

## CONTENTS

<b>Introduction</b>	<b>2</b>	<b>3. Composite indexes</b>	<b>15</b>	<b>5. Compliance &amp; security</b>	<b>22</b>
Benchmark Minerals Mission Statement	2	3.1. Weighted average prices	15		
Assessment introduction	3			<b>6. Corrections</b>	<b>23</b>
Methodology structure	3	<b>4. Price definitions</b>	<b>16</b>	<b>7: Complaints &amp; enquiries</b>	<b>24</b>
		4.1 High energy synthetic graphite			
<b>1: Data collection &amp; reporting</b>	<b>4</b>	anode: DDP China	16	<b>8: Revision history</b>	<b>24</b>
1.1. How we collect anode data	5	4.2 Medium energy synthetic graphite			
1.2. Typical interactions	6	anode: DDP China	17	<b>9: Contact us</b>	<b>24</b>
1.3. Data sources	8	4.3 Low energy synthetic graphite			
1.4. Data assessment process	9	anode: DDP China	18		
1.5. Grade-specific prices	9	4.4 High energy natural graphite			
		anode: DDP China	19		
<b>2: Data assessment</b>	<b>11</b>	4.5 Medium energy natural graphite			
2.1 Anode production capacity data	11	anode: DDP China	20		
2.2 Tier data	11	4.6 Low energy natural graphite			
2.3 Production capacity by anode type	11	anode: DDP China	21		
2.4 Testing our price integrity	11				
2.5 Governance	12				
2.6 Review process	13				

# INTRODUCTION

## BENCHMARK MINERALS MISSION STATEMENT

Benchmark Mineral Intelligence (Benchmark Minerals) strives to create methodologies that accurately reflect the market dynamics of the industries we cover and allow for independent data collection, free of distortion or misrepresentation.

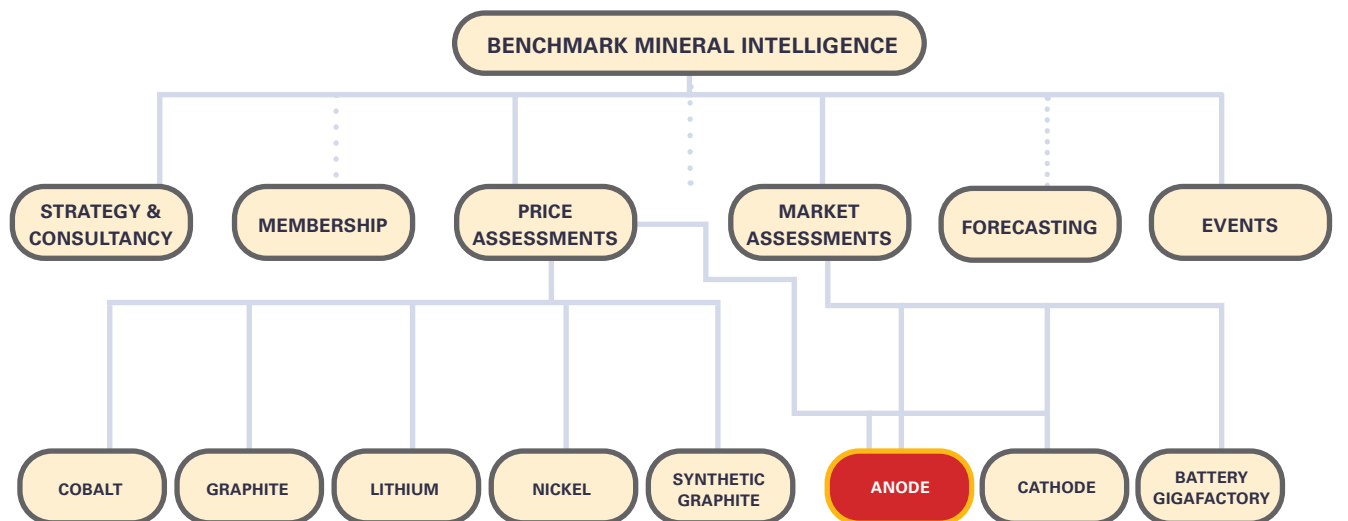
Our market assessments track key metrics that can be regularly assessed to determine the growth trajectory of that given market.

For the anode assessment we have identified key data points which allow for direct comparative analysis of the ongoing and future state of the industry. These include (but are not limited to):

- Anode production capacity, current and forecast, on a plant-by-plant basis
- The location of capacity
- Anode type used by each facility
- Tier status of each producer
- 6 anode price grades

Alongside this, Benchmark Minerals assesses supplementary data including raw material demand of the anode plants in the assessment to help make informed decision relating to the growth trajectory of the industry (more details on this can be found in section 2 of this methodology).

## COMPANY STRUCTURE



The anode price grades selected represent the most commonly utilised natural and synthetic anodes traded in the Chinese domestic market. Details of the individual grades can be found in the Price Definitions section of this document (section 4).

Benchmark Minerals focuses on primary data collection from different sources directly from the supply chain in order to build an informed and robust perspective of the market.

Due to the opaque nature of the industry, Benchmark Minerals employs expert analysts to collect and

interpret this information, using editorial expertise to assess the information received.

This methodology describes the process by which Benchmark Minerals assesses anode production capacity and the standards our analysts adhere to in data collection.

The information we publish is distributed directly to subscribers and also made available via our website for authorised users/licensers. The timing and delivery of this information is outlined in section 1.4. To ensure the data we publish is accurate, delivered

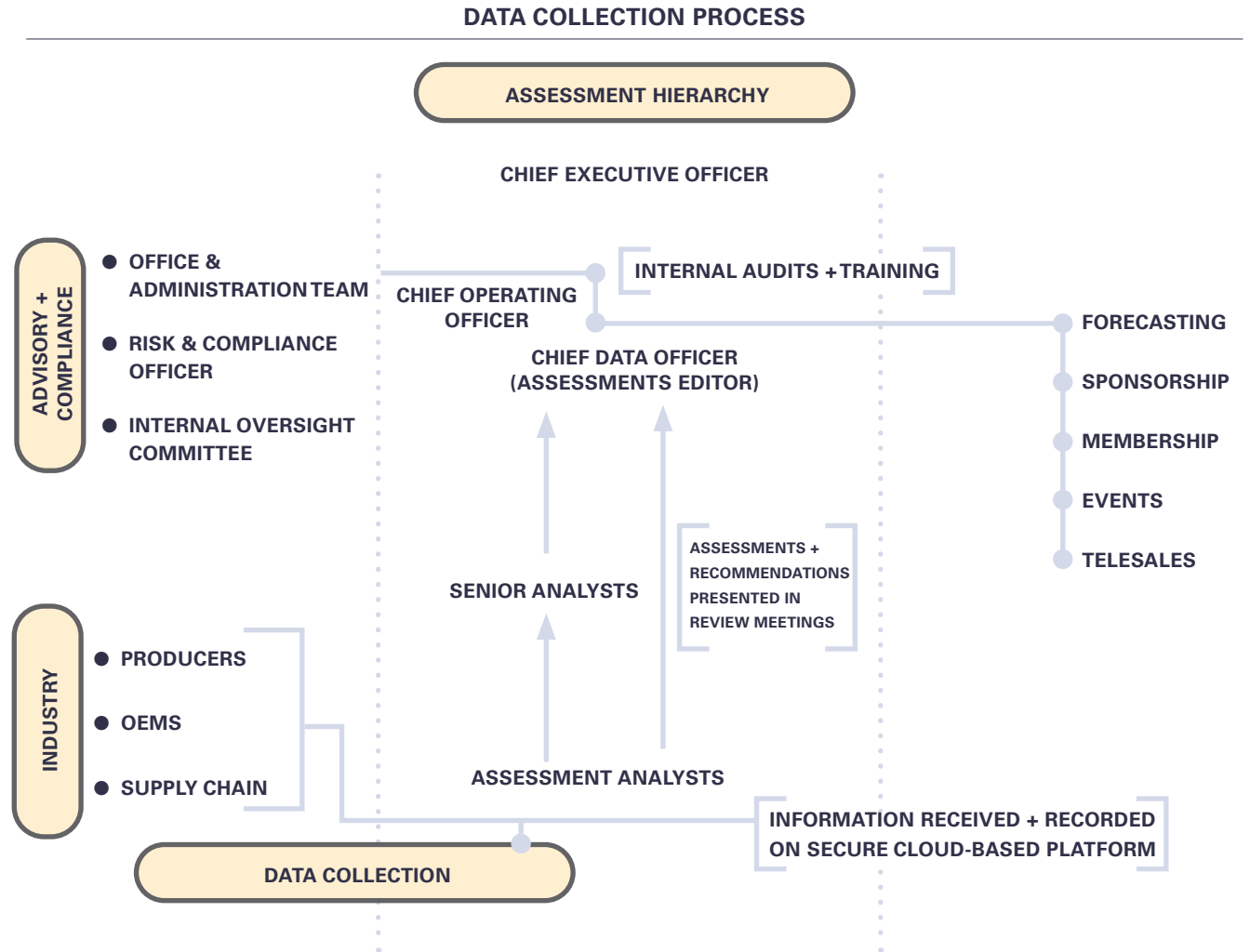
# INTRODUCTION

on time and compliant with regulatory principles, Benchmark Minerals applies a number of failsafe processes that are outlined in this document to allow problems to be rectified when and if they occur.

Benchmark Minerals methodologies are created and updated in line with developments in each of the specific markets we cover.

As the industries we follow evolve, we update the data we collect and process we adhere to in order to ensure the most accurate and relevant data is made available to the market. A full history of revisions to our methodology can be found in section 8.

All Benchmark Minerals methodologies are tailored to the markets they cover and reflect Benchmark's commitment to independent and accurate price and data reporting.



# INTRODUCTION

## METHODOLOGY STRUCTURE

This methodology has been structured to provide a detailed description of our data collection processes and procedures, the rationale behind this process in relation to the anode market, and the compliance process we adhere to in order to ensure clear and transparent data reporting. The methodology is structured as follows:

- **SECTION 1:** An overview of the data we report, details of the data collection process and Benchmark Minerals' data assessment principles. This includes how and when data are distributed.
- **SECTION 2:** Highlights the key types of data that are collected for the assessment and how they relate to the market.
- **SECTION 3:** How we calculate our prices using the information received from the market. This section gives a detailed account of Benchmark Minerals' editorial process, the prioritisation and limitations of data and how we normalise data to produce grade-specific market prices.
- **SECTION 4:** A detailed description of each anode price we publish, including a review of the significance of each price in relation to global trade flows.
- **SECTION 5:** A description of our compliance and security procedures, including how we adhere to regulatory principles relating to price reporting and benchmarking.
- **SECTION 6:** How we identify and substantiate corrections to published price data, including how any corrections are reported to the market.
- **SECTION 7:** Benchmark Minerals contact details

# 1. DATA COLLECTION

The objective of Benchmark Minerals Anode Assessment is to provide an accurate and independent evaluation of global anode production capacity and prevailing market prices for the anode grades under assessment.

The data that is used in our assessments is collected directly from the market, and we encourage our sources to report any supplementary information possible in order to determine the most accurate reflection of the data we have collected.

In order to protect the integrity of our assessments, Benchmark Minerals conducts regular reviews of the sources providing market information. These sources are also kept private in order to allow for open and honest information exchange.

In this section we detail how this information is collected, used and reported to the market via Benchmark Minerals Market Assessments.

## 1.1 HOW WE COLLECT DATA

Benchmark Minerals' market data is collected primarily via direct contact with anode producers and consumers or companies that have outlined detailed plans to produce capacity. Benchmark Minerals price data is collected by polling a cross-section of active market participants. Our team of analysts verify and

substantiate this information through a range of primary and secondary sources.

Our primary process involves a dedicated team of experienced market analysts communicating regularly with the industry via phone, email, messenger services and direct meetings in person.

All information received is logged on our internal secure cloud-based system by the analyst upon receipt of the data along with any accompanying information that can assist in verifying or normalising the prices.

This data is cross-referenced and analysed in relation to other relevant data points received from the market.

As a secondary method of verifying this information, the data is checked against public sources such as company reports, and government data.

Due to the timing of this type of reporting, it largely serves as a method of identifying anomalies in data that has already been published.

Any unclear or incomplete price data which is received is reviewed and assessed in the price assessment meetings to ensure independence and neutrality is applied to the value of this information in the price calculation.

The cutoff time for the initial assessment is 5pm (London) on the day prior to publication. If any information is received after this point, it is included in the following assessment.

### **Anomalies**

Any pricing data received which is over 5% different from the average of the previous month's assessment is highlighted and reviewed in the final review process by the Chief Data Officer or Senior Analysts to determine accuracy and relevance.

When this type of information is received, price assessors will seek to verify the information with counterparts in the transaction in order to verify the transacted value.

Benchmark has determined 5% as an appropriate value in price fluctuation, as this represents a threshold which would highlight unusual, yet plausible, market volatility.

If it is decided in the final review process that the information can not be independently verified or corroborated by other data points received in the same period, then the data point is excluded from the assessment and an action point raised to investigate further for the following assessment period.

Although the number of contacts for any one data

# 1. DATA COLLECTION

point can vary, the insight and experience of our analysts ensure that all data published can be authenticated and supported by market intelligence.

If at any time the number of contacts for any one price falls to a point where data cannot be sufficiently verified, the price grade is reviewed by the supervising editor.

## 1.2 TYPICAL INTERACTIONS

### Capacity data

Benchmark Minerals looks to confirm all data points that have not been received directly from the company under assessment within 6 months.

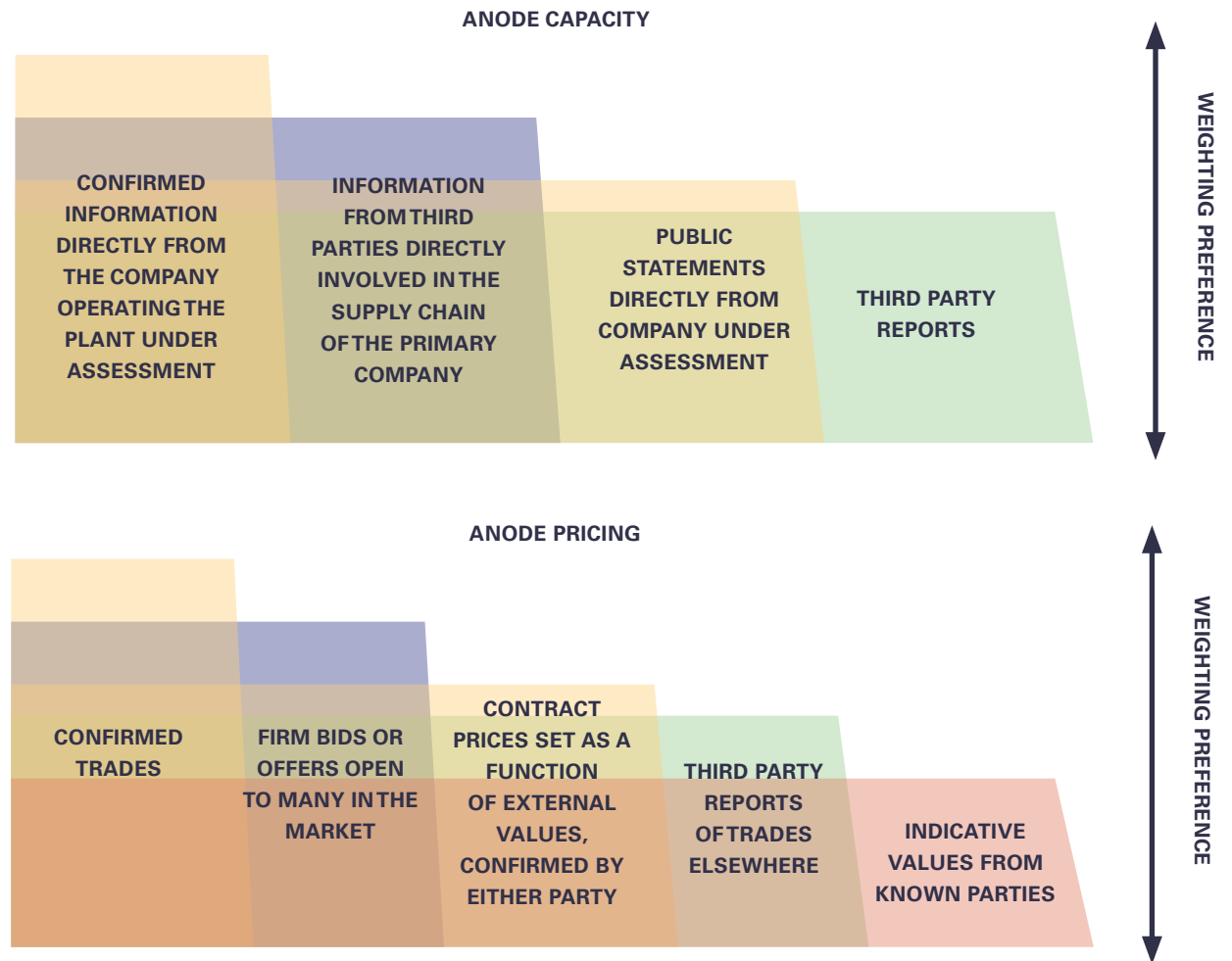
Data points that have not been collected directly from the company are assessed for reliability and can, in some instances, be used in the assessment prior to confirmation.

Benchmark strives to collect all capacity data in the Benchmark Minerals Anode Assessment directly from industry contacts, from the companies included in the assessment.

Where this is not always possible this information can also be supplemented by:

- Public statements made by the company under assessment

### INPUT DATA HIERARCHY



# 1. DATA COLLECTION

- Information gathered from other companies in the supply chain - directly involved with the one in question
- Third-party reports of market activity

## Price data

Types of transactions in the anode market can vary considerably based on the type of anode, volumes and specifications. Details of these variables in relation to specific prices Benchmark Minerals publish is outlined in the Price Definitions section of this methodology (Part 4)

The price data included in Benchmark Minerals Price Assessments represents confirmed trades primarily and firm bid/offers that are open to the market as a whole.

This information is supplemented by:

- Expressions of interest to trade at published levels
- Contract prices set as a function of external values, confirmed by either party
- Third-party reports of market activity
- Other non-transactional data

These data points are used to verify and corroborate the price information received to determine a prevailing market price.

In order to protect the confidentiality of our price sources, specific transactional information is not

disclosed to the market.

## Price data preference

In regard to pricing, Benchmark Minerals prioritises information received relating to confirmed trades and transactional volumes when making its price assessments. Given the structure of the anode market and the lack of any openly traded contracts, price providers are often unable to provide trade-specific details and instead provide an average value or range for their transactions in a given period. For the purposes of including information from these sources, which represent a large proportion of the market, this information is classified as a confirmed trade.

In the instance that confirmed trades are not provided, we then give preference to firm bids and offers that are open to more than one party in the market, provided all other variables are equal.

Finally, Benchmark Minerals also records third party reports of trades elsewhere in the market that they have not had direct involvement in and uses indicative values from active market participants or prices into other areas of the world as way of verifying other information received.

## Price Assessment thresholds

As Benchmark plays a role in bringing price transparency to opaque markets, in some cases

trading and market information can be sporadic and therefore not conducive to minimum data thresholds.

As a result, Benchmark Minerals makes its assessments and assigns weightings to the information it receives based upon estimates of the respective market share each source represents.

This information is used in collaboration with external market commentary, source test validation and our process of editorial judgement to analyse the relevance of any piece of information.

In the instance that one price provider accounts for a substantial proportion of the market volumes traded across one individual price, Benchmark Minerals seeks to verify this information with counterparts to verify the information received and avoid key submitter dependency.

In the instance that one price provider accounts for a substantial proportion of the market volumes traded across one individual price, deemed to be more than 25%, Benchmark Minerals seeks to verify the information received with counterparts to avoid key submitter dependency. Should Benchmark rely on transaction data from one provider representing more than 25% of data received, this will be outlined in the price assessment commentary.

Whilst rare, in some cases, due to the illiquid nature of some of the markets covered by the assessment,

# 1. DATA COLLECTION

as well as forecasted supply deficits limiting trading activity, it is realistically possible that no transaction data will be received for an assessed period. Where trade or supplementary data (as defined in the input data hierarchy on Pg.6) is not available or does not provide a conclusive reason to edit the price, the assessment remains unchanged.

## **Prevailing market price**

Benchmark Minerals assesses anode prices through a prevailing market price process which aims to identify the value of material traded within a stated time period.

The process has been designed to provide a reliable reference price for the industry based on the receipt of a sufficient number of price points to allow for accurate market assessment. It also considers the reliability of the sources of information.

Price data must be received by the end of the stated assessment period to be included in the respective price review.

For the purposes of discounting data which may include a long-term bias, Benchmark Minerals excludes any transactions which have a fixed-price for longer than 1 month.

## **Assessment period**

Benchmark Minerals analysts evaluate all data received in the assessment period on the day of

publishing during an initial review meeting with the Chief Data Officer or Senior Analysts.

These proposed price ranges are then submitted and reviewed on the day of publication by the Chief Data Officer, Chief Operating Officer or a Senior Analyst. The cutoff time for the initial assessment is 5pm (London) on the day prior to publication.

If any information is received after this point it is included in the following assessment. If we do not receive sufficient data points to make an assessment, then we do carry over relevant data received in previous assessments or information which can be used to extrapolate market prices.

## **1.3 DATA SOURCES**

Benchmark Minerals conducts confidential interactions with market participants in order to source the data and market intelligence used for its assessments.

Due to the structure of the market and the position of companies within the supply chain, full transactional data is not always available.

Where possible Benchmark Minerals requests that all relevant data is provided and individual data points are provided throughout the assessment period. Due to the private nature of the discussions Benchmark has with its contacts, full disclosure

of the interaction is often not possible, however Benchmark Minerals does ask sources to meet a set of standards which confirm:

- i) Data is reported on an honest, timely and consistent basis
- ii) Data is reflective of the overall trend in data rather than selective deals submitted to influence the assessment
- iii) Data is supplied or approved by a commercial division of the source company
- iv) data provided is from arm's length transactions only, from non-affiliated parties.

Data providers do not enter into a formal agreement to provide data to Benchmark Minerals. Instead interactions with the market are conducted on a trust basis which require internal review and editorial judgement. Information sources are only added to our network of price providers after a review process between the analyst and the Chief Data Officer.

## **1.4 DATA ASSESSMENT PROCESS**

Benchmark Minerals anode capacity and price data is assessed on a monthly basis to allow for a sufficient number of transactions to be made to identify a consistent market trend and range for prices.

# 1. DATA COLLECTION

Benchmark Minerals analysts conduct the monthly review on the 15th of the month, or the closest business day following the 15th should the 15th fall on a non-business day, with price data published to Benchmark's website by 4pm (London).

The monthly data review involves all relevant analysts collecting their respective data points for the time period in question and reviewing in relation to other information received.

The team of analysts then submit recommended price ranges based on the data collected in that period and these recommendations are confirmed by the Chief Data Officer or a Senior Analyst who was not involved in the price collection process for the assessed grades.

All price assessments and editorial judgments made during the assessment review are recorded and logged internally by name and rationale within internal audit framework.

The size and frequency of transactions in the anode market dictate that monthly price publication is required in order to collect a sufficient number of data points within the framework of a robust and regulatory compliant methodology.

Benchmark Minerals works actively with the industry to increase the regularity and transparency of transactions, and as the industry evolves the

frequency of the prices it publishes will move towards semi-monthly, weekly and eventually daily pricing across all grades where suitable. Due to the nature of capacity data received by Benchmark analysts, on occasion, data received in an assessment month may not be published until later months whilst it is verified.

## 1.5 GRADE-SPECIFIC PRICES

### Editorial judgement

Benchmark Minerals employs a process of editorial judgement to calculate the price ranges for each of the grade-specific prices published.

This process originates from primary data collection which is logged and reviewed in regular team meetings involving the relevant market analysts as described in more detail in section 2.6.

After the data is reviewed and each relevant analyst makes their price recommendations, the Chief Data Officer or a Senior Analyst will analyse the recommended price ranges in relation to supporting evidence and internal data logs to check for accuracy.

In the event that price recommendations do not correspond with the prices and supporting evidence which has been internally logged, the Chief Data Officer or relevant Senior Analyst will conduct a review of the data with the responsible analyst(s) directly.

The Chief Data Officer or a Senior Analyst not involved with the price collection process for the assessed grades verifies the established price ranges before the data is published and distributed.

### Price ranges

The way anodes are traded dictates that prices are negotiated directly between buyer and seller. As such, there is no one price for anodes and prices for the same product in the market at any one time can often vary considerably dependent on volume, contract/delivery terms, impurity profiles and numerous other variables.

Benchmark Minerals grade-specific anode prices are therefore set as ranges. Where one value is shown this represents the mid-point of the price range unless otherwise stated.

### Input weightings

Benchmark Minerals' assessment of the value and weighting of information received is based on a process of expert ranking, whereby analysts analyse the information received with respect to the volumes traded where available, the position of the company in the market and the reliability of the source. Benchmark Minerals' assessment team build an internal profile of price sources through our interactions with companies and other secondary sources of market information in order to rank the validity of received data points.

# 1. DATA COLLECTION

Price ranges are intended as an average spread of transaction throughout the assessment period and therefore data evaluation is not weighted on the time at which the price information is received within the price collection period.

## Units of measurement

Benchmark Minerals Price Assessments are published in the most common currencies and units of measurement.

In the anode market, which is largely focused in China, domestic transactions are typically negotiated in Chinese yuan (RMB). However, global transactions are most commonly traded in US dollars (USD)

In the case that domestic Chinese prices are represented in USD, they are converted using the USD/RMB exchange rate, which is fixed via Finnhub at 9am (London) on the day of publication and can be made available to subscribers upon request. Grades are published by Benchmark in the currency in which they are traded. Prices are available on the Benchmark website in both RMB and USD, based on the Finnhub exchange rate.

Anode volumes are negotiated on a kg or metric tonne basis. Benchmark Minerals prices are represented in metric tonnes unless stated otherwise.

## Shipping terms

Across all assessments, Benchmark minerals uses four industry standard incoterms to represent the location/destination of the material.

Free on board (FOB) – used to represent the price out of an originating region/country

Cost, Insurance and Freight (CIF) – used to represent the delivered price going in to a particular region/country

Ex Works (EXW) – used to represent a domestically traded price with minimal shipping or transportation costs

Delivered Duty Paid (DDP) – used to represent a domestically traded price with transportation costs and other fees included

## Normalisation

The specialist nature of anode production means these specifications are not always consistent across the market and Benchmark Minerals therefore aims to align the variables of any pricing data received with the most relevant price assessment.

A normalisation process is undertaken when dealing with this type of non-standard data. Benchmark Minerals standardises the varying costs of shipping from/to different ports within the regions outlined in its assessments.

Grade and impurity profiles can also vary, and Benchmark Minerals seeks to normalise these specifications to industry standard levels by applying discounts or premiums to prices received dependent on the individual material specifications.

The level of normalisation is dependent on analyst judgement based on interactions with the market and observed variance in market value from a base standard. Taxes, tariffs and duties are also included in the published prices, unless otherwise stated in the price definitions section of this methodology. Finally, shipping terms are also normalised to meet the shipping/destination port specified for each price in section 3.

## Editorial judgement

The nature of the anode market dictates that a process of editorial judgement is necessary to interpret the various data points in the market and normalise the information received to the grade specifications, outlined in section 3 of this methodology.

## 2. DATA ASSESSMENT

In this section the methodology will review some of the key types of data included in the assessment and how they relate to the market:

### 2.1 ANODE CAPACITY DATA

Data in the assessment is measured in tonnes per annum (tpa) providing details on active production capacity and forecasts for future available capacities.

The numbers shown reflect the total volume of anode material that could be produced by the plant on an annual basis (assuming 100% utilisation).

The figures represent capacity at the end of the given year i.e. 31 December.

### 2.2 TIER DATA

Benchmark Minerals applies a tier ranking to the companies in the assessment.

The purpose of this ranking system is to define anode producers by the qualification level as well as volume and quality status.

Companies are qualified as Tier 1, Tier 2 or Tier 3, definitions are as follows:

#### Tier 1

- Qualified to supply and delivering to the global EV market
- > 10,000 tonnes of annual production capacity
- Assessed every 3 months

#### Tier 2

- Not yet qualified to supply the global EV market
- Qualified to supply Chinese domestic EV market and non-EV sectors

#### Tier 3

- New market entrants or producers not yet qualified to supply any EV end markets

### 2.3 PRODUCTION CAPACITY BY ANODE TYPE

As part of Benchmark Minerals assessment of each plant, anode types are assigned to capacities. This information shows the relative direction of anode technology for current and future plants.

Where possible information is gathered directly from industry, otherwise Benchmark analysts will use their expertise and supply chain knowledge to make an informed estimate.

Anode production capacity is assigned on a plant-by-plant basis and aggregated in the monthly assessment to demonstrate the total market share by anode type.

### 2.4 TESTING OUR PRICE INTEGRITY

As part of our data collection process Benchmark Minerals also conducts regular reviews of our sources and the data received to analyse the information published against external metrics and verify accuracy.

#### Price verification

When pricing information is received by Benchmark Minerals, we seek to verify this information directly with other parties involved in the transaction, or companies at other levels of the supply chain that would be privy to data relating to the transaction.

Any information received from sources which have been shown to provide inaccurate or misleading data is excluded from the assessment. Also if there is a notable disparity on the price from different parties reporting on the same transaction then this information is discounted from the assessment.

Benchmark Minerals' policy is to assess, affirm and verify all data for accuracy and reliability. If data fails to meet our quality standards, then our price assessors will initiate procedures to either rectify or reject a specific data submission. Assessors may notify the providers of this action, should the price be deemed to have been purposefully misrepresenting the market.

Certain standard tests are also carried out to apply:

## 2. DATA ASSESSMENT

- Checks on internal transfers, offtake agreements or deals with affiliated parties
- Restrictions on the weight a single party can have on a monthly price
- Individual case assessment of outliers and anomalies
- Checks on price discrepancies between buyer and seller
- Secondary verifications when there are a lack of reportable transactions

### Source Tests

All information received during our data collection process is weighted upon the credibility of the information source.

Benchmark Minerals therefore judges the validity of the information received based upon:

- Proximity – the position of the source within the industry and in relation to the transaction being discussed
- Vested interest – the motivation of the source in discussing the information
- Track record – the previous reliability of information obtained from the source
- Date received – when the information was shared in relation to the date of publishing

### Comparative metrics

Often, the nature of surrounding markets can be used as a point of reference for contract negotiations

between buyer and seller. Subsequently these data points are employed as comparative metrics in measuring the state of the market in question. Comparative metrics include:

- Comparison to the price of the same product in another area of the market
- Comparison to a slightly different specification product in the same area of the market
- Comparison to transactions completed for the same product in another relevant time period
- Comparison to the material's feedstock or primary derived product(s)
- Comparison to transactions for different volumes or trade routes

Use of transactions involving material outside of standard specifications will be assessed and normalised, where viable, for contribution to price data. This can include transactions of anomalous sizes, locations or involving multiple contingencies which may distort price.

### 2.5 GOVERNANCE

Benchmark Minerals employs a numbers of governance checks to ensure the suitability and application of the methodology and to consult with the market as to any changes in our processes and procedures.

A full employee code of conduct is available upon request and outlines the standards employees are obligated to adhere to in terms of antitrust, confidentiality and data protection policy.

### Operational checks and balances

Benchmark Minerals imposes Chinese walls between areas of the business where a conflict of interest may arise to ensure our price assessments are conducted independently, and without any prejudice or bias.

The four areas of the Benchmark Minerals business are outlined on pg. 2 of this methodology:

- Benchmark Membership: News & analysis
- Benchmark Price Assessments: Price reporting
- Benchmark Forecasting: Long-term supply, demand & price forecasting
- Benchmark Events: Conferences and seminars

Benchmark Price Assessments are operated by a team of analysts that operate independently to the other areas of the business. This team is managed by the Chief Data Officer who, alongside Senior Analysts, coordinates the price assessment reviews and makes the final appraisal of price data received ahead of publishing.

The Chief Data Officer reports directly to the Chief Executive Officer who oversees any external queries or complaints and regularly monitors the proper implementation of the methodology.

## 2. DATA ASSESSMENT

The company also employs a Company Secretary to act as external counsel on any issues pertaining to legal disputes.

### Internal governance meetings

Benchmark Minerals holds annual governance meetings with all senior management members to review price collection processes and ensure data collection adheres to the standards outlined in this methodology as well as regulatory principles.

Benchmark Minerals also holds bi-annual consultation meetings with management and the price collection team to consult on any amendments or changes to the methodology.

This meeting serves as a review of the methodology relevance in relation to industry developments and ensures the price reporting process is robust to industry requirements and regulatory standards.

### Methodology Public Consultation

Benchmark Minerals holds a period of public consultation to allow for comment on its mineral specific Price Assessment Methodologies.

This is held via a free to view article on the Benchmark website and notification is made to its contact database. This public consultation will typically be held in August, and for no fewer than 28 days, exact dates may change as market factors define.

Benchmark will review all comments and seek to make public all non-confidential comments/responses within 10 working days of the closure of the public consultation. If any comments result in a material change to its methodology, Benchmark will undertake process defined in its Benchmark Methodology Review Process.

### External Audits

Benchmark Minerals employs an external auditor to confirm the company's compliance with IOSCO principles with reasonable assurance.

Annual external audits will be held once IOSCO certification is received to ensure all processes and procedures are being followed in a regulatory compliant manner within the structure of this methodology.

### Industry briefings and conferences

Benchmark Minerals also engages the industry to consult on updates and developments to its price collection process through its series of annual events. These events include:

- Benchmark World Tours
- Benchmark Week: Cathodes, Anodes & Sustainability Summit
- Benchmark Battery Gigafactories events

## 2.6 REVIEW PROCESS

Ahead of publication of our prices, Benchmark Minerals conducts a thorough review process to ensure all information received has been logged internally and reviewed in line with the principles set out in this methodology.

### Initial review

Benchmark Minerals analysts hold reviews the day prior to price publication to collate information received from various price providers and interpret this information in order to make an informed and consistent assessment of market prices during the period in question.

This meeting is chaired by the Chief Data Officer and involves the Chief Operating Officer and/or another senior manager and all the analysts involved in the price assessment presenting the information they have received as well as their interpretation of this information in alignment with the price definition and our guidance for suspicious or anomalous data.

In conjunction with the Chief Data Officer, this information is used to provide a set of suggested price ranges for each of the grades using the processes set out above.

Notes are made of this assessment process, including the details of suggestions from each analyst involved in the price collection process, in

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## 2. DATA ASSESSMENT

order to log the rationale used in the assessment. This rationale is not made public due to the confidential nature in which Benchmark Minerals collects market information, but is stored for external audit purposes.

These notes, along with the individual price assessment audit trails of each price analyst are saved on a secure system and stored for a minimum of 10 years after the assessment is made. These files are password protected and restricted to senior management and compliance access.

### **Final review**

The final review of each price assessment is made on the day of publication by the Chief Data Officer or a Senior Analyst.

This review involves a detailed analysis of the suggested assessments from the initial review, during which the Chief Data Officer or Senior Analyst checks the assessments are in accordance with the methodology principles.

This review is documented and saved on a secure system as above.

### **Internal checks and compliance**

All information relating to the price assessment process, including audit trails and supporting rationale are saved on a secure system for compliance purposes.

Benchmark Minerals' Compliance officer conducts periodic reviews of this information to ensure it is being stored, maintained and interpreted in accordance with the principles set out in this methodology.

## 3. COMPOSITE INDEXES

### 3.1 BENCHMARK MINERALS ANODE INDEX

Benchmark Minerals publishes four monthly anode price indexes with a base month of January 2021.

These indexes are tied to the average assessed price for anode material on a monthly basis.

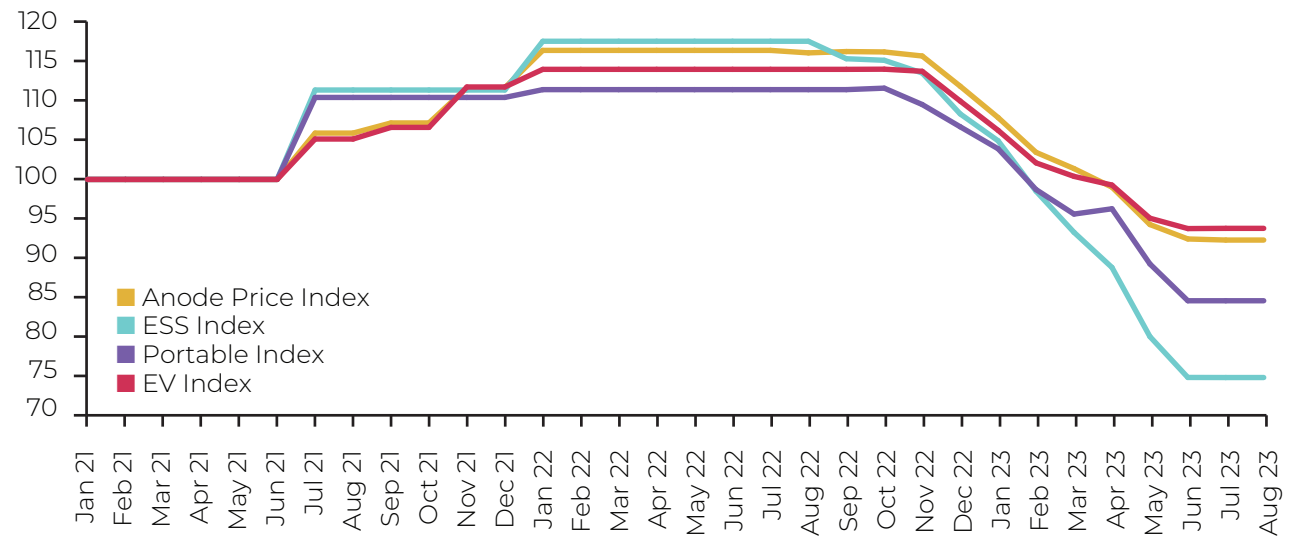
To determine the end-use market anode indexes, Benchmark Minerals assesses the share of anode chemistry within each given market using the Benchmark forecasts, including EV, Portable Electronics, and ESS.

This information is used to generate an overall anode price index, wherein Benchmark Minerals assesses the share of demand across each end-use market using the Benchmark forecasts.

These weightings are updated on a quarterly basis, using market volume inputs from Benchmark's forecasts.

Each index value represents the change in the weighted anode price against a base of 100 in January 2021.

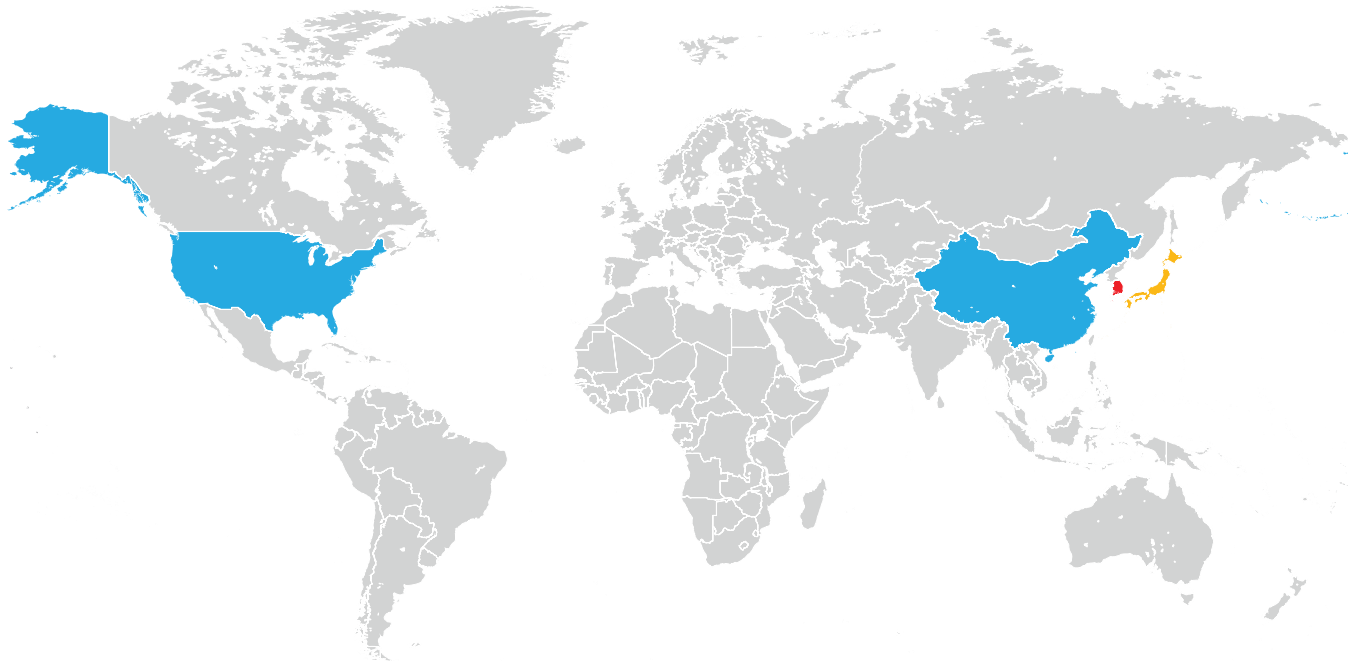
**Benchmark Minerals Anode Price Indexes**



Source: Benchmark Mineral Intelligence

# 4. PRICE DEFINITIONS

## 4.1 HIGH ENERGY SYNTHETIC GRAPHITE ANODE: DDP CHINA



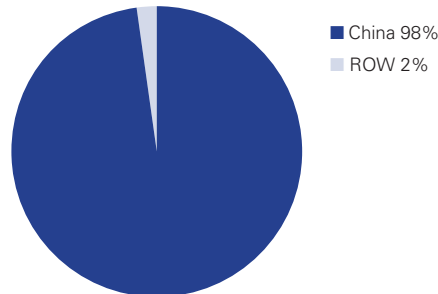
**KEY**

- Supply
- Demand
- Supply & demand

**SPECIFICATION**

SYNTHETIC GRAPHITE ANODE	
Theoretical Specific Capacity	350-370 mAh/g
Carbon content	≥99.97%
Synthetic graphite content	≥90%

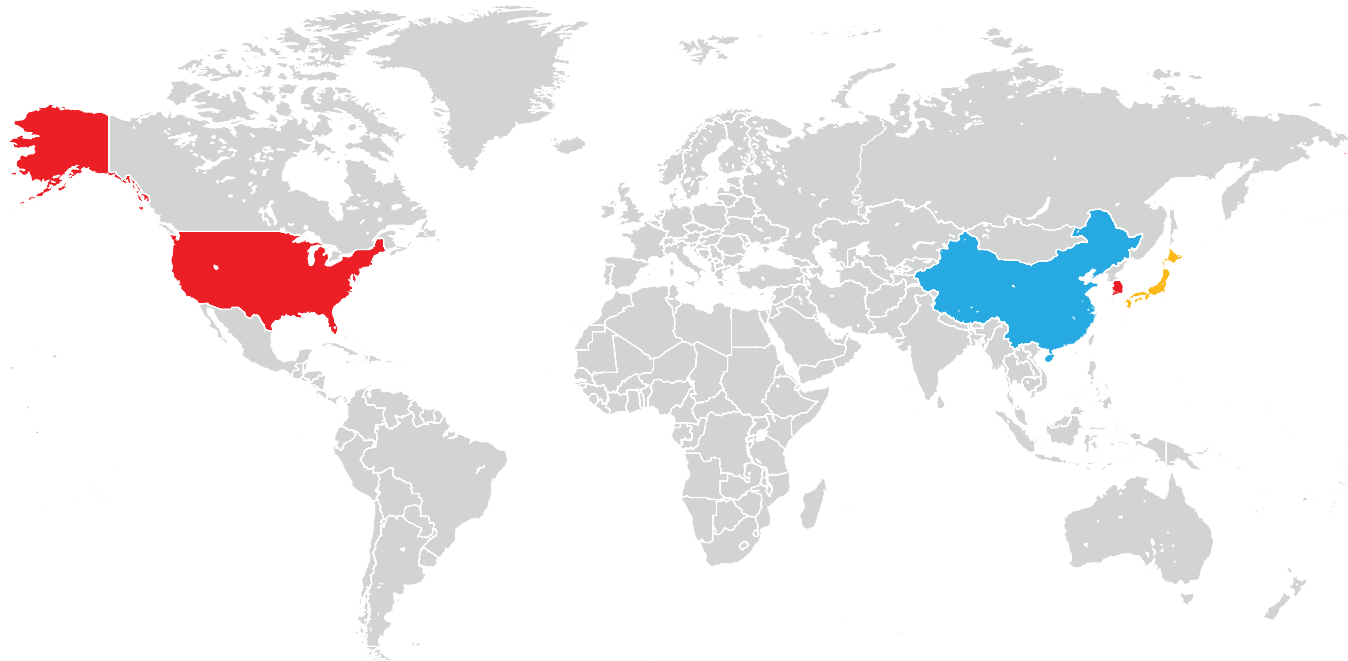
**SYNTHETIC ANODE SUPPLY (2022)**



LOCATION:	China
CONTRACT BASIS:	DDP, VAT Included
CURRENCY:	RMB
UOM:	mAh/g
DELIVERY WINDOW:	60 days
MIN SIZE:	1mt
MAX SIZE:	1,000mt
MAIN CONSUMERS:	China
ENERGY	High End
TYPICAL END-USE MARKET	EVs
PRODUCTION (2022):	525,000 tonnes
PUBLICATION:	15th of the month or first working day following the 15th of the month, 4pm (London)

# 4. PRICE DEFINITIONS

## 4.2 MEDIUM ENERGY SYNTHETIC GRAPHITE ANODE: DDP CHINA



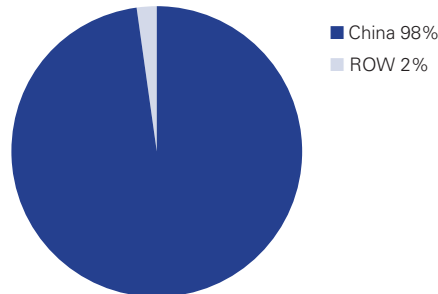
**KEY**

- Supply
- Demand
- Supply & demand

**SPECIFICATION**

SYNTHETIC GRAPHITE ANODE	
Theoretical Specific Capacity	330-350 mAh/g
Carbon content	≥99.95%
Synthetic graphite content	≥90%

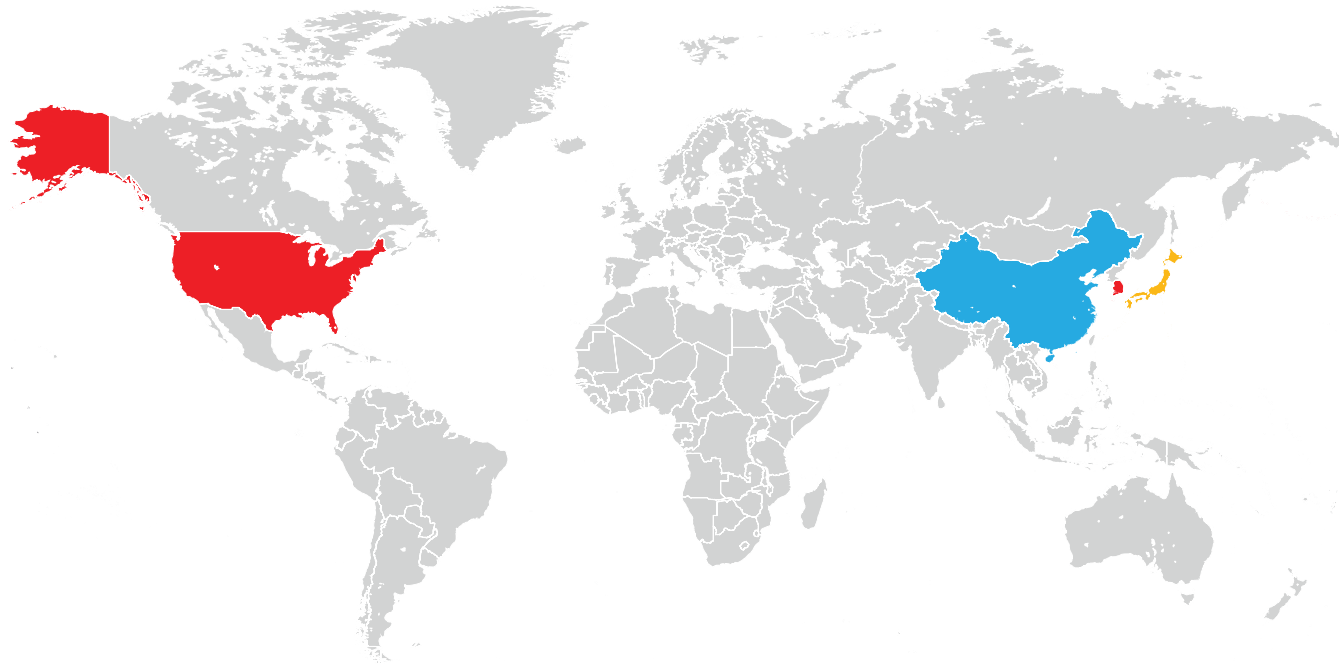
**SYNTHETIC ANODE SUPPLY (2022)**



LOCATION:	China
CONTRACT BASIS:	DDP, VAT Included
CURRENCY:	RMB
UOM:	mAh/g
DELIVERY WINDOW:	60 days
MIN SIZE:	1mt
MAX SIZE:	1,000mt
MAIN CONSUMERS:	China
ENERGY	Medium End
TYPICAL END-USE MARKET	Portable electronics
PRODUCTION (2022):	60,000 tonnes
PUBLICATION:	15th of the month or first working day following the 15th of the month, 4pm (London)

## 4. PRICE DEFINITIONS

### 4.3 LOW ENERGY SYNTHETIC GRAPHITE ANODE: DDP CHINA



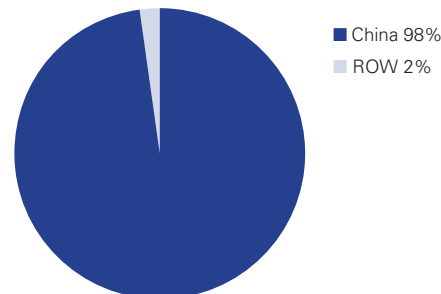
#### KEY



#### SPECIFICATION

SYNTHETIC GRAPHITE ANODE	
Theoretical Specific Capacity	310-330 mAh/g
Carbon content	≥99.70%
Synthetic graphite content	≥90%

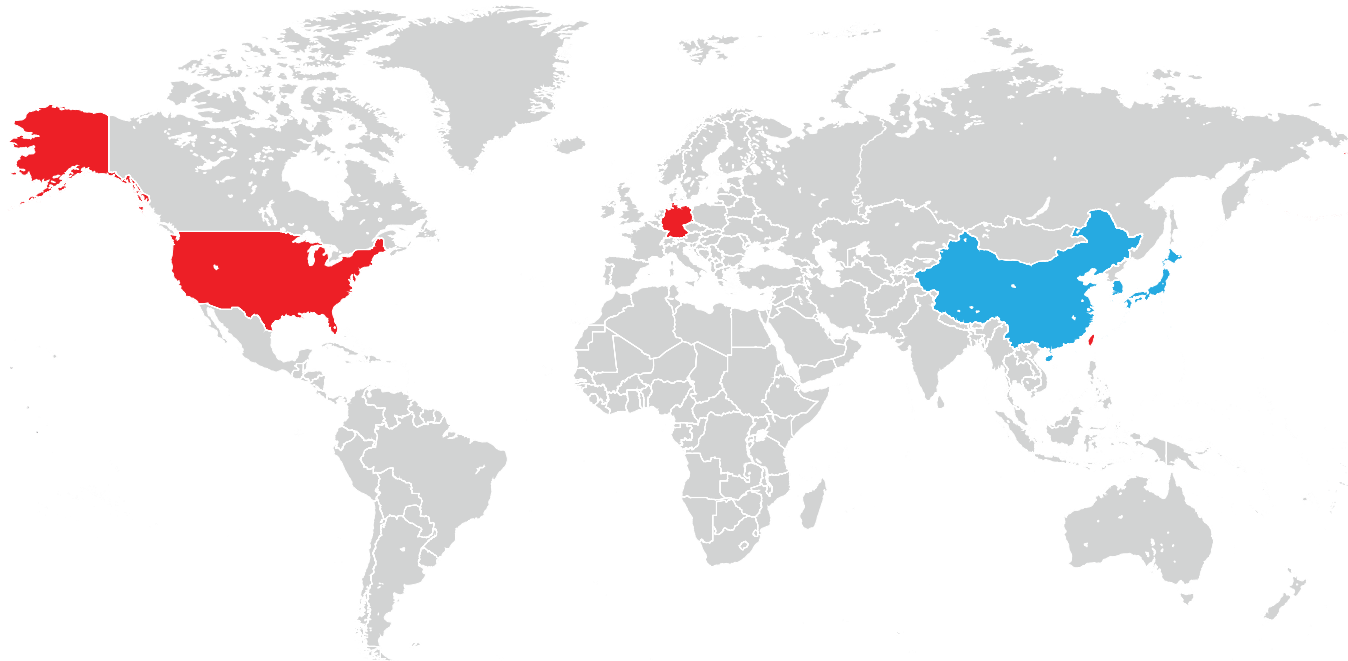
#### SYNTHETIC ANODE SUPPLY (2022)



LOCATION:	China
CONTRACT BASIS	DDP, VAT Included
CURRENCY:	RMB
UOM:	mAh/g
DELIVERY WINDOW:	60 days
MIN SIZE:	1mt
MAX SIZE:	1,000mt
MAIN CONSUMERS:	China
ENERGY	Low End
TYPICAL END-USE MARKET	ESS
PRODUCTION (2022):	30,000 tonnes
PUBLICATION:	15th of the month or first working day following the 15th of the month, 4pm (London)

# 4. PRICE DEFINITIONS

## 4.4 HIGH ENERGY NATURAL GRAPHITE ANODE: DDP CHINA



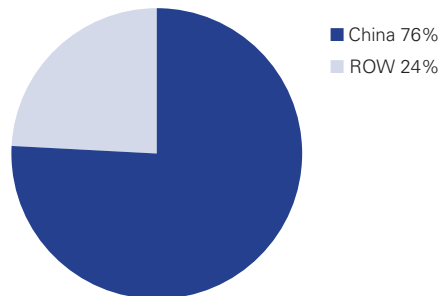
**KEY**

- Supply
- Demand
- Supply & demand

**SPECIFICATION**

NATURAL GRAPHITE ANODE	
Theoretical Specific Capacity	360-370 mAh/g
Carbon content	≥99.97%
Natural graphite content	≥85%

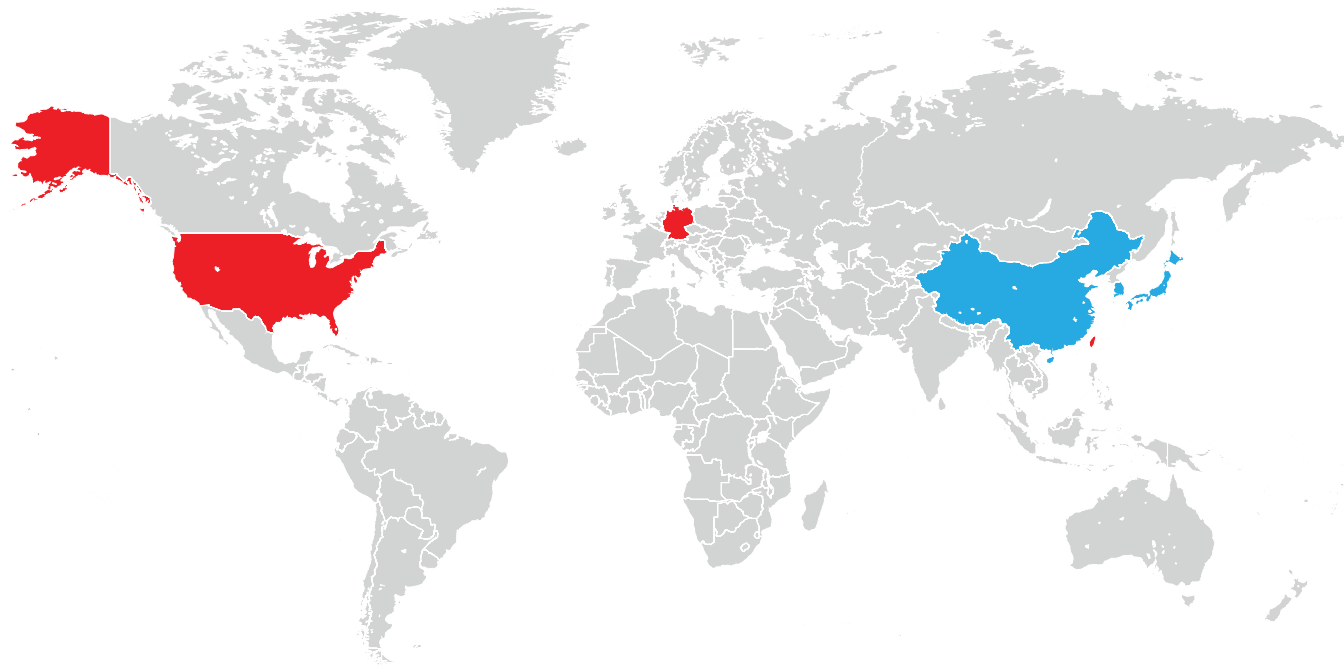
**NATURAL ANODE SUPPLY (2022)**



LOCATION:	China
CONTRACT BASIS:	DDP, VAT Included
CURRENCY:	RMB
UOM:	mAh/g
DELIVERY WINDOW:	60 days
MIN SIZE:	1mt
MAX SIZE:	1,000mt
MAIN CONSUMERS:	China
ENERGY	High end
TYPICAL END-USE MARKET	EVs
PRODUCTION (2022):	260,000 tonnes
PUBLICATION:	15th of the month or first working day following the 15th of the month, 4pm (London)

# 4. PRICE DEFINITIONS

## 4.5 MEDIUM ENERGY NATURAL GRAPHITE ANODE: DDP CHINA



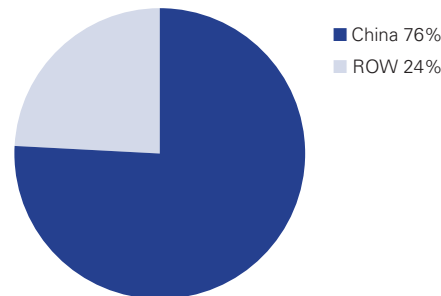
### KEY

- Supply
- Demand
- Supply & demand

### SPECIFICATION

NATURAL GRAPHITE ANODE	
Theoretical Specific Capacity	360-370 mAh/g
Carbon content	≥99.95%
Natural graphite content	≥85%

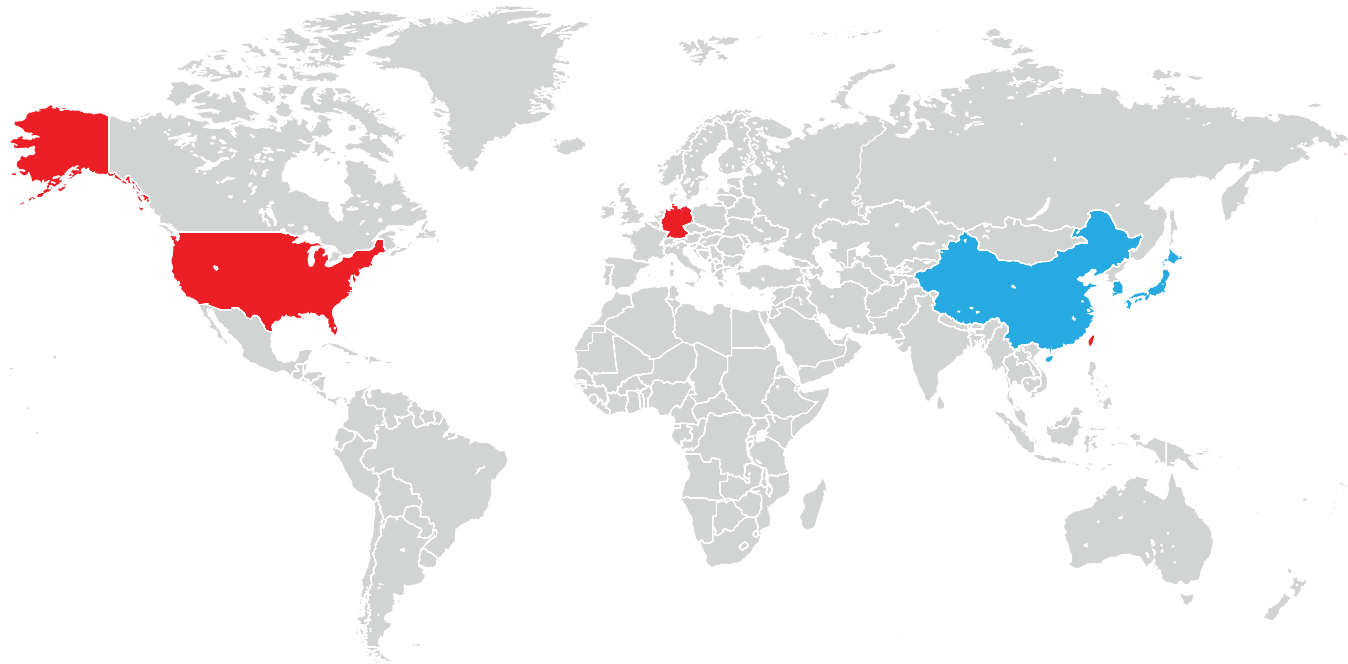
### NATURAL ANODE SUPPLY (2022)



LOCATION:	China
CONTRACT BASIS:	DDP, VAT Included
CURRENCY:	RMB
UOM:	mAh/g
DELIVERY WINDOW:	60 days
MIN SIZE:	1mt
MAX SIZE:	1,000mt
MAIN CONSUMERS:	China
ENERGY	Medium End
TYPICAL END-USE MARKET	Portable electronics
PRODUCTION (2022):	50,000 tonnes
PUBLICATION:	15th of the month or first working day following the 15th of the month, 4pm (London)

# 4. PRICE DEFINITIONS

## 4.6 LOW ENERGY NATURAL GRAPHITE ANODE: DDP CHINA



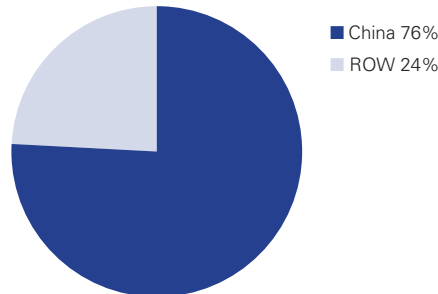
**KEY**

- Supply
- Demand
- Supply & demand

**SPECIFICATION**

NATURAL GRAPHITE ANODE	
Theoretical Specific Capacity	345-360 mAh/g
Carbon content	≥99.90%
Natural graphite content	≥85%

**NATURAL ANODE SUPPLY (2022)**



LOCATION:	China
CONTRACT BASIS:	DDP, VAT Included
CURRENCY:	RMB
UOM:	mAh/g
DELIVERY WINDOW:	60 days
MIN SIZE:	1mt
MAX SIZE:	1,000mt
MAIN CONSUMERS:	China
ENERGY	Low End
TYPICAL END-USE MARKET	ESS
PRODUCTION (2022):	25,000 tonnes
PUBLICATION:	15th of the month or first working day following the 15th of the month, 4pm (London)

## 5. COMPLIANCE & SECURITY

All Benchmark Minerals analysts are obligated to sign a code of conduct upon employment in relation to data collection and assessment, to ensure independence and credibility.

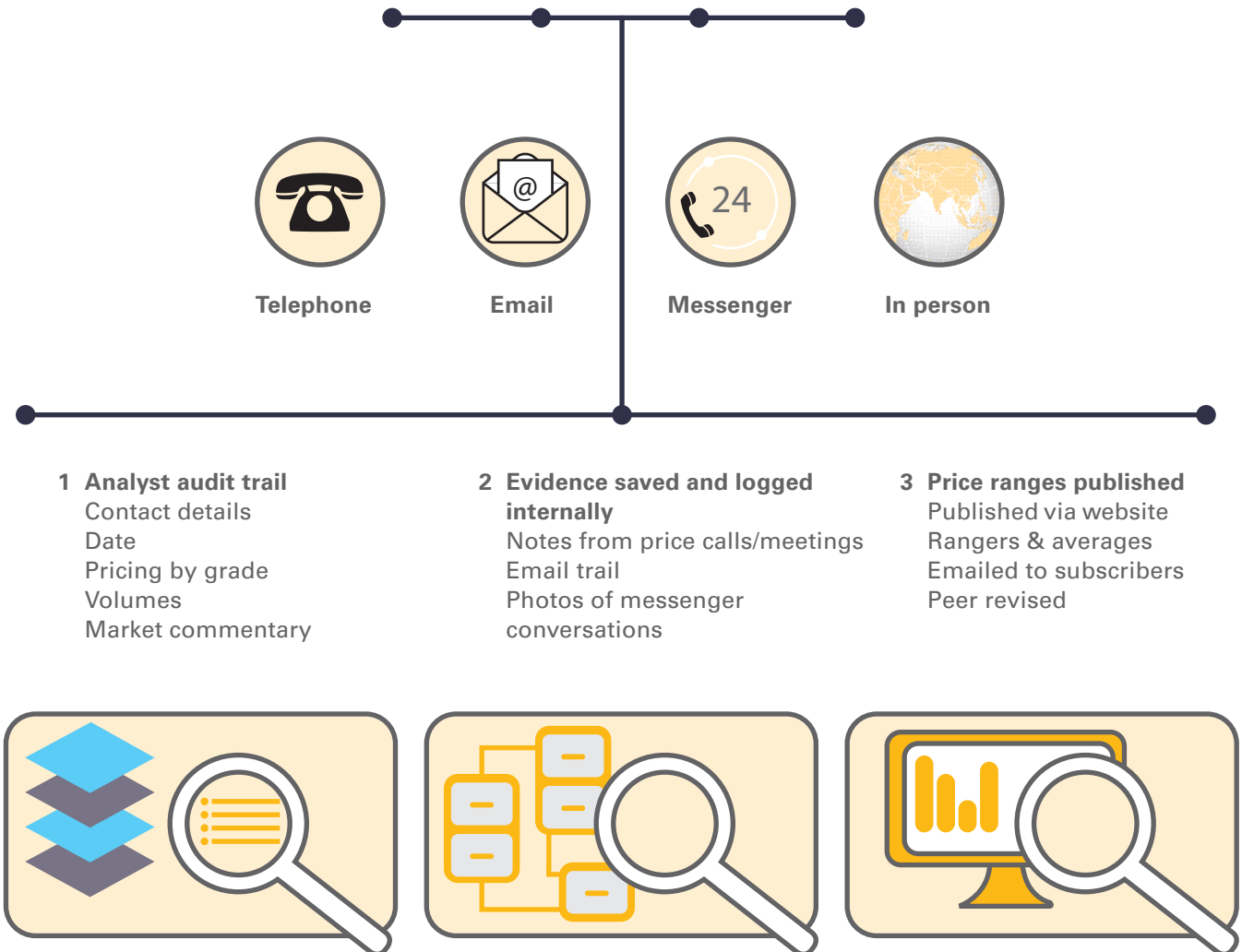
This code of conduct is enforced through annual appraisals by the Chief Executive Officer where adherence to these principles is reviewed. All members price analysts are also required to attend annual training sessions where the terms of the employee code of conduct are outlined in detail.

Benchmark Minerals also provides an employee handbook which outlines all company policies in relation to antitrust, conflicts of interest, anti-corruption and bribery.

Data and supporting information is stored on a secure cloud-based platform to ensure the information can only be accessed and edited by authorised Benchmark Minerals employees.

We treat the confidentiality of all our contacts and data with the utmost seriousness and information exchange is subject to Chinese walls within the company in addition to complete confidentiality outside of the company. To allow for open and transparent price discussions, Benchmark Minerals does not publicly disclose the sources of its price data.

Benchmark Minerals analysts are required to log all



## 5. COMPLIANCE & SECURITY

price interactions, including supplementary market commentary in our internal audit system which details:

- Point/date of contact
- Company details
- Method of communication
- Pricing by grade
- Volume information
- Market commentary

All relevant data and information is stored on Benchmark Minerals internal systems for a period of 10 years following the date of publishing.

### **IOSCO**

Benchmark Minerals implements an accountable audit trail for its price collection and has created a robust price collection process, designed specifically for the graphite market.

To assist in the introduction of financial derivatives into the graphite industry, Benchmark Minerals adheres to an IOSCO compliant methodology, with strict governance to protect the reliability and accuracy of Benchmark Minerals graphite pricing.

Benchmark Minerals also implements a strict employee code of conduct to prevent conflicts of

interest and a comprehensive complaints process to address any external queries or questioning of Benchmark Minerals prices.

### **EU Benchmark Regulation**

Benchmark Minerals will seek registration as a benchmark administrator under the EU Benchmark Regulation as its prices are adopted in financial derivatives.

## 6. CORRECTIONS

Benchmark Minerals is committed to providing accurate and reliable pricing information and as such any corrections to previously published data are reviewed internally and communicated to the market at the earliest opportunity.

Only data that was available when the price/index was published is used for subsequent corrections.

If a correction is identified then the price assessment team conduct an internal verification process to ensure the accuracy of the correction before notifying the market.

Notification of corrections is sent directly to users/ licensors via email, updated on the following issues and also updated on the Benchmark Minerals online price database.

## 7. COMPLAINTS AND ENQUIRIES

### 4. COMPLAINTS AND ENQUIRIES

Benchmark Minerals strives to provide the highest standards for any request for information or complaint in order to give the market full confidence in its price assessments.

Any complaints should be forwarded to our dedicated complaints mailbox at: [complaints@benchmarkminerals.com](mailto:complaints@benchmarkminerals.com)

All complaints are acknowledged within 3 working days

Complaints handling principles:

- Complaints can come from data providers, subscribers, as well as industry participants.
- Complaints can cover specific data, how the data was compiled, proposed changes to methodology and other editorial decisions taken by BMI.
- BMI has set a timetable and will handle all complaints in a timely and fair manner.
- The inquiry is conducted independently of any personnel who may be subject of the complaint.
- BMI will advise the complainant of the outcome in writing in a reasonable period.
- There is recourse to an independent 3rd party appointed by BMI if a complainant is dissatisfied with the outcome and seeks further recourse.
- All material concerning the complaint and its review are kept by BMI for five years.

## 8. REVISION HISTORY

### 5. REVISION HISTORY

Benchmark Minerals is committed to consistency in data collection and reporting methodology.

Benchmark Minerals regularly reviews its policies and procedures, at least annually, to affirm the appropriateness of its methodologies.

Benchmark Minerals has continual and regular dialogue within the industry which allows it to

gather feedback, adjust and refine its policies that ensure:

- Appropriateness of data assessments
- Provision of amendments and or removal of key types of data
- Initiate new assessments to meet market needs

**July 2025:** Updated to change FX rate provider and publication currencies

## 9. CONTACT US

### CONTACT US

For more information please contact:

**Price and Data team**  
[prices@benchmarkminerals.com](mailto:prices@benchmarkminerals.com)

For complaints or compliance related questions, please contact:

**Risk and Compliance Officer**  
**Email:** [complaints@benchmarkminerals.com](mailto:complaints@benchmarkminerals.com)