

## CRU Prices

Carbon Products  
Methodology and  
Definitions Guide

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THE INDEPENDENT AUTHORITY  
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## Methodology and Definitions Guide – Carbon Products

### 1 Scope

This guide covers carbon product prices in all geographical markets and should be read in conjunction with the *CRU Group Compliance Framework and Methodology Guide*. It details commodity-specific methodology which have precedence, with all other aspects covered by the Group methodology guide.

### 2 Methodology

#### Frequency

The final price assessment inclusion date is the fourth Wednesday of each month, at which point all prices are updated in CRU's Carbon Products Monitor. Published price assessments represent all gathered prices pertaining to each current or upcoming pricing window, ensuring contracts fixed at the start of the pricing period are recorded alongside those fixed at the end of this period - price ranges are then established.

For settlement windows containing a mix of quarterly and semester pricing (6-month settlement period), CRU analysts will use discretion when including mixed tenor prices, to better reflect the true market conditions at the time of publication.

#### Assessment Method

Analysts use telephone and email to collect market intelligence as well as to verify the information received. Price assessments are meant to reflect actual deals concluded, and information is gathered through consultations with producers, buyers, traders and shipping companies. FOB prices are derived either from direct sales from producers to traders/buyers or from netbacks on CIF sales based on estimated or actual freight rates.

#### Price determination in an illiquid market

In the case that there are no submissions that meet, or after normalisation can meet, the definition below in any monthly or quarterly time period, the prior period's published price range will be rolled over and used as the value for the current period. In the case of low market liquidity but where a single admissible data point has been received, this single data point would be the sole determinant of the value of the price range in the relevant period.

#### Exclusion of outliers

Expert judgement may be used in the exclusion of a data point as an input to the calculation of a final price. In doing so consideration may be given to the range and distribution of data collected in the same timeframe from other data providers; previous data received from the same data provider; non-price information received from the data provider and the current market state from any other source. Inclusion or exclusion of input data in the final price is recorded.

Any price data that deviates from the previous assessed price range or the collected price data for the trading period will receive extra scrutiny. For example, if a transaction is considered to be a potential outlier, supporting documentation as a means of further authentication may be asked for. Supporting documentation is typically a contract or purchase/sales order, but other documentation may be accepted. Supporting documentation may not be asked for when, in CRU's judgement, the data is otherwise corroborated or deemed valid.

#### Expert Judgment

Expert judgement may apply to decisions on what type of price data is submitted; if the deal is executed at arms-length; if normalisation of price data submitted is required; the means of any normalisation, and the inclusion of a data point in the calculation of the final price (exclusion of outliers).

An analyst will consult with one or more colleagues before any application of expert judgement if in any doubt, or where collective input would improve the quality of a judgement.

**Deactivated assessments**

If the quotation suffers from limited transparency or if business dynamics change, it will be deactivated. CRU will provide 3 months' notice before the deactivation date. Its history will still be available to clients, should they require it, but no further information will be collected for that product from the time it is deactivated.

**Sizes and Specifications**

Transaction sizes may vary by shipment. Timing of spot assessments typically reflect transactions for a product to be supplied within 30 days although this may vary. CRU reserves the right to adjust its historical pricing assessments if compelling new evidence emerges.

**Final publication**

CRU's carbon prices are published in the *CRU Carbon Product Monitor*, associated *Carbon Product Price Basket*, via FTP data feeds and available in DataLab.

### 3 Definitions

#### Green Petroleum Coke: Monthly

##### No.1 China (\$/t Ex-works)

DataLab name:	Carbon Products, Green Coke, 1A 1B, Spot price; China, EXW
Material:	1A / 1B GPC
Price basis:	Ex-works
Location:	China
Type:	Spot
Currency:	Collected prices in RMB and convert to US\$
Weight unit:	Metric tonne
Pricing:	Reflects typical 1A/1B grade green petroleum coke
Duties/tariffs:	Where applicable
Sulphur, %:	≤ 0.50
Volatile, %:	≤ 12
Ash, %:	≤ 0.30
Moisture, %:	Actual measured
Real Density, %:	≤ 2.04
Coke powder, %:	35
Silicon, µg/g:	300
Vanadium, µg/g:	150
Iron, µg/g:	250
Calcium, µg/g:	200
Nickel, µg/g:	150
Sodium, µg/g:	100
Nitrogen, %:	Actual measured
Frequency:	Monthly

##### 2A 2B China (\$/t Ex-works)

DataLab name:	Carbon Products, Green Coke, 2A 2B, Spot price; China, EXW
Material:	2A / 2B GPC
Price basis:	Ex-works
Location:	China
Type:	Spot
Currency:	Collected prices in RMB and convert to US\$
Weight unit:	Metric tonne
Pricing:	Reflects typical 2A/2B grade green petroleum coke
Duties/tariffs:	Where applicable
Sulphur, %:	≤ 1.00 (A)
Sulphur, %:	≤ 1.50 (B)
Volatile, %:	≤ 12
Ash, %:	≤ 0.40 (A)
Ash, %:	≤ 0.50 (B)
Moisture, %:	Actual measured
Coke powder, %:	Actual measured
Silicon, µg/g:	Actual measured
Vanadium, µg/g:	Actual measured
Iron, µg/g:	Actual measured
Calcium, µg/g:	Actual measured
Sodium, µg/g:	Actual measured
Nitrogen, µg/g:	Actual measured
Frequency:	Monthly

##### 3A 3B China (\$/t Ex-works)

DataLab name:	Carbon Products, Green Coke, 3A 3B, Spot price; China, EXW
Material:	3A / 3B GPC
Price basis:	Ex-works

Location:	China
Type:	Spot
Currency:	Collected prices in RMB and convert to US\$
Weight unit:	Metric tonne
Pricing:	Reflects typical 3A/3B grade green petroleum coke
Duties/tariffs:	Where applicable
Sulphur, %:	≤ 2.00 (A)
Sulphur, %:	≤ 3.00 (B)
Volatile, %:	≤ 14
Ash, %:	≤ 0.60
Moisture, %:	Actual measured
Frequency:	Monthly

## Calcined Petroleum Coke: Monthly

### No.1 China (\$/t Ex-works)

DataLab name:	Carbon Products, Calcined Coke, 1A 1B, Spot price; China, EXW
Material:	1A / 1B CPC
Price basis:	Ex-works
Location:	China
Type:	Spot
Currency:	Collected prices in RMB and convert to US\$
Weight unit:	Metric tonne
Pricing:	Reflects typical 1A/1B grade calcined petroleum coke
Duties/tariffs:	Where applicable
Sulphur, %:	≤ 0.50 (A)
Sulphur, %:	≤ 0.70 (B)
Volatile, %:	≤ 0.50
Ash, %:	≤ 0.50
Real Density, %:	≤ 2.04 (A)
Real Density, %:	≤ 2.05 (B)
Frequency:	Monthly

Commented [KB1]: Not listed on prices metadata spreadsheet

### 2A 2B China (\$/t Ex-works)

DataLab name:	Carbon Products, Calcined Coke, 2A 2B, Spot price; China, EXW
Material:	2A / 2B CPC
Price basis:	Ex-works
Location:	China
Type:	Spot
Currency:	Collected prices in RMB and convert to US\$
Weight unit:	Metric tonne
Pricing:	Reflects typical 2A/2B grade calcined petroleum coke
Duties/tariffs:	Where applicable
Sulphur, %:	≤ 1.50 (A)
Sulphur, %:	≤ 3.50 (B)
Volatile, %:	≤ 0.50
Ash, %:	≤ 0.50
Real Density, %:	≤ 2.05
Frequency:	Monthly

### 3A 3B China (\$/t Ex-works)

DataLab name:	Carbon Products, Calcined Coke, 3A 3B, Spot price; China, EXW
Material:	3A / 3B CPC
Price basis:	Ex-works
Location:	China
Type:	Spot
Currency:	Collected prices in RMB and convert to US\$
Weight unit:	Metric tonne

Pricing:	Reflects typical 3A/3B grade calcined petroleum coke
Duties/tariffs:	Where applicable
Sulphur, %:	≤ 3.00 (A)
Sulphur, %:	≤ 4.00 (B)
Volatile, %:	≤ 0.50
Ash, %:	≤ 0.50
Real Density, %:	≤ 2.05
Frequency:	Monthly

### China Export (\$/t FOB)

DataLab name:	Carbon Products, Calcined Coke, Spot price; China, FOB
Material:	CPC
Price basis:	China Export FOB
Location:	China
Type:	Contract & Spot
Currency:	US\$
Weight unit:	Metric tonne
Pricing:	Reflects typical export grade calcined petroleum coke
Duties/tariffs:	Where applicable
Sulphur, %:	≤ 1.50 (A)
Sulphur, %:	≤ 3.50 (B)
Volatile, %:	≤ 0.50
Ash, %:	≤ 0.50
Real Density, %:	≤ 2.05
Frequency:	Monthly

### Coal Tar: Monthly

#### China (\$/t Ex-works)

DataLab name:	Carbon Products, Coal Tar, Spot price; China, EXW
Material:	CT
Price basis:	Ex-works
Location:	China
Type:	Spot
Currency:	Collected prices in RMB and convert to US\$
Weight unit:	Metric tonne
Pricing:	Reflects typical coal tar
Duties/tariffs:	Where applicable
Frequency:	Monthly

### Coal Tar Pitch: Monthly

#### China (\$/t Ex-works)

DataLab name:	Carbon Products, Coal Tar Pitch, Spot price; China, EXW
Material:	CTP
Price basis:	Ex-works
Location:	China
Type:	Spot
Currency:	Collected prices in RMB and convert to US\$
Weight unit:	Metric tonne
Pricing:	Reflects typical coal tar pitch (i.e liquid coal tar pitch)
Duties/tariffs:	Where applicable
Frequency:	Monthly

### China Export (\$/t FOB)

DataLab name:	Carbon Products, Coal Tar Pitch, Spot price; China, FOB
Material:	CTP

Price basis:	Export FOB
Location:	China
Type:	Contract
Currency:	US\$
Weight unit:	Metric tonne
Pricing:	Reflects typical coal tar pitch
Duties/tariffs:	Where applicable
Typical Softening point, °C:	103-120
Typical Insoluble in Quinoline, %:	7-12
Typical Ash, %:	≤0.5
Frequency:	Monthly

## Anodes: Monthly

### China (\$/t Ex-works)

DataLab name:	Carbon Products, Anodes, Spot price; China, EXW
Material:	Anode
Price basis:	Ex-works
Location:	China
Type:	Spot
Currency:	Collected prices in RMB and convert to US\$
Weight unit:	Metric tonne
Pricing:	Reflects typical anode
Duties/tariffs:	Where applicable
Frequency:	Monthly

### China Export (\$/t FOB)

DataLab name:	Carbon Products, Anodes, Spot price; China, FOB
Material:	Anode
Price basis:	China Export FOB
Location:	China
Type:	Spot
Currency:	US\$
Weight unit:	Metric tonne
Pricing:	Reflects typical anode
Duties/tariffs:	Where applicable
Frequency:	Monthly

## Calcined Petroleum Coke: Quarterly

### US Gulf Coast (\$/t FOB)

DataLab name:	Carbon Products, Calcined Coke, Contract price; USA, FOB
Material:	CPC
Price basis:	USGC FOB
Location:	US Gulf Coast
Type:	Quarterly Contract
Currency:	US\$
Weight unit:	Metric tonne
Pricing:	Reflects typical calcined petroleum coke
Duties/tariffs:	Where applicable
Typical Sulphur, %:	2.5 – 3.5
Typical Vanadium, ppm:	300-400



### Europe (\$/t CIF)

DataLab name:	Carbon Products, Calcined Coke, Contract price; Europe, CIF
Material:	CPC
Price basis:	EU CIF
Location:	Rotterdam
Type:	Quarterly Contract
Currency:	US\$
Weight unit:	Metric tonne
Pricing:	Reflects typical calcined petroleum coke
Duties/tariffs:	Where applicable
Typical Sulphur, %:	1.0-2.0
Typical Vanadium, ppm:	150-300

### Middle East (\$/t CIF)

DataLab name:	Carbon Products, Calcined Coke, Contract price; Middle East, CIF
Material:	CPC
Price basis:	M.E. CIF
Location:	Delivered M.E. Smelter
Type:	Quarterly Contract
Currency:	US\$
Weight unit:	Metric tonne
Pricing:	Reflects typical calcined petroleum coke
Duties/tariffs:	Where applicable

## Coal Tar Pitch: Quarterly

### North America (\$/t FOB)

DataLab name:	Carbon Products, Coal Tar Pitch, Contract price; USA, FOB
Material:	CTP
Price basis:	Ex-works
Location:	Supplier Facility
Type:	Semester
Currency:	US\$
Weight unit:	Metric tonne
Pricing:	Reflects typical coal tar pitch (i.e liquid coal tar pitch)
Duties/tariffs:	Where applicable
Typical Softening point, °C:	108-113
Typical Insoluble in Quinoline, %:	8-16
Typical Ash, %:	≤0.5

### Europe (\$/t FOB)

DataLab name:	Carbon Products, Coal Tar Pitch, Contract price; Europe, FOB
Material:	CTP
Price basis:	EU FOB
Location:	Europe
Type:	Semester
Currency:	US\$
Weight unit:	Metric tonne
Pricing:	Reflects typical coal tar pitch (i.e liquid coal tar pitch)
Duties/tariffs:	Where applicable
Typical Softening point, °C:	103-120
Typical Insoluble in Quinoline, %:	4-7
Typical Ash, %:	≤0.5

## Europe (€/t FOB)

DataLab name:

Material:

Price basis:

Location:

Type:

Currency:

Weight unit:

Pricing:

Duties/tariffs:

Typical Softening point, °C:

Typical Insoluble in Quinoline, %:

Typical Ash, %:

Carbon Products, Coal Tar Pitch, Contract price; Europe, FOB

CTP

EU FOB

Europe

Semester

Euro conversion from US\$

Metric tonne

Reflects typical coal tar pitch (i.e liquid coal tar pitch)

Where applicable

103-120

4-7

≤0.5

## Glossary of abbreviations

### INCO TERM RULES FOR ANY MODE OR MODES OF TRANSPORT:

EXW – Ex-Works  
FCA – Free Carrier  
CPT – Carriage Paid To  
CIP – Carriage and Insurance Paid To  
DAT – Delivered at Terminal  
DAP – Delivered at Place  
DDP – Delivered Duty Paid

### INCO TERM RULES FOR SEA AND INLAND WATERWAY TRANSPORT:

FAS – Free Alongside Ship  
FOB – Free on Board  
CFR – Cost and Freight  
CIF – Cost Insurance and Freight

### COUNTRY ABBREVIATIONS USED:

We use ISO 3166 alpha-2 standard country codes