Methodology and specifications guide
TSI Coking coal

Latest update: September 2019

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INTRODUCTION

The Steel Index ("TSI") is a specialist provider of price information for key steel, iron ore, ferrous scrap and coking coal products around the world, based on spot market transaction data. It is an impartial organization that is wholly owned by Platts, a division of S&P Global.

TSI methodologies are designed to produce price indices that are representative of spot market value, and of the particular markets to which they relate. Methodology documents describe the specifications for various products reflected by TSI price indices, the processes and standards TSI adheres to in collecting data, and the methods by which TSI arrives at final index prices for publication. These guides are freely available on TSI’s website for public review at the following link: https://www.thesteelindex.com.

TSI discloses publicly the days of publication for its price indices, and the times during each trading day in which TSI considers transactions in determining its index levels. This schedule of publication is available on TSI’s website, under the Frequently Asked Questions menu.

The dates of publication and the pricing periods are subject to change in the event of outside circumstances that affect TSI’s ability to adhere to its normal publication schedule. Such circumstances include network outages, power failures, acts of terrorism and other situations that result in an interruption in TSI’s operations at one or more of its worldwide offices. In the event that any such circumstance occurs, TSI will endeavor, whenever feasible, to communicate publicly any changes to its publication schedule and assessment periods, with as much advance notice as possible.

All TSI methodologies reflect TSI’s commitment to maintaining best practices in price reporting.

TSI methodologies have evolved to reflect changing market conditions through time, and will continue to evolve as markets change. A revision history, a cumulative summary of changes to this and future updates, is included at the end of the methodology. For more information on the review and approval procedures, please visit https://www.spglobal.com/platts/en/our-methodology/methodology-review-change.

How this methodology statement is organized

This description of methodology for price indices is divided into seven major parts (I-VII) that parallel the entire process of producing price values for the specified market period (daily, weekly or monthly).

- Part I describes what goes into TSI price indices, including details on what data market participants are expected to submit, the process for submitting data and criteria for timeliness of market data submissions.
- Part II describes any security and confidentiality practices that TSI uses in handling and treating data.
- Part III is a detailed account of how TSI collects market data, and what TSI does with the data to formulate its price indices. It includes descriptions of the methods that TSI uses for reviewing data, and the methods used to convert raw data into price indices, including the procedures used to identify anomalous data. This section describes how and when judgment is applied in this process, the basis upon which transaction data may be excluded from a price assessment, and the relative importance assigned to each criterion used in forming the price assessment. This section also describes the minimum amount of transaction data required for a particular price assessment to be published. Finally, this section describes how TSI addresses assessment periods where one or more reporting entities submit market data that constitute a significant proportion of the total data upon which the assessment is based.
- Part IV explains the process for verifying that published prices comply with TSI’s standards.
- Part V lays out the verification and correction process for revising published prices and the criteria TSI uses to determine when it publishes a correction.
- Part VI explains how users of TSI’s price indices can contact TSI for clarification of data that has been published, or to register a complaint. It also describes how to find out more about TSI’s complaint policies.
- Part VII is a list of detailed specifications for the reference products for which TSI publishes price indices in this commodity.

PART I: DATA QUALITY AND DATA SUBMISSION

TSI’s objective is to ensure that the submission of transactional information and other data inputs that analysts use as the basis for compiling the price indices is of the highest quality, as this is crucial to maintaining the integrity of TSI’s various pricing processes.

TSI compiles transactional data received from a broad group of companies, hereafter referred to as “data providers”. This group is fully representative of the markets for which indices are produced, including metallurgical coal miners, traders, intermediaries and steel producers (mills) in all relevant regions. TSI aims to have a balance of data providers representing the “buy side” and “sell side” of transactions for each reference price. These data providers submit spot price data based on their actual transactions. Data providers commit to submit in good faith accurate price and related information based on actual transactions. In return, TSI commits to keeping the identity of each Data Provider and the data they submit confidential.
In order to become a data provider, TSI requires the following conditions to be satisfied:

- The company has to be directly involved in the coking coal supply chain, buying or selling relevant products;
- The company must be directly involved in spot transactions. Negotiated contract prices or index-related prices are ineligible for submission.
- The company must be buying or selling coking coal products within the specification ranges defined as permissible by TSI and for the relevant pricing points specified for each index in Section VII.

Individuals providing the data typically hold positions in the commercial sales or purchasing departments in their companies, although they can also be members of senior management or administrative staff.

TSI provides some active representatives of data providers with a complimentary subscription to TSI’s Coking Coal service, but no rewards or other benefits for submitting data. No monetary reward or other benefit is offered or provided by TSI in exchange for data submitted to TSI’s Coking Coal Index.

Data submitted to TSI must be detailed, transaction-level data. TSI strongly encourages companies to surpass minimum reporting requirements and to submit all their transaction data relevant to TSI’s Coking Coal Index. As long as companies clearly define transactions by key attributes, TSI is able to sort transactional data and include the applicable deals in the calculation of the relevant price indices.

Data providers are able to submit their transaction data to TSI via email, telephone and instant messenger. TSI’s data providers are required to provide TSI with their email addresses and telephone numbers so that those responsible for submissions can be contacted and asked questions about submissions made. Where TSI analysts become aware that data has not been received, they will contact the Data Provider to request submission.

TSI’s Coking Coal Index is published on a daily basis according to the Singapore public holiday calendar and reflects the average transaction prices for the 24 hours prior to the specified “cut-off” time before publication. Further details on publication times are provided in Part III.

Permissible data submitted up to 30 minutes before index publication time is considered for inclusion in the compilation of the Coking Coal Index for that day. The 30 minutes before index publication time each day is used to compile, verify and prepare for publication. Any incomplete submissions made within the time period but unclarified at the cut-off point, are not included in the compilation process for that day’s index. Permissible data submitted after 30 minutes before index publication time each day is considered for inclusion in the compilation of the Coking Coal Index published the following day.

What to report

- Confirmed trades
- Firm bids that are open to the marketplace as a whole, with market accepted terms
- Firm offers that are open to the marketplace as a whole, with market accepted terms
- Expressions of interest to trade with published bids and offers, with market accepted terms
- Reported transactional activity heard across the market, clearly described as such
- Other data that may be relevant to TSI indices

Data collected and units

Data collected from data providers is for spot sales/purchases. The Coking Coal Index aims to give a transparent and unbiased view of the transacted price of the specified coking coal reference products in the spot market.

Data providers are required to submit the following transaction information in each data submission:

Material Specifications

Data providers for the Australian exports series are required to provide:

- Volatile matter content (air dried) – up to two (’.00) decimal places, in %
- Ash content (air dried) – up to two (’.00) decimal places, in %
- Total moisture content (as received) – up to two (’.00) decimal places, in %
- Sulphur content (air dried) – up to two (’.00) decimal places, in %
- Phosphorus content (air dried) – up to two (’.00) decimal places, in %
- Vitrinite Reflectance (RV max) – up to two (’.00) decimal places, in %
- Gieseler Fluidity – whole integer, in dial divisions per minute (DDPM)
- Free Swelling Index (FSI) – up to one (’.0) decimal place
- Coke Strength after Reaction (CSR) – whole integer in %
- Total Dilatation (max contraction + max dilatation) – whole
integer, in %

- Vitrinite content – whole integer, in %

Data providers for the Chinese imports series are required to provide:

- Volatile matter content (air dried) – up to two (‘.00) decimal places, in %
- Ash content (air dried) – up to two (‘.00) decimal places, in %
- Total moisture content (as received) – up to two (‘.00) decimal places, in %
- Sulphur content (air dried) – up to two (‘.00) decimal places, in %
- G index value – whole integer
- Y index value – whole integer
- Coke Strength after Reaction (CSR) – whole integer in %

Transaction Date

- Date on which the transaction was concluded

Transaction Price

- Price – up to two (‘.00) decimal places, in US$/metric tonne
  FOB East Coast Port Australia

Volume/Lot Size

- Volume associated with each transaction – no decimal places, in metric tonnes

- A minimum lot size of 15,000 metric tonnes is set and only transactions larger than this will be considered in calculation of the Coking Coal Index.

Loading Window

- Loading window (start date - end date) within which it is intended that each cargo will be loaded and made ready for shipping. If the cargo is already loaded onto a ship, then data providers record this information on the submission form.

- Loading window information is necessary to determine whether the transaction is considered relevant. Only cargoes with a loading window 7-60 days after the transaction date are included in the compilation of the Coking Coal Index.

Origin and Destination

- Shipments from all major ports within the applicable origin country for which freight cost differentials to the reference port specified as the pricing point can be determined by TSI are included in the compilation of the Coking Coal Index.

Payment Terms

- The payment terms agreed for the transaction. This is recorded in terms of “Number of Days” with “0 days” representing “Payment at sight”. All transactions are normalized to “Payment at Sight”.

How to report

TSI accepts price information in real-time across a variety of media, including email, instant messaging systems and telephone.

TSI’s data providers are required to provide TSI with their email addresses and telephone numbers so that those responsible for submissions can be contacted and asked questions about submissions made.

TSI accepts price information for firm bids and offers by email, instant messaging systems or telephone. Submissions of bids or offers should not be considered as received by TSI unless acknowledged as received by a TSI analyst.

Transactions, bids and offers published on physical trading platforms will be accepted only if the data can be verified by TSI analysts directly with at least one of the market participants involved and sufficient details about any transactions can be obtained to enable the price to be normalized accurately to TSI’s reference product specifications.

Submissions for TSI’s daily Coking Coal Index must be made each day at least 30 minutes before the index publication time if they are to be included in the data used to compile that day’s index. Submissions made on time but in an incomplete form, where the terms are not clarified until after the cut-off deadline will not be used in the compilation process for that day’s index.

As a general recommendation TSI advises market participants not to wait until the last possible minute before the cut-off deadline as the communication may not be completed and verified in time for inclusion in the data sample used to compile that day’s index.

PART II: SECURITY AND CONFIDENTIALITY

Market participants are expected to submit all transactions for each trading period. TSI signs confidentiality agreements providing for non-disclosure of submitted data except in circumstances where it is legally required to disclose the data.

Submitted data is stored in a secure network, in accordance with S&P Global’s policies and procedures. Transaction-level price data is used only for constructing indices. TSI does not use price data from an individual source for news reporting purposes, and Platts news reporters do not have access to individual entities’ transaction reports. Data aggregated from all reporting sources – e.g., changes in prices and trading volumes over time – may be used as the basis for reports or news stories.
PART III: CALCULATING INDICES

The following section describes how TSI uses reported transactions and any other market information it has collected, in the manner described in Part II, to formulate its price indices.

Index calculation principles

As a publisher owned by S&P Global, TSI places independence and impartiality at the heart of its price indices. TSI has no financial interest in the price of the products or commodities on which it reports. TSI’s overall objective is to reflect the transactable value of the commodity calculated.

For coking coal, TSI focuses primarily on determining the value of material trading in the seaborne spot market. TSI requires transactional spot price data that has been executed at arms’ length in the open market. A spot price for a physical commodity is the value at which a standard, repeatable transaction for merchantable material takes place between parties on an arms’ length basis. Where both counterparties are known, TSI’s data validation process includes checks to ensure transactions are executed at arm’s length.

TSI prices are available to any party who subscribes to the relevant TSI or Platts services. TSI’s prices are copyrighted and may not be distributed or used for commercial gain by any third party without an explicit agreement with TSI.

TSI analysts follow specific methodology when exercising editorial judgment during their pricing process. Judgment is only applied when determining whether data is suitable for inclusion within the index calculation. No judgment is used during the index calculation itself. Only data that meets methodology requirements will be accepted. All such judgment is subject to review by TSI management for adherence to the standards published in TSI methodologies.

To ensure the indices are as robust as possible, TSI systems are backed by a strong corporate structure that includes managerial and compliance oversight. To ensure analysts follow TSI methodological guidelines in a consistent manner, TSI staff are trained and regularly assessed in their own and each other’s markets.

TSI publishes its indices reflecting the currencies and units of measurement in which the products typically trade. TSI’s Coking Coal Index is quoted in US$ per metric tonne (US$/mt). Part VII of this methodology contains details of the specifications for each reference product.

Pricing Point

The pricing points for TSI’s Premium and Hard Coking Coal reference prices are FOB East Coast Port Australia for Australian exports.

Relevant ports for the FOB East Coast Port Australia reference prices include the Queensland ports of Dalrymple Bay, Hay Point, Gladstone and Abbot Point; and in New South Wales: Newcastle and Port Kembla.

FOB is a term provided and defined by the International Chamber of Commerce which publishes the INCOTERMS. The definition of FOB is understood to be:

- Free On Board (named port of shipment)
- Carriage of goods is to be arranged by the buyer
- Risk transfers from the seller to the buyer when the goods are alongside the ship
- Buyer bears all costs from the moment the goods are alongside.

CFR is a term provided and defined by the International Chamber of Commerce which publishes the INCOTERMS. The definition of CFR is understood to be:

- Cost and Freight (named port)
- Seller pays costs and freight necessary to bring goods to named port of destination
- Risk transfers from the seller to the buyer when the goods are delivered on board vessel
- Buyer bears all costs from the moment the goods are on board vessel

Further definitions are available at http://www.iccwbo.org/incoterms/.

Price Fluctuations

TSI’s Coking Coal Index prices are rounded to the nearest US$0.1 level. This limits the Coking Coal Index price fluctuations to a minimum movement of US$0.10/mt.

Publication Time

TSI’s Coking Coal Index is published every Monday-Friday daily at 10.30 UK GMT (18.30 Singapore and 05:30 US East Coast), with the following exceptions:

- No publication on Singapore public holidays
- Earlier publication time of 06:00 GMT (14:00 Singapore and 01:00 US EST) on the last working day before Christmas (December 25), New Year’s Day (January 1) and the Lunar New Year.

During the summer time (British Summer Time in the UK and Daylight Savings Time in the US) the publication time does not change in GMT terms. For example, in the UK, Singapore and US local publication times are as follows:

- In the UK publication is at 10:30 local time, except between the last Sunday in March and the last Sunday in October when publication time is 11:30 local time (i.e. British Summer Time)
In Singapore and Shanghai at 18:30 local time throughout the year.

In the US publication is at 05:30 East Coast local time, except between the second Sunday in March and the first Sunday in November when publication time is 06:30 East Coast local time (Daylight Savings Time).

**Index calculation procedure**

The same calculation procedure is used to compile all TSI Coking Coal price indices. This ensures that all coking coal price indices are compiled on a consistent basis and are directly comparable.

Calculation of the Coking Coal Index involves three principal steps:

- Normalization of the data submitted to the reference product specifications and pricing points;
- Analysis, rationalization and verification of the normalized data set i.e. statistical checks, validation and removal of outliers and any anomalous data submissions;
- Volume-weighted calculation of the Coking Coal Index based on the rationalized and validated normalized data set.

The calculation methodology employed by TSI to compile the Coking Coal Index follows the same principles as those used to compile all of TSI’s indices and is detailed below. The calculation procedure has been successfully employed in the calculation of TSI steel reference prices since 2006.

**Normalization**

All data submitted is initially screened to ensure the loading window is 7–80 days after the transaction date. Any data for which the end of the expected loading window falls outside this window is excluded from the data sample.

Following this, the remaining data sample is split between those submissions with a pricing point applicable for compiling the Australian exports indices (i.e., priced FOB Australian port). These data sets are treated separately in the index compilation process from this point onwards.

The data set for Australian exports is then split into two groups: The first group containing data for transactions with product specifications within the publicized permissible minimum/maximum specification ranges for inclusion in the relevant Premium Coking Coal price index and a second group, containing data for transactions with product specifications within the publicized permissible minimum/maximum specification ranges for inclusion in the relevant Hard Coking Coal price index.

The data set for Chinese imports is split into three groups: The first group containing data for transactions with product specifications within the publicized permissible minimum/maximum specification ranges for inclusion in the relevant Mid-Vol JM25 Coking Coal price index and the second group containing data for transactions with product specifications within the publicized permissible minimum/maximum specification ranges for inclusion in the relevant Hard JM25 Coking Coal price index. Any data submissions for which one or more attributes fall outside the permissible ranges is excluded from the data sample.

Within each group, for each data submission that has not been excluded by a previous step, the price is normalized for any variations of the volatile matter, ash, total moisture, sulphur, proximate analysis, FSI, total dilatation and phosphorus content from the applicable reference product specification. Submissions for the Chinese imports series also see adjustments made for variations in coal brand G & Y values to TSI’s reference product specifications. In addition to the normalizations carried out above, TSI normalizes prices for the interplay of fluidity, vitrinite and CSR. The normalization adjustments applied for each factor reflect the average market value-in-use associated with that factor at that point in time, determined by analyses of the data submitted and confirmed by collecting market intelligence.

Where necessary, price submissions are also normalized for payment terms to ‘at sight’. Adjustments are made based on international lending rates.

The normalized price for each permissible submission is then used in the calculation of the Coking Coal Index.

**Analysis, Rationalization and Verification**

Prior to calculating the Coking Coal Index, all normalized price data submitted is screened to identify and remove outliers to ensure that the data set is as tight as possible pre-calculation stage. This ensures no outlying price data can influence the index. For each reference price:

- If one or more price data points are more than +/- 20% from the arithmetic average (mean) price of the total data set submitted, the data point furthest from the average is excluded and the average recalculated; this procedure is repeated until all price data points are within +/- 20% of the average price of the remaining data set;
- The standard deviation of the remaining price data set is calculated;
- The highest and lowest prices within the remaining data are excluded if they are unique;
- Any remaining price data points more than +/- 1 times the standard deviation from the average (mean) price of the remaining data set are then also excluded.

In addition, a variety of statistical analyses are conducted of all the price data and other information submitted by data providers. The purpose of these analyses is firstly to evaluate
and record the size, attributes and consistency of the data sample submitted to verify the statistical robustness of the normalized data set and secondly to monitor individual data submissions for any signs of bias or attempts by individual data providers to manipulate the Coking Coal Index.

Any data submissions exhibiting unusual trends are investigated by a TSI analyst and the data provider concerned is contacted. If no satisfactory explanation can be found, the anomalous data submission is not included in the calculation of the index. If any data provider repeatedly submits anomalous data for which no satisfactory explanations can be found, the agreement with the data provider concerned is terminated and no further data collected from that company.

Following removal of the outliers and any anomalous data submissions that cannot be verified, the remaining normalized price data set is referred to as the "Core Data".

**Calculation**

Each coking coal reference price is calculated as the volume-weighted average of the normalized Core Data Set.

Data is utilized in the following order:

- Concluded and reported transactions
- Bids and offers

When calculating the volume-weighted average price, the percentage weighting assigned to the total submissions by any single data provider is capped at 40% in order to ensure that the average remains representative.

**Fall-back Procedures**

If analysis of the Core Data set on any occasion reveals that it does not provide a sufficiently statistically robust basis for compiling the Coking Coal Index (for example, if an insufficient number of transactions has been submitted during the period), fall-back procedures are deployed. These fall-back procedures ensure that the Coking Coal Index can be compiled on every occasion.

As a first level of fall-back, the Core Data set collected for the current period is supplemented by "rolling forward" data submissions made during the previous period by data providers that have not submitted any data during the current period. Providing this achieves a Core Data set which is a sufficiently statistically robust basis for calculating the Coking Coal Index, the usual methodology is then applied, but any price data "rolled forward" carries a reduced volume-weighting (10% less each day) in the calculation of the reference price.

If, after applying this first fall-back measure, there is still insufficient Core Data to meet the necessary robustness criteria for compiling the Coking Coal Index, a second fall-back measure is applied in which the Core Data set is supplemented with firm bid and offer price data for the relevant period. The usual calculation methodology is then applied, but any firm bid and offer price data used also carries a reduced volume-weighting relative to any transaction data submitted for the current period (where a transaction is weighted to 100%, the bid/offer is weighted to 10%).

Due to the potential for market-disruptive events in the FOB Australia market, which can lead to acute reduction in FOB data points, TSI will employ indicative bids & offers on a FOB Australia basis in the index calculation should such an event occur. In such circumstances, a subscriber note is published to inform market participants when such indications will be included.

An evaluation process is conducted before publication on every benchmark assessment by a second editor or manager.

**PART IV: PLATTS EDITORIAL STANDARDS**

All TSI employees must adhere to the S&P Global Code of Business Ethics (COBE), which has to be signed annually. The COBE reflects S&P Global's commitment to integrity, honesty and acting in good faith in all its dealings.

In addition, TSI requires that all employees attest annually that they do not have any personal relationships or personal financial interests that may influence or be perceived to influence or interfere with their ability to perform their jobs in an objective, impartial and effective manner.

TSI analysts are mandated to ensure adherence to published methodologies as well as internal standards that require accurate records are kept in order to document their work.

S&P Global Platts has a Compliance function that is independent of the analysts. The Compliance team is responsible for ensuring the quality and adherence to Platts policies, standards, processes and procedures. The Compliance team conduct regular assessments of editorial operations, including checks for adherence to published methodologies.

S&P Global’s internal auditor, an independent group that reports directly to the parent company’s board of directors, reviews the Platts risk assessment programs.

**PART V: CORRECTIONS**

TSI is committed to correcting any material errors promptly. If an error is identified in the value of a published index, TSI will issue a correction as soon as possible. Corrections will be made only on the basis of information available at the original index calculation time. TSI will not change the value of a published index retroactively based on new information that comes to its attention after publication.
PART VI: REQUESTS FOR CLARIFICATIONS OF DATA AND COMPLAINTS

TSI strives to provide critical information of the highest standards, to facilitate greater transparency and efficiency in physical commodity markets.

TSI customers raise questions about its methodologies and the approach taken in price assessments, proposed methodology changes and other editorial decisions in relation to TSI indices. TSI strongly values these interactions and encourages dialogue concerning any questions a customer or market stakeholder may have.

However, TSI recognizes that occasionally customers may not be satisfied with responses received or the services provided and wish to escalate matters. Full information about how to contact TSI to request clarification around an assessment, or make a complaint, is available on the TSI website, at: https://thesteelindex.com/en/contact-us/ and on the Platts website at http://www.platts.com/ContactUs/Complaints.
PART VII: DEFINITIONS OF TSI REFERENCE PRODUCT SPECIFICATIONS

The following specifications guide contains the product specifications and pricing points for TSI’s Coking Coal Index prices.

This methodology is current at the time of publication. TSI may issue further updates and enhancements to this methodology and will announce these to subscribers through its usual publications of record. Such updates will be included in the next version of the methodology. TSI analysts and managers will usually be ready to provide guidance when issues require clarification.

Australian Exports

TSI Premium Hard Coking Coal Australia Export FOB East Coast Port (TS01034)

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<thead>
<tr>
<th>Specification</th>
<th>Requirement</th>
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</thead>
<tbody>
<tr>
<td>Particle Size</td>
<td>particle size below 55mm for at least 90% of the cargo</td>
</tr>
<tr>
<td>Volatile Matter (ad)</td>
<td>21.0%</td>
</tr>
<tr>
<td>Ash (ad)</td>
<td>10.0%</td>
</tr>
<tr>
<td>Total Moisture (ar)</td>
<td>10.0%</td>
</tr>
<tr>
<td>Sulphur (ad)</td>
<td>0.45%</td>
</tr>
<tr>
<td>Phosphorous (ad)</td>
<td>0.05%</td>
</tr>
<tr>
<td>Rvmax</td>
<td>1.35%</td>
</tr>
<tr>
<td>Fluidity</td>
<td>600 ddpm</td>
</tr>
<tr>
<td>FSI</td>
<td>8</td>
</tr>
<tr>
<td>CSR</td>
<td>71%</td>
</tr>
<tr>
<td>Total Dilatation</td>
<td>80%</td>
</tr>
<tr>
<td>Vitrinite</td>
<td>68%</td>
</tr>
<tr>
<td>Minimum lot size</td>
<td>15,000 metric tonnes</td>
</tr>
<tr>
<td>Pricing Point</td>
<td>FOB East Coast Port Australia</td>
</tr>
</tbody>
</table>

Timing: Loading 7-60 days after transaction
Payment: At sight
Currency and Units: US$ per metric tonne

Prices submitted for transactions with specifications in the following ranges are normalized to premium coking coal reference product:

<table>
<thead>
<tr>
<th>Specification</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volatile Matter (ad)</td>
<td>18.0% min – 25.0% max inclusive</td>
</tr>
<tr>
<td>Ash (ad)</td>
<td>11.0% max</td>
</tr>
<tr>
<td>Total Moisture (ar)</td>
<td>12.0% max</td>
</tr>
<tr>
<td>Sulphur (ad)</td>
<td>0.80% max</td>
</tr>
<tr>
<td>Phosphorous (ad)</td>
<td>0.09% max</td>
</tr>
<tr>
<td>Rvmax</td>
<td>1.15% min</td>
</tr>
<tr>
<td>Fluidity</td>
<td>no upper limit</td>
</tr>
<tr>
<td>FSI</td>
<td>7 min</td>
</tr>
<tr>
<td>CSR</td>
<td>67% min</td>
</tr>
<tr>
<td>Total Dilatation</td>
<td>no restriction</td>
</tr>
<tr>
<td>Vitrinite</td>
<td>50% min</td>
</tr>
<tr>
<td>Payment:</td>
<td>All payment terms are normalized to 'At sight'</td>
</tr>
<tr>
<td>Assessment</td>
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<td>------------------------------------------------</td>
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<td>TSI Premium Hard Coking Coal FOB Australia swap</td>
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</table>
REVISION HISTORY

September 2019: Clarified data provision and validation, as well as methods of data submission to exclude an on-line channel which was discontinued in 2018.

March 2019: Updated the Platts Methodology Review and Change web link in the Introduction. Added language to Part III to cover the Platts end of day approval process. Updated Part IV to reference 'Platts'.

October 2018: Methodology & Specifications Guide Annual Review was conducted and clarifications made.

July 2018: Updated to reflect basis change of Platts swaps assessments to reflect the TSI PHCC FOB Australia swaps contracts.

June 2018: Updated to reflect merger and discontinuation of various TSI metallurgical coal indices.

November 2017: Methodology & Specifications Guide Annual Review was conducted. In addition, updates were made to reflect methodology change carried out on November 1, 2017.

October 2016: Correction to typos.

March 2016: Updated to remove the upper limit for permissible fluidity for Premium Hard Coking Coal index - FOB East Coast port, Australia.

January 2016: Clarified early publication time prior to key Singapore public holidays.

December 2015: Moved the publication time to earlier in the day on the eve of three specified Singapore public holidays and corrected typos.

August 2014: TSI updated all methodology guides, including the Coking Coal Index, in August 2014. This update was completed to enhance the clarity and usefulness of all guides, and to introduce greater consistency of layout and structure across all published methodology guides. Reference product specifications and index compilation procedures were not changed during this update.