 99.9935% min copper conforming to LME specifications BS EN 1978:1998 – Cu-CATH-1  
**Unit:** USD/tonne  
**Quantity:** 25 tonnes  
**Payment terms:** Cash, other payment terms normalised  
**Timing:** Prompt release  
**Form:** Cathode  
**Publication:** Weekly. Tuesday 3-4pm London time

### Copper Grade A cathode US delivered Midwest

**Location:** Delivered consumer works Midwest US  
**Grade:** Grade A 99.9935% min copper conforming to LME specifications BS EN 1978:1998 – Cu-CATH-1 or Grade 1 Electrolytic Copper Cathode ASTM B115-00  
**Quantity:** 25 tonnes  
**Timing:** Within 4 weeks  
**Unit:** USD/lb  
**Form:** Cathode  
**Payment:** 30 days, other payment terms normalised  
**Publication:** Weekly. Tuesday 3-4pm London time

### Copper rod

**Location:** In any LME-approved warehouse in the US, premium on top of LME cash prices  
**Grade:** Grade A 99.9935% min copper conforming to LME specifications BS EN 1978:1998 – Cu-CATH-1  
**Unit:** USD/tonne  
**Quantity:** 25 tonnes  
**Payment terms:** Cash, other payment terms normalised  
**Timing:** Prompt release  
**Form:** Cathode  
**Publication:** Weekly. Tuesday 3-4pm London time

### Annual copper wire rod cif Nhava Sheva

**Grade:** 8mm copper wire rod conforming to the ASTM B49-98 / BS-EN 1977-1998 standard chemical specification; copper content min 99.9%  
**Quantity:** 100 tonnes  
**Location:** CIF Nhava Sheva (India), premium on top of LME cash prices  
**Timing:** Within 6 weeks  
**Unit:** USD/tonne  
**Payment terms:** Cash against documents or letter of credit, quotation period  
**Publication time:** Annual, after deals for long-term contracts completed between Indian buyers and international producers and traders.
# Lead concentrate

## CHINA

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Lead Concentrate spot TC High Silver cif China</th>
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<tbody>
<tr>
<td>Location</td>
<td>Treatment Charge on cif basis delivery to Chinese ports</td>
</tr>
<tr>
<td>Grade</td>
<td>55-65% lead content, high silver 2-4kg, arsenic below 0.7%, mercury below 0.05%</td>
</tr>
<tr>
<td>Unit</td>
<td>USD/tonne</td>
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<tr>
<td>Quantity</td>
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<tr>
<td>Payment terms</td>
<td>Letter of Credit, quotation period M+3</td>
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<td>Timing</td>
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<td>Form</td>
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<td>Publication</td>
<td>Monthly. Last Friday of every month</td>
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<th>Assessment</th>
<th>Lead Concentrate spot TC Low Silver cif China</th>
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<td>Location</td>
<td>Treatment Charge on cif basis delivery to Chinese ports</td>
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<tr>
<td>Grade</td>
<td>55-65% lead content, low silver below 1kg, arsenic below 0.7%, mercury below 0.05%</td>
</tr>
<tr>
<td>Unit</td>
<td>USD/tonne</td>
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<tr>
<td>Quantity</td>
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## SOUTHEAST ASIA

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<th>Assessment</th>
<th>Lead 99.99% ingot Cif India</th>
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<tbody>
<tr>
<td>Location</td>
<td>CIF Nhava Sheva (India), duty-unpaid premium on top of LME cash prices</td>
</tr>
<tr>
<td>Grade</td>
<td>Lead of 99.99% minimum purity conforming to LME specification BS EN 12659:1999, GB/T 469/2005 or ASTM B29-03 (2009)</td>
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<td>Unit</td>
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<tr>
<td>Quantity</td>
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<td>Timing</td>
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## Refined lead

## INDIA

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<th>Lead 99.97% ingot Cif India</th>
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<tbody>
<tr>
<td>Location</td>
<td>CIF delivery in Nhava Sheva (India), premium on top of LME cash prices</td>
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<td>Lead of 99.97% to 99.99% purity conforming to LME specification BS EN 12659:1999, GB/T 469/2005 or ASTM B29-03 (2009)</td>
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<td>Publication</td>
<td>Weekly. Tuesday 3-4pm London time</td>
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**Assessment**  
**Lead 99.99% ingot cif Southeast Asia**

**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

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

**Unit:** USD/tonne  
**Quantity:** 25 tonnes  
**Timing:** Within 5 weeks  
**Form:** Ingot  
**Payment terms:** Letter of credit, telegraphic transfer or cash against documents, other terms normalized  
**Publication:** Weekly. Tuesday 3-4pm London time

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**Assessment**  
**Lead 99.97% ingot cif Taiwan**

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

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

**Unit:** USD/tonne  
**Quantity:** 25 tonnes  
**Timing:** Within 5 weeks  
**Form:** Ingot  
**Payment terms:** Letter of credit, telegraphic transfer or cash against documents, other terms normalized  
**Publication:** Weekly. Tuesday 3-4pm London time

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**Assessment**  
**Lead 99.99% ingot cif Taiwan**

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

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

**Unit:** USD/tonne  
**Quantity:** 25 tonnes  
**Timing:** Within 5 weeks  
**Form:** Ingot  
**Payment terms:** Letter of credit, telegraphic transfer or cash against documents, other terms normalized  
**Publication:** Weekly. Tuesday 3-4pm London time

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**EAST ASIA**

**Assessment**  
**Lead 99.97% ingot in-warehouse Southeast Asian warrants**

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

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

**Unit:** USD/tonne  
**Quantity:** 25 tonnes  
**Payment terms:** Cash, other payment terms normalised  
**Timing:** Prompt release  
**Form:** Ingot  
**Publication:** Weekly. Tuesday 3-4pm London time

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**Assessment**  
**Lead 99.97% ingot in-warehouse East Asian warrants**

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

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

**Unit:** USD/tonne  
**Quantity:** 25 tonnes  
**Payment terms:** Cash, other terms normalised  
**Timing:** Prompt release  
**Form:** Ingot  
**Publication:** Weekly. Tuesday 3-4pm London time
EUROPE

Assessment: Lead 99.97% ingot in-warehouse
North European warrants

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

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

Unit: USD/tonne
Quantity: 25 tonnes
Payment terms: Cash, other payment terms normalised
Timing: Prompt release
Form: Cathode
Publication: Weekly. Tuesday 3-4pm London time

UNITED STATES

Assessment: Lead 99.97% ingot delivered US Midwest

Location: Delivered consumer works, US Midwest

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

Currency: US cents
Unit: lb
Quantity: 25 tonnes
Payment terms: 30 days, other payment terms normalized
Timing: Within 5 weeks
Form: Ingot
Publication: Weekly. Tuesday 3-4pm London time

Assessment: Lead 99.97% ingot delivered US Midwest

Location: Delivered consumer works, US Midwest

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

Currency: US cents
Unit: lb
Quantity: 25 tonnes
Payment terms: 30 days, other payment terms normalized
Timing: Within 5 weeks
Form: Ingot
Publication: Weekly. Tuesday 3-4pm London time

Assessment: Lead 99.99% ingot US warrants

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

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

Unit: USD/tonne
Quantity: 25 tonnes
Payment terms: Cash, other payment terms normalised
Timing: Prompt release
Form: Cathode
Publication: Weekly. Tuesday 3-4pm London time
Non-ferrous Prices

Nickel ore
Please see Ores section.

Nickel

**CHINA**

**Assessment**
Duty-free nickel briquette cif Shanghai premium

**Grade:** Nickel content 99.8% in line with LME specifications

**Min quantity:** 6 tonnes

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

**Origin:** Australia and Madagascar

**Unit:** USD/tonne

**Delivery:** Within 8 weeks

**Payment terms:** Cash, other terms normalised

**Timing:** Prompt release

**Form:** Briquette

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

**Assessment**
Nickel full plate in-warehouse Shanghai

**Type:** Assessed range and single number

**Location:** In-warehouse iShanghai bonded zone, premium on top of LME cash prices

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

**Unit:** USD/tonne

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

**Payment terms:** Cash against document, Letter of credit, telegraphic transfer, other terms normalised

**Timing:** With 2 weeks

**Form:** Full plate

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

**Assessment**
Nickel full plate cif Shanghai

**Type:** Assessed range and single number

**Location:** Cif delivery basis Shanghai port, premium on top of LME cash prices

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

**Unit:** USD/tonne

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

**Payment terms:** Cash against document, Letter of credit, telegraphic transfer, other terms normalised

**Timing:** With 2 weeks

**Form:** Full plate

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

**SOUTHEAST ASIA**

**Assessment**
Nickel full plate in-warehouse Southeast Asian warrants

**Type:** Assessed range and single number

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

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

**Unit:** USD/tonne

**Quantity:** 6 tonnes

**Payment terms:** Cash, other terms normalised

**Timing:** Prompt release

**Form:** Full-plate cathode

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

**Assessment**
Nickel briquette in-warehouse Southeast Asian warrants

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

**Unit:** USD/tonne

**Quantity:** 6 tonnes

**Payment terms:** Cash, other terms normalised

**Timing:** Prompt release

**Form:** Briquette

**Publication:** Weekly. Tuesday 3-4pm London time
### EAST ASIA

**Assessment** | **Nickel full plate in-warehouse East Asian warrants**  
**Grade:** | 99.80% min primary nickel conforming to LME specification: ASTM B39-79 (2013) or GB/T 6516-2010 - Ni9990 grade  
**Quantity:** | 6 tonnes  
**Location:** | In any LME-approved warehouse in Taiwan (Kaohsiung) and South Korea (Gwangyang, Busan or Incheon), premium on top of LME cash prices  
**Unit:** | USD/tonne  
**Payment terms:** | Cash, other terms normalised  
**Timing:** | Prompt release  
**Form:** | Full-plate cathode  
**Publication:** | Weekly. Tuesday 3-4pm London time

**Assessment** | **Nickel briquette in-warehouse East Asian warrants**  
**Grade:** | 99.80% min primary nickel conforming to LME specification: ASTM B39-79 (2013) or GB/T 6516-2010 – Ni9990 grade  
**Quantity:** | 6 tonnes  
**Location:** | In any LME-approved warehouse in Taiwan (Kaohsiung) and South Korea (Gwangyang, Busan or Incheon), premium on top of LME cash prices  
**Unit:** | USD/tonne  
**Payment terms:** | Cash, other payment terms normalised  
**Timing:** | Prompt release  
**Form:** | Briquette  
**Publication:** | Weekly. Tuesday 3-4pm London time

### EUROPE

**Assessment** | **Nickel 4x4 cathode in-warehouse Rotterdam**  
**Location:** | In-warehouse Rotterdam, premium on top of LME cash prices  
**Grade:** | 99.80% min primary nickel conforming to LME specification: ASTM B39-79 (2013) or GB/T 6516-2010 – Ni9990 grade  
**Unit:** | USD/tonne  
**Quantity:** | 20 tonnes  
**Payment terms:** | Cash, other payment terms normalised  
**Timing:** | Within one week  
**Form:** | 4x4 cut cathode  
**Publication:** | Weekly. Tuesday 3-4pm London time

**Assessment** | **Nickel briquette in-warehouse Rotterdam $/tonne**  
**Location:** | In-warehouse Rotterdam, premium on top of LME cash prices  
**Grade:** | 99.80% min primary nickel conforming to LME specification: ASTM B39-79 (2013) or GB/T 6516-2010 – Ni9990 grade  
**Unit:** | USD/tonne  
**Quantity:** | 20 tonnes  
**Payment terms:** | Cash, other payment terms normalised  
**Timing:** | Within one week  
**Form:** | Briquette  
**Publication:** | Weekly. Tuesday 3-4pm London time

**Assessment** | **Nickel in-warehouse North European warrants**  
**Location:** | Any LME-approved warehouse in North Europe (Belgium, Germany, the Netherlands, Sweden and the UK), premium on top of LME cash prices  
**Grade:** | 99.80% min primary nickel conforming to LME specification: ASTM B39-79 (2013) or GB/T 6516-2010 – Ni9990 grade  
**Unit:** | USD/tonne  
**Quantity:** | 6 tonnes  
**Payment terms:** | Cash, other terms normalized  
**Timing:** | Prompt release  
**Form:** | Cathode (full-plate, cut), pellet or briquette  
**Publication:** | Weekly. Tuesday 3-4pm London time
### UNITED STATES

**Assessment:** Nickel 4x4 cathode delivered US premium

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

**Min quantity:** 20 tonnes

**Location:** Delivered consumer works US

**Timing:** Within four weeks

**Unit:** US cents per lb

**Form:** 4x4 cut cathode

**Payment terms:** 30 days, other payment terms normalized

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

### CHINA

**Assessment:** Tin 99.9% ingot cif Shanghai

**Location:** Cif delivery basis Shanghai port, premium on top of LME cash prices

**Grade:** 99.9% tin purity conforming to LME specification: BS EN 610:1996 with 100-300 ppm lead content

**Unit:** USD/tonne

**Quantity:** 5 tonnes

**Payment terms:** Cash against document, telegraphic transfer, other terms normalised

**Timing:** Within 2 weeks

**Form:** Ingot

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

### SOUTHEAST ASIA

**Assessment:** Tin 99.9% ingot cif Taiwan

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

**Grade:** 99.9% tin purity conforming to LME specification: BS EN 610:1996 with 100-300 ppm lead content

**Unit:** USD/tonne

**Quantity:** 5 tonnes

**Payment terms:** Cash against document, telegraphic transfer, other terms normalised

**Timing:** Within 2 weeks

**Form:** Ingot

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

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**Assessment:** Nickel briquette delivered US premium

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

**Min quantity:** 20 tonnes

**Location:** Delivered consumer works US

**Timing:** Within four weeks

**Unit:** US cents per lb

**Form:** Briquette

**Payment terms:** 30 days, other payment terms normalized

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

### Tin 99.9% Low Lead ingot cif Shanghai

**Location:** Cif delivery basis Shanghai port, premium on top of LME cash prices

**Grade:** 99.9% tin purity conforming to LME specification: BS EN 610:1996 with less than 100 ppm lead content

**Unit:** USD/tonne

**Quantity:** 5 tonnes

**Payment terms:** Cash against document, telegraphic transfer, other terms normalised

**Timing:** Within 2 weeks

**Form:** Ingot

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

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<table>
<thead>
<tr>
<th>Assessment</th>
<th>Tin ingot 99.85% minimum in-warehouse Southeast Asian warrants</th>
</tr>
</thead>
<tbody>
<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>Grade:</td>
<td>Minimum 99.85% tin purity conforming to LME specification: BS EN 610:1996, max 500ppm lead</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD/tonne</td>
</tr>
<tr>
<td>Quantity:</td>
<td>5 tonnes</td>
</tr>
<tr>
<td>Payment terms:</td>
<td>Cash, other payment terms normalised</td>
</tr>
<tr>
<td>Timing:</td>
<td>Prompt release</td>
</tr>
<tr>
<td>Form:</td>
<td>Ingot</td>
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<tr>
<td>Publication:</td>
<td>Weekly. Tuesday 3-4pm London time</td>
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**UNITED STATES**

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Tin 99.85% delivered US Midwest</th>
</tr>
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<tbody>
<tr>
<td>Location:</td>
<td>Delivered consumer works USA</td>
</tr>
<tr>
<td>Grade:</td>
<td>Min 99.85% tin purity conforming to LME specification BS EN 610:1996 and ASTM grade A, max 500ppm lead</td>
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<tr>
<td>Unit:</td>
<td>USD/tonne</td>
</tr>
<tr>
<td>Quantity:</td>
<td>20 tonnes</td>
</tr>
<tr>
<td>Payment terms:</td>
<td>30 days, other payment terms normalised</td>
</tr>
<tr>
<td>Timing:</td>
<td>Within 2 weeks</td>
</tr>
<tr>
<td>Form:</td>
<td>Ingot</td>
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<tr>
<td>Publication:</td>
<td>Weekly. Tuesday 3-4pm London time</td>
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**EUROPE**

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Tin 99.9% ingot in-warehouse Rotterdam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location:</td>
<td>In-warehouse Rotterdam, premium on top of LME cash prices</td>
</tr>
<tr>
<td>Grade:</td>
<td>99.9% tin purity conforming to LME specification: BS EN 610:1996 with 100-300 ppm lead content</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD/tonne</td>
</tr>
<tr>
<td>Quantity:</td>
<td>20 tonnes</td>
</tr>
<tr>
<td>Payment terms:</td>
<td>Cash against conditional release, other payment terms normalised</td>
</tr>
<tr>
<td>Timing:</td>
<td>Within 2 weeks</td>
</tr>
<tr>
<td>Form:</td>
<td>Ingot</td>
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<tr>
<td>Publication:</td>
<td>Weekly. Tuesday 3-4pm London time</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Assessment</th>
<th>Tin 99.9% ingot in-warehouse Rotterdam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location:</td>
<td>In-warehouse Baltimore, premium on top of LME cash prices</td>
</tr>
<tr>
<td>Grade:</td>
<td>Minimum 99.85% tin purity conforming to LME specification: BS EN 610:1996, max 500ppm lead, total impurities must not exceed 0.15%</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD/tonne</td>
</tr>
<tr>
<td>Quantity:</td>
<td>20 tonnes</td>
</tr>
<tr>
<td>Payment terms:</td>
<td>Cash against documents, other payment terms normalised</td>
</tr>
<tr>
<td>Form:</td>
<td>Ingot</td>
</tr>
<tr>
<td>Publication:</td>
<td>Weekly. Tuesday 3-4pm London time</td>
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<table>
<thead>
<tr>
<th>Assessment</th>
<th>Tin 99.9% Low Lead ingot in-warehouse Rotterdam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location:</td>
<td>In-warehouse Rotterdam, premium on top of LME cash prices</td>
</tr>
<tr>
<td>Grade:</td>
<td>99.9% tin purity conforming to LME specification: BS EN 610:1996 with less than 100 ppm lead content</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD/tonne</td>
</tr>
<tr>
<td>Quantity:</td>
<td>20 tonnes</td>
</tr>
<tr>
<td>Payment terms:</td>
<td>Cash against conditional release, other payment terms normalised</td>
</tr>
<tr>
<td>Timing:</td>
<td>Within 2 weeks</td>
</tr>
<tr>
<td>Form:</td>
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<tr>
<td>Publication:</td>
<td>Weekly. Tuesday 3-4pm London time</td>
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</table>

**Zinc concentrate**

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Zinc Concentrate spot TC cif China</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location:</td>
<td>Treatment Charge on cif basis delivery to Chinese ports</td>
</tr>
<tr>
<td>Grade:</td>
<td>45-55% zinc content, low silver (0-170g/t), silica 3.5-4.5%, copper below 3% (high copper 4-5%), lead below 3.5% (total copper, lead, silica at max 6-7%), arsenic below 0.6%, cadmium below 0.33% and mercury below 0.06%</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD/tonne</td>
</tr>
<tr>
<td>Quantity:</td>
<td>2,000 tonnes</td>
</tr>
<tr>
<td>Payment terms:</td>
<td>Letter of Credit, quotation period M+3</td>
</tr>
<tr>
<td>Timing:</td>
<td>Within 13 weeks</td>
</tr>
<tr>
<td>Form:</td>
<td>Concentrate</td>
</tr>
<tr>
<td>Publication:</td>
<td>Monthly. Last Friday of every month.</td>
</tr>
</tbody>
</table>
Non-ferrous Prices

Assessment: **Zinc Concentrate spot TC delivered North China**
Location: Treatment Charge on delivered basis
Grade: Zn 50%, As <0.4%, Hg <100ppm, Si <6%, S >26%, Pb <3%, Fe <8%.
Currency: CNY
Unit: Tonne
Quantity: 100 tonnes
Payment terms: Cash against document or prepayment
Form: Concentrate
Publication: Monthly. Last Friday of every month.

Assessment: **Zinc Concentrate spot TC delivered South China**
Location: Treatment Charge on delivered basis
Grade: Zn content 50%, As <0.4%, Hg <100ppm, Si <6%, S >26%, Pb <3%, Fe <8%.
Currency: CNY
Unit: Tonne
Quantity: 100 tonnes
Payment terms: Cash against document or prepayments
Form: Concentrate
Publication: Monthly. Last Friday of every month.

Refined zinc

**CHINA**

Assessment: **Zinc SHG ingot in-warehouse Shanghai**
Type: Assessed range and assessed single number
Location: In-warehouse Shanghai bonded zone, premium on top of LME cash prices
Grade: Special High Grade zinc 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
Unit: USD/tonne
Quantity: 25 tonnes
Payment terms: Letter of credit, telegraphic transfer or documents against payment, other payment terms normalised
Timing: Within 4 weeks
Form: Ingot
Publication: Weekly. Tuesday 3-4pm London time

Assessment: **Zinc SHG ingot Cif Shanghai**
Type: Assessed range
Location: Cif in Shanghai port, premium on top of LME cash prices
Grade: Special High Grade zinc 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
Unit: USD/tonne
Quantity: 25 tonnes
Payment terms: Letter of credit, telegraphic transfer or documents against payment, other payment terms normalised
Timing: Within 4 weeks
Form: Ingot
Publication: Weekly. Tuesday 3-4pm London time

Assessment: **Zinc SHG ingot Cif Taiwan**
Type: Assessed range
Location: Cif delivery in Taiwanese ports, premium on top of LME cash prices
Grade: Special High Grade zinc 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
Unit: USD/tonne
Quantity: 25 tonnes
Payment terms: Letter of credit, telegraphic transfer or documents against payment, other payment terms normalised
Timing: Within 4 weeks
Form: Ingot
Publication: Weekly. Tuesday 3-4pm London time

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## SOUTHEAST ASIA

<table>
<thead>
<tr>
<th>Assessment: Zinc SHG ingot FCA Singapore</th>
<th>Assessment: Zinc SHG ingot CIF Southeast Asia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location: Free-carrier in Singapore, premium on top of LME cash prices</td>
<td>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</td>
</tr>
<tr>
<td>Unit: USD/tonne</td>
<td>Unit: USD/tonne</td>
</tr>
<tr>
<td>Quantity: 25 tonnes</td>
<td>Quantity: 25 tonnes</td>
</tr>
<tr>
<td>Payment terms: Letter of credit or telegraphic transfer, other terms normalised</td>
<td>Payment terms: Letter of credit or telegraphic transfer, other terms normalised</td>
</tr>
<tr>
<td>Timing: Within 4 weeks</td>
<td>Timing: Within 4 weeks</td>
</tr>
<tr>
<td>Form: Ingot</td>
<td>Form: Ingot</td>
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<tr>
<td>Publication: Weekly. Tuesday 3-4pm London time</td>
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## EUROPE

<table>
<thead>
<tr>
<th>Assessment: Zinc SHG ingot FCA DP Rotterdam</th>
<th>Assessment: Zinc SHG ingot fca DP Rotterdam</th>
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</thead>
<tbody>
<tr>
<td>Location: Free-carrier basis delivery in Rotterdam, duty-paid premium on top of LME cash prices</td>
<td>Location: Free-carrier basis delivery in Rotterdam, duty-paid premium on top of LME cash prices</td>
</tr>
<tr>
<td>Unit: USD/tonne</td>
<td>Unit: USD/tonne</td>
</tr>
<tr>
<td>Quantity: 25 tonnes</td>
<td>Quantity: 25 tonnes</td>
</tr>
<tr>
<td>Payment terms: Letter of credit or telegraphic transfer, other terms normalised</td>
<td>Payment terms: Cash, other payment terms normalised</td>
</tr>
<tr>
<td>Timing: Within 4 weeks</td>
<td>Timing: Within 4 weeks</td>
</tr>
<tr>
<td>Form: Ingot</td>
<td>Form: Ingot</td>
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<tr>
<td>Publication: Weekly. Tuesday 3-4pm London time</td>
<td>Publication: Weekly. Tuesday 3-4pm London time</td>
</tr>
</tbody>
</table>
Assessment: **Zinc SHG ingot FCA DP Italy**
Location: Free-carrier basis delivery in Italy, duty-paid premium on top of LME cash prices
Grade: Special High Grade zinc 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
Unit: USD/tonne
Quantity: 100 tonnes
Payment terms: Cash, other payment terms normalised
Timing: Within 4 weeks
Form: Ingot
Publication: Weekly. Tuesday 3-4pm London time

Assessment: **Zinc SHG ingot DDP Italy**
Location: Delivered duty paid consumer works in Italy, premium on top of LME cash prices
Grade: Special High Grade zinc 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
Unit: USD/tonne
Quantity: 100 tonnes
Payment terms: Cash, other terms normalised
Timing: Within 4 weeks
Form: Ingot
Publication: Weekly. Tuesday 3-4pm London time

Assessment: **Zinc SHG ingot delivered UK price**
Type: Partly-assessed single number
Location: Delivered customer works basis in the UK; all-in price including average of LME GBP cash settlements for the last ten days of the previous month and assessed term premiums for UK delivery (either delivered customer works or FCA Rotterdam plus transport, warehousing, delivery and financing costs)
Grade: Special High Grade zinc 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
Unit: GBP/tonne
Quantity: 25 tonnes
Payment terms: Cash, other payment terms normalised
Form: Ingot
Publication: Monthly. 1st working day of the month between 1pm and 2pm London time
Note: The price was launched in 2013 as a replacement to the Thyssenkrupp Metallurgie UK SHG zinc price, which had been discontinued.
<table>
<thead>
<tr>
<th>United States</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assessment:</strong></td>
<td><strong>Zinc SHG ingot delivered US Midwest</strong></td>
</tr>
<tr>
<td><strong>Location:</strong></td>
<td>Delivered consumer works Midwest USA</td>
</tr>
<tr>
<td><strong>Grade:</strong></td>
<td>Min 99.995% special high grade zinc, conforming to LME specifications and relevant BS EN standards</td>
</tr>
<tr>
<td><strong>Unit:</strong></td>
<td>USD/tonne</td>
</tr>
<tr>
<td><strong>Quantity:</strong></td>
<td>25 tonnes</td>
</tr>
<tr>
<td><strong>Payment terms:</strong></td>
<td>30 days, other payment terms normalised</td>
</tr>
<tr>
<td><strong>Timing:</strong></td>
<td>Within 4 weeks</td>
</tr>
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<td><strong>Form:</strong></td>
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<td><strong>Publication:</strong></td>
<td>Weekly. Tuesday 3-4pm London time</td>
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<tr>
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</thead>
<tbody>
<tr>
<td><strong>Assessment:</strong></td>
<td><strong>Zinc SHG ingot US warrants</strong></td>
</tr>
<tr>
<td><strong>Location:</strong></td>
<td>In any LME-approved warehouse in the USA, premium on top of LME cash prices</td>
</tr>
<tr>
<td><strong>Grade:</strong></td>
<td>Special High Grade zinc 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>
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<td><strong>Unit:</strong></td>
<td>USD/tonne</td>
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<td><strong>Quantity:</strong></td>
<td>25 tonnes</td>
</tr>
<tr>
<td><strong>Payment terms:</strong></td>
<td>Cash, other payment terms normalised</td>
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<td><strong>Timing:</strong></td>
<td>Prompt release</td>
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<td><strong>Publication:</strong></td>
<td>Weekly. Tuesday 3-4pm London time</td>
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</table>
Bulk alloys

Ferro-chrome

**CHINA**

**Index:**

**Type:**

**Basis:**

**Currency:**

**Chrome:**

**Carbon:**

**Silicon:**

**Phosphorous:**

**Sulphur:**

**Material form:**

**Delivered:**

**Material origin:**

**Delivered window:**

**Delivered method:**

**Payment terms:**

**Publication:**

**Data History:**

**Assessment:**

**JAPAN**

**Assessment:**

**Type:**

**Basis:**

**Unit:**

**Min lot size:**

**Payment terms:**

**Quality:**

**Form:**

**Publication:**

**Data History:**

**Assessment:**

**SOUTHEAST ASIA**

**Assessment:**

**Type:**

**Basis:**

**Unit:**

**Min lot size:**

**Payment terms:**

**Quality:**

**Form:**

**Publication:**

**Data History:**

**Assessment:**

**UNITED STATES**

**Assessment:**

**Type:**

**Unit:**

**Basis:**

**Quality:**

**Minimum Lot size:**

**Publication:**

**Data History:**
### Non-ferrous Prices

**EUROPE**

- **Assessment:** High carbon ferro-chrome (6-8.5% C basis 60-70% Cr max 1.5% Si) major European destinations $/lb Cr
  - **Basis:** Delivered consumer works Europe
  - **Unit:** USD per lb of chrome contained
  - **Min lot size:** 24 tonnes
  - **Payment terms:** 30 days, other payment terms normalised
  - **Quality:** 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)
  - **Form:** Lump
  - **Publication:** Weekly, Friday between 2pm and 3pm London time

- **Assessment:** Low carbon ferro-chrome (0.06% C max - 65% Cr) Delivered consumer works $/lb Cr, Europe
  - **Type:** Assessed range
  - **Basis:** Delivered consumer works Europe
  - **Unit:** USD per lb of chrome contained
  - **Min lot size:** 25 tonnes
  - **Payment terms:** 30 days, other payment terms normalised
  - **Quality:** Cr: 65% basis (range 60-70% Cr); C: 0.06% max; Si: 1.5% max; P: 0.05% max; S: 0.05% max
  - **Form:** Lump
  - **Publication:** Fortnightly, Friday between 2pm and 3pm London time

- **Assessment:** Low carbon ferro-chrome (0.10% C avg 65-70% Cr) Delivered consumer works Europe $/lb Cr
  - **Quality:** Cr: 65% basis (range 65-70% Cr); C: 0.10% excluding material up to 0.06% C; Si: 1.5% max; P: 0.05% max; S: 0.05% max
  - **Quantity:** Min 25 tonnes
  - **Location:** Delivered consumer works Europe
  - **Unit:** USD per lb of chrome contained
  - **Form:** Lump
  - **Payment terms:** 30 days, other payment terms normalised
  - **Publication:** Fortnightly, Friday 2-3pm London time

- **Assessment:** Low phosphorous ferro-chrome (Cr min 65% P max 0.015%) delivered consumer works Europe $/lb
  - **Location:** Delivered consumer works Europe
  - **Unit:** USD per lb of chrome contained
  - **Min lot size:** 25 tonnes
  - **Payment terms:** 30 days, other payment terms normalised
  - **Quality:** Cr: 65% min, Si: 1% max, C: 6-8%, P: 0.015% max, Ti:0.05%
  - **Form:** Lump
  - **Publication:** Fortnightly. Friday between 2pm and 3pm London time

- **Assessment:** Ferro-chrome lumpy cr charge basis 52 Cr and high carbon delivered consumer works Europe $/lb Cr quarterly
  - **Price type:** Industry-settled single figure
  - **Basis:** Delivered consumer works Europe
  - **Unit:** US cents per lb of chrome contained
  - **Min lot size:** Not specified
  - **Payment terms:** Not specified
  - **Quality:** N/A
  - **Form:** Lump
  - **Publication:** Quarterly as per industry announcement to Johannesburg Stock Exchange

**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.
**European ferro-chrome quarterly benchmark indicator**

**Type:** Indicator, single figure  
**Quality:** Ferro-chrome lumpy, basis 52% chrome content  
**Currency:** US cents per lb of chrome content to major European destinations  
**Publication:** Weekly. Friday 3pm London time  
**Note:** The price indicates a representative level for the European ferro-chrome benchmark if it were to be settled on that Friday. It does so by using a proprietary Fastmarkets formula based on the historical relationship between the European ferro-chrome benchmark and Fastmarkets market data.

**UNITED STATES**

**Assessment:** Ferro-chrome, low carbon, 0.05%C–65% min Cr, US  
**Quality:** Cr min: 65.00%, Ca: 0.05%, Si: max 1.00%  
**Quantity:** 20 tons  
**Location:** FOB Pittsburgh  
**Unit:** US cents per pound  
**Publication:** Weekly. Thursday

**Assessment:** Ferro-chrome, low carbon, 0.10%C–62% min Cr, US  
**Type:** Assessed range  
**Currency:** US cents per pound  
**Basis:** FOB Pittsburgh  
**Quality:** Cr min 62.00%, C: 0.10%, Si max: 1.00%  
**Minimum lot size:** 20 tons  
**Publication:** Weekly. Thursday

**Assessment:** Ferro-chrome, low carbon, 0.15%C–60% min Cr, US  
**Type:** Assessed range  
**Currency:** US cents per pound  
**Basis:** FOB Pittsburgh  
**Quality:** Cr: min. 60.00%, C: 0.15%, Si: max. 1.00%  
**Minimum lot size:** 20 tons  
**Publication:** Weekly. Thursday

**Ferro-manganese**

**EUROPE**

**Assessment:** Ferro-manganese 78% Mn max  
**Type:** Assessed range  
**Currency:** US dollars per long ton  
**Basis:** In-warehouse Pittsburgh  
**Quality:** Mn: 78.00%, C: 7.50%  
**Minimum lot size:** 20 tons  
**Frequency:** Weekly, Thursday

**Assessment:** Ferro-manganese, high carbon, US  
**Currency:** US dollars per long ton  
**Basis:** In-warehouse Pittsburgh  
**Quality:** Mn: 78.00%, C: 7.50%  
**Minimum lot size:** 20 tons  
**Frequency:** Weekly, Thursday

**Assessment:** Ferro-manganese, medium carbon, US  
**Currency:** US cents per pound  
**Basis:** FOB Pittsburgh  
**Quality:** Manganese min. 80.00%, carbon max. 1.50%  
**Minimum lot size:** 20 tons  
**Frequency:** Weekly, Thursday

**Assessment:** Ferro-manganese, low carbon, 0.05%C–65% min Cr, US  
**Currency:** US dollars per long ton  
**Basis:** In-warehouse Pittsburgh  
**Quality:** Mn: 78.00%, C: 7.50%  
**Minimum lot size:** 20 tons  
**Frequency:** Weekly, Thursday

**Assessment:** Ferro-manganese, medium carbon, US  
**Currency:** US cents per pound  
**Basis:** FOB Pittsburgh  
**Quality:** Manganese min. 80.00%, carbon max. 1.50%  
**Minimum lot size:** 20 tons  
**Frequency:** Weekly, Thursday

**Assessment:** Ferro-manganese, high carbon, US  
**Currency:** US dollars per long ton  
**Basis:** In-warehouse Pittsburgh  
**Quality:** Mn: 78.00%, C: 7.50%  
**Minimum lot size:** 20 tons  
**Frequency:** Weekly, Thursday

**CHINA**

**Assessment:** Ferro-manganese, min 65% Mn max 7.0% C, China CNY/tonne  
**Location:** China  
**Unit:** CNY/tonne, all Mn grades normalised to 65% on pro rata basis  
**Min lot size:** 100 tonnes  
**Payment terms:** Cash, other payment terms normalised  
**Quality:** Mn: 65-72%, Si: 4.5% max, C: 7.0% max, P: 0.4% max, S: 0.03% max  
**Form:** Lump  
**Publication:** Weekly, Friday 2-3pm London time

**UNITED STATES**

**Assessment:** Ferro-manganese, high carbon, US  
**Currency:** US dollars per long ton  
**Basis:** In-warehouse Pittsburgh  
**Quality:** Mn: 78.00%, C: 7.50%  
**Minimum lot size:** 20 tons  
**Frequency:** Weekly, Thursday

**Assessment:** Ferro-manganese, medium carbon, US  
**Currency:** US cents per pound  
**Basis:** FOB Pittsburgh  
**Quality:** Manganese min. 80.00%, carbon max. 1.50%  
**Minimum lot size:** 20 tons  
**Frequency:** Weekly, Thursday

www.fastmarkets.com
### Ferro-silicon

#### CHINA
- **Assessment:** Ferro-silicon min 75% Si, China CNY/tonne
- **Quality:** Si: 75-80%; Mn: 0.4% max; Al: 2.0% max; Cr: 0.3% max; P: 0.035% max; S: 0.02% max; C: 0.1% max
- **Quantity:** 100 tonnes
- **Location:** China
- **Unit:** CNY/tonne, price for all Si grades normalised to 75% on pro rata basis
- **Payment terms:** Cash, other payment terms normalised
- **Form:** Lump
- **Publication:** Weekly, Friday between 2pm and 3pm London time

#### UNITED STATES
- **Assessment:** Ferro-silicon, US
- **Type:** Assessed range
- **Currency:** US cents per pound
- **Basis:** In-warehouse Pittsburgh
- **Quality:** Silicon 75.00%
- **Minimum lot size:** 20 tons
- **Frequency:** Weekly, Thursday

### Silico-manganese

#### EUROPE
- **Assessment:** Silico-manganese lumpy 65-75% Mn basis 15-19% Si, Delivered consumer works Europe €/tonne
- **Quality:** Mn: 65-75% (Scale pro rata), Si: 15-19%, C: 2.0-2.5%, P: 0.3%, S: 0.03%
- **Quantity:** 100 tonnes
- **Location:** Delivered consumer works Europe
- **Unit:** EUR/tonne
- **Form:** Lump
- **Payment terms:** Cash, other payment terms normalised
- **Publication:** Weekly, Friday between 2pm and 3pm London time

#### CHINA
- **Assessment:** Silico-manganese min 65% Mn max 17% Si, delivered duty paid China CNY/tonne
- **Basis:** Delivered duty paid China
- **Unit:** CNY/tonne, all Mn grades normalised to 65% basis on pro rata basis
- **Min lot size:** 100 tonnes
- **Payment terms:** Cash, other terms normalised
- **Form:** Lump
- **Publication:** Weekly, Friday between 2pm and 3pm London time

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www.fastmarkets.com
## INDIA

**Assessment:** Silico-manganese 65% min Mn 16% min Si Fob India $/tonne

**Location:** Fob India  
**Unit:** USD/tonne  
**Min lot size:** 100 tonnes  
**Quality:** Mn: 65%  Si: 16%  C: 2%  P:0.35%  S:0.03%  
**Form:** Lump  
**Payment terms:** Letter of Credit  
**Publication:** Weekly. Friday between 2pm and 3pm London time

## UNITED STATES

**Assessment:** Silico-manganese, US  
**Quality:** Manganese min. 65.00%; silicon min. 16.00%  
**Quantity:** 20 tons  
**Location:** In-warehouse Pittsburgh  
**Unit:** US cents per pound  
**Publication:** Weekly. Thursday

## CHINA

### Ferro-nickel

**Assessment:** Ferro-nickel 26-32% nickel content cif China  
**Basis:** Cif China  
**Unit:** USD/tonne  
**Quality:** Ni typical 30% (range 26%-32%), P 0.0045% max, S 0.060% max  
**Calculation:** Ferro-nickel price = (LME Ni price + premium/ discount) x nickel content  
**Min lot size:** At least 100 nickel metal tonnes per lot  
**Payment terms:** Cash, other payment terms normalised  
**Publication:** Last Monday of each month between 2pm to 3pm London time

### Nickel Pig Iron

**Assessment:** High-grade NPI Ni content 10-15% Contract price delivered duty paid China CNY/tonne  
**Basis:** Delivered duty paid China  
**Currency:** CNY  
**Unit:** Tonne  
**Quality:** Ni10-15%, Fe 80%, P 0.04% max, S 0.03% max, Si 4.5% max, C 4% max  
**Form:** Lump  
**Packaging:** Big bag of 1 tonne  
**Min lot size:** 1,000 tonnes  
**Payment terms:** Cash  
**Publication:** Weekly. Tuesday between 2pm and 3pm UK time

**Assessment:** High-grade NPI Ni content 10-15%, spot price delivered duty-paid China CNY/tonne  
**Basis:** Delivered duty paid China  
**Currency:** Yuan  
**Unit:** tonne  
**Quality:** Ni10-15%, Fe 80%, P 0.04% max, S 0.03% max, Si 4.5% max, C 4% max  
**Form:** Lump  
**Packaging:** Big bag of 1 tonne  
**Min lot size:** 500 tonnes  
**Payment terms:** Cash  
**Publication:** Weekly. Tuesday between 2pm and 3pm UK time
Noble alloys

Molybdenum

**EUROPE**

**Assessment:** Molybdenum drummed molybdenic oxide, Rotterdam $/lb Mo

**Quality:** Mo: 57% min. Cu: 0.5% max. S: 0.1% max. P: 0.05% max. Pb: 0.05% max. C: 0.1% max. All other elements should each be 0.10% max, with the exception of Si, which should be 6% max.

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

**Location:** Rotterdam

**Unit:** USD per lb Mo

**Form:** Sandy powder (0-4 mm)

**Payment terms:** Cash; other terms normalised

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

**Assessment**

**Ferro-molybdenum 65% min Rotterdam $/kg Mo**

**Basis:** Rotterdam

**Unit:** USD per kg Mo

**Min lot size:** 10 tonnes (+/- 2%)

**Payment terms:** Cash; other payment terms normalised

**Quality:** Mo: 65% min Si: 1.50% max Cu: 0.50% max C: 0.10% max S: 0.10% max P: 0.05% max All other elements should be each 0.10% max, with the exception of Fe

**Form:** Lump, in range from 5-50mm, 90% minimum

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

**UNITED STATES**

**Assessment:** Molybdenum canned molybdenic oxide, US

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

**Quantity:** 10 tons

**Location:** In-warehouse US

**Unit:** USD per pound

**Publication:** Weekly. Thursday

**Titanium**

**CHINA**

**Assessment:** Ferro-titanium min 70% Ti (max 4.5% Al), delivered duty paid Europe $/kg Ti

**Quality:** 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%

**Quality:** 10-tonne lots (+/- 2%)

**Location:** DDP Europe

**Unit:** USD per kg Ti

**Form:** Lump

**Payment terms:** Cash; other payment terms normalised

**Publication:** Weekly. Wednesday 2-3pm London
Tungsten

**EUROPE**

**Assessment:** Tungsten APT Europe min 88.5% WO3 cif Rotterdam duty free $/mtu WO3

**Basis:** CIF Rotterdam, duty free

**Unit:** USD per mtu WO3

**Min lot size:** 20 tonnes (+/- 2%)

**Payment terms:** Cash; Delivered up to three months in advance considered spot business

**Quality:**
- 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

**Form:** White finely divided free-flowing crystals

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

**CHINA**

**Assessment:** Tungsten APT China min 88.5% WO3 Fob China main ports $/mtu WO3

**Basis:** Fob China main ports

**Unit:** USD per mtu WO3

**Min lot size:** 17 tonnes

**Quality:**
- WO3 88.5% min, Al 0.0005% max, As 0.001% max, Bi 0.0001% max, Ca 0.001% max, Cd 0.001% max, Co 0.005% max, Cr 0.001% max, Cu 0.0005% max, Fe 0.001% max, K 0.001% max, Mn 0.0005% max, Mg 0.0005% max, Mo 0.002% max, Na 0.001% max, Ni 0.0005% max, P 0.007% max, Pb 0.0001% max, S 0.008% max, Sb 0.002% max, Si 0.001% max, Sn 0.0002% max, Ti 0.0005% max, V 0.001% max

**Form:** White finely divided free-flowing crystals

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

Ferro-tungsten

**EUROPE**

**Assessment:** Ferro-tungsten basis 75% W Rotterdam duty unpaid $/kg W

**Quality:**
- W: 75.00% min. C: 0.40% max. S: 0.08% max. Mn: 0.50% max. As: 0.10% max. Sn: 0.08% max. P: 0.05% max. Si: 0.70% max. Cu: 0.15% max. Sb: 0.05% max.

**Quality:** Minimum 3-tonne lots

**Location:** Rotterdam duty unpaid

**Unit:** USD per kg W

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

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

Tungsten concentrate 65% WO3 China

**Assessment:** Tungsten concentrate 65% WO3 China

**Basis:** China

**Currency:** CNY

**Unit:** tonne

**Min lot size:** 50 tonnes

**Payment terms:** Cash or 30 days

**Quality:**
- 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

**Form:** Powder

**Publication:** Weekly. Wednesday 2-3pm London
## Europe

### Assessment:
**Ferro-vanadium 78% min delivered consumer works Europe duty paid $/kg V**

### Quality:
- 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:
Minimum 5-tonne lots

### Location:
Delivered consumer works Europe

### Unit:
USD per kg V

### Form:
Lumps

### Payment terms:
Cash; other payment terms normalised

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

## China

### Assessment:
**Vanadium pentoxide min 98% Rotterdam $/lb V2O5**

### Quality:
- V: 98.00% 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.

### Location:
In-warehouse Rotterdam

### Unit:
USD per lb V2O5

### Min lot size:
Min 5 tonnes (+/- 5%)

### Payment terms:
Cash, other payment terms normalised

### Form:
Brown flake

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

### Notes:
Assessed by Fastmarkets in London and Shanghai

## United States

### Assessment:
**Ferro-vanadium, US $/lb**

### Unit:
USD per lb

### Location:
In-warehouse Pittsburgh

### Quality:
- V: 70.00-80.00%

### Quantity:
10 tons

### Publication:
Weekly. Thursday
Bauxite

AFRICA

Assessment: **Bauxite Fob Kamsar, Guinea, single figure**

Units: USD per tonne per dmtu

Basis: FOB Guinea (other delivered terms normalised)

Chemistry: 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

Trade size: Minimum 20,000 tonnes

Loading port: Kamsar (other ports normalised)

Loading window: Within two months

Delivered method: Bulk carrier

Published: 30 days after loading (other payment terms normalised)

Publication: Fortnightly. Thursdays between 2pm and 3pm London time

BRAZIL

Assessment: **Bauxite Fob Trombetas, Brazil, single figure**

Units: USD per tonne per dmtu

Basis: FOB Brazil (other Delivered terms normalised)

Chemical spec: 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

Trade size: Minimum 20,000 tonnes

Payment terms: 30 days after loading (other payment terms normalised)

Publication: Fortnightly. Thursdays between 2pm and 3pm London time

Chrome ore

AFRICA

Index: South African UG2 chrome ore Concentrates, single figure

Unit: USD per dry metric tonne unit

Basis: CIF China

Chrome: Base 42%, range 40-43%

Silica: Maximum 6%

Alumina: Maximum 18%

Magnesium oxide: Maximum 0.15%

Phosphorous: Maximum 0.01%

Sulphur: Maximum 0.01%

Chrome: Iron ratio: 1.2:1 minimum

Form: Sizing up to 1mm (95% min)

Packaging: Bulk (container deals normalised)

Trade Size: Minimum 2,000 tonnes

Payment terms: Payment at sight

Published: Weekly. Friday 3pm London time

CHINA

Assessment: Chrome ore Turkish lumpy 40-42% cfr main Chinese ports $/tonne

Location: CIF China main ports

Unit: USD per tonne

Min lot size: 1,000 tonnes

Quality: Cr: 40-42; SiO2: 15% max; Al2O3: 16% max; MgO: 26% max; S: 0.02%; P: 0.01%, Cr:Fe: 2.6:1 basis, 2.5:1 min

Form: Lump

Payment terms: Payment at sight

Publication: Weekly. Friday Between 2pm and 3pm London time
Manganese ore

**SOUTH AFRICA**

**Index:** MnOi37 FOB

**Unit:** US$ per dry metric tonne unit, fob

**Port Elizabeth, South Africa**

**Contents:**
- Manganese: Base 37%, Range 35-39%
- Iron: Base 5%, Maximum 10%
- Silica: Base 5.5%, Maximum 12%
- Phosphorous: Base 0.025%, Maximum 0.160%
- Alumina: Base 0.2%, Maximum 2%
- Moisture content: Base 4%, Maximum 12%
- Form: Lump
- Delivery: Port Elizabeth (South Africa)
- Granularity: 5.5-75mm
- Quantity: 5,000 tonnes
- Delivery window: Within nine weeks
- Payment: Cash or equivalent
- Publication: Friday, 3pm London

**Index:** MnOi37 CIF

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

**Tianjin, China**

**Contents:**
- Manganese: Base 37%, Range 35-39%
- Iron content: Base 5%, Maximum 10%
- Silica content: Base 5.5%, Maximum 12%
- Phosphorous: Base 0.025%, Maximum 0.160%
- Alumina: Base 0.2%, Maximum 2%
- Moisture: Base 4%, Maximum 12%
- Form: Lump
- Delivery: Tianjin (China) – normalized for any Chinese mainland sea port
- Granularity: 5.5-75mm
- Quantity: Min 5,000 tonnes
- Delivery window: Within nine weeks
- Payment: Cash or equivalent
- Publication: Friday, 3pm London

**CHINA**

**Index:** MnOi44 CIF

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

**Tianjin, China**

**Contents:**
- Manganese: Base 44%, Range 42-48%
- Iron content: Base 5%, Maximum 16%
- Silica content: Base 11%, Maximum 12%
- Phosphorous: Base 0.10%, Maximum 0.16%
- Alumina: Base 5%, Maximum 14%
- Moisture: Base 4%, Maximum 12%
- Form: Lump
- Delivery: Tianjin (China) – normalized for any Chinese mainland sea port
- Granularity: 5.5-75mm
- Quantity: Min 5,000 tonnes
- Delivery window: Within nine weeks
- Payment: Cash or equivalent
- Publication: Friday, 3pm London

**Index:** MnOi44 FOT

**Unit:** Yuan per dry metric tonne, fot Tianjin port, China

**Contents:**
- Manganese: Base 44%, Range 42-48%
- Iron content: Base 5%, Maximum 16%
- Silica content: Base 11%, Maximum 12%
- Phosphorous: Base 0.10%, Maximum 0.16%
- Alumina: Base 5%, Maximum 14%
- Moisture: Base 4%, Maximum 12%
- Form: Lump
- Delivery: Tianjin (China) – normalized for any Chinese mainland sea port
- Granularity: 5.5-75mm
- Quantity: Min 1,000 tonnes
- Delivery window: Immediate
- Payment: Cash or equivalent
- Publication: Friday, 3pm London
**Nickel ore**

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<th>CHINA</th>
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**Manganese ore stocks**

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Non-ferrous Prices

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**

**Assessment:** Antimony metal MMTA Standard Grade II delivered duty paid China CNY/tonne

**Quality:**
- MMTA standard Grade II. Sb: 99.65% min, As: 0.1% max, Pb: 0.2% max, Se: 0.002% max, Cd: 0.002% max, Sn: 0.005% max, Te: 0.005% max, Bi: 0.01% max, Cu: 0.02% max, Fe: 0.02% max

**Quantity:** 1 tonne

**Location:** Delivered duty paid China

**Unit:** CNY/tonne

**Form:** Ingot

**Payment terms:** Cash

**Publication:** Weekly. Wednesday between 2pm and 3pm London time

**EUROPE**

**Assessment:** Antimony metal MMTA Standard Grade II Rotterdam $/tonne

**Quality:**
- Sb: Min 99.65% Bi: Max 100ppm Se: Max 50ppm Cu: Max 200ppm Pb: Max 0.2%

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

**Location:** Rotterdam

**Timing:** Prompt, within ten calendar days

**Unit:** USD per tonne

**Form:** Ingot

**Packaging:** Original producer’s packing, on pallets or in wooden cases

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

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

**Arsenic**

**EUROPE**

**Assessment:** Arsenic 99% min Rotterdam $/lb

**Quality:** As: 99% min, no other elements specified

**Quantity:** 1 tonne (+/-2%)

**Location:** Rotterdam

**Timing:** Prompt release

**Unit:** USD per lb

**Form:** Lumpy, fist-sized and downwards

**Packaging:** Original producer’s poly-lined steel drums, each 50kg net, in accordance with the IMDG code and RID & ADR rules

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

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

**EUROPE**

**Assessment:** Bismuth 99.99% min Rotterdam $/lb

**Quality:** Bi: 99.99%, no other elements specified

**Quantity:** 1 tonne

**Location:** Rotterdam

**Timing:** Prompt release

**Unit:** USD/lb

**Form:** Ingot

**Packaging:** Original producers’ packaging

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

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

**CHINA**

**Assessment:** Bismuth 99.99% min China CNY/tonne

**Quality:** Bi: 99.99% min, no other elements specified

**Quantity:** 1 tonne

**Location:** China

**Unit:** CNY/tonne

**Form:** Ingot

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

**Publication:** Weekly, Friday between 2pm and 3pm London time

Cadmium

**GLOBAL**

**Assessment:** Cadmium 99.95% min cif global ports US cents/lb

**Quality:** Cd: 99.95%, no other elements specified

**Quantity:** 10 tonnes

**Location:** CIF global port basis

**Timing:** Prompt release

**Unit:** US cents per lb

**Form:** Sticks or ingots

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

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

**UNITED STATES**

**Assessment:** Chromium alumino-thermic, min 99% ex-warehouse United States, US$/pound

**Quality:** Min 99% chromium

**Quantity:** 3 tonnes

**Location:** Ex-warehouse, US

**Unit:** USD per pound

**Form:** Lump, packaged in drums

**Publication:** Once a week every Thursday

Chromium

**EUROPE**

**Assessment:** Chromium alumino-thermic 99% min Rotterdam $/tonne

**Quality:** Conforming to MMTA Russian X99H4 specification. Cr: 99.0 min % Fe: 0.5 max % Al: 0.2 max % Si: 0.2 max % C: 0.03 max % S: 0.02 max % Pb: 0.0008 max % Cu: 0.01 max % P: 0.02 max % Zn: 0.006 max % Sb: 0.008 max % Sn: 0.004 max % Bi: 0.0005 max % As:0.01 max % Co: 0.005 max % N: 0.04 max %

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

**Location:** Rotterdam

**Timing:** Prompt release

**Unit:** USD per tonne

**Form:** Lump

**Packaging:** In steel drums of uniform net weight, usually 300kg

**Payment terms:** Cash, other terms normalised

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

**CHINA**

**Assessment:** Cobalt tetroxide min 72.6% Co delivered China CNY/tonne

**Quality:** Min 72.6% Co

**Basis:** Delivered China

**Unit:** CNY/tonne

**Quantity:** Min 1 tonne

**Payment terms:** Cash

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

**Assessment:** Cobalt metal min 99.8% domestic China CNY/tonne

**Quality:** Cobalt metal, Co 99.8% min

**Basis:** Ex-works China

**Unit:** CNY/tonne

**Quantity:** Min 1 tonne

**Form:** Cathode

**Payment terms:** Cash

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

**EUROPE**

**Assessment:** Cobalt Alloy Grade, Rotterdam $ per lb

**Location:** Rotterdam

**Unit:** US$ per lb

**Delivery:** Within 30 days, other terms normalised

**Min lot size:** 1 tonne

**Max lot size:** 100 tonnes

**Quality:** Alloy-grade cobalt metal, 99.8% minimum cobalt content. Nikkelverk cut cathodes, Vale cobalt rounds, SMM cut cathodes, Jinchuan cut cathodes, Jiangsu (KLK) broken cathodes, Sherritt briquettes

**Form:** Cut cathodes, rounds, broken cathodes, briquettes

**Packaging:** Original packaging

**Payment terms:** Cash; other terms normalised

**Publication:** Twice weekly. Wednesday and Friday, at 3pm London time

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**Cobalt sulfate**

Please see [Battery Raw Materials](#) section.

**Gallium**

**EUROPE**

**Assessment:** Gallium min 99.99% Ga Rotterdam $/kg

**Basis:** Rotterdam

**Unit:** USD/kg

**Min lot size:** 100kg (+/- 2%)

**Quality:** Ga: 99.99% min, no other elements specified

**Form:** Ingot

**Packaging:** Packed in plastic sleeves, original producers’ cases

**Delivery time:** Prompt release

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

**Publication:** Twice weekly. Wednesday and Friday between 2pm and 3pm London time
Assessment: **Gallium min 99.99% Ga China**
CNY/kg

- **Basis:** China
- **Currency:** CNY
- **Unit:** CNY/kg
- **Min lot size:** 50kg
- **Payment terms:** Cash, other payment terms normalised
- **Quality:** Ga: 99.99% min, no other elements specified
- **Form:** Ingot
- **Publication:** Weekly. Wednesday by 3pm London time.

Assessment: **Germanium Dioxide Rotterdam**
$/kg

- **Location:** Rotterdam
- **Unit:** USD/kg
- **Min lot size:** 100 kg (+/- 2%)
- **Payment terms:** Cash, other payment terms normalised
- **Quality:** GeO2 99.99% min, Ge 69% approx
- **Form:** White powder
- **Packaging:** Original producer cases, normally 25kg each
- **Delivery time:** Prompt release
- **Publication:** Twice-weekly. Wednesday and Friday between 2pm and 3pm London time.

### Germanium

#### CHINA

- **Assessment:** Germanium 99.99% Ge China
CNY/kg
- **Basis:** China
- **Unit:** CNY/kg
- **Min lot size:** 50 kg
- **Payment terms:** Cash, other payment terms normalised
- **Quality:** Ge: 99.99% min, 50ohm/cm; no other elements specified
- **Form:** Ingot
- **Publication:** Weekly. Wednesday by 3pm London time

#### EUROPE

- **Assessment:** Germanium 99.99% Ge Rotterdam
$/kg
- **Type:** Assessed range
- **Location:** Rotterdam
- **Currency:** USD
- **Unit:** kg
- **Min lot size:** 100 kg (+/- 2%)
- **Quality:** Ga: 99.999%, no other elements specified
- **Form:** Ingot
- **Packaging:** Packed in plastic sleeves, original producer cases
- **Delivery:** Prompt release
- **Payment:** Cash, other payment terms normalised
- **Publication:** Twice-weekly. Wednesday and Friday between 2pm and 3pm London time

### Hafnium

#### GLOBAL

- **Assessment:** Hafnium, 1% Zr max, global locations, $/kg
- **Location:** Global
- **Unit:** USD/per kg
- **Min lot size:** 50kg
- **Payment terms:** Cash, other payment terms normalised
- **Quality:** Hf+Zr 99.8% min; Zr 1%
- **Form:** Uniform lots of 5kg max cut ingot, plate, sheet or bar
- **Publication:** Fortnightly. Friday between 2pm and 3pm London time
- **Notes:** Hafnium is classed as a 'dual use' metal under the Non-proliferation of Nuclear Weapons Treaty and may require end-user statements and import/export licences
Non-ferrous Prices

Indium

**EUROPE**

Assessment: Indium 99.99% Rotterdam $/kg
Basis: Rotterdam
Unit: USD/kg
Min lot size: 100kg
Payment terms: Cash, other payment terms normalised
Quality: In: 99.99%, no other elements specified
Form: Ingots, usually between 0.5kg and 3.5 kg; also 10 kg ingots
Packaging: Original producer wooden cases
Delivery time: Prompt release
Publication: Twice-weekly. Wednesday and Friday between 2pm and 3pm London time

**CHINA**

Assessment: Indium 99.99% ex-works China CNY/kg
Basis: Ex-works China
Unit: CNY per kg
Min lot size: 1kg
Payment terms: Cash on spot
Quality: 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
Form: Ingot of 500g
Publication: Weekly. Wednesday between 2pm and 3pm London time

Magnesium

**EUROPE**

Assessment: Magnesium 99.9% Rotterdam $/tonne
Basis: Rotterdam
Unit: USD/tonne
Min lot size: 20 tonnes (+/- 2%)
Payment terms: Cash, other payment terms normalised
Quality: 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
Form: Ingots, free from oxidation, of uniform size and weight
Publication: Weekly. Friday 2-3pm London time

**CHINA**

Assessment: Magnesium 99% ex-works China RMB/tonne
Basis: Ex-works China
Unit: CNY/Tonne
Min lot size: 20 tonnes (+/- 2%)
Payment terms: Cash on spot
Quality: Mg 99.9% min
Form: Ingot
Publication: Weekly. Friday between 2pm and 3pm London time

Assessment: Magnesium 99.8% Fob China main ports $/tonne
Basis: Fob China main ports
Unit: USD/tonne
Min lot size: 10 tonnes (+/-2%)
Payment terms: LC or TT
Quality: Mg 99.8% min
Form: Ingot
Publication: Weekly. Friday between 2pm and 3pm London time

Manganese

**EUROPE**

Assessment: Manganese 99.7% electrolytic manganese flake $/tonne Rotterdam
Basis: Rotterdam
Unit: USD/tonne
Min lot size: 25 tonnes (+/-2%)
Payment terms: Cash, other payment terms normalised
Quality: Mn: 99.7% S: 500 ppm max P: 50 ppm max C: 400 ppm max Fe+Se+Si: 0.205% max
Form: Flake
Publication: Twice-weekly. Wednesday and Friday by 3pm London time
Packaging: Big bags or steel drums
Delivery time: Prompt, within ten calendar days

www.fastmarkets.com
**Manganese**

**UNITED STATES**
- **Assessment:** Manganese 99.7% electrolytic cents per pound, ex-warehouse, US
- **Type:** Assessed range
- **Basis:** Ex-warehouse, US
- **Unit:** US cents per pound
- **Min lot size:** 10 tonnes
- **Payment terms:** Cash, other payment terms normalised
- **Quality:** Min 99.7% manganese
- **Form:** Flake
- **Packaging:** Bulk
- **Publication:** Weekly, every Thursday

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

**Mercury**

**GLOBAL**
- **Assessment:** Mercury 99.99% Hg global locations $/flask
- **Quality:** Hg: 99.99%, no other elements specified
- **Quantity:** 50 flasks with zero tolerance
- **Location:** Global
- **Timing:** Within one calendar month
- **Unit:** USD per flask
- **Form:** Free-flowing liquid
- **Packaging:** 34.5kg UN-approved steel flasks
- **Payment terms:** Cash, other payment terms normalised
- **Publication:** Fortnightly. Friday between 2pm and 3pm London time

**Selenium**

**EUROPE**
- **Assessment:** Selenium min 99.5 Se Rotterdam $/lb
- **Basis:** Rotterdam
- **Unit:** USD/lb
- **Min lot size:** 250kg (+/-2%)  
- **Quality:** Se: 99.5% min, no other elements specified
- **Form:** Powder of minus 200 mesh or granules sizing 1-5 mm
- **Packaging:** Original producers’ packaging, normally 25kg net
- **Delivery time:** Prompt release
- **Payment terms:** Cash, other payment terms normalised
- **Publication:** Twice-weekly. Wednesday and Friday between 2pm and 3pm London time

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**Rhenium**

**EUROPE**
- **Assessment:** Rhenium APR Catalytic grade
- **Quality:** Ammonium perrhenate, Re 68.5 - 69.8% min.
- **Quantity:** 20 kg (+/-2%)
- **Basis:** Rotterdam, duty unpaid
- **Unit:** USD/kg
- **Form:** White, free flowing powder/crystals
- **Packaging:** Uniform IMDG-approved containers, individually sealed and numbered
- **Delivery time:** Within one calendar month
- **Payment terms:** Cash, other terms normalised
- **Publication:** Fortnightly. Friday by 3pm London time

**EUROPE**
- **Assessment:** Rhenium metal pellets min 99.9%
- **Quality:** Rhenium pellets, Re 99.9% min.
- **Basis:** Rotterdam, duty unpaid
- **Unit:** USD/lb
- **Min lot size:** 10 kg (+/-2%)
- **Payment terms:** Cash, other payment terms normalised
- **Quality:** Rhenium pellets, Re 99.9% min.
- **Form:** White, free flowing powder/crystals
- **Packaging:** In uniform IMDG approved containers, individually sealed and numbered
- **Delivery time:** Within one calendar month
- **Publication:** Fortnightly. Friday by 3pm London time
### Non-ferrous Prices

#### CHINA

**Assessment:** Selenium min 99.9% Se China

- **Basis:** China
- **Unit:** CNY/kg
- **Min lot size:** 100 kg
- **Payment terms:** Cash, other payment terms normalised
- **Quality:** Se: 99.9% min, no other elements specified
- **Form:** Powder of minus 200 mesh or granules size 1-5 mm
- **Publication:** Weekly, Friday by 3pm London time

**Assessment:** Selenium dioxide min 98% China

- **Basis:** China
- **Unit:** CNY/kg
- **Min lot size:** 100 kg
- **Payment terms:** Cash, other payment terms normalised
- **Quality:** Selenium dioxide: 98% min, no other elements specified
- **Form:** Powder
- **Publication:** Weekly, Friday by 3pm London time

#### Silicon

**EUROPE**

**Assessment:** Silicon grade 4-4-1, min 99% Si

- **Basis:** Rotterdam
- **Unit:** EUR/tonne
- **Min lot size:** 25 tonnes (+/- 2%)
- **Payment terms:** Cash, other payment terms normalised
- **Quality:** Si 99% min, Fe 0.4% max, Al 0.4% max, Ca 0.1% max
- **Form:** 10-100mm lumps 90% min
- **Packaging:** 1 tonne big bag
- **Publication:** Weekly, Friday between 2pm and 3pm London time

**CHINA**

**Assessment:** Silicon grade 5-5-3, min 98.5% Si

- **Basis:** Rotterdam
- **Unit:** EUR/tonne
- **Min lot size:** 25 tonnes (+/- 2%)
- **Payment terms:** Cash, other payment terms normalised
- **Delivery time:** Prompt
- **Quality:** Silicon 98.50%, iron 0.50% max, aluminium 0.50% max, calcium 0.30% max
- **Form:** Lump, between 10 mm and 100 mm
- **Packaging:** 1 tonne big bag
- **Publication:** Once a week, Friday between 2pm and 3pm London time

**Assessment:** Silicon export China min 98.5% Si

- **Basis:** FOB China main ports
- **Unit:** USD/tonne
- **Min lot size:** 20 tonnes
- **Payment terms:** TT
- **Quality:** Si: 98.5% Min, Fe: 0.5% Max, Al: 0.5% Max, Ca: 0.3% Max
- **Form:** Lump
- **Publication:** Weekly, Friday between 2pm and 3pm London time

**UNITED STATES**

**Assessment:** Silicon metal, US

- **Quality:** Si: 98.50%, Fe: 0.50%, Al: 0.50%, Ca: 0.30%
- **Location:** Delivered US
- **Unit:** US cents per lb
- **Quantity:** 20 tons
- **Publication:** Monthly
## Tellurium

### EUROPE

<table>
<thead>
<tr>
<th>Assessment:</th>
<th>Tellurium, min 99.9-99.99% Rotterdam $/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basis:</td>
<td>Rotterdam</td>
</tr>
<tr>
<td>Unit:</td>
<td>USD/kg</td>
</tr>
<tr>
<td>Min lot size:</td>
<td>100 kg (+/-2%)</td>
</tr>
<tr>
<td>Payment terms:</td>
<td>Cash, other payment terms normalised</td>
</tr>
<tr>
<td>Quality:</td>
<td>Te: 99.9-99.99%, no other elements specified</td>
</tr>
<tr>
<td>Form:</td>
<td>Ingots, sticks or powder</td>
</tr>
<tr>
<td>Packaging:</td>
<td>Original producer packaging</td>
</tr>
<tr>
<td>Delivery time:</td>
<td>Prompt</td>
</tr>
<tr>
<td>Publication:</td>
<td>Twice-weekly, Wednesday and Friday between 2pm and 3pm London time</td>
</tr>
</tbody>
</table>

### CHINA

<table>
<thead>
<tr>
<th>Assessment:</th>
<th>Tellurium min 99.99% China CNY/kg</th>
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</thead>
<tbody>
<tr>
<td>Basis:</td>
<td>China</td>
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<tr>
<td>Unit:</td>
<td>CNY/kg</td>
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<tr>
<td>Min lot size:</td>
<td>500kg</td>
</tr>
<tr>
<td>Payment terms:</td>
<td>Cash, other payment terms normalised</td>
</tr>
<tr>
<td>Quality:</td>
<td>Te 99.99% min, no other elements specified</td>
</tr>
<tr>
<td>Form:</td>
<td>Ingots, sticks or powder</td>
</tr>
<tr>
<td>Frequency:</td>
<td>Weekly, Friday 2-3pm London time</td>
</tr>
</tbody>
</table>
Non-ferrous Prices

Battery raw materials

Cobalt sulfate

**China**

**Assessment:** China cobalt sulfate, Co 20.5% min, ex-works

**Unit:** CNY/tonne

**Quality/shape:** Crystal; feed from cobalt ores & concentrates, cobalt intermediates, such as crude cobalt hydroxide (materials produced from cobalt scrap are excluded)

**Chemistry:** Co: 20.5% min, Ni: 0.001% max, Cu: 0.001% max, Fe: 0.001% max, Zn: 0.001% max

**Minimum Lot size:** one tonne

**Delivery window:** within 30 days

**Payment terms:** On bank acceptance (other payments normalized)

**Publication:** Twice a week on Wednesday and Friday, between 2pm and 3pm London time

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Cobalt hydroxide

**Assessment:** Cobalt hydroxide payable indicator, min 30% Co, cif China, % payable of Fastmarkets’ standard-grade cobalt price (low-end)

**Unit:** % payable of Fastmarkets’ standard-grade cobalt price (low-end)

**Basis:** cif China (other terms normalized)

**Delivery window:** 45 days

**Base spec:** min 30% cobalt content

**Minimum lot size:** 50 tonnes (cobalt content)

**Payment terms:** Letter of credit

**Payment window:** current pricing month (ie, “M”)

**Publication:** Twice a week on Wednesday and Friday, between 2pm and 3pm London time

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Lithium

**Assessment:** Battery grade lithium carbonate min 99.5% Li2CO3, ex-works China

**Type:** Assessment and Index

**Basis:** China ex-works, VAT included

**Currency:** CNY

**Unit:** Tonne

**Delivery window:** 30 days

**Min lot size:** 5 tonnes

**Quality:** Min 99.5% Li2CO3 (delivery of Min 99.2% Li2CO3 also accepted, qualified for use in battery applications)

**Form:** Powder

**Publication:** Weekly. Thursday by 4pm London

**Notes:** The tonnage weighted index is intended to run in parallel with the existing assessment.
EAST ASIA, SOUTHEAST ASIA

Assessment: Lithium hydroxide monohydrate min 56.5% LiOH.H2O battery grade spot price CNY per tonne, ex works China
Basis: China ex-works, VAT included
Unit: CNY /tonne
Min lot size: 5 tonnes
Quality: Min 56.5% LiOH.H2O (qualified for use in battery applications)
Form: Powder
Publication: Weekly. Thursday by 4pm London

Assessment: Lithium carbonate min 99.5% Li2CO3 battery grade spot price US$ per kg CIF China, Japan & South Korea
Type: Assessed range
Basis: CIF main Chinese Japanese & South Korean ports (other ports normalized)
Unit: USD/kg
Min lot size: 5 tonnes
Quality: Min 99.2-99.5% Li2CO3 (delivery of Min 99.2% Li2CO3 also accepted, qualified for use in battery applications)
Form: Powder
Publication: Weekly. Thursday by 4pm London

Assessment: Lithium hydroxide monohydrate min 56.5% LiOH.H2O battery grade spot price CIF China, Japan & South Korea
Basis: CIF main Chinese Japanese & South Korean ports (other ports normalized)
Unit: USD/kg
Min lot size: 5 tonnes
Quality: Min 56.5% LiOH.H2O (qualified for use in battery applications)
Form: Powder
Publication: Weekly. Thursday by 4pm London

EUROPE & US

Assessment: Lithium hydroxide monohydrate min 56.5% LiOH.H2O battery grade contract price US$ per kg CIF China, Japan & Korea
Form: Powder
Min lot size: 20 tonnes
Quality: Min 99.5% Li2CO3 (delivery of Min 99.2% Li2CO3 also accepted, qualified for use in battery applications)
Location: CIF China, Japan & South Korea
Unit: USD/kg
Delivery Window: up to 1 year
Publication: Monthly, last Wednesday of the month between 3pm and 4pm London time

Assessment: Lithium carbonate min 99.5% Li2CO3 battery grade spot price US$ per kg DDP Europe and US
Form: Powder
Min lot size: 5 tonnes
Quality: Min 99.5% Li2CO3 (delivery of Min 99.2% Li2CO3 also accepted, qualified for use in battery applications)
Location: DDP US & Europe
Unit: USD/kg
Delivery Window: 30 days
Publication: Weekly, Thursday between 3pm and 4pm London time

Assessment: Lithium hydroxide monohydrate min 56.5% LiOH.H2O battery grade spot price US$ per kg DDP Europe and US
Form: Powder
Min lot size: 5 tonnes
Quality: Min 56.5% LiOH.H2O (qualified for use in battery applications)
Location: DDP US & Europe
Unit: USD/kg
Delivery Window: 30 days
Publication: Weekly, Thursday between 3pm and 4pm London time
Non-ferrous Prices

Graphite

**Assessment:** Graphite spherical 99.95% C, 15 microns uncoated
**Basis:** FOB China
**Unit:** USD/tonne
**Min lot size:** 20 tonnes
**Quality:** 99.95% C, 15 microns, uncoated
**Publication:** Weekly. Thursday by 4pm London

**Assessment:** Graphite flake 94-97% C, -100 Mesh, FCL, FOB Qingdao, China
**Basis:** FOB China
**Unit:** USD/tonne
**Min lot size:** 20 tonnes
**Quality:** 94-97% C, -100 Mesh
**Publication:** Weekly. Thursday by 4pm London

Nickel Sulfate

**Assessment:** China nickel sulfate, ex-works
**Grade:** Nickel content min 21%, max: 22.5%; cobalt 10ppm max
**Unit:** CNY/tonne
**Min Lot size:** 1 tonne
**Payment terms:** Bank acceptance (other payments normalized)
**Publication:** Weekly. Tuesdays by 4pm London time

Assessment: Lithium hydroxide monohydrate min 56.5% LiOH.H2O battery grade contract price US$ per kg DDP Europe and US
**Form:** Powder
**Min lot size:** 20 tonnes
**Quality:** Min 99.5% Li2CO3 (delivery of Min 99.2% Li2CO3 also accepted, qualified for use in battery applications)
**Location:** DDP US & Europe
**Unit:** USD/kg
**Delivery Window:** up to 1 year
**Publication:** Monthly, last Wednesday of the month between 3pm and 4pm London time
Scrap

Copper scrap

CHINA

Assessment: No. 2 copper (Birch/Cliff) imported into China
Basis: CIF in China ports (Shanghai, Guangdong, Zhejiang, Tianjin and Shandong)
Grade: 94-96% copper content, US or European origin; discount to LME or Comex
Unit: US cents/lb
Min Lot size: 25 tonnes
Payment: Cash against documents, letter of credit, telegraphic transfer; other terms normalised
Delivery window: Within 5 weeks
Publication: Monthly. Last Monday of each month 3-4pm London time

Aluminium scrap

EUROPE

Assessment: Aluminium scrap baled old rolled UK
Basis: Delivered consumer works, UK
Grade: Wrought scrap of alloyed and unalloyed aluminium. Maximum 2% calcareous and other non-metallic substances
Unit: GBP/tonne
Min lot size: 5 tonnes
Payment terms: Net monthly account
Delivery window: Within 4 weeks
Publication: Weekly. Wednesday 3-4pm London time

Assessment: Aluminium scrap cast wheels UK
Basis: Delivered consumer works, UK
Grade: Cast aluminium wheels
Currency: GBP
Unit: Tonne
Min lot size: 5 tonnes
Payment terms: Net monthly account
Delivery window: Within 4 weeks
Publication: Weekly. Wednesday 3-4pm London time

Assessment: Aluminium scrap commercial cast UK £/tonne
Basis: Delivered consumer works, UK
Grade: Whole or broken aluminium castings of all kinds
Unit: GBP/tonne
Min lot size: 5 tonnes
Payment terms: Net monthly account
Delivery window: Within 4 weeks
Publication: Weekly. Wednesday 3-4pm London time

Assessment: Aluminium scrap clean HE9 extrusions UK
Basis: Delivered consumer works, UK
Grade: Clean HE9 extrusion scrap. Cu 0.1% max, Zn 0.1% max, free from deleterious materials, oil, grease, non-metallic coatings max 1%
Unit: GBP/tonne
Min lot size: 5 tonnes
Payment terms: Net monthly account
Delivery window: Within 4 weeks
Publication: Weekly. Wednesday 3-4pm London time

Assessment: Aluminium scrap commercial pure cuttings UK
Basis: Delivered consumer works, UK
Grade: New, uncoated, mixed alloys, pure sheet scrap. May contain proportion of one of more aluminium alloys, none of which shall contain more than 0.1% Cu and 0.1% each of Pb, Zn, Sn, antimony, bismuth. Mg 0.5% max. No 2000 or 7000 series metal
Unit: GBP/tonne
Min lot size: 5 tonnes
Payment terms: Net monthly account
Delivery window: Within 4 weeks
Publication: Weekly. Wednesday 3-4pm London time
## Assessment:
**Aluminium scrap commercial turnings UK**

**Basis:** Delivered consumer works, UK  
**Grade:** 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  
**Unit:** GBP/tonne  
**Min lot size:** 5 tonnes  
**Payment terms:** Net monthly account  
**Delivery window:** Within 4 weeks  
**Publication:** Weekly. Wednesday 3-4pm London time

**Assessment:**  
**Aluminium scrap 1 pure 99% & litho UK**

**Basis:** Delivered consumer works, UK  
**Grade:** 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%)  
**Currency:** GBP  
**Unit:** Tonne  
**Min lot size:** 5 tonnes  
**Payment terms:** Net monthly account  
**Delivery window:** Within 4 weeks  
**Publication:** Weekly. Wednesday 3-4pm London time

## Assessment:
**Aluminium Scrap Floated Frag delivered consumer works Europe**

**Basis:** Delivered consumer works, Europe  
**Grade:** Twitch floated fragmentiser aluminium scrap (from automobile shredders). Free Zn 1% max, free Mg 1% max, analytical Fe 1% max. Non-metallics 2% max (of which rubber & plastics 1% max)  
**Unit:** EUR/tonne  
**Min lot size:** 25 tonnes  
**Payment terms:** 30 days, other payment terms normalised  
**Delivery window:** Within 4 weeks  
**Publication:** Weekly. Friday 3-4pm London time

**Assessment:**  
**Aluminium scrap loose old rolled cuttings UK**

**Type:** Assessed range  
**Basis:** Delivered consumer works, UK  
**Grade:** Wrought scrap of alloyed and unalloyed aluminium. Maximum 2% calcareous and other non-metallic substances  
**Unit:** GBP/tonne  
**Min lot size:** 5 tonnes  
**Payment terms:** Net monthly account  
**Delivery window:** Within 4 weeks  
**Publication:** Weekly. Wednesday 3-4pm London time

## Assessment:
**Aluminium scrap group 7 turnings UK**

**Basis:** Delivered consumer works, UK  
**Grade:** Clean, uncorroded aluminium borings, millings and turnings of two or more specified alloys.  
**Currency:** GBP  
**Unit:** Tonne  
**Min lot size:** 5 tonnes  
**Payment terms:** Net monthly account  
**Delivery window:** Within 4 weeks  
**Publication:** Weekly. Wednesday 3-4pm London time

**Assessment:**  
**Aluminium scrap mixed turnings Europe**

**Basis:** Delivered consumer works, Europe  
**Grade:** Clean, uncorroded aluminium borings, millings and turnings of two or more specified alloys. Zn 2% max. Fines 3% max, oil/moisture/free iron 10% max  
**Unit:** EUR/tonne  
**Min lot size:** 25 tonnes  
**Payment terms:** 30 days, other payment terms normalised  
**Delivery window:** Within 4 weeks  
**Publication:** Weekly. Wednesday 3-4pm London time
Non-ferrous Prices

Secondary aluminium scrap

EUROPE

Assessment: Aluminium scrap tense mixed aluminium castings (Cast) Europe
Basis: Delivered consumer works, Europe
Grade: Whole or broken aluminium castings of all kinds. Oil and grease not to total more than 2%
Unit: EUR/tonne
Min lot size: 25 tonnes
Payment terms: 30 days, other payment terms normalised
Delivery window: Within 4 weeks
Publication: Weekly. Friday 3-4pm London time

Assessment: Aluminium pressure diecasting ingot DIN226/A380 DDP Europe
Basis: Delivered consumer works in Europe, most consumers in Northern Europe, in particular Germany
Grade: 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
Unit: EUR/tonne
Min lot size: 25 tonnes
Payment terms: 30 days, other payment terms normalised
Delivery window: Within 2 months
Form: Ingot
Publication: Weekly. Friday 3-4pm London time

Titanium scrap

EUROPE

Assessment: Titanium scrap turnings unprocessed (90/6/4) (0.5% Sn) cif major European ports $/lb
Basis: Cif major European ports
Unit: USD/ per lb Ti
Min lot size: 18-22 tonne lots
Payment terms: Cash; other payment terms normalised
Quality: Ti: 90% Al: 6%V: 4% Sn: 0.5%
Form: Turnings
Publication: Weekly. Wednesday 3-4pm London time

Assessment: Titanium scrap turnings unprocessed (90/6/4) (0.5%-2% Sn) cif major European ports $/lb
Basis: Cif major European ports
Unit: USD/ per lb Ti
Min lot size: 18-22 tonne lots
Payment terms: Cash; other payment terms normalised
Quality: Titanium: 90% Al: 6%V: 4% Sn: 0.5-2%
Form: Turnings
Publication: Weekly. Wednesday 3-4pm London time
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