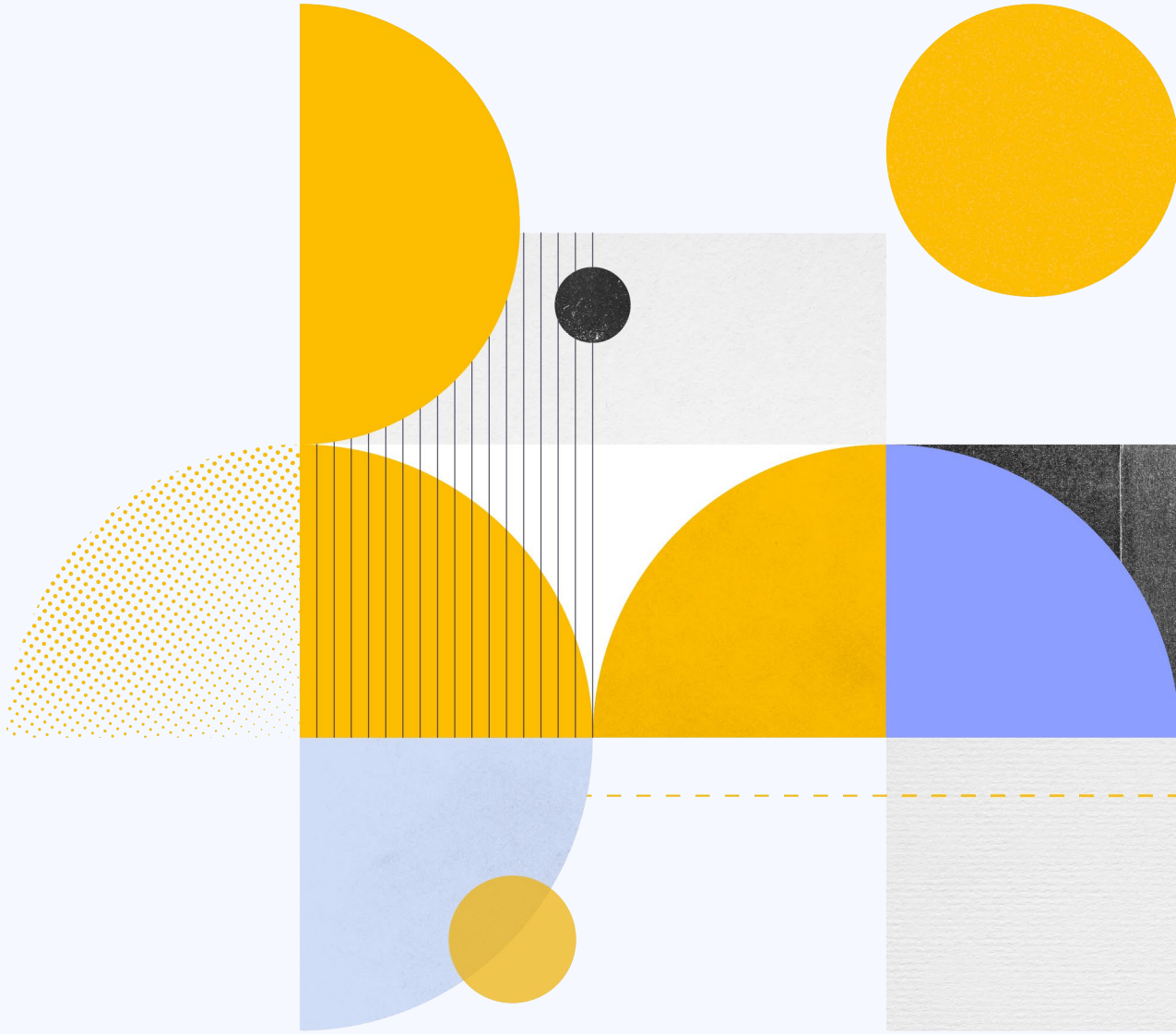
BENCHMARK

Rare Earths Price Assessment Methodology

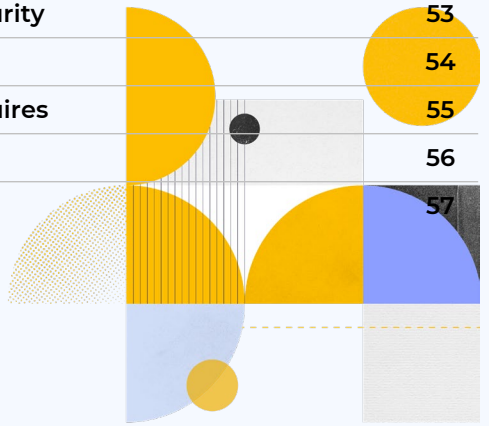


Updated late October 2026

benchmarkminerals.com

Contents

Introduction **3**
Benchmark Minerals Mission Statement 3
Methodology Structure 4
1: Data collection & price reporting **5**
1.1 How we collect price data 5
1.2 Typical transactions 6
1.3 Information sources 8
1.4 Price assessment process 9
2: Price calculation **10**
2.1 Grade-specific prices 10
2.2 Testing our price integrity 12
2.3 Governance 13
2.4 Review process 14
3. Weighted prices and indexes **16**
3.1. Weighted average prices 16
3.2. Benchmark Minerals Rare Earths Index 17
4: Price definitions **18**
4.1 Praseodymium-Neodymium (PrNd) Oxide, DDP China 18
4.2 Praseodymium-Neodymium (PrNd) Oxide, CIF Europe 19
4.3 Praseodymium-Neodymium (PrNd) Oxide, CIF North America 20
4.4 Dysprosium (Dy) Oxide, DDP China 21
4.5 Dysprosium (Dy) Oxide, CIF Europe 22
4.6 Terbium (Tb) Oxide, DDP China 23
4.7 Terbium (Tb) Oxide, CIF Europe 24
4.8 Samarium (Sm) Oxide, DDP China 25
4.9 Praseodymium-Neodymium (PrNd) Metal, DDP China 26
4.10 Dysprosium (Dy) Metal, DDP China 27
4.11 Terbium (Tb) Metal, DDP China 28
4.12 Yttrium (Y) Oxide, CIF North America 29
4.13 Yttrium (Y) Oxide, DDP China 30
4.14 Cerium (Ce) Oxide, CIF North America 31
4.15 Cerium (Ce) Oxide, DDP China 32
4.16 Erbium (Er) Oxide, CIF North America 33
4.17 Erbium (Er) Oxide, DDP China 34
4.18 Europium (Eu) Oxide, CIF North America 35
4.19 Europium (Eu) Oxide, DDP China 36
4.20 Gadolinium (Gd) Oxide, CIF North America 37
4.22 Holmium (Ho) Oxide, CIF North America 39
4.23 Holmium (Ho) Oxide, DDP China 40
4.24 Lanthanum (La) Oxide, CIF North America 41
4.26 Lanthanum (La) Oxide, DDP China 43
4.28 Lutetium (Lu) Oxide, CIF North America 45
4.29 Lutetium (Lu) Oxide, DDP China 46
4.30 Praseodymium-Neodymium (PrNd) Metal, CIF North America 47
4.31 Samarium (Sm) Oxide, CIF North America 48
4.32 Thulium (Tm) Oxide, CIF North America 49
4.34 Ytterbium Oxide, CIF North America 51
4.35 Ytterbium Oxide, DDP China 52
5: Compliance & security **53**
6: Corrections **54**
7: Complaints & enquires **55**
8: Revision History **56**
Contact us **57**



Introduction

Benchmark 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.

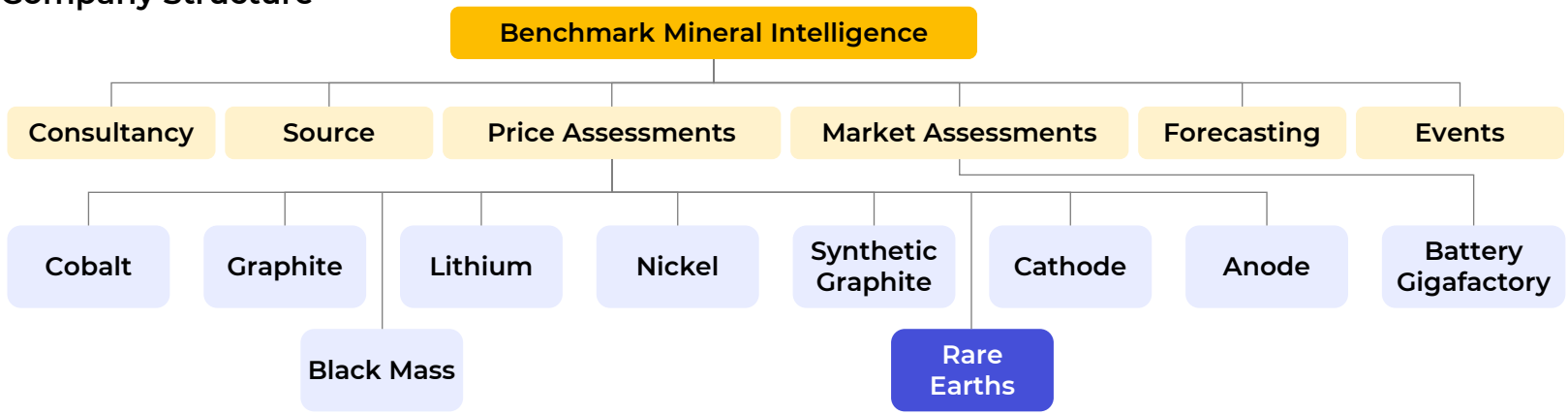
In the rare earths market, we have identified prices that best reflect the existing balance of production and trade flows, details of which can be found in the Price Definitions section of this document (section 4).

These prices include the most commonly traded magnetic rare earths, both oxides and metals, as well as a China Weighted Average Price.

Prices for each of these products focus on the most common region where they are traded. The vast majority of Rare Earths contracts are negotiated privately between buyer and seller.

Benchmark Minerals has developed a robust price discovery mechanism which focuses on primary data collection from different sources throughout 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.

Company Structure



This methodology describes the process by which Benchmark Minerals assesses rare earths market prices, the definitions and specifications used in each of the prices/indexes we publish, the standards our analysts adhere to in price collection, and our compliance, security and complaints process.

The information we publish is distributed directly to subscribers and also made available via our website for authorized users/licensers. The timing and delivery of this information is outlined in section 1.3.

To ensure the data we publish is accurate, delivered 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 prices we publish and the process we adhere to in order to ensure the most accurate and relevant prices are made available to the market. A full history of revisions to our methodology can be found in section 7.

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

© Benchmark Mineral Intelligence 2025

Introduction

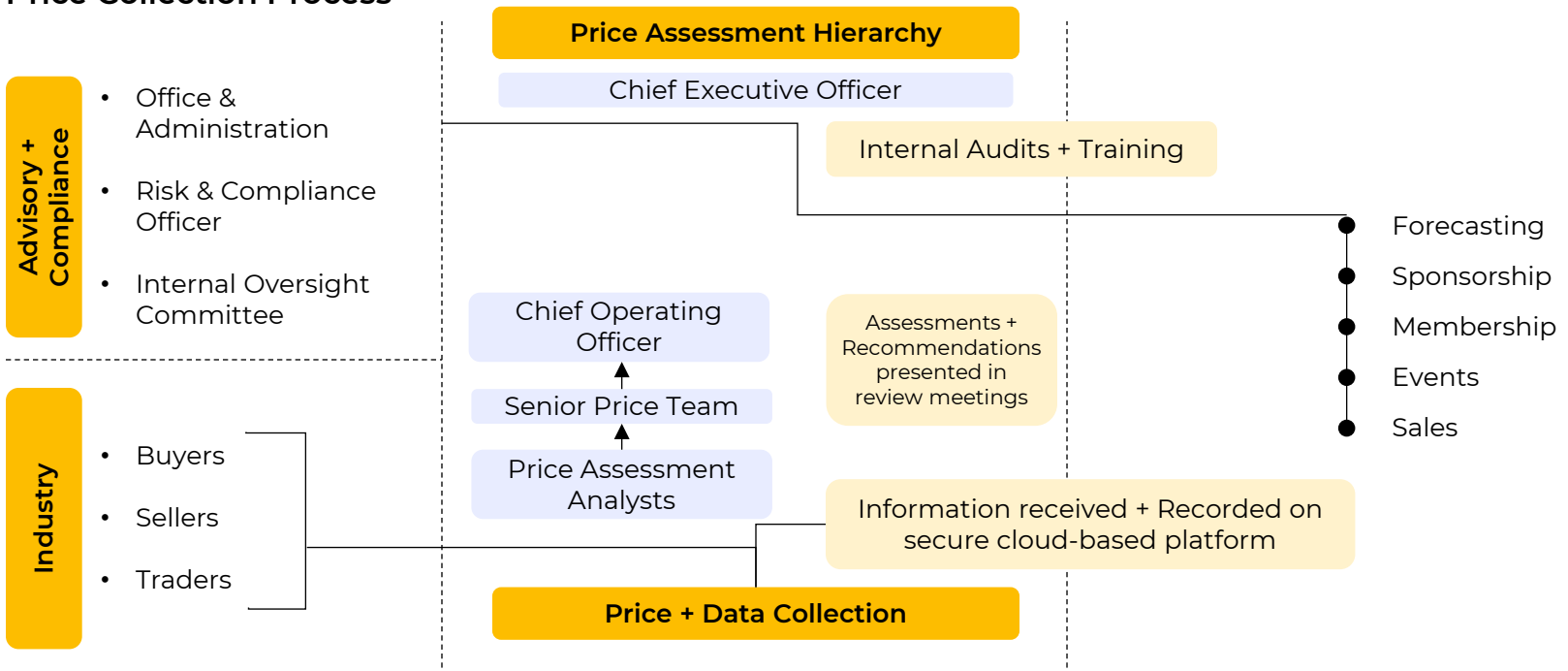
Methodology Structure

This methodology has been structured to provide a detailed description of our price collection processes and procedures, the rationale behind this process in relation to the rare earths market, and the compliance process we adhere to in order to ensure clear and transparent price reporting.

The methodology is structured as follows:

- **Section 1:** An overview of the prices we report, details of the data collection process and Benchmark Minerals' price assessment principles. This includes how and when prices are distributed.
- **Section 2:** 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 3:** The process we use to calculate composite indexes using our grade specific price ranges to create weighted average prices and the Benchmark Minerals Rare Earths Index.
- **Section 4:** A detailed description of each rare earths price we publish, including a review of the significance of each price in relation to global trade flows.

Price Collection Process



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: Details of Benchmark Minerals' complaints process and our service commitments.

Section 8: A record of all previous changes and updates to the Rare Earths Methodology.

© Benchmark Mineral Intelligence 2025

1. Data Collection and Price Reporting

The objective of the Benchmark Minerals Rare Earths Price Assessments is to provide an accurate and independent evaluation of the prevailing market prices for the rare earths grades outlined in section 3 of this methodology.

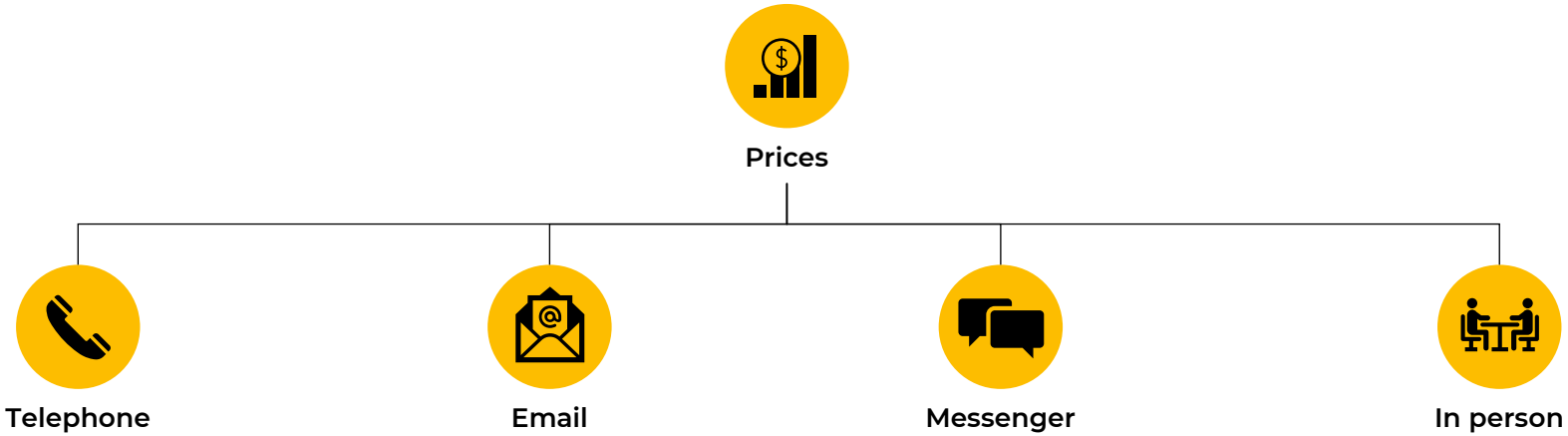
The data that is used in our price assessments is collected directly form the market, and we encourage our sources to report any supplementary information possible in order to determine accurate price ranges, normalised for price-related variables.

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 Price Assessments.

1.1 How We Collect Price Data

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 trade statistics, 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 information 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.

Benchmark Minerals' analysts continually seek to increase the number of price points (contacts) surveyed. Although the number of contacts for any one price 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 grade is reviewed by the Senior Price Team.

© Benchmark Mineral Intelligence 2025

1. Data Collection and Price Reporting

1.2 Typical Transactions

Types of transactions in the rare earths market can vary considerably based on the type of rare earths, volumes, specifications and delivery terms. Details of these variables in relation to specific prices Benchmark publishes is outlined in the Price Definitions section of this methodology (Section 4).

The primary information included in Benchmark Minerals Price Assessments is confirmed trades and firm bid/offers that are open to the market as a whole.

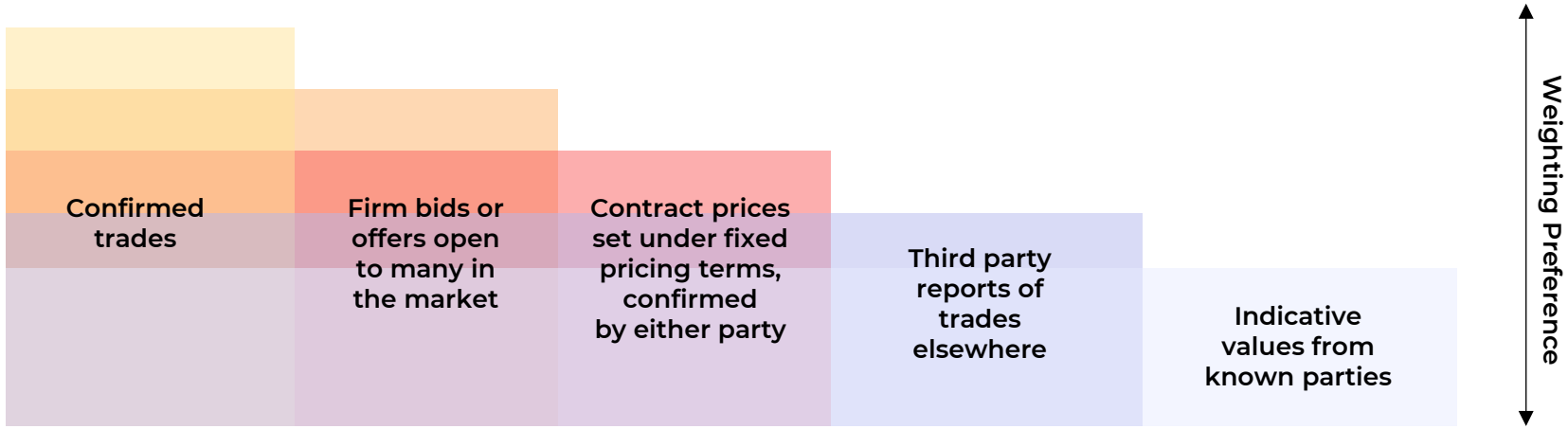
This information is supplemented by:

- Expressions of interest to trade at published levels
- Contract prices set under fixed pricing terms, 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.

Input Data Hierarchy



Data preference

Benchmark Minerals prioritises information received relating to confirmed trades and transactional volumes when making its price assessments. Given the structure of the rare earths market and the lack of 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 bid 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.

1. Data Collection and Price Reporting

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, 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 the 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, 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 no information is received for a price, or the information received is judged to fail to be representative, Benchmark Minerals analysts can infer price changes dependant on information received in other regions or from other actors in the supply chain.

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 global rare earths 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.

Due to the nature of the rare earths market, a large proportion of material is traded on long-term supply contracts.

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 year.

Assessment period

Benchmark Minerals analysts evaluate all data received in the assessment period on the day prior to publishing during an initial review meeting with a member of the Senior Price Team.

These proposed price ranges are then submitted and reviewed on the day of publication by a member of the Senior Price Team.

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.

Spot vs Term Pricing

The majority of rare earth oxides and metals are traded on a spot basis, and any short term contract agreements (<3 months) will typically include pricing clauses which define the settlement price on the previous assessments' spot prices, and as such are determined by short term spot pricing.

As a result, Benchmark Minerals' prevailing market price process is inclusive of volumes being traded on a fixed-price basis for less than 3 months

© Benchmark Mineral Intelligence 2025

1. Data Collection and Price Reporting

Fixed price deals of less than 3 months are included during the assessment period in which they are entered.

Benchmark Minerals conducts follow up discussions with price sources to ensure these deals are completed through the duration of the contract.

Fixed price contracts of over 3 months are excluded from Benchmark Minerals assessments as they fail to provide an accurate reflection of the existing volumes being traded in the market at that point in time.

To prevent distortion of prices received throughout the collection period, Benchmark Minerals does not use volume-weighted price averages to determine prices, however, volumes are used in our process of editorial judgement and source test to verify the legitimacy of information received.

In some cases using a volume weighted average price (VWAP) could distort the true representation of market pricing as volumes are not always made available to Benchmark for specific trades due to the opaque nature of the market.

However, Benchmark does use its own indications from the market in regards to the relative ratio of PrNd, Dy and Tb oxide/metal content in medium, high and very high temperature rare earth permanent magnets to establish a China Weighted Average Rare Earths Price from the relative market share of these three categories of magnets.

Anomalies

Any pricing data received which is over 25% different from the average of the previous assessment is highlighted and reviewed in the final review process review process by the senior analyst or superior from the Prices & Data Division to determine accuracy and relevance.

Benchmark has determined 25% as an appropriate value in price fluctuation, as this represents a threshold which would highlight unusual, yet plausible, market volatility.

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.

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.

1.3 Information Sources

Benchmark Minerals conducts confidential interactions with market participants in order to source the data and market intelligence used for its price 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 pertaining to the price is provided and individual data points are provided throughout the assessment period.

The private nature of transactions in the rare earths market today mean full disclosure 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 pricing rather than selective

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 prices to Benchmark Minerals. Instead, interactions with the market are conducted on a trust basis which require internal review and editorial judgement to assess the weighting of information.

Information sources are only added to our network of price providers after a review process between the analyst and the Senior Price Team.

© Benchmark Mineral Intelligence 2025

1. Data Collection and Price Reporting

1.4 Price Assessment Process

Benchmark Minerals rare earths prices are 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.

Benchmark reserves the right to temporarily alter publishing dates, for example during UK national holidays, subject to providing the market with 30 days' notice via email.

Benchmark Minerals analysts conduct the price review on the final working day of the assessment period and the price data is published on our website and distributed to subscribers and licensers by 4pm (London) of the same day.

Due to the wide number of pricing variables for rare earths, analysts normalise the data received for shipping terms, specifications and any other applicable variables to match the price definitions as outlined in section 2 of this methodology.

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

All price assessments and editorial judgements 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 rare earths market outside of China dictate that price publication every two weeks 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 weekly and eventually daily pricing across all grades where suitable.

© Benchmark Mineral Intelligence 2025

2. Price Calculation

This section outlines how Benchmark Minerals uses the information it collects directly from, the market to determine the final price assessments it publishes.

2.1 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 1.3.

After the data is reviewed and each relevant analyst makes their price recommendations, a member of the Senior Price Team 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, a member of the Senior Price Team will conduct a review of the data with the responsible analyst(s) directly.

A member of the Senior Price Team 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 rare earths are traded dictates that prices are negotiated directly between buyer and seller. As such, there is no one price for rare earths 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 rare earth prices are therefore set as ranges. Where one value is shown this represents the mid-point of the price range unless otherwise stated.

The price range is not a direct function of the lowest/highest data points received but represents an average of where a majority of transactions are settled.

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.

Price ranges are intended as an average spread of transactions 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.

2. Price Calculation

Units of measurement

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

In the rare earths market, most Sm and PrNd volumes are traded in tonnes, whilst Dy and Tb volumes are traded in kilograms. For consistency across products, Benchmark publishes prices in USD per tonne.

Where 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 FX rate.

Rare Earths volumes are negotiated on a kg or metric tonne basis. Benchmark Minerals prices are represented in metric tonnes.

Shipping terms

Benchmark Minerals uses three industry standard incoterms to represent the location/destination of the material.

Delivered, Duty Paid (DDP) – used to represent the delivered price going into a particular region/country.

Normalisation

The specialist nature of rare earths oxide and metal 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 4.

Editorial judgement

The nature of the rare earths 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 4 of this methodology.

To ensure consistency of this editorial judgement across various assessments, Benchmark Minerals has established an internal review process whereby we ensure that all calculation variables are applied in a fair and even manner.

This review process includes reference to historical data points, industry knowledge and the use of publicly available information to judge appropriate premium/discount levels.

© Benchmark Mineral Intelligence 2025

2. Price Calculation

2.2 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 in 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.

The preference for term agreements within the rare earths market require Benchmark Minerals to stay in regular contact with the industry to monitor that these contracts are completed or if any terms are changed during the term of the agreement.

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 in 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. If data is rejected, our price assessors may notify the providers of this action should the price be deemed to have been purposely misrepresenting the market.

Certain standard tests are also carried out to apply:

- Checks on internal transfers, offtake agreements or deals with affiliated parties
- Restrictions on the weight a single party can have on a 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

© Benchmark Mineral Intelligence 2025

2. Price Calculation

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.

2.3 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 professional 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. 3 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 Head of Prices who, alongside Senior Analysts, coordinate the price assessment reviews and makes the final appraisal of price data received ahead of publishing.

The Head of Prices reports directly to the Director of Indexing and Derivatives and the COO, who alongside the Risk and Compliance Officer, oversees regularly monitors the proper implementation of the methodology.

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

© Benchmark Mineral Intelligence 2025

2. Price Calculation

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 are 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 Tour**
- **Benchmark Gigafactories events**
- **Benchmark Week**
- **Webinars**

2.4 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 a member of the Senior Price Team not involved with the price collection process for the assessed grades. All relevant analysts involved in the price assessment process are also present in the meeting, where possible, or are given the opportunity to review the final prices after the meeting but before publication. Analysts present 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 a member of the Senior Price Team,

© Benchmark Mineral Intelligence 2025

2. Price Calculation

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 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 a member of the Senior Price Team.

This review involves a detailed analysis of the suggested assessments from the initial review, during which a member of the Senior Price Team 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.

© Benchmark Mineral Intelligence 2025

3. Composite Indexes

3.1 Weighted Average Prices

Benchmark Minerals uses the grade-specific rare earths prices it publishes to establish a China weighted average basket price for a typical rare earths used in rare earths permanent magnets.

The weighting of each grade-specific price is based on the ratio of PrNd, Tb and Dy in medium, high, and very high temperature rare earth permanent magnets. The market share of each type of magnet is then applied to this price to calculate the China Weighted Average Price.

Weightings

Benchmark Minerals determines average price weightings from the grade-specific rare earths prices it publishes to/from specific regions.

The volumes traded in/out of these regions is estimated based on three factors:

Total traded volumes: Benchmark Minerals analysts make regular assessments of the volumes of material estimated to be supplied from/consumed into each region through regular communications with the market.

Benchmark Minerals trade assessment: Benchmark Minerals analysts make an internal estimation of how the volumes traded in each period vary based on discussions with the industry and volume data received in price collection.

Historical trade data: Customs data beginning in January 2009 is analysed to provide a historical trend in the volumes typically exported/imported for each time period.

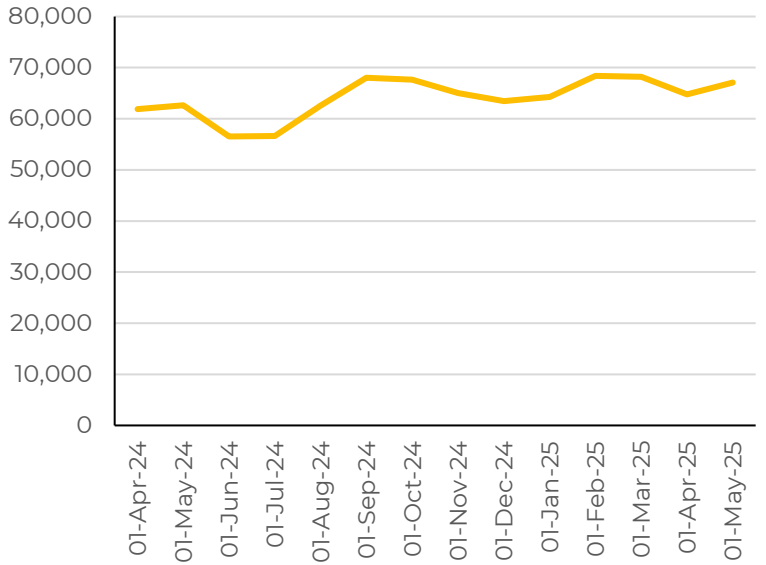
Calculation

The weighted average price for each product in the Rare Earths is calculated as a function of the relative volume of each type of feedstock in medium, high, and very high temperature rare earth permanent magnets.

Once the weighted average price for PrNd, Tb and Dy oxide in rare earth permanent magnets as assessed by Benchmark has been calculated, Benchmark publishes a rare earths China Weighted Average Price using the relative market share of the three magnet categories.

The weighted average price is represented in USD/tonne.

Rare Earths weighted average prices ($/tonne)



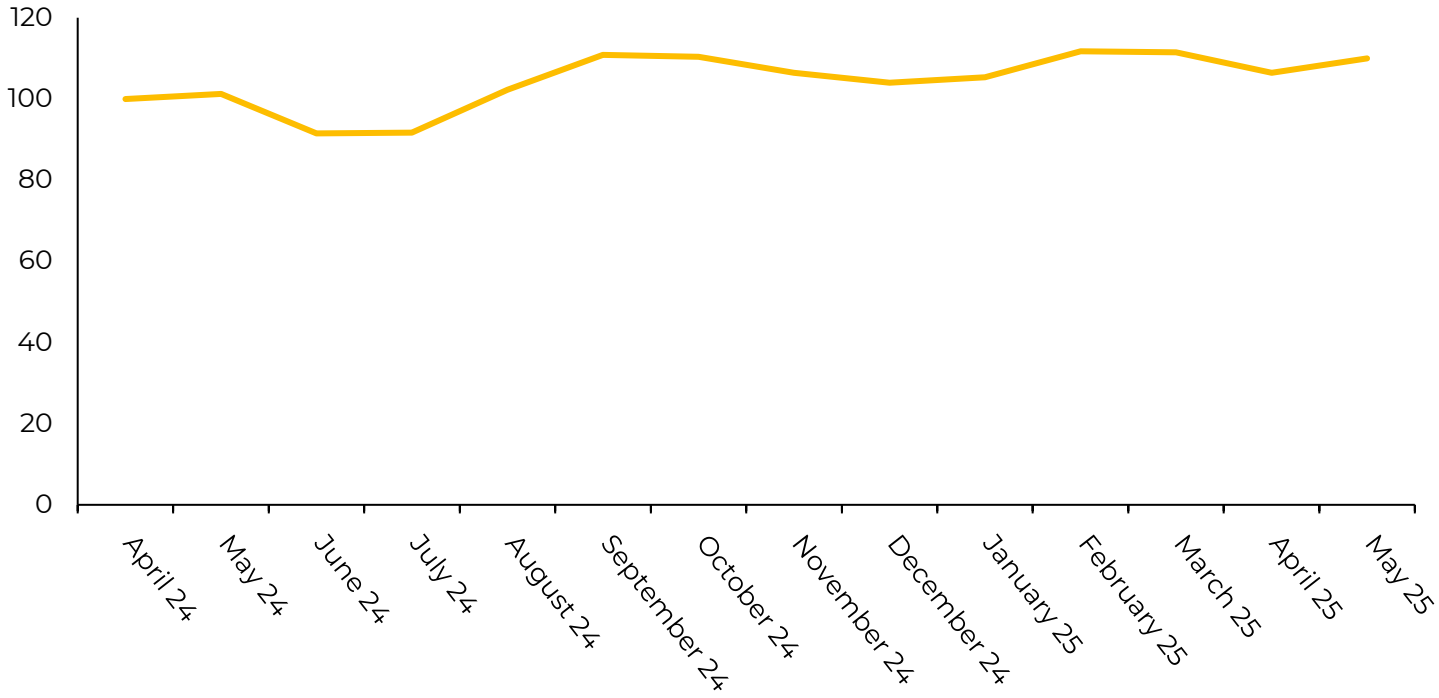
Source: Benchmark Mineral Intelligence

3. Composite Indexes

3.2 Benchmark Minerals Rare Earths Index

The Benchmark rare earths index is set to a base of 100 April 2024 using the China Weighted Average Price. Benchmark keeps the base period of its indexes under review and will consult the market if it decides to re-base its indexes in the future.

Benchmark Minerals Rare Earths Price Index

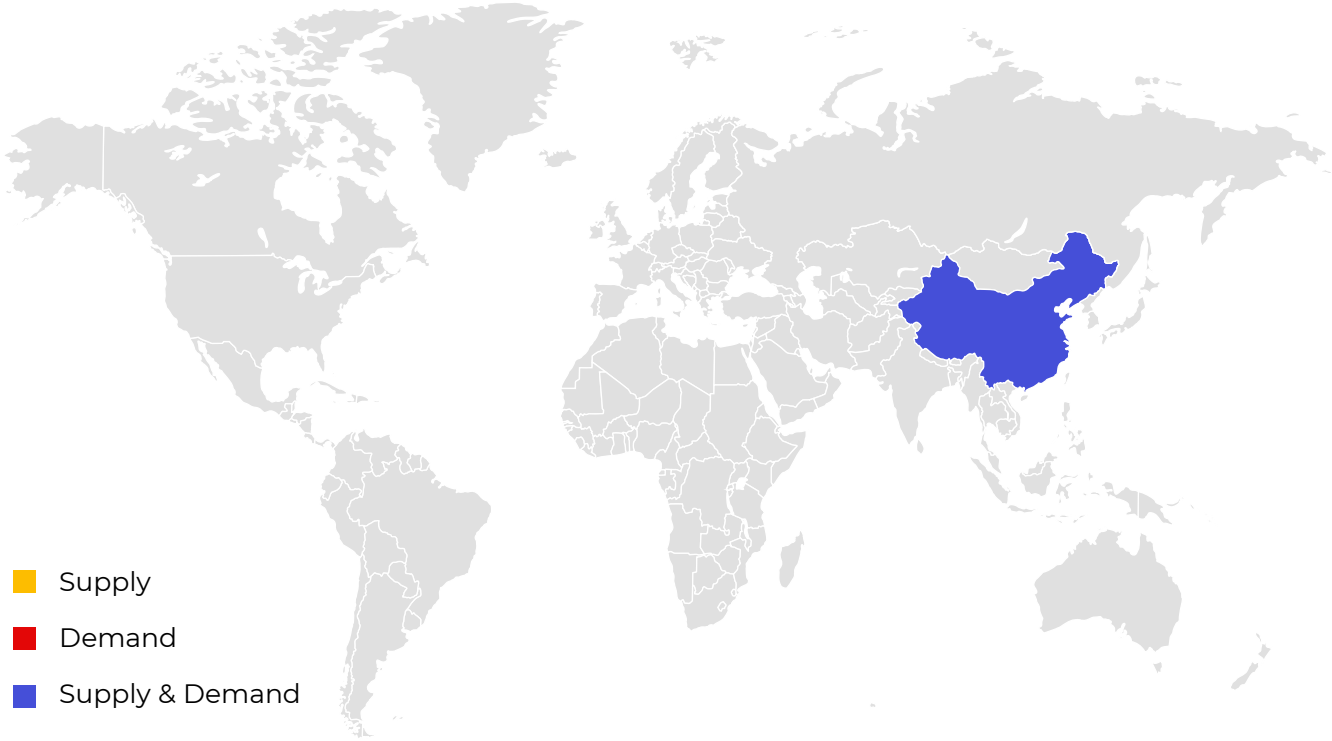


Source: Benchmark Mineral Intelligence

4. Price Definitions

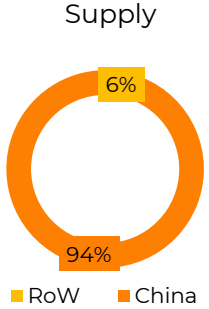
4.1 Praseodymium-Neodymium (PrNd) Oxide, DDP China

Location:	China
Contract Basis:	Delivered Duty Paid (DDP)
Currency:	RMB
Shipping Port:	Domestic
Form:	Powder
UOM:	Tonnes
Delivery Window:	60 days
Min Size:	20 tonnes
Max Size:	100 tonnes
Main Suppliers:	China
Production (2024):	78,254 tonnes
Publication:	Published every two weeks on Thursdays by 4pm (London)



Praseodymium-Neodymium (PrNd) Oxide	
Formula	(PrNd)xOy
Content	Nd2O3: 70-85%, Pr6O11: 22-30%
Common impurities	Ce 0.1%, Sm 0.05%

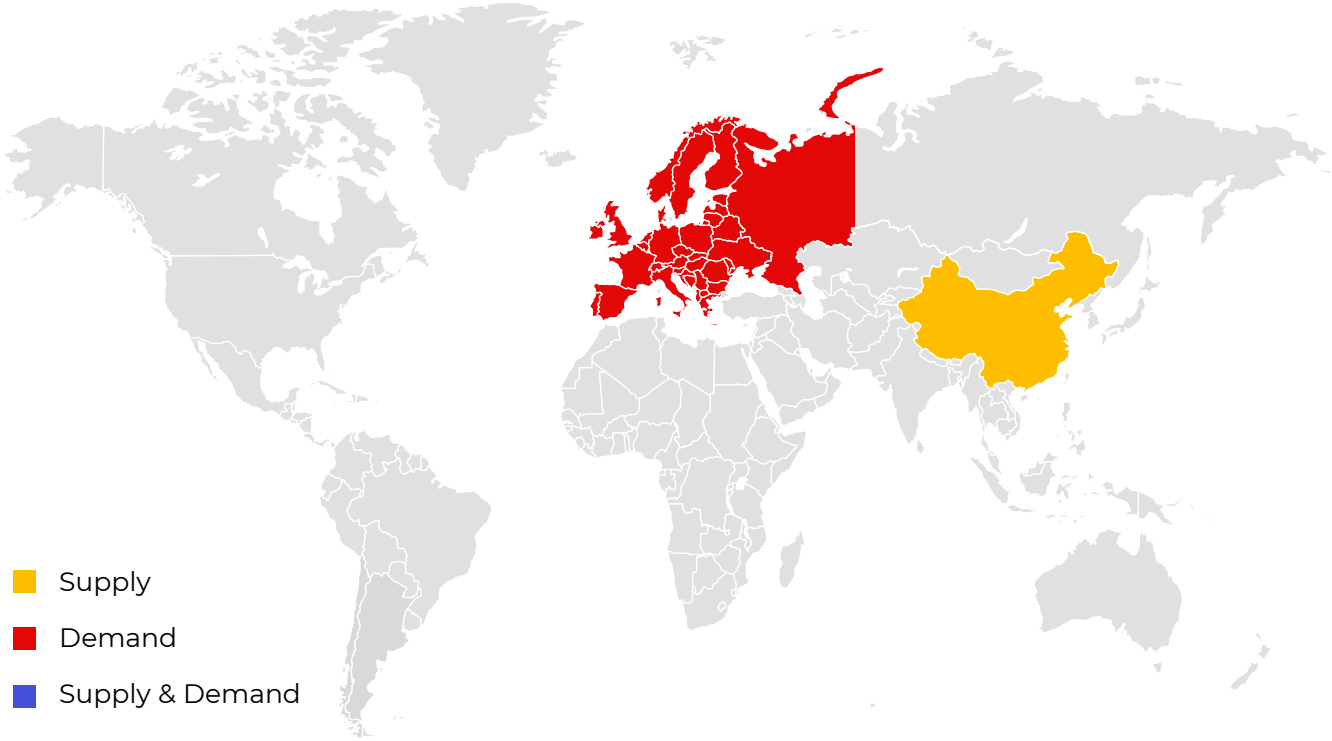
Praseodymium-Neodymium (PrNd) Supply (2024)



4. Price Definitions

4.2 Praseodymium-Neodymium (PrNd) Oxide, CIF Europe

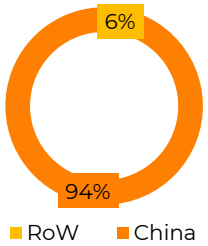
Location:	Europe
Contract Basis:	CIF
Currency:	USD
Shipping Port:	German ports (other ports normalised)
Form:	Powder
UOM:	Tonnes
Delivery Window:	90 days
Min Size:	1 tonnes
Max Size:	100 tonnes
Main Suppliers:	China
Production (2024):	78,254 tonnes
Publication:	Published every two weeks on Thursdays by 4pm (London)



Praseodymium-Neodymium (PrNd) Oxide	
Formula	(PrNd)xOy
Content	Nd2O3: 70-85%, Pr6O11: 20-30%
Common impurities	Ce 0.1%, Sm 0.05%

Praseodymium-Neodymium (PrNd) Supply (2024)

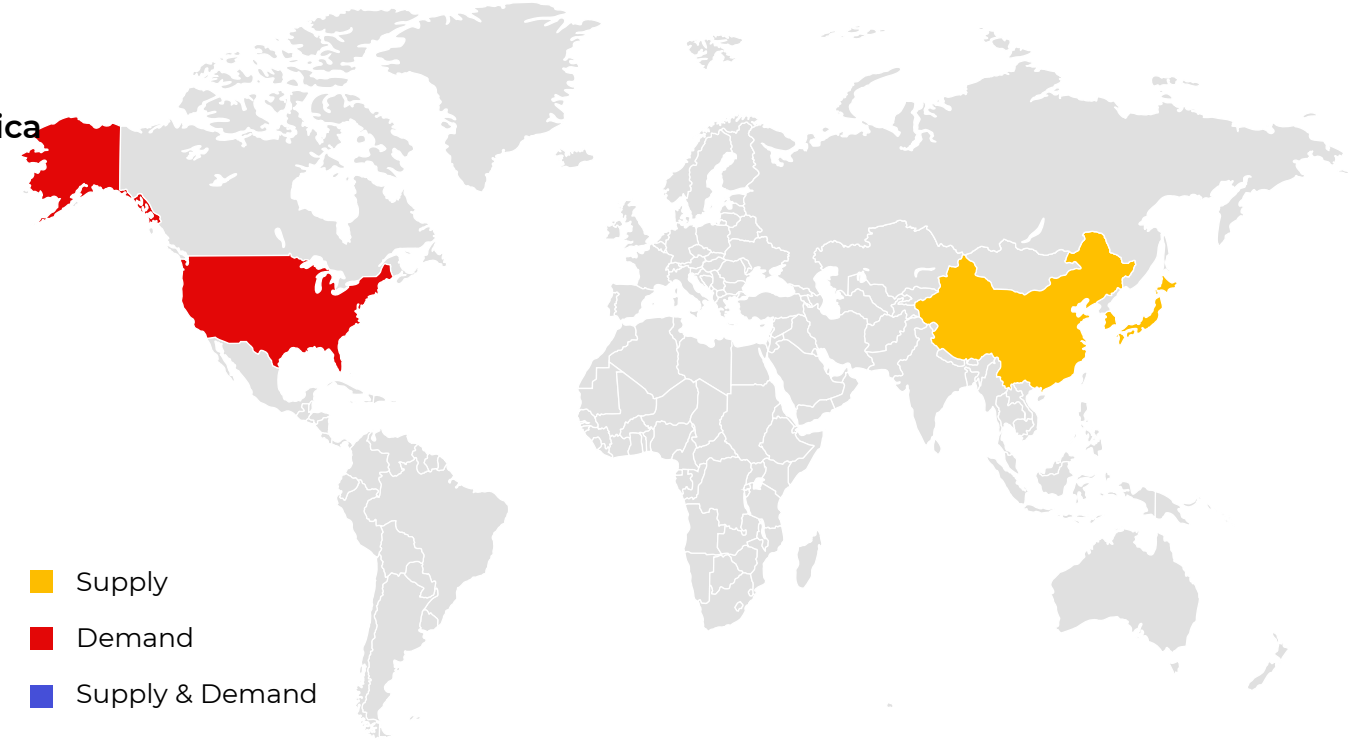
Supply



4. Price Definitions

4.3 Praseodymium-Neodymium (PrNd) Oxide, CIF North America

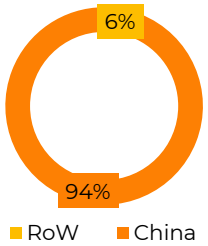
Location:	North America
Contract Basis:	CIF
Currency:	USD
Shipping Port:	East Coast USA (other ports normalised)
Form:	Powder
UOM:	Tonnes
Delivery Window:	90 days
Min Size:	1 tonnes
Max Size:	100 tonnes
Main Suppliers:	China
Production (2024):	78,254 tonnes
Publication:	Published every two weeks on Thursdays by 4pm (London)



Praseodymium-Neodymium (PrNd) Oxide	
Formula	(PrNd)xOy
Content	Nd2O3: 70-85%, Pr6O11: 20-30%
Common impurities	Ce 0.1%, Sm 0.05%

Praseodymium-Neodymium (PrNd) Supply (2024)

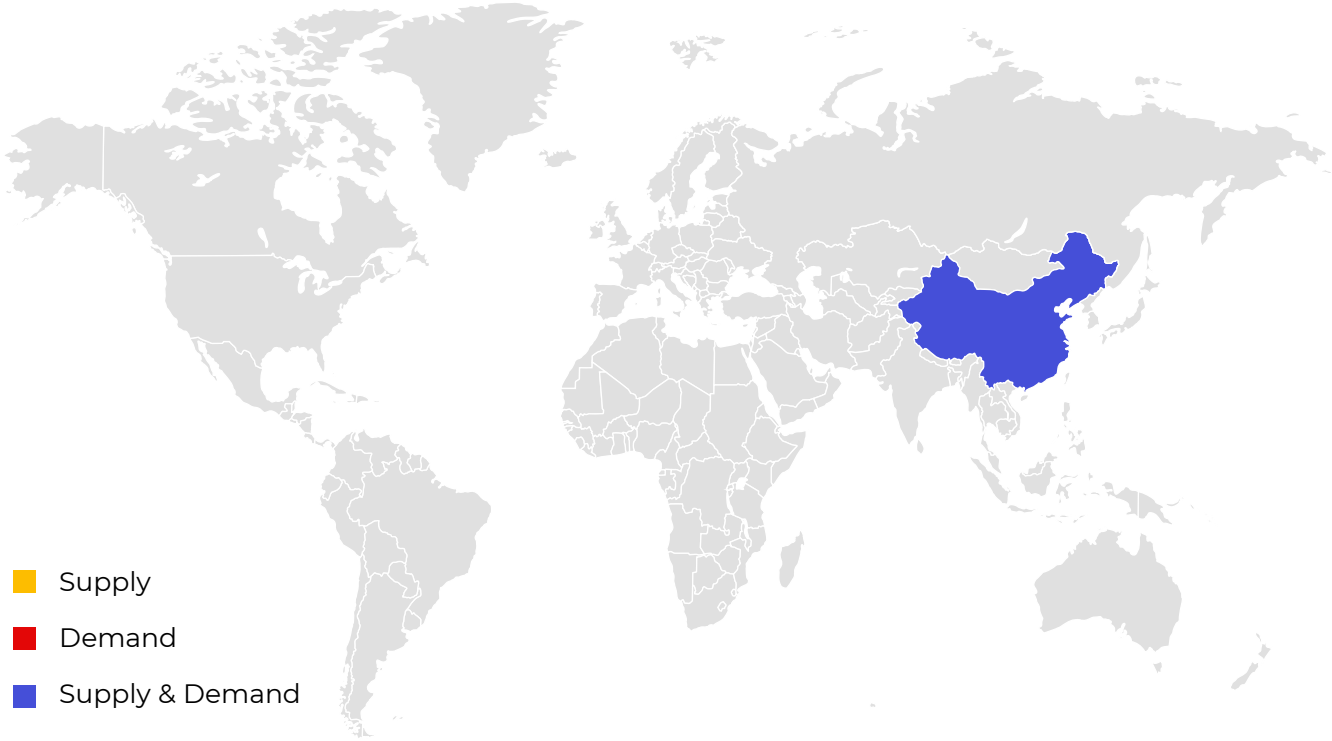
Supply



4. Price Definitions

4.4 Dysprosium Oxide, DDP China

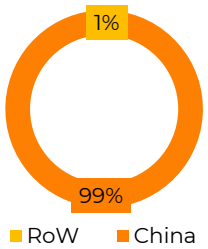
Location:	China
Contract Basis:	Delivered Duty Paid (DDP)
Currency:	RMB
Shipping Port:	Domestic
Form:	Powder
UOM:	Tonnes
Delivery Window:	60 days
Min Size:	1 kilogram
Max Size:	10 tonnes
Main Suppliers:	China
Production (2024):	2,215 tonnes
Publication:	Published every two weeks on Thursdays by 4pm (London)



Dysprosium (Dy) Oxide	
Formula	Dy_2O_3
Content	99.0-99.5%
Common impurities	Ho 0.1% max; Tb 0.1% max

Dysprosium (Dy) Oxide Supply (2024)

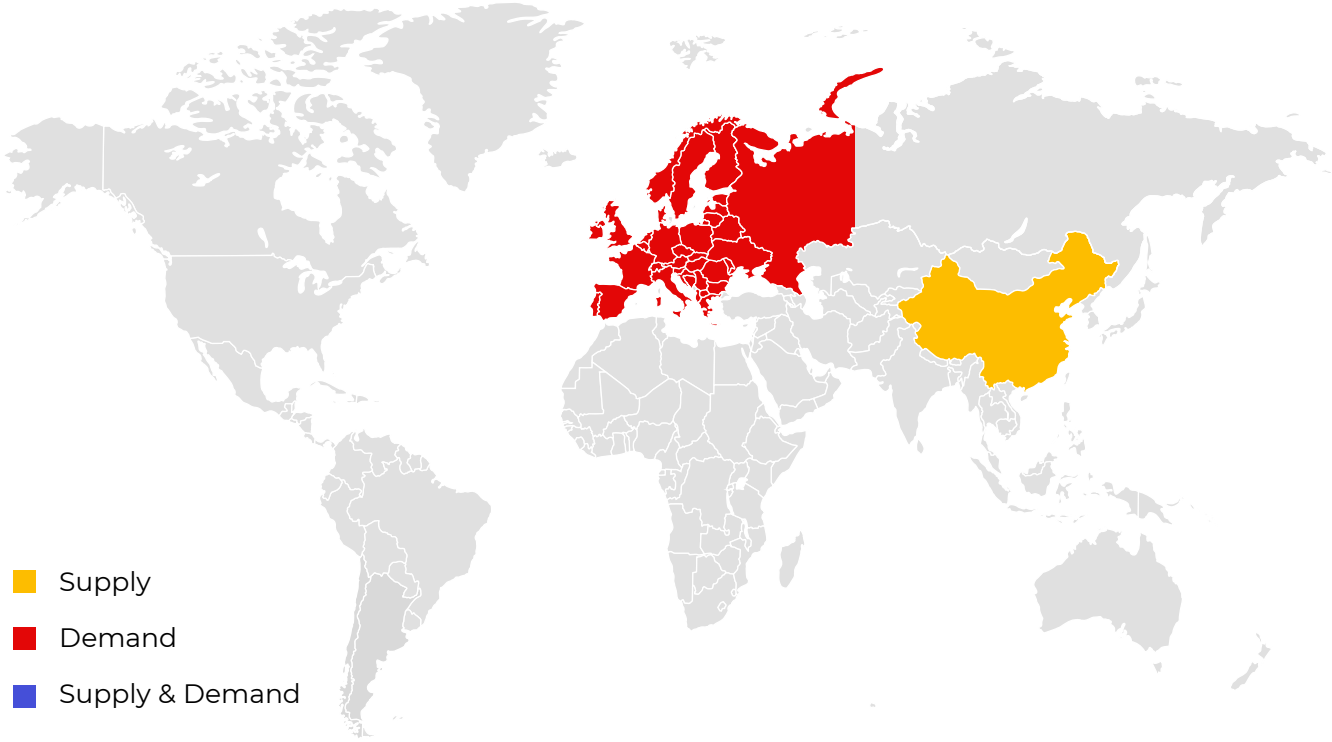
Supply



4. Price Definitions

4.5 Dysprosium Oxide, CIF Europe

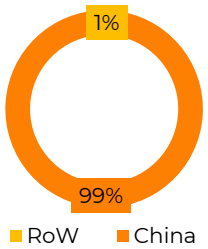
Location:	Europe
Contract Basis:	CIF
Currency:	USD
Shipping Port:	German ports (other ports normalised)
Form:	Powder
UOM:	Tonnes
Delivery Window:	90 days
Min Size:	1 kilogram
Max Size:	10 tonnes
Main Suppliers:	China
Production (2024):	2,215 tonnes
Publication:	Published every two weeks on Thursdays by 4pm (London)



Dysprosium (Dy) Oxide	
Formula	Dy_2O_3
Content	99.0-99.5%
Common impurities	Ho 0.1% max; Tb 0.1% max

Dysprosium (Dy) Oxide Supply (2024)

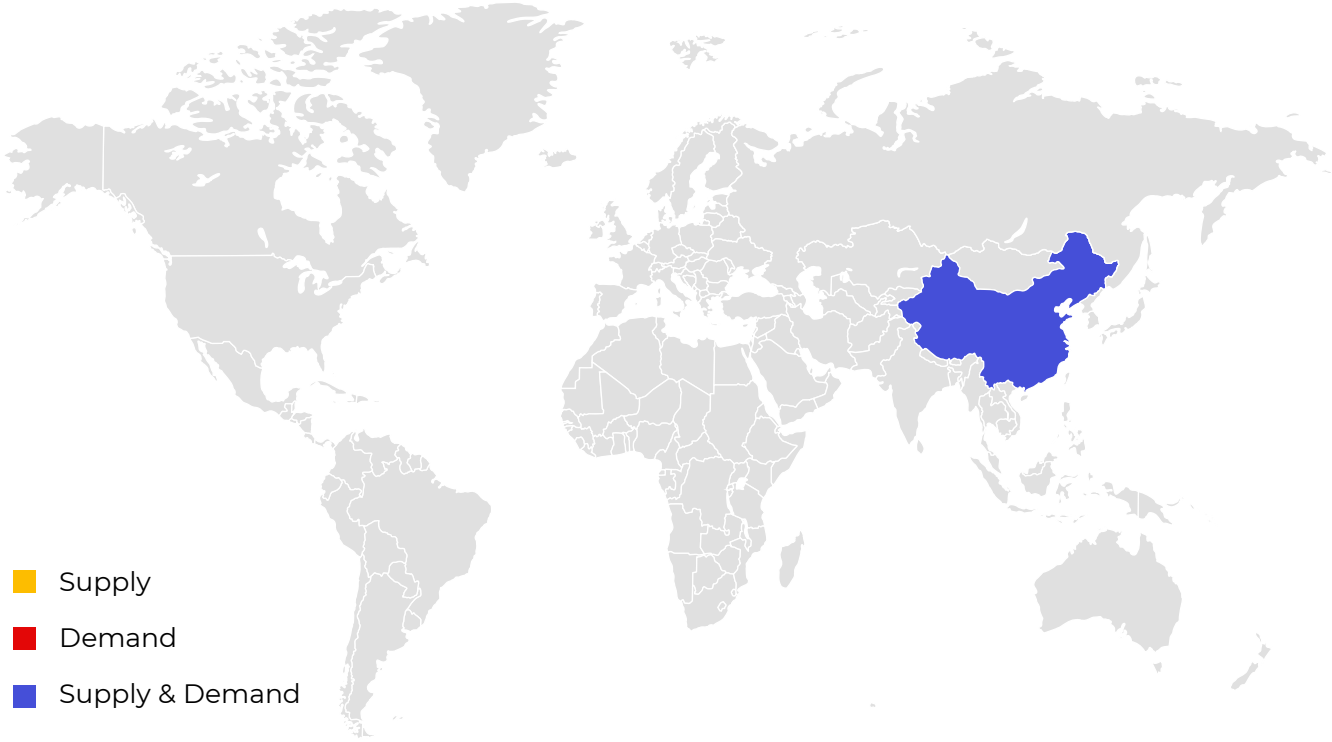
Supply



4. Price Definitions

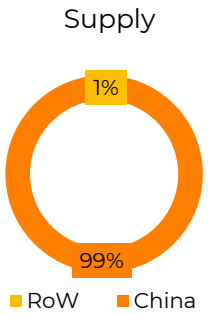
4.6 Terbium Oxide, DDP China

Location:	China
Contract Basis:	Delivered Duty Paid (DDP)
Currency:	RMB
Shipping Port:	Domestic
Form:	Powder
UOM:	Tonnes
Delivery Window:	60 days
Min Size:	1 kilogram
Max Size:	10 tonnes
Main Suppliers:	China
Production (2024):	632 tonnes
Publication:	Published every two weeks on Thursdays by 4pm (London)



Terbium (Tb) Oxide	
Formula	Tb_4O_7
Content	99.0-99.9%
Common impurities	Dy 20ppm max, Gd 10ppm max

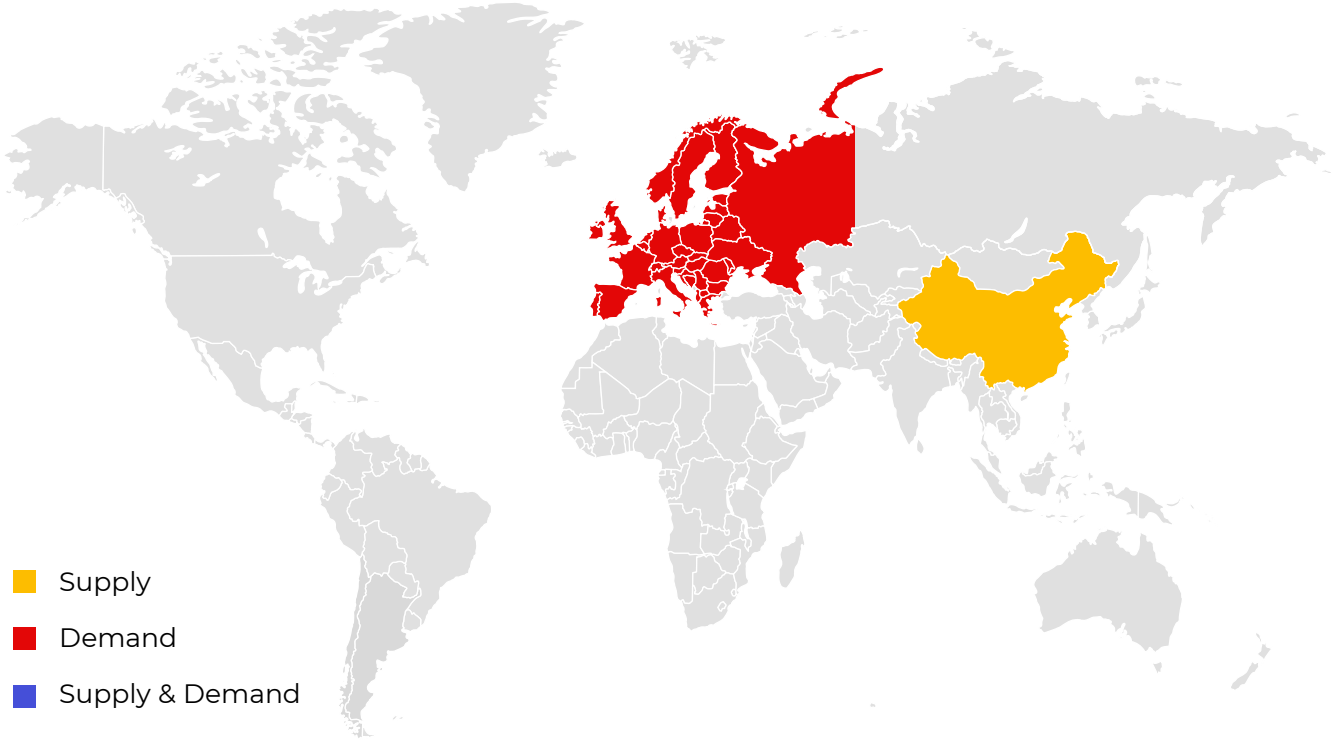
Terbium (Tb) Oxide Supply (2024)



4. Price Definitions

4.7 Terbium Oxide, CIF Europe

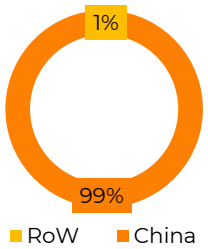
Location:	Europe
Contract Basis:	CIF
Currency:	USD
Shipping Port:	German ports (other ports normalised)
Form:	Powder
UOM:	Tonnes
Delivery Window:	90 days
Min Size:	1 kilogram
Max Size:	10 tonnes
Main Suppliers:	China
Production (2024):	632 tonnes
Publication:	Published every two weeks on Thursdays by 4pm (London)



Terbium (Tb) Oxide	
Formula	Tb_4O_7
Content	99.0-99.9%
Common impurities	Dy 20ppm max, Gd 10ppm max

Terbium (Tb) Oxide Supply (2024)

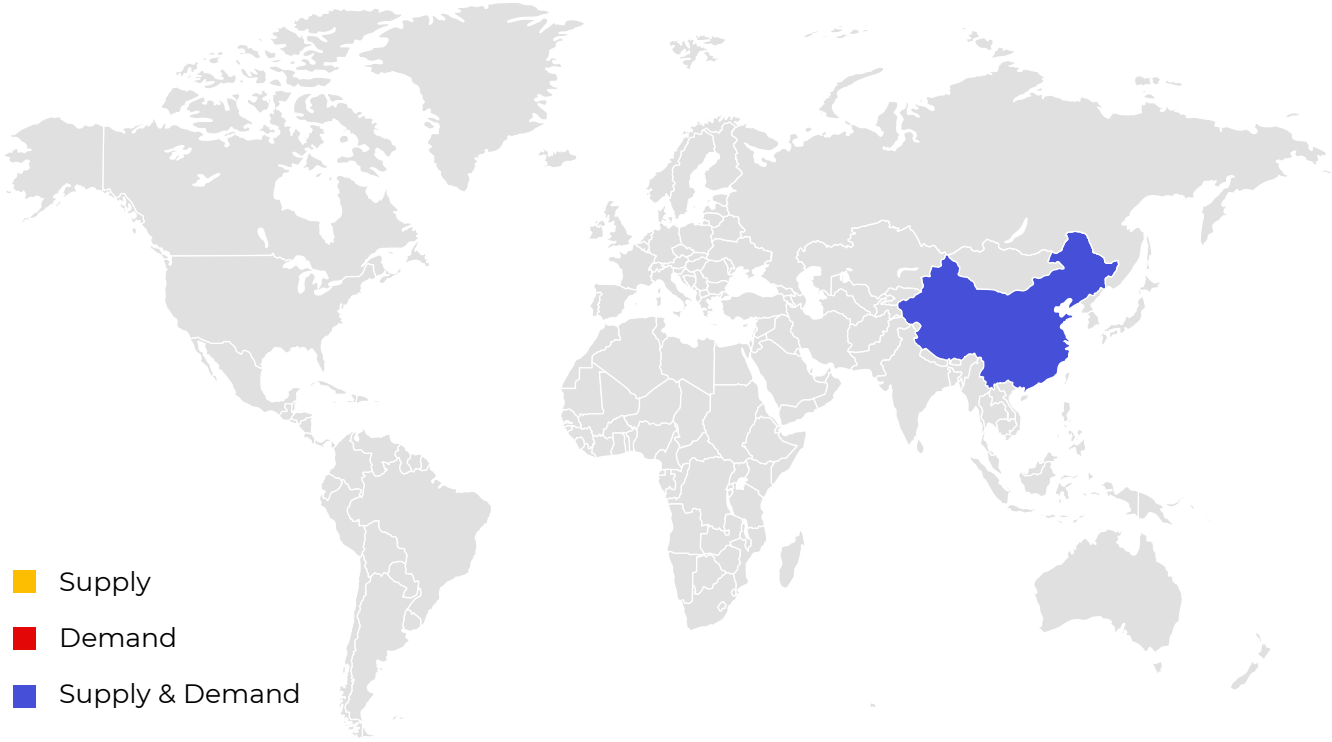
Supply



4. Price Definitions

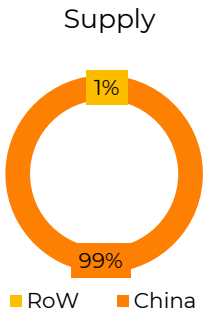
4.8 Samarium Oxide, DDP China

Location:	China
Contract Basis:	Delivered Duty Paid (DDP)
Currency:	RMB
Shipping Port:	Domestic
Form:	Powder
UOM:	Tonnes
Delivery Window:	60 days
Min Size:	1 kilogram
Max Size:	10 tonnes
Main Suppliers:	China
Production (2024):	6,679 tonnes
Publication:	Published every two weeks on Thursdays by 4pm (London)



Samarium (Sm) Oxide	
Formula	Sm_2O_3
Content	99.0-99.9%
Common impurities	Si 0.1%, Al 0.05%, LOI 1%

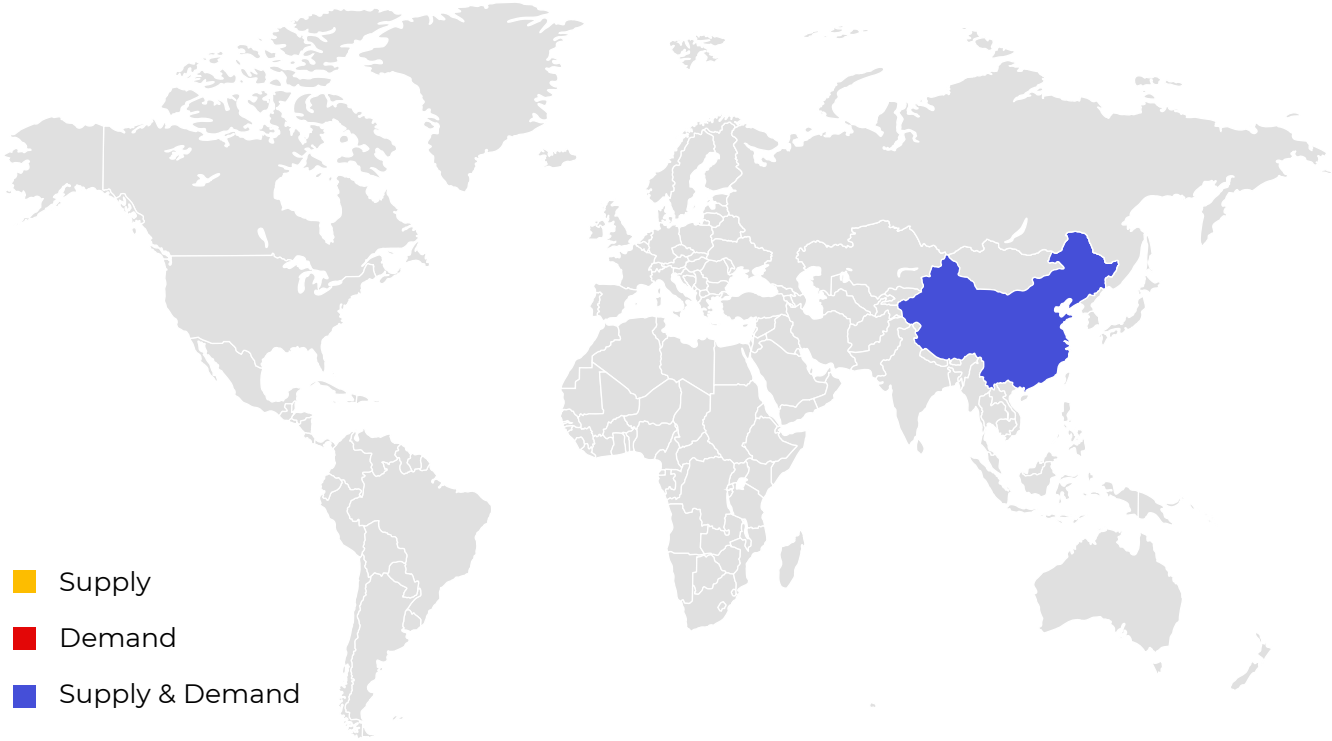
Samarium (Sm) Oxide Supply (2024)



4. Price Definitions

4.9 Praseodymium-Neodymium (PrNd) Metal, DDP China

Location:	China
Contract Basis:	Delivered Duty Paid (DDP)
Currency:	RMB
Shipping Port:	Domestic
Form:	Ingot
UOM:	Tonnes
Delivery Window:	60 days
Min Size:	10 tonnes
Max Size:	100 tonnes
Main Suppliers:	China
Publication:	Published every two weeks on Thursdays by 4pm (London)

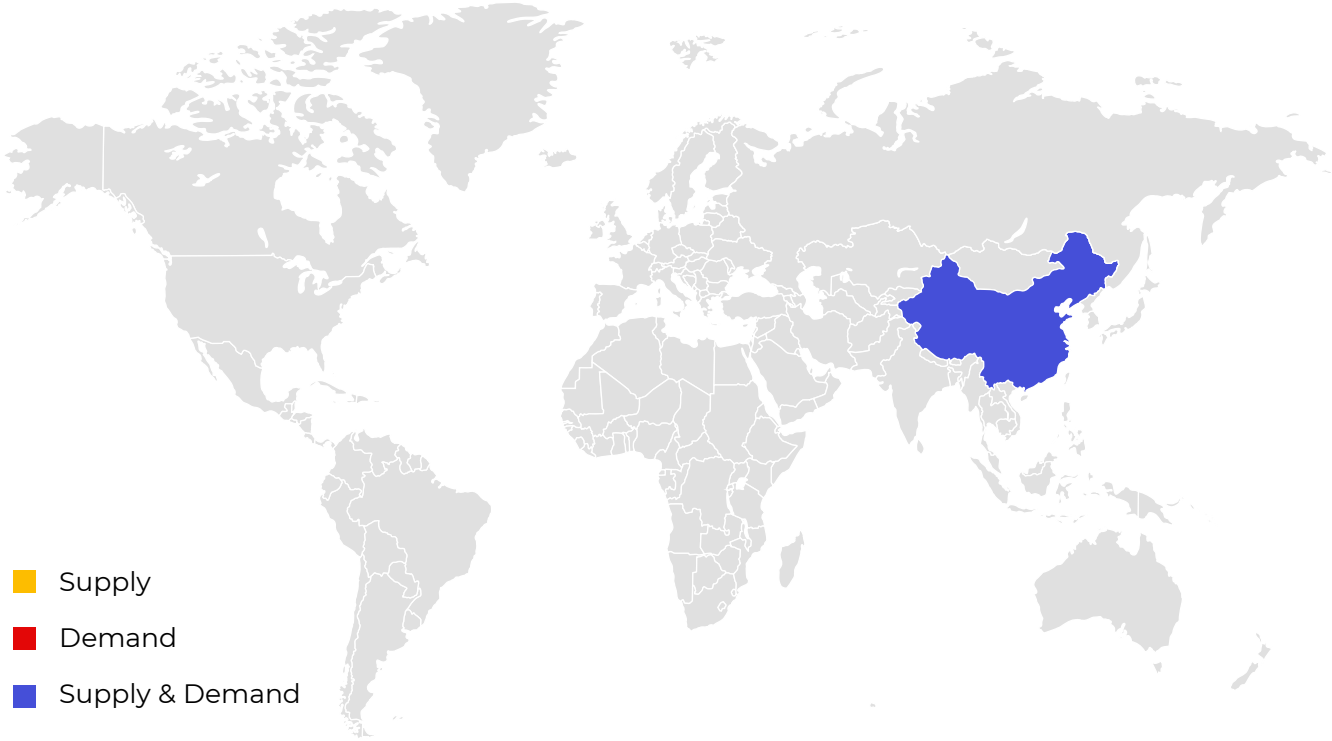


Praseodymium-Neodymium (PrNd) Metal	
Content	Nd 70-85%, Pr: 22-30%
Common impurities	Ce 0.1%, Sm 0.05%

4. Price Definitions

4.10 Dysprosium Metal, DDP China

Location:	China
Contract Basis:	Delivered Duty Paid (DDP)
Currency:	RMB
Shipping Port:	Domestic
Form:	Ingot
UOM:	Tonnes
Delivery Window:	60 days
Min Size:	1 tonne
Max Size:	10 tonnes
Main Suppliers:	China
Publication:	Published every two weeks on Thursdays by 4pm (London)

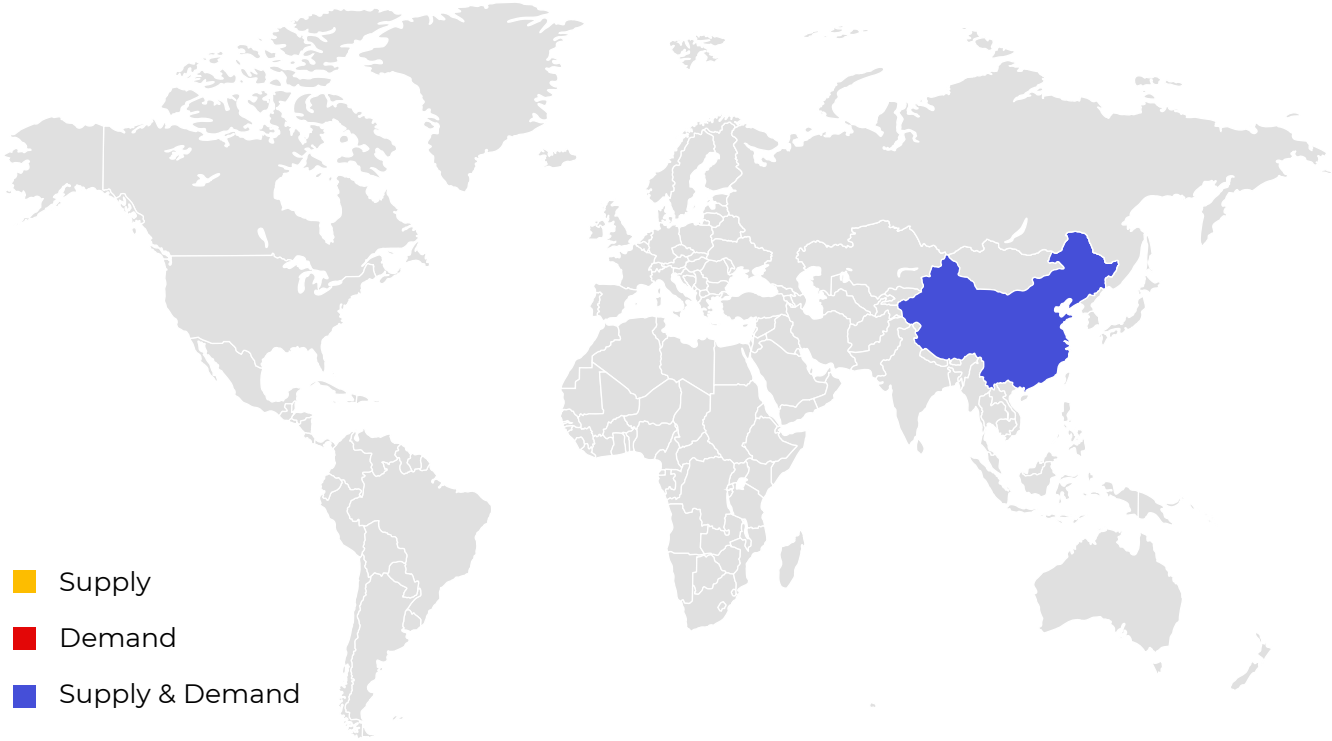


Dysprosium (Dy) Metal	
Formula	Dy
Content	99.0-99.5%
Common impurities	Ho 0.1% max; Tb 0.1% max

4. Price Definitions

4.11 Terbium Metal, DDP China

Location:	China
Contract Basis:	Delivered Duty Paid (DDP)
Currency:	RMB
Shipping Port:	Domestic
Form:	Ingot
UOM:	Tonnes
Delivery Window:	60 days
Min Size:	1 tonne
Max Size:	10 tonnes
Main Suppliers:	China
Publication:	Published every two weeks on Thursdays by 4pm (London)

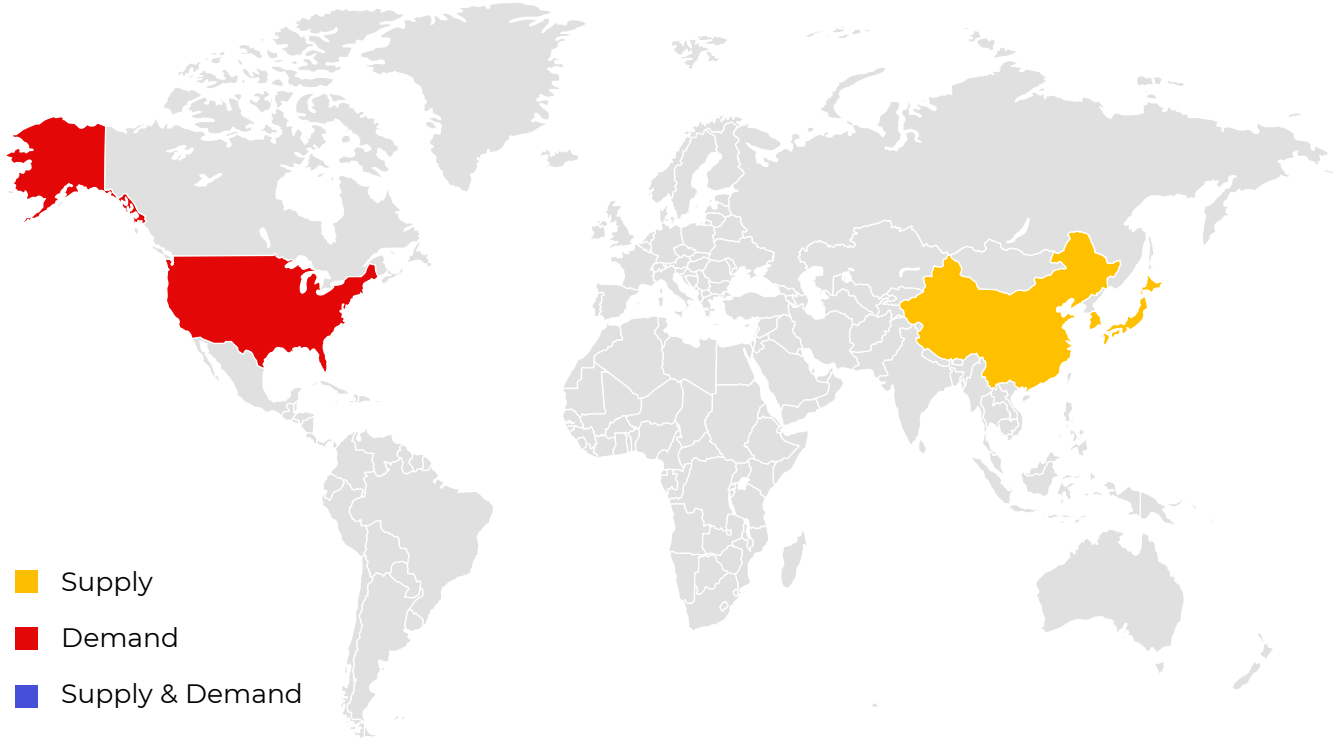


Terbium (Tb) Metal	
Formula	Tb
Content	99.0-99.9%
Common impurities	Dy 20ppm max, Gd 10ppm max

4. Price Definitions

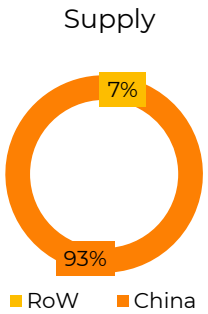
4.12 Yttrium Oxide, CIF North America

Location:	North America
Contract Basis:	CIF
Currency:	USD
Shipping Port:	East Coast USA (other ports normalised)
Form:	Powder
UOM:	Tonnes
Delivery Window:	90 days
Min Size:	100 kg
Max Size:	100 tonnes
Main Suppliers:	China
Production (2024):	369,967 tonnes
Publication:	Published every two weeks on Thursdays by 4pm (London)



Yttrium Oxide	
Formula	Y_2O_3
Content	99.999%
Common impurities	Fe_2O_3 0.0001%, SiO_2 0.0001%, CaO 0.0005%

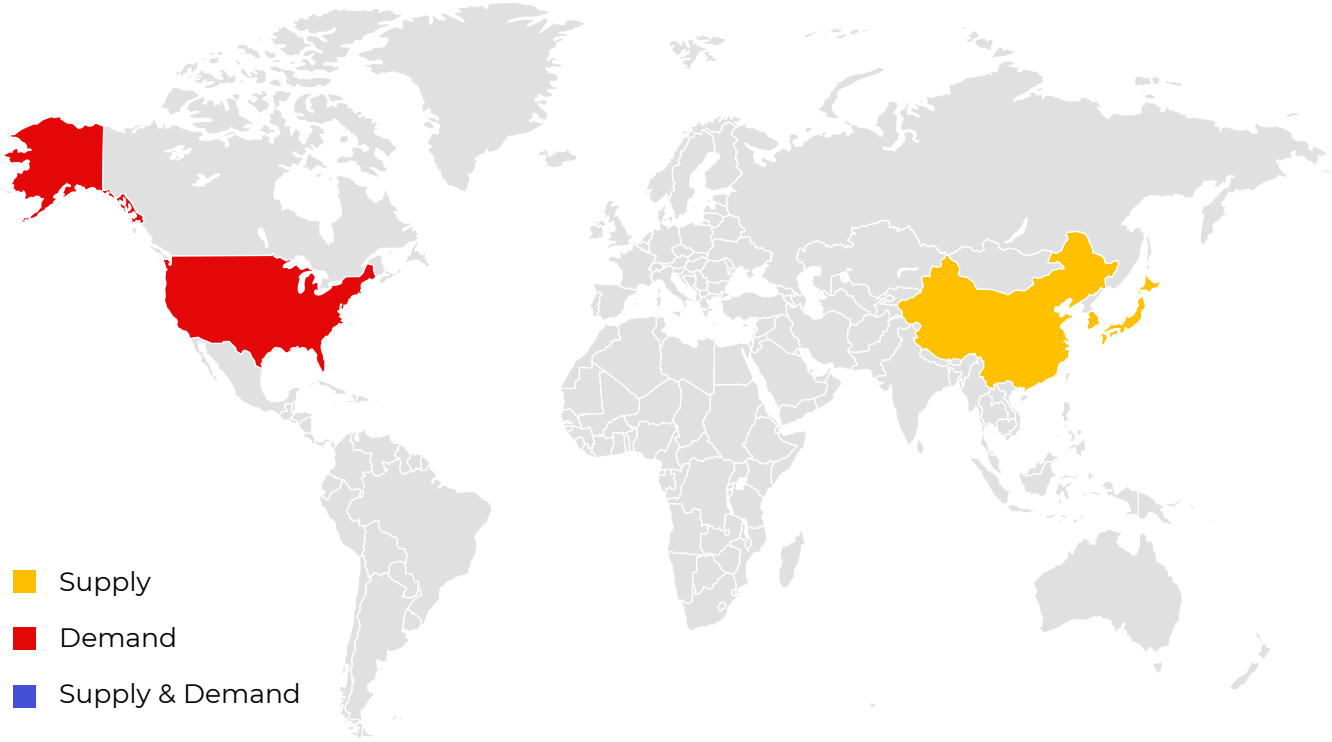
Yttrium Oxide Supply (2024)



4. Price Definitions

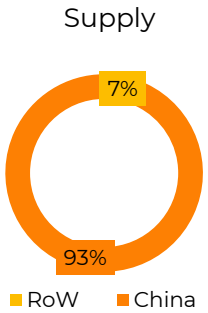
4.13 Yttrium Oxide, DDP China

Location:	China
Contract Basis:	Delivered Duty Paid (DDP)
Currency:	RMB
Shipping Port:	Domestic
Form:	Ingot
UOM:	Tonnes
Delivery Window:	90 days
Min Size:	1 kg
Max Size:	100 tonnes
Main Suppliers:	China
Production (2024):	369,967 tonnes
Publication:	Published every two weeks on Thursdays by 4pm (London)



Yttrium Oxide	
Formula	Y_2O_3
Content	99.999%
Common impurities	Fe_2O_3 0.0001%, SiO_2 0.0001%, CaO 0.0005%

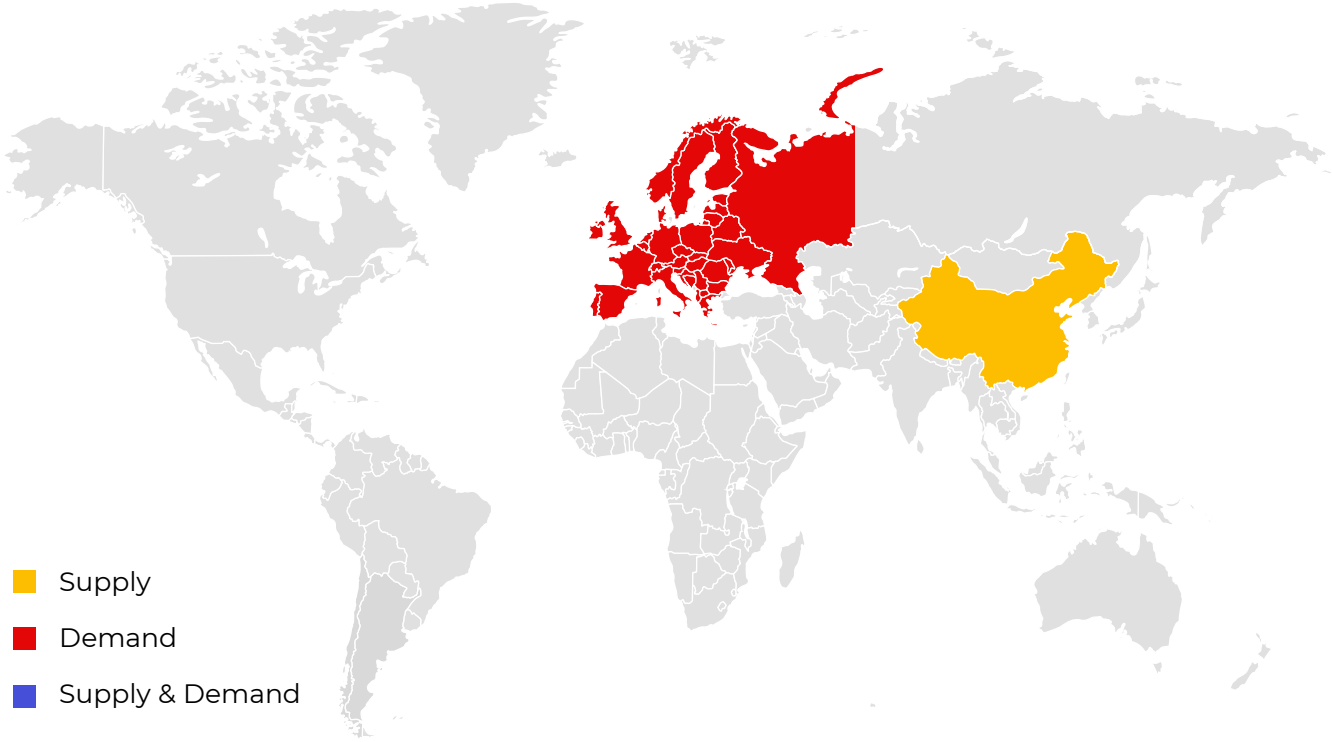
Yttrium Oxide Supply (2024)



4. Price Definitions

4.14 Cerium Oxide, CIF Europe

Location:	Europe
Contract Basis:	CIF
Currency:	USD
Shipping Port:	German ports (other ports normalised)
Form:	powder
UOM:	tonnes
Delivery Window:	90 days
Min Size:	5t (+/-2%)
Main Suppliers:	China
Publication:	Published every two weeks on Thursdays by 4pm (London)

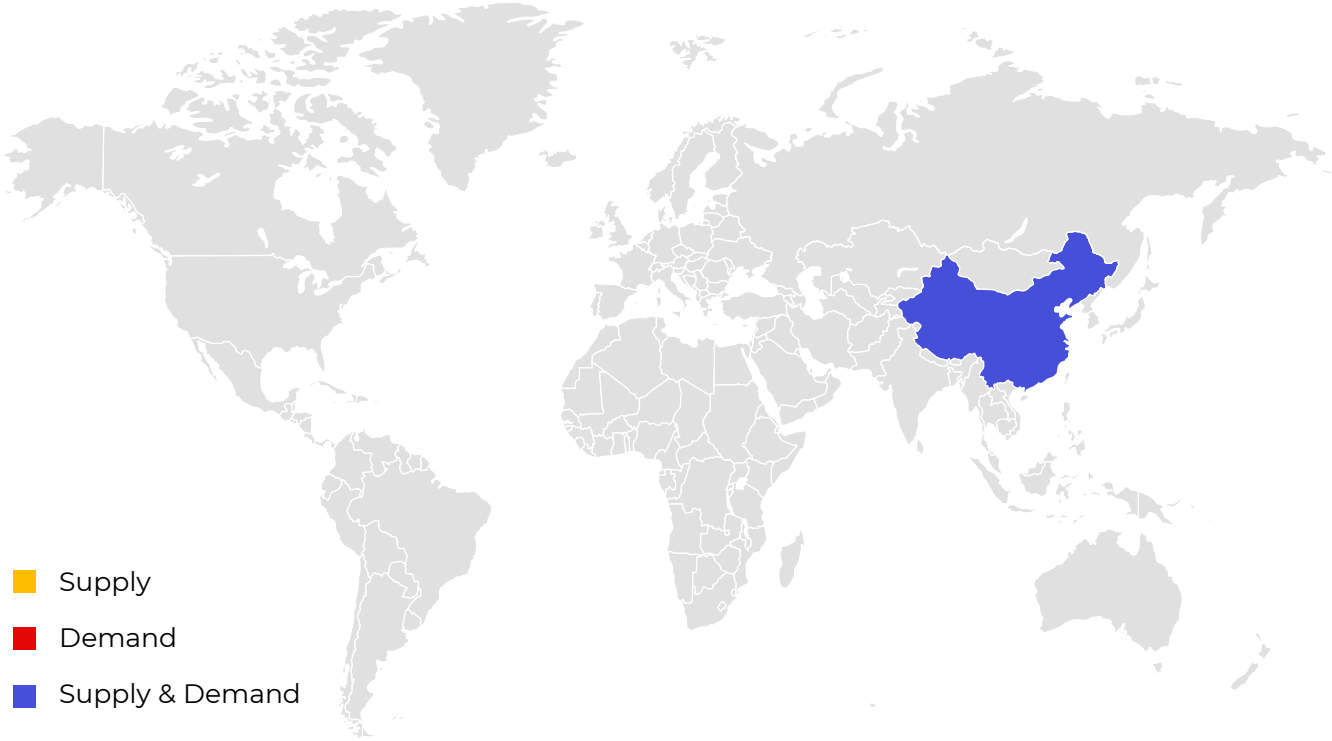


Cerium Oxide	
Formula	CeO2
Content	99.5-99.9% min
Common impurities	Fe 0.01%, Si 0.03%, Ca 0.03%, Cl 0.05%, S 0.1%, RE impurities 0.1% maximum

4. Price Definitions

4.15 Cerium Oxide, DDP China

Location:	China
Contract Basis:	Delivered Duty Paid (DDP)
Currency:	RMB
Shipping Port:	Domestic
Form:	powder
UOM:	tonnes
Delivery Window:	90 days
Min Size:	5t (+/-2%)
Main Suppliers:	China
Publication:	Published every two weeks on Thursdays by 4pm (London)

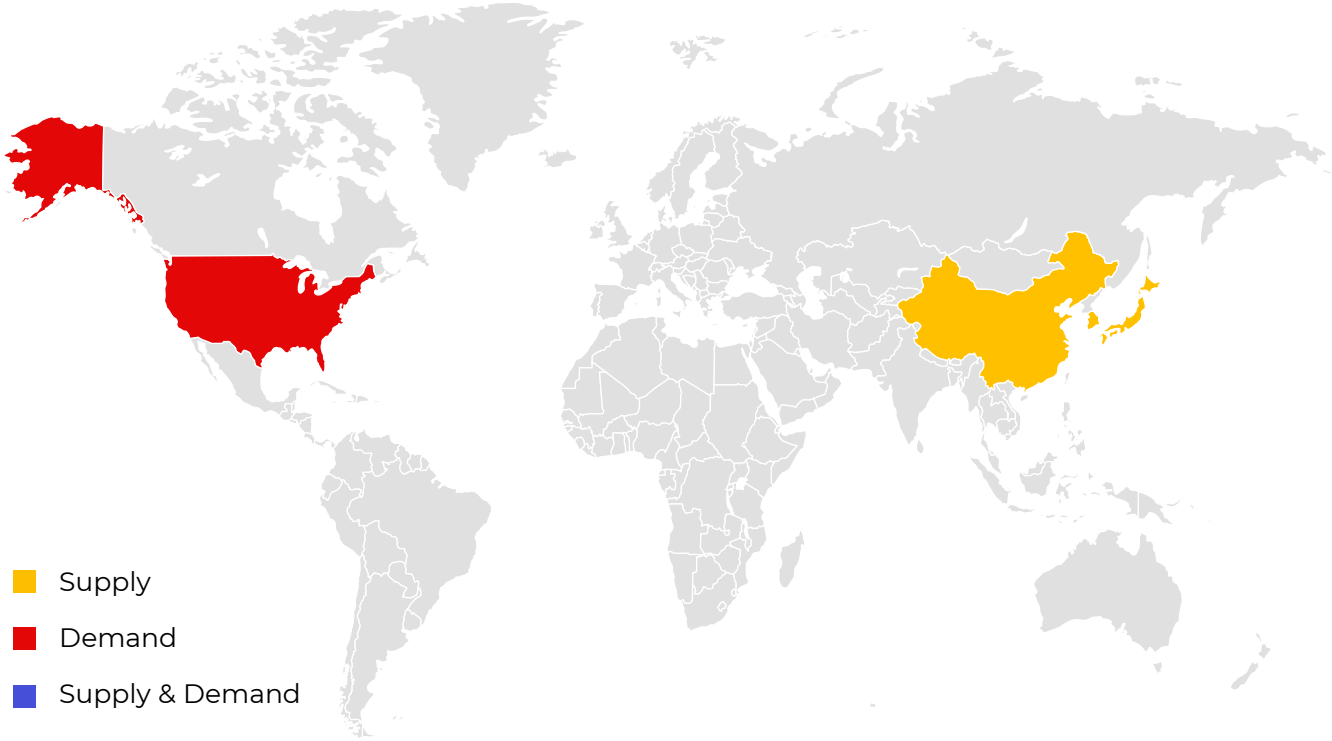


Cerium Oxide	
Formula	CeO2
Content	99.5-99.9% min
Common impurities	Fe 0.01%, Si 0.03%, Ca 0.03%, Cl 0.05%, S 0.1%, RE impurities 0.1% maximum

4. Price Definitions

4.16 Erbium Oxide, CIF North America

Location:	North America
Contract Basis:	CIF
Currency:	USD
Shipping Port:	East Coast USA (other ports normalised)
Form:	powder
UOM:	tonnes
Delivery Window:	90 days
Min Size:	50kg (+/-2%)
Main Suppliers:	China
Publication:	Published every two weeks on Thursdays by 4pm (London)

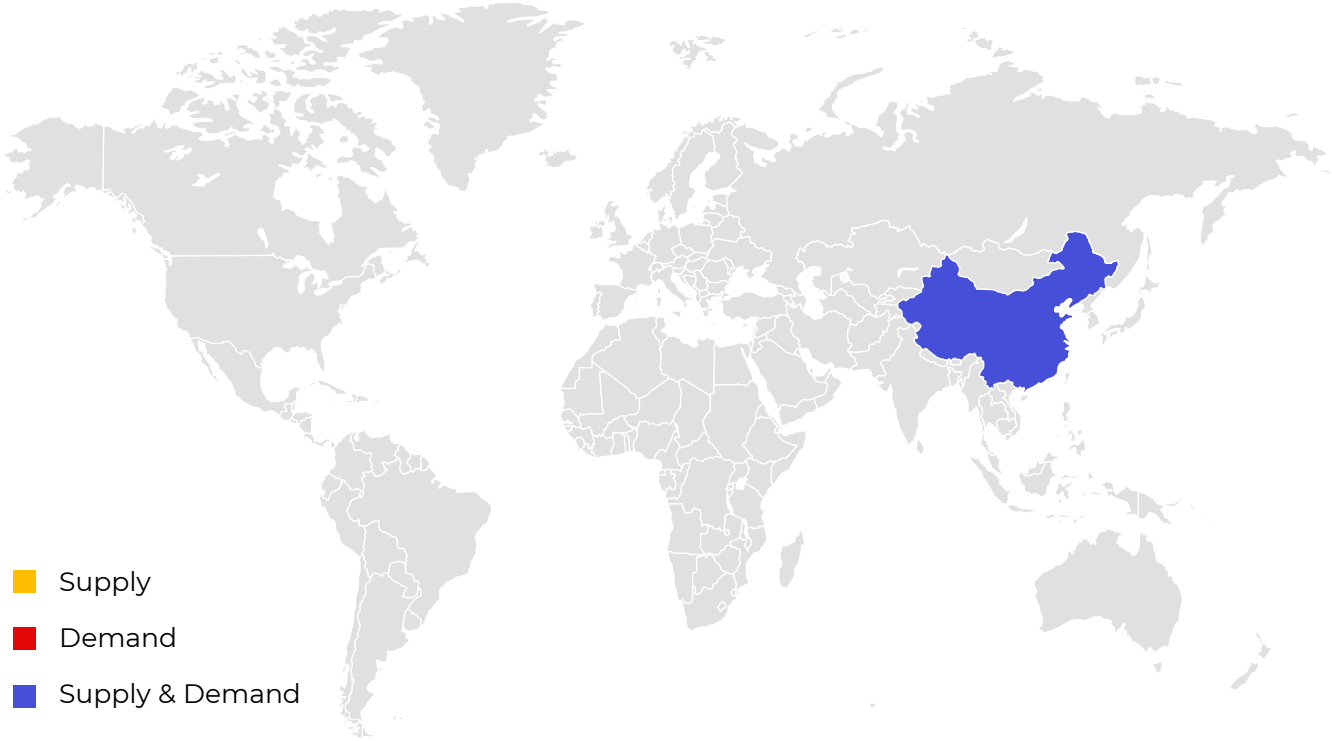


Erbium Oxide	
Formula	Er2O3
Content	99.50% min
Common impurities	Fe 0.05%, Si 0.01%, Ca 0.02%, RE impurities 0.5% maximum

4. Price Definitions

4.17 Erbium Oxide, DDP China

Location:	China
Contract Basis:	Delivered Duty Paid (DDP)
Currency:	RMB
Shipping Port:	Domestic
Form:	powder
UOM:	tonnes
Delivery Window:	90 days
Min Size:	1t (+/-2%)
Main Suppliers:	China
Publication:	Published every two weeks on Thursdays by 4pm (London)

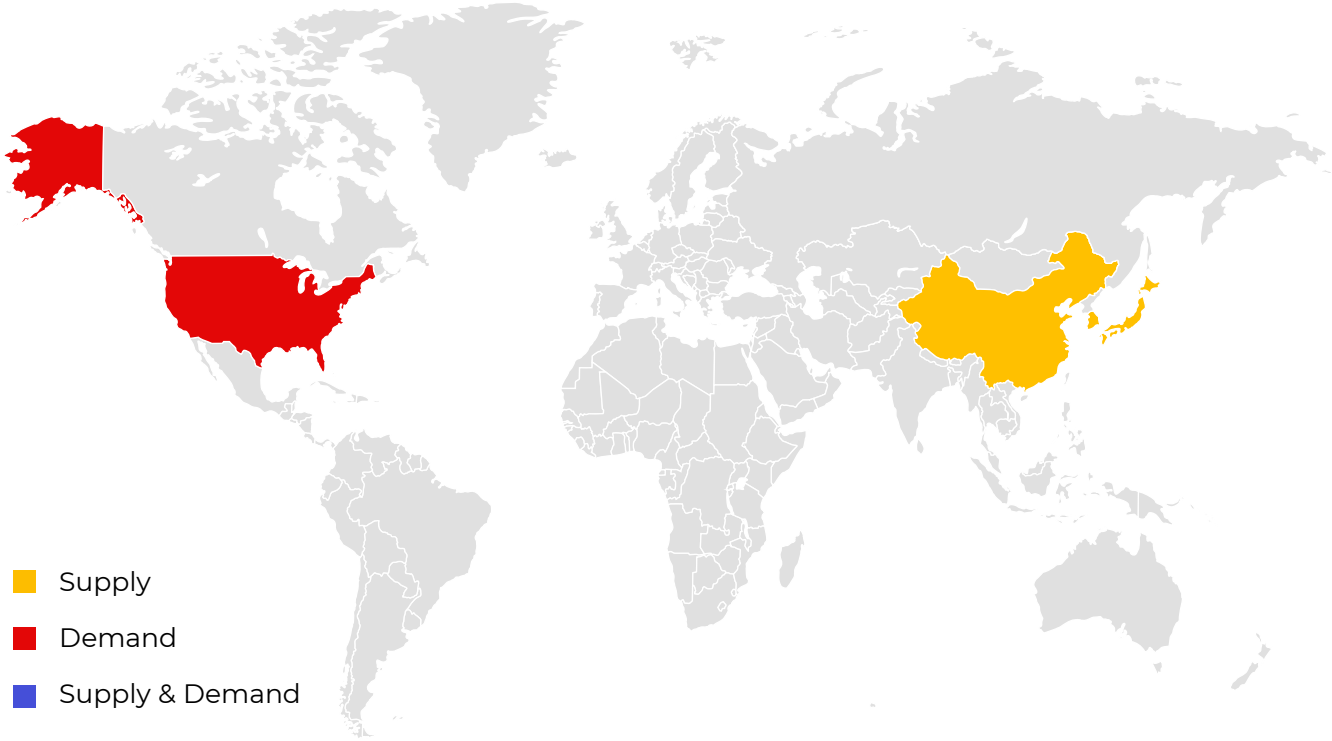


Erbium Oxide	
Formula	Er2O3
Content	99.50% min
Common impurities	Fe 0.05%, Si 0.05%, Ca 0.02%, RE impurities 0.5% maximum

4. Price Definitions

4.18 Europium Oxide, CIF North America

Location:	North America
Contract Basis:	CIF
Currency:	USD
Shipping Port:	East Coast USA (other ports normalised)
Form:	powder
UOM:	tonnes
Delivery Window:	90 days
Min Size:	50kg (+/-2%)
Main Suppliers:	China
Publication:	Published every two weeks on Thursdays by 4pm (London)

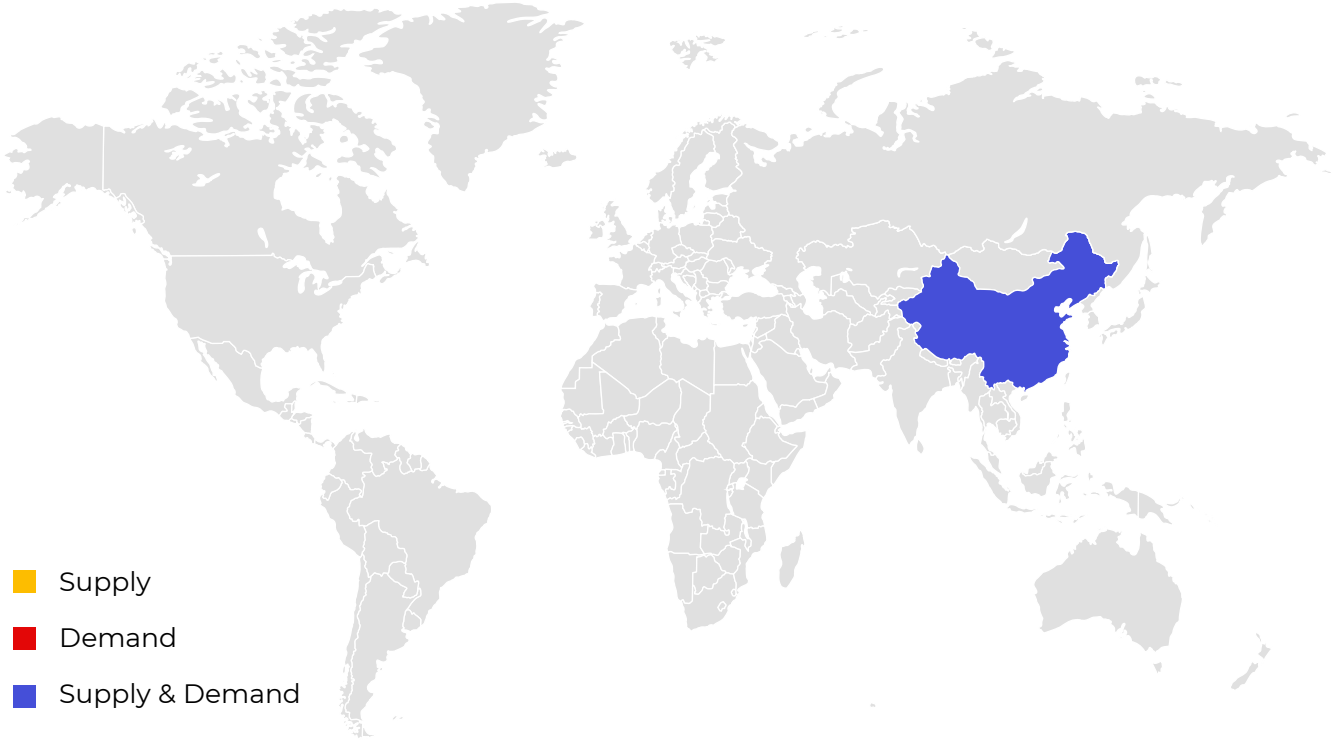


Europium Oxide	
Formula	Eu2O3
Content	99.99% min
Common impurities	Fe 0.005%, Si 0.002%, Ca 0.002%, Ni 0.001%, Zn 0.001%, Al 0.01%, RE impurities 0.01% maximum

4. Price Definitions

4.19 Europium Oxide, DDP China

Location:	China
Contract Basis:	Delivered Duty Paid (DDP)
Currency:	RMB
Shipping Port:	Domestic
Form:	powder
UOM:	tonnes
Delivery Window:	90 days
Min Size:	50kg (+/-2%)
Main Suppliers:	China
Publication:	Published every two weeks on Thursdays by 4pm (London)

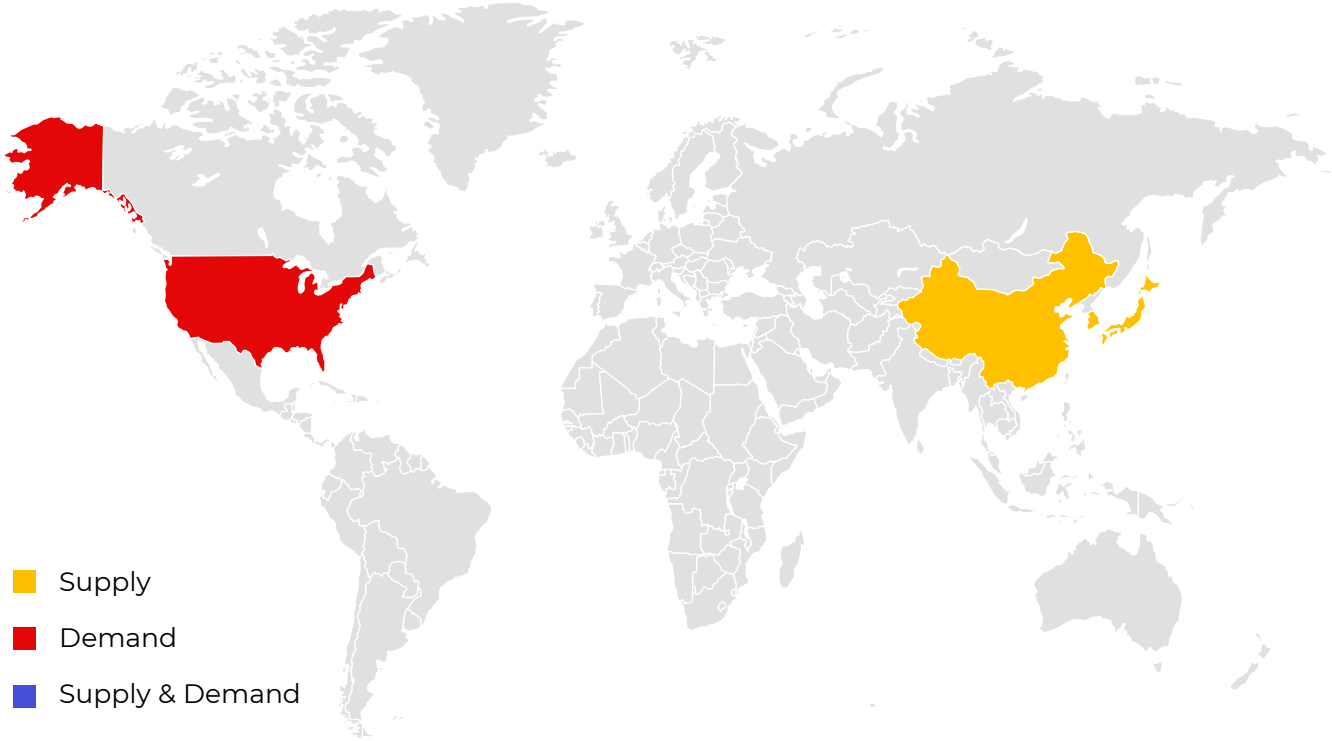


Europium Oxide	
Formula	Eu2O3
Content	99.99% min
Common impurities	Fe 0.005%, Si 0.002%, Ca 0.002%, Ni 0.001%, Zn 0.001%, Al 0.01%, RE impurities 0.01% maximum

4. Price Definitions

4.20 Gadolinium Oxide, CIF North America

Location:	North America
Contract Basis:	CIF
Currency:	USD
Shipping Port:	East Coast USA (other ports normalised)
Form:	powder
UOM:	tonnes
Delivery Window:	90 days
Min Size:	50kg (+/-2%)
Main Suppliers:	China
Publication:	Published every two weeks on Thursdays by 4pm (London)

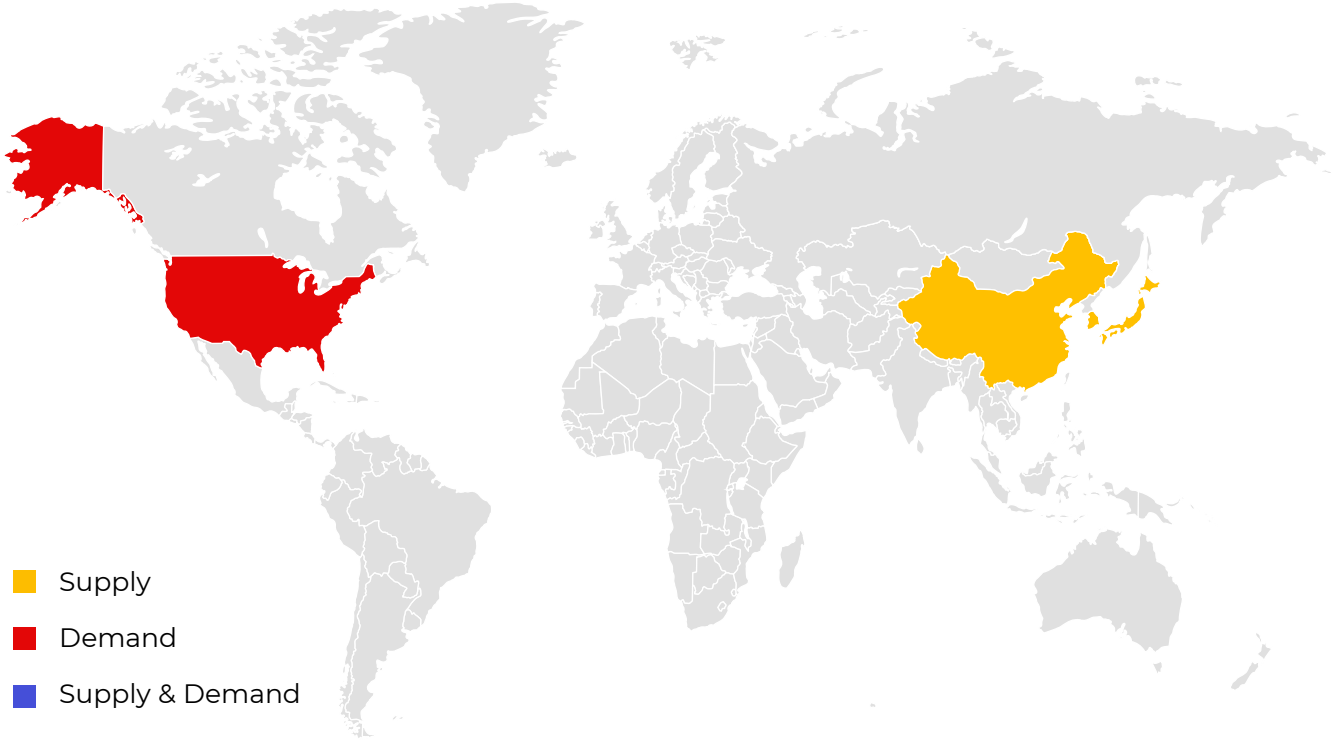


Gadolinium Oxide	
Formula	Gd2O3
Content	99.99-99.999% min
Common impurities	Fe 0.0002%, Si 0.002%, Ca 0.001%, RE impurities 0.001% maximum

4. Price Definitions

4.22 Holmium Oxide, CIF North America

Location:	North America
Contract Basis:	CIF
Currency:	USD
Shipping Port:	East Coast USA (other ports normalised)
Form:	powder
UOM:	tonnes
Delivery Window:	90 days
Min Size:	50kg (+/-2%)
Main Suppliers:	China
Publication:	Published every two weeks on Thursdays by 4pm (London)

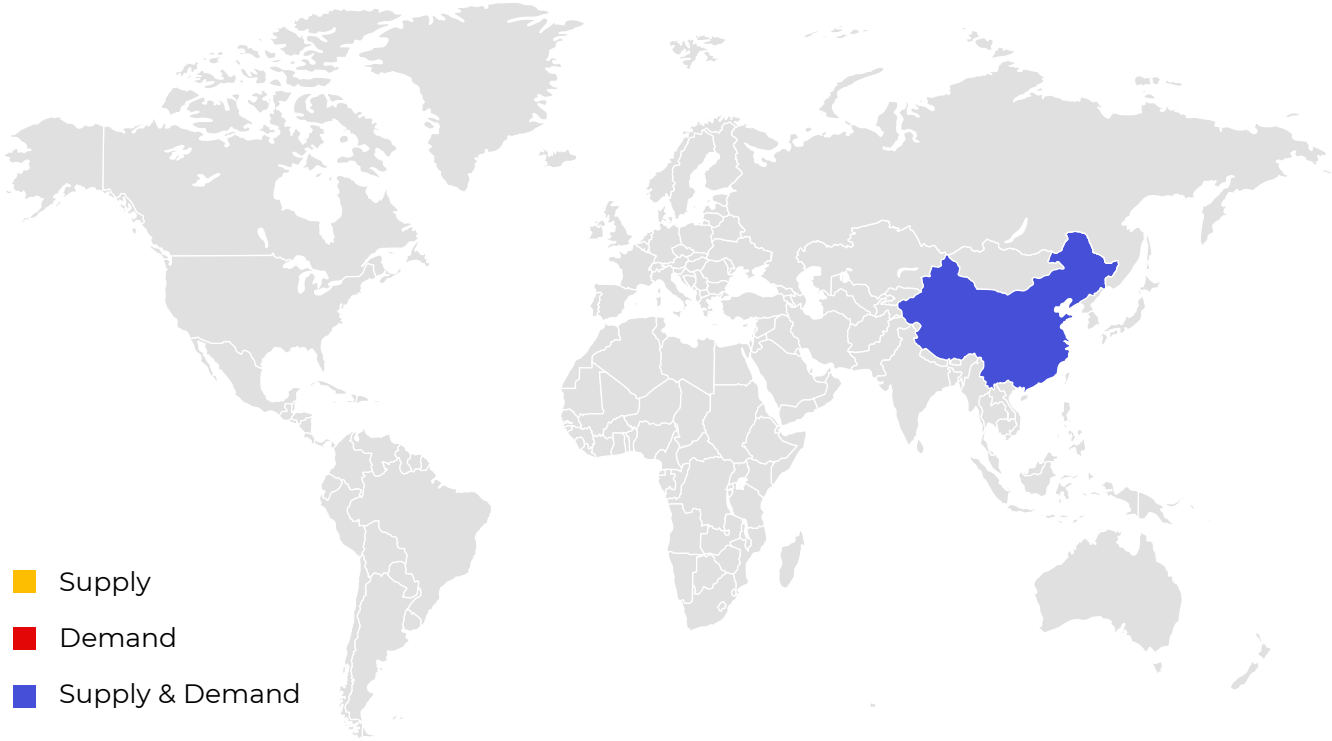


Holmium Oxide	
Formula	Ho2O3
Content	99.50% min
Common impurities	Fe 0.001%, Si 0.0017%, Ca 0.0075%, RE impurities 0.5% maximum

4. Price Definitions

4.23 Holmium Oxide, DDP China

Location:	China
Contract Basis:	Delivered Duty Paid (DDP)
Currency:	RMB
Shipping Port:	Domestic
Form:	powder
UOM:	tonnes
Delivery Window:	90 days
Min Size:	500kg
Main Suppliers:	China
Publication:	Published every two weeks on Thursdays by 4pm (London)

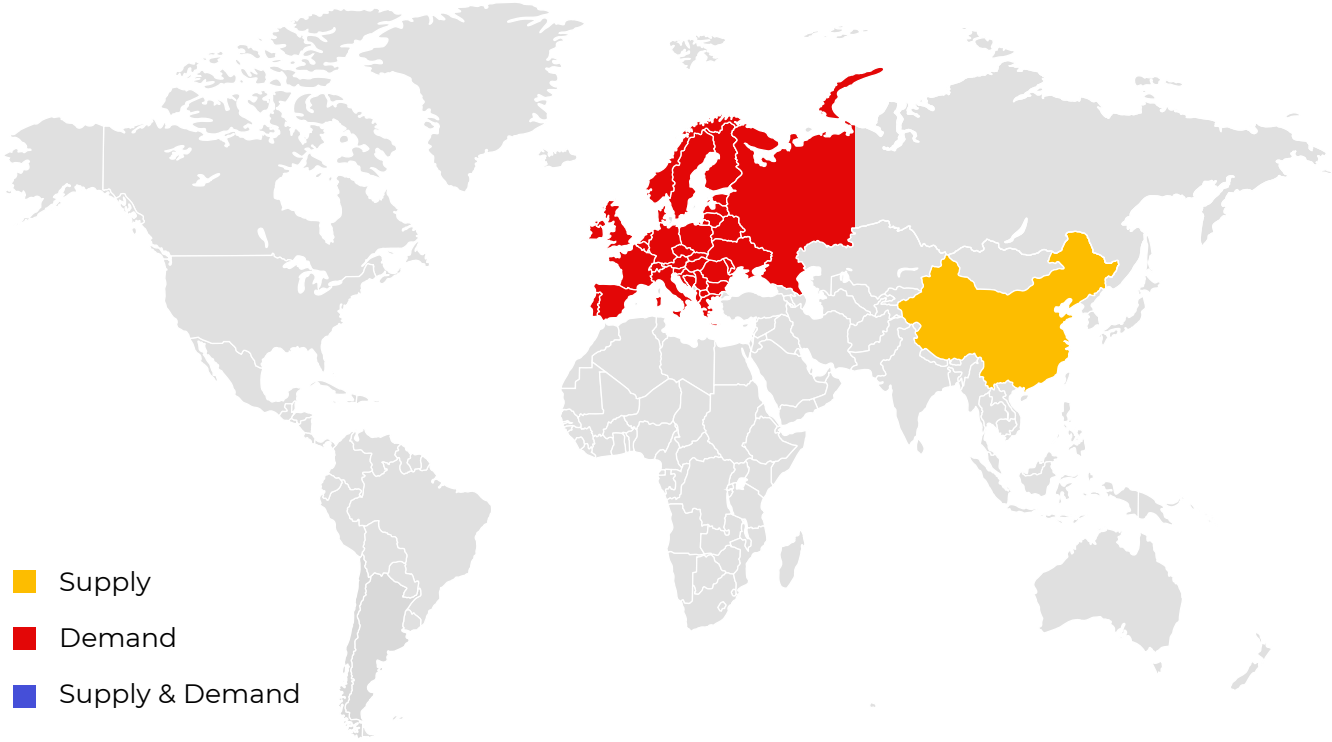


Holmium Oxide	
Formula	Ho2O3
Content	99.50% min
Common impurities	Fe 0.001%, Si 0.0017%, Ca 0.0075%, RE impurities 0.5% maximum

4. Price Definitions

4.24 Lanthanum Oxide, CIF Europe

Location:	Europe
Contract Basis:	CIF
Currency:	USD
Shipping Port:	German ports (other ports normalised)
Form:	powder
UOM:	tonnes
Delivery Window:	90 days
Min Size:	5t (+/-2%)
Main Suppliers:	China
Publication:	Published every two weeks on Thursdays by 4pm (London)

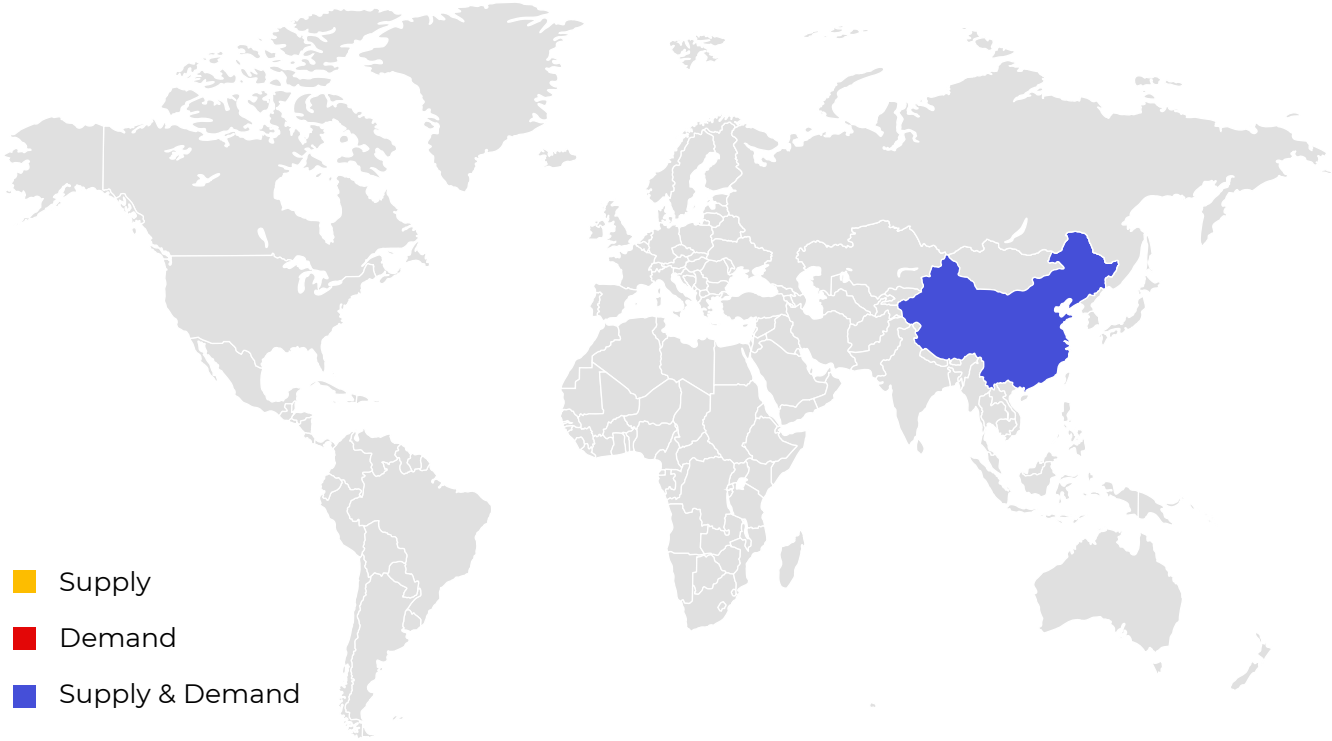


Lanthanum Oxide	
Formula	La2O3
Content	99.5-99.9% min
Common impurities	Fe 0.005%, Si 0.05%, Ca 0.05%, Na 0.10%, Zn 0.015%, Cl 0.05%, RE impurities 0.5% maximum

4. Price Definitions

4.25 Lanthanum Oxide, DDP China

Location:	China
Contract Basis:	Delivered Duty Paid (DDP)
Currency:	RMB
Shipping Port:	Domestic
Form:	powder
UOM:	tonnes
Delivery Window:	90 days
Min Size:	5t (+/-2%)
Main Suppliers:	China
Publication:	Published every two weeks on Thursdays by 4pm (London)

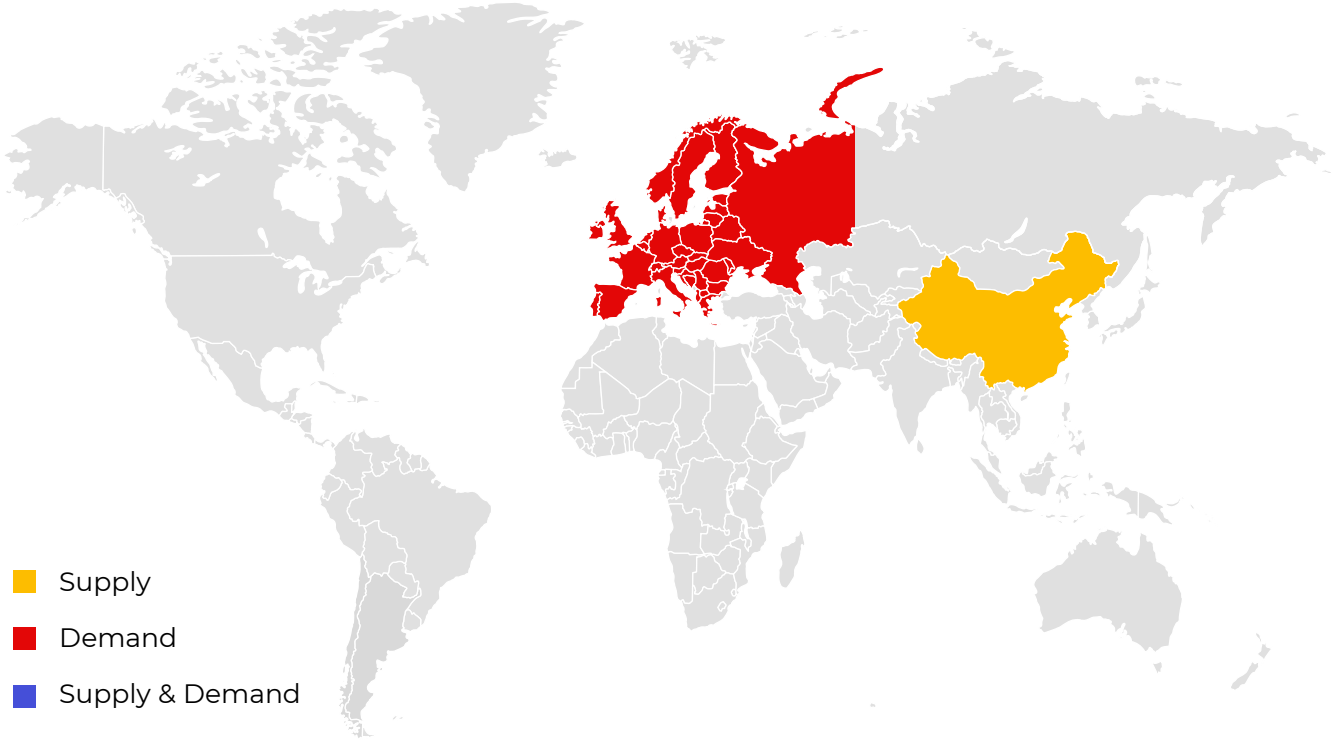


Lanthanum Oxide	
Formula	La2O3
Content	99.5-99.9% min
Common impurities	Fe 0.005%, Si 0.05%, Ca 0.05%, Na 0.10%, Zn 0.015%, Cl 0.05%, RE impurities 0.5% maximum

4. Price Definitions

4.26 Lanthanum Oxide, CIF Europe

Location:	Europe
Contract Basis:	CIF
Currency:	USD
Shipping Port:	German ports (other ports normalised)
Form:	powder
UOM:	tonnes
Delivery Window:	90 days
Min Size:	5t (+/-2%)
Main Suppliers:	China
Publication:	Published every two weeks on Thursdays by 4pm (London)

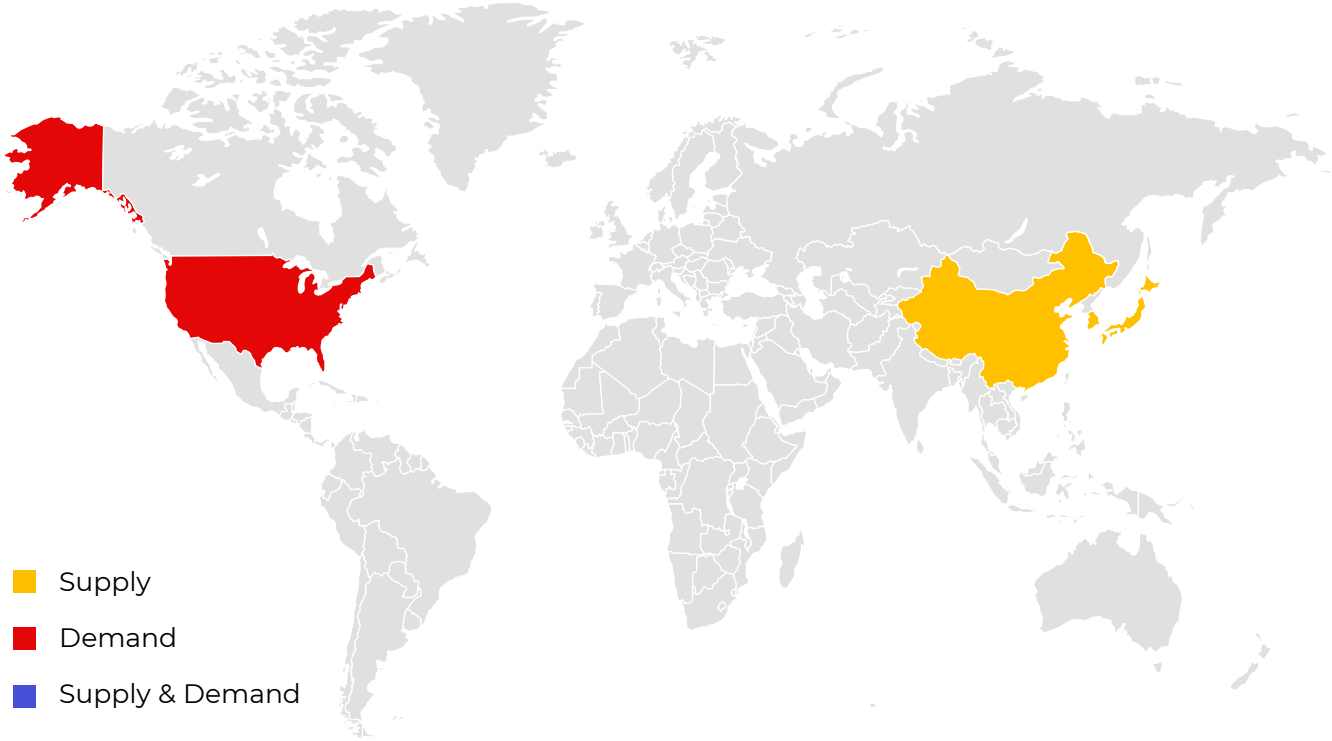


Lanthanum Oxide	
Formula	La2O3
Content	99.999% min
Common impurities	Fe 0.0001%, Si 0.003%, Cu 0.0001%, Ca 0.0005%, Ni 0.0001%, RE oxides 0.001% maximum

4. Price Definitions

4.28 Lutetium Oxide, CIF North America

Location:	North America
Contract Basis:	CIF
Currency:	USD
Shipping Port:	East Coast USA (other ports normalised)
Form:	powder
UOM:	tonnes
Delivery Window:	90 days
Min Size:	50kg (+/-2%)
Main Suppliers:	China
Publication:	Published every two weeks on Thursdays by 4pm (London)

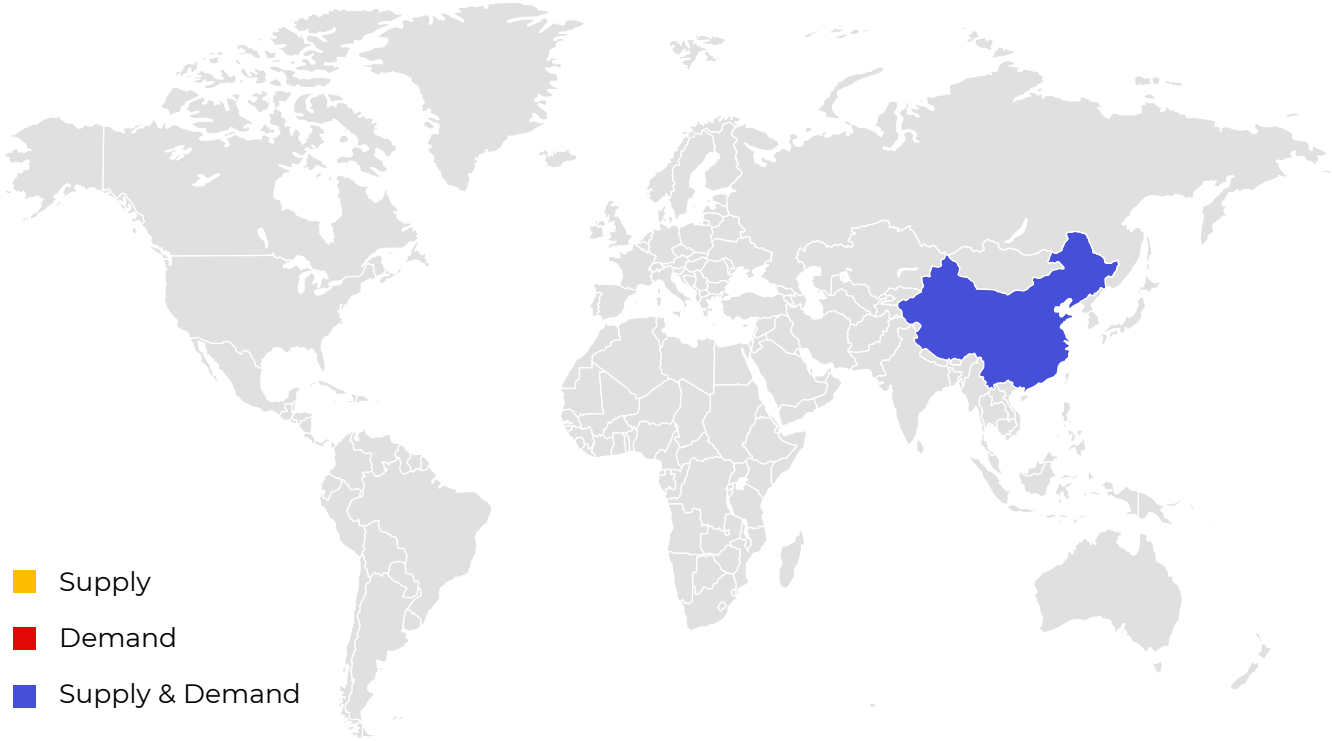


Lutetium Oxide	
Formula	Lu2O3
Content	99.99% min
Common impurities	Fe 0.0001%, Si 0.001%, Ca 0.0007%, RE impurities 0.01% maximum

4. Price Definitions

4.29 Lutetium Oxide, DDP China

Location:	China
Contract Basis:	Delivered Duty Paid (DDP)
Currency:	RMB
Shipping Port:	Domestic
Form:	powder
UOM:	tonnes
Delivery Window:	90 days
Min Size:	200kg
Main Suppliers:	China
Publication:	Published every two weeks on Thursdays by 4pm (London)

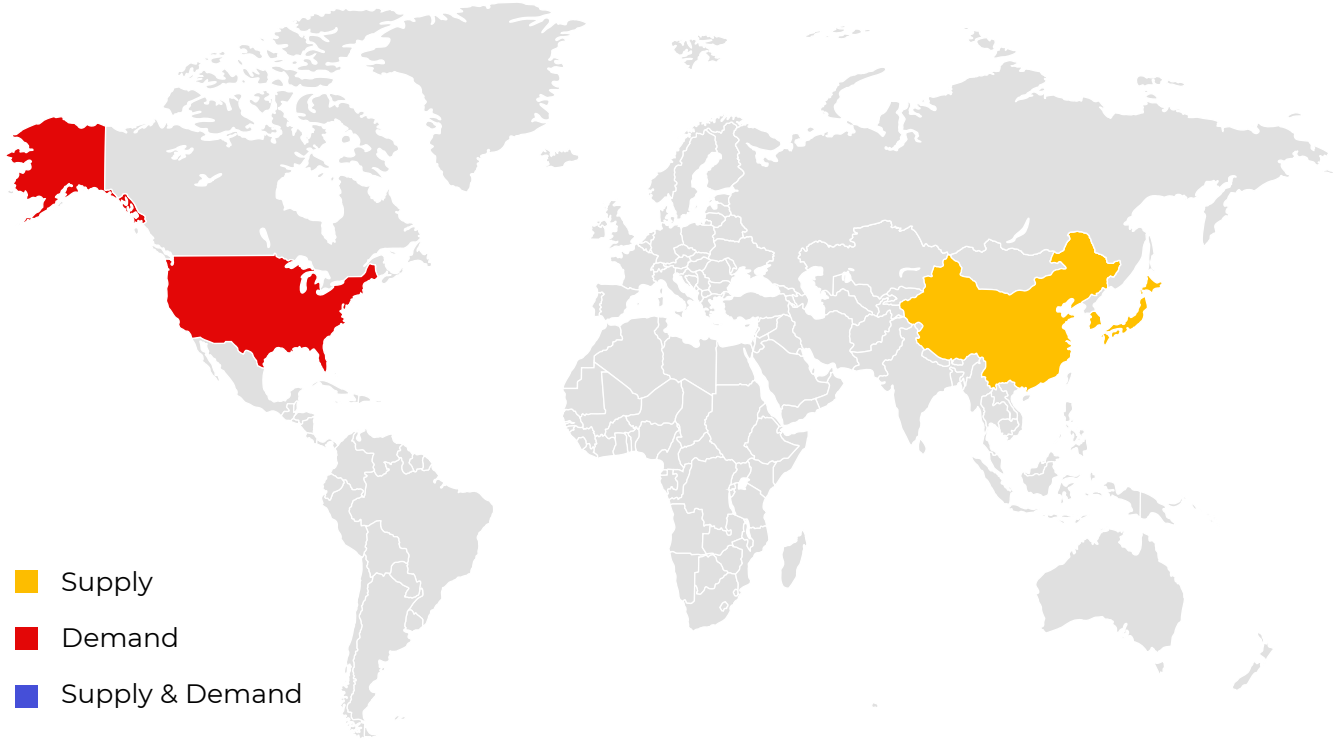


Lutetium Oxide	
Formula	Lu2O3
Content	99.99% min
Common impurities	Fe 0.0001%, Si 0.001%, Ca 0.0007%, RE impurities 0.01% maximum

4. Price Definitions

4.30 Praseodymium-Neodymium Metal, CIF North America

Location:	North America
Contract Basis:	CIF
Currency:	USD
Shipping Port:	East Coast USA (other ports normalised)
Form:	ingots
UOM:	tonnes
Delivery Window:	90 days
Min Size:	5t (+/-2%)
Main Suppliers:	China
Publication:	Published every two weeks on Thursdays by 4pm (London)

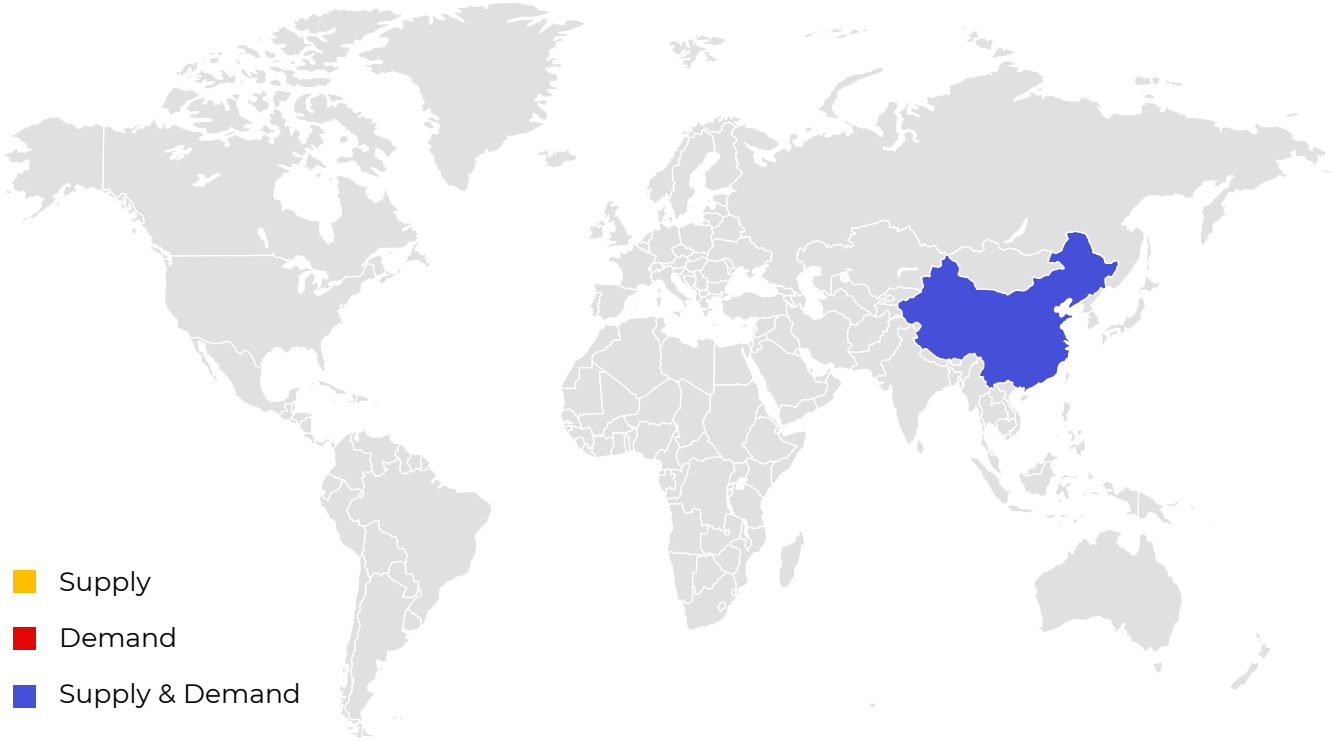


Praseodymium-Neodymium Metal	
Formula	Nd, Pr (metal alloy)
Content	99.00% min
Common impurities	Fe 0.3%, Si 0.05%, Ca 0.03%, Al 0.1%, Mg 0.05%, O 0.05%, C 0.05%, Cl 0.05%, RE impurities 1% maximum

4. Price Definitions

4.31 Praseodymium-Neodymium Metal, DDP China

Location:	China
Contract Basis:	Delivered Duty Paid (DDP)
Currency:	RMB
Shipping Port:	Domestic
Form:	1-2kg or 5-7kg ingots
UOM:	tonnes
Delivery Window:	90 days
Min Size:	5t (+/-2%)
Main Suppliers:	China
Publication:	Published every two weeks on Thursdays by 4pm (London)

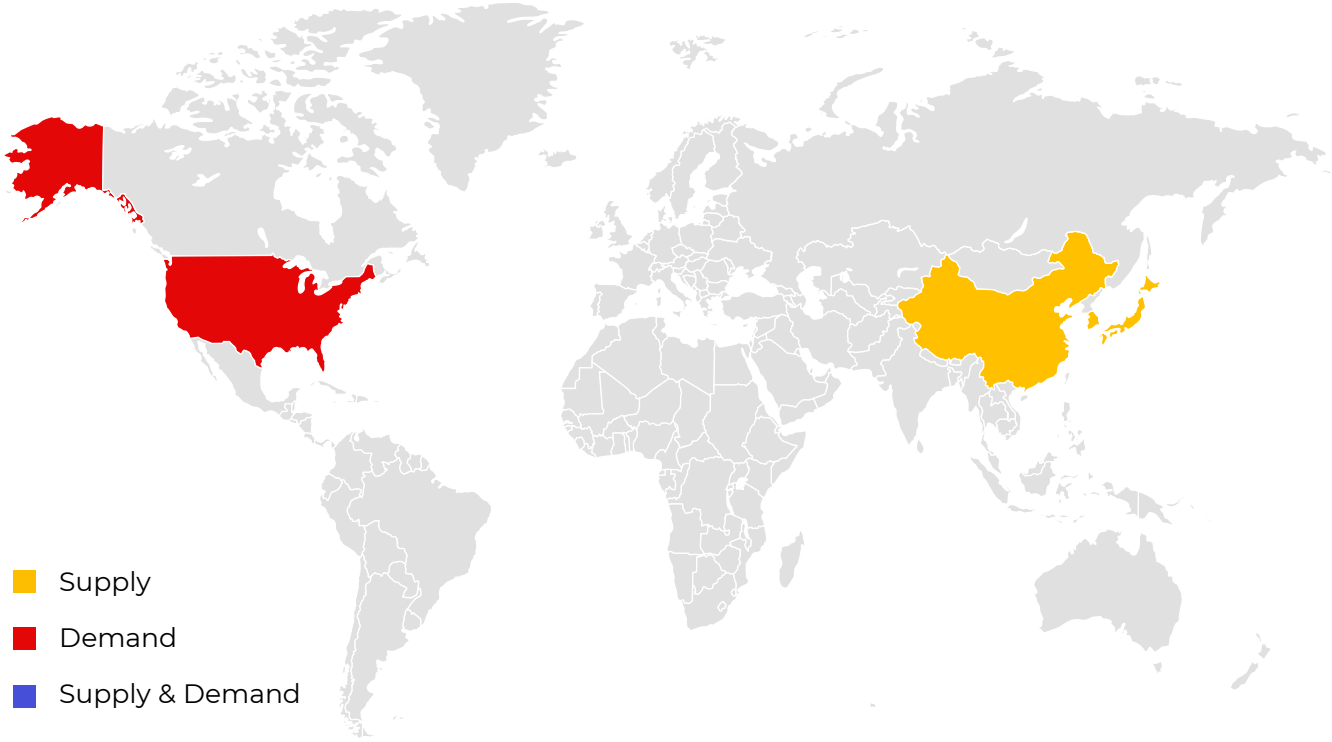


Praseodymium-Neodymium Metal	
Formula	Nd, Pr (metal alloy)
Content	99.00% min
Common impurities	Fe 0.3%, Si 0.05%, Ca 0.03%, Al 0.1%, Mg 0.05%, O 0.05%, C 0.05%, Cl 0.05%, RE impurities 1% maximum

4. Price Definitions

4.32 Samarium Oxide, CIF North America

Location:	North America
Contract Basis:	CIF
Currency:	USD
Shipping Port:	East Coast USA (other ports normalised)
Form:	powder
UOM:	tonnes
Delivery Window:	90 days
Min Size:	5t (+/-2%)
Main Suppliers:	China
Publication:	Published every two weeks on Thursdays by 4pm (London)

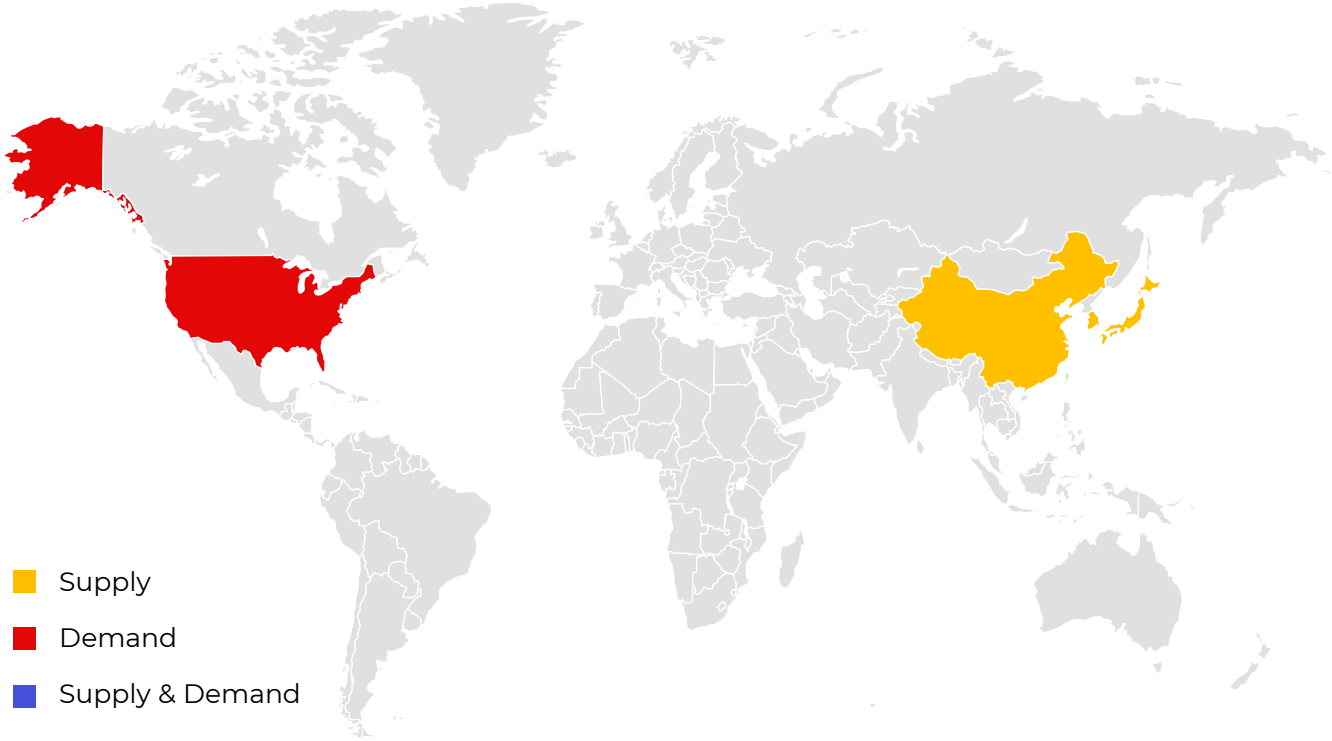


Samarium Oxide	
Formula	Sm2O3
Content	99.50% min
Common impurities	Fe 0.001%, Si 0.005%, Ca 0.01%, Al 0.02%, RE impurities 1% maximum

4. Price Definitions

4.33 Thulium Oxide, CIF North America

Location:	North America
Contract Basis:	CIF
Currency:	USD
Shipping Port:	East Coast USA (other ports normalised)
Form:	powder
UOM:	tonnes
Delivery Window:	90 days
Min Size:	50kg (+/-2%)
Main Suppliers:	China
Publication:	Published every two weeks on Thursdays by 4pm (London)

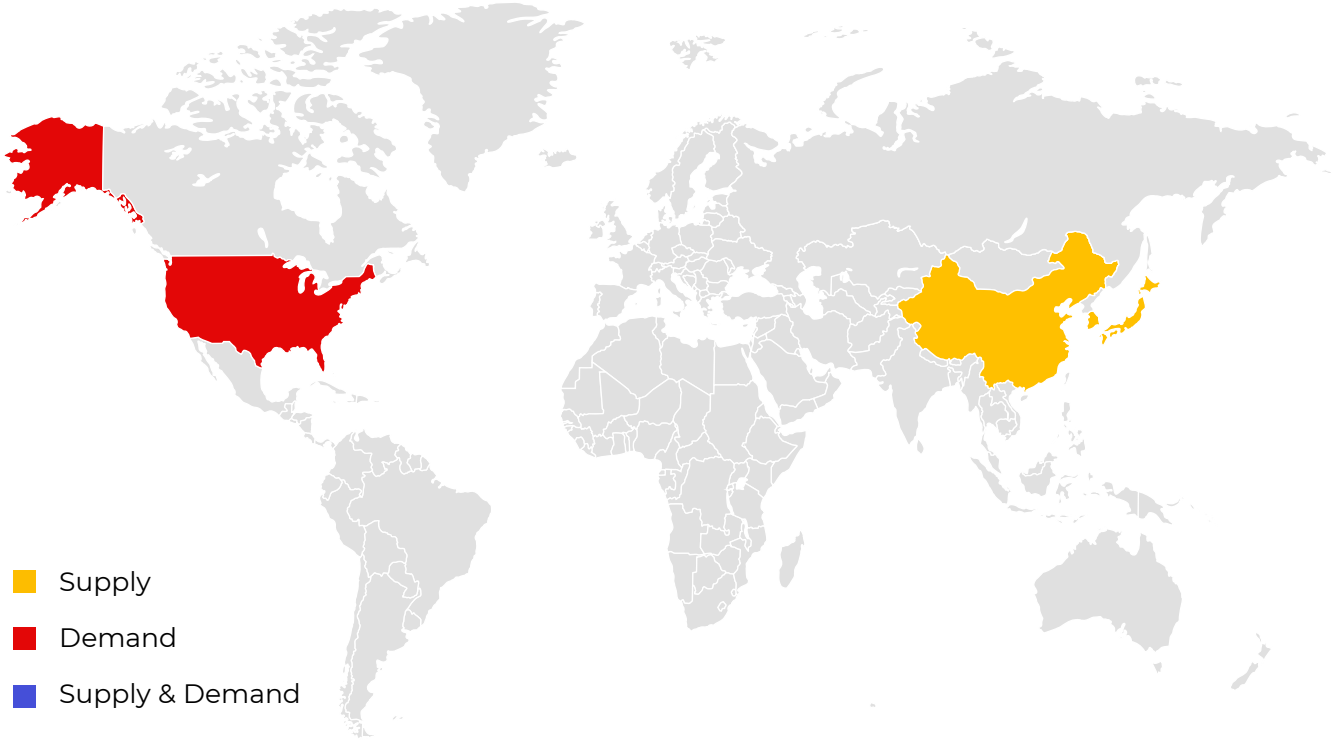


Thulium Oxide	
Formula	Tm2O3
Content	99.99% min
Common impurities	Fe 0.001%, Si 0.003%, Ca 0.005%, RE impurities 0.01% maximum

4. Price Definitions

4.35 Ytterbium Oxide, CIF North America

Location:	North America
Contract Basis:	CIF
Currency:	USD
Shipping Port:	East Coast USA (other ports normalised)
Form:	powder
UOM:	tonnes
Delivery Window:	90 days
Min Size:	50kg (+/-2%)
Main Suppliers:	China
Publication:	Published every two weeks on Thursdays by 4pm (London)

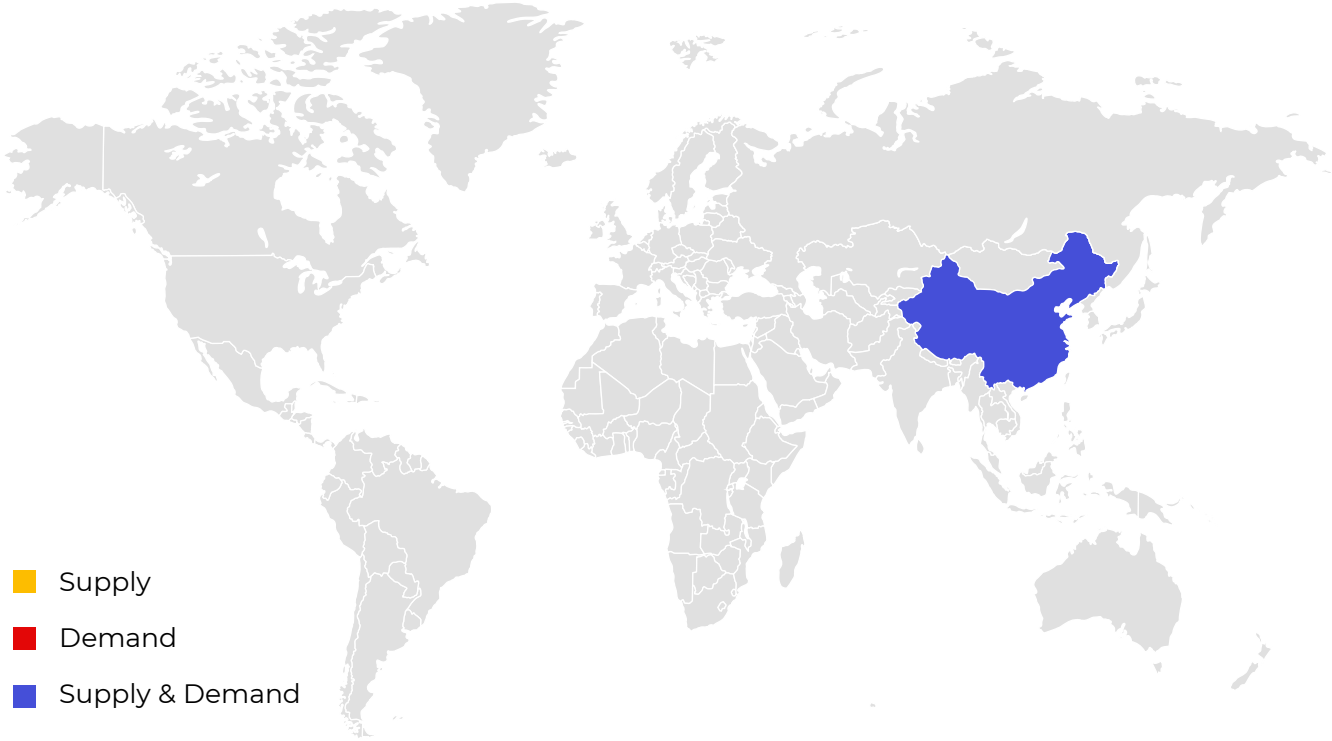


Ytterbium Oxide	
Formula	Yb2O3
Content	99.99% min
Common impurities	Fe 0.001%, Si 0.003%, Ca 0.005%, RE impurities 0.01% maximum

4. Price Definitions

4.36 Ytterbium Oxide, DDP China

Location:	China
Contract Basis:	Delivered Duty Paid (DDP)
Currency:	RMB
Shipping Port:	Domestic
Form:	powder
UOM:	tonnes
Delivery Window:	90 days
Min Size:	500kg
Main Suppliers:	China
Publication:	Published every two weeks on Thursdays by 4pm (London)



Ytterbium Oxide	
Formula	Yb2O3
Content	99.99% min
Common impurities	Fe 0.001%, Si 0.003%, Ca 0.005%, RE impurities 0.01% maximum

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.

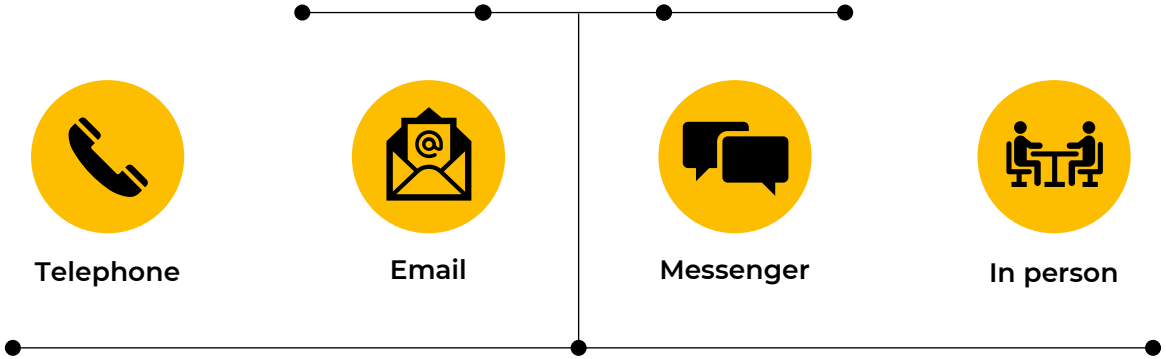
This code of conduct is enforced through annual appraisals by the Head of Prices where adherence to these principles is reviewed. All price analysts are also required to attend annual training sessions where the terms of the employee code of conduct are outlined in detail.

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



1

Analyst audit trail
Contact details
Date
Pricing by grade
Volumes
Market commentary

2

Evidence saved and logged internally
Notes from price calls/meetings
Email trail
Photos of messenger conversations

3

Price ranges published
Published via website
Rangers & averages
Emailed to subscribers
Peer revised







5. Compliance & Security

- 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 5 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 rare earths market.

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

UK Benchmark Regulation

Benchmark Minerals is registered as a benchmark administrator under the UK Benchmark Regulation, and 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/licensers via email, updated on the following issues and also updated on the Benchmark Minerals online price database.

© Benchmark Mineral Intelligence 2025

7. 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

All complaints are acknowledged within 3 working days. For any other queries, contact details for price assessment analysts are provided on the front page of the Price Assessment reports and we encourage open and transparent dialogue to retain the highest levels of confidence in our prices.

If for any reason a client is unsatisfied with the response received in relation to their enquiry/complaint, this can be escalated to the Benchmark Minerals management team by contacting:

complaints@benchmarkminerals.com

Complaints handling principles:

- Complaints can come from data providers, subscribers, as well as industry participants.
- Complaints can cover specific prices, 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.

© Benchmark Mineral Intelligence 2025

8. 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
- Provide amendments and or removal of pricing conditions
- Initiate new price assessments to meet market needs

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

Late July 2025: Updated to add CIF Europe and CIF North America price grades

October 2025: Updated to add DDP China metal grades

November 2025: Updated to include updated frequency and NdPr specification change

March 2026 Updated to add Yttrium Oxide

October 2026 Updated to include 26 additional grades

© Benchmark Mineral Intelligence 2025

BENCHMARK

Contact us:

For more information please contact:

Prices & Data Division

prices@benchmarkminerals.com

For complaints or compliance related questions, please contact:

Risk and Compliance Officer

complaints@benchmarkminerals.com

benchmarkminerals.com

