

CRU Prices

Steelmaking Raw Materials

Methodology and
Definitions Guide

July 2018

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Methodology and Definitions Guide – Bulk Steelmaking Raw Materials and Thermal Coal

1 Scope

This guide covers carbon semi-finished and finished steel products 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

Data Submitters

Data Submitters collectively represent the entire physical supply chain and include producers, stockholders/traders, and consumers.

They must have access to data relating to actual spot market transactions (a purchase or a sale), bid/offer information or be able to provide a credible opinion on such prices in the absence of any other data over the relevant time period. They are therefore typically employed in sales or marketing functions on the sell side and purchasing functions on the buy side, or act in a trading function. Data Submitters may also include individuals in finance functions if they can provide the same.

CRU actively seeks new Data Submitters and will consider unsolicited applications to become a Data Submitter. Potential new Data Submitters are vetted on a case-by-case basis, but are not required to sign a Data Providers' Agreement

Data submitted and submission processes

Any price data provided to CRU must meet the relevant product definitions.

For each product, data submitters provide CRU with a single price figure or a range of prices relating to all spot sales or purchases concluded in the week prior to publication. In the absence of actual transaction data, firms bids/offers or an opinion of the prevailing market price in the same period can be submitted. The type of price data submitted (actual transaction, firm bid/offer or opinion) should be indicated to CRU.

Industry participants can submit prices to CRU by telephone, email, private one-to-one instant messenger services, facsimile, or other private means of communication.

Final benchmark calculation

Although no specific statistical checks are in place to detect errors, the price submissions are collected by experienced CRU price assessors. As such, submissions which are regarded as suspect - whether this be because of the variance from that contributor's last submission or the variance from the average of the other contributors' submissions - are questioned at the time of the survey or, if necessary, by speaking to the participant for a second time. If a satisfactory answer is not received, the contribution is not taken into account when arriving at the final price assessment.

Final prices are arrived at using the expert judgement of the CRU price assessor, taking into account the price points and type of price points they may have received from market participants. Where a mix of price types have been received, greater subjective weighting will generally be given to transaction prices, then firm bid/offer prices, then indicative bid/offer prices, then opinions of prices in that order. Weekly average assessed prices found in the weekly updates are reflect the average of price indications received during the week. Dashboard prices, on the other hand, reflect the spot price on the day of assessment.

Price determination in an illiquid market

In the cases of zero submissions or where all submissions were deemed inadmissible, expert judgement would be used to determine the final benchmark value. This choice would be based on: observation of the previous week's prices; short term historical price trends; other quantitative market data including prices in other related active markets, producer price change

announcements; qualitative information such as that received from interactions with market participants or other CRU analysts, and; other sources of information relevant to the spot market.

The price assessor will use their judgement to evaluate the volume, quality and coherence of any such market information they may possess. If one or more of these factors in combination does not provide a sufficiently clear indication of the direction and extent of market movement to allow the price assessor to confidently change the benchmark from the previous value, the prior value would be rolled over to form the current period value.

Final benchmark publication

Price benchmarks are made available to customers of CRU's *Steelmaking Raw Materials Monitor* and Prices Basket according its publication schedule.

3 Definitions

Iron ore

Prices are shown on a dry basis (unless otherwise stated) in US\$/Tonne (\$/t). The Fe grade is stated in the prices table and the levels of impurities for each price reflect industry standards. Iron ore freight rates are shown on a wet basis in \$/t, reflecting Capesize vessel rates.

Contract prices are based on the average spot price for the quarter in which the ore is delivered. This means that a contract settled in February will be based on an agreed price which reflects the full calendar quarter (January to March). At the end of the quarter, there is likely to be a credit/debit due to the buyer reflecting the actual quarterly average. Please note that there are several methods by which the contract price can be settled, including, for example, a 5 day prior average, a rolling quarter average or previous quarter less one month average. The method adopted can vary from transaction to transaction, however, once a method is established, CRU understands that the parties are bound to this.

Australia 62% Fe fines FOB contract

Fe Grade:	62%
Moisture:	8%
Silica:	4.5%
Alumina:	2%
Phosphorous:	0.075%
Sulphur:	0.02%
Price basis:	FOB
Loading Location:	Australia-Pilbara
Type:	Contract
Currency:	US dollar
Weight Unit:	Tonne
Size/tolerance:	Sizing of up to 10 mm for up to 90% of cargo
Timing:	Forward Quarterly delivery
Payment terms:	L/C at sight
Main Consumer Markets:	China
Duties/tariffs:	-

China 62% Fe fines CFR contract

Fe Grade:	62%
Moisture:	8%
Silica:	4.5%
Alumina:	2%
Phosphorous:	0.075%
Sulphur:	0.02%
Price basis:	CFR
Loading Location:	Australia Pilbara
Type:	contract
Currency:	US dollar
Weight Unit:	Tonne
Size/tolerance:	Sizing of up to 10 mm for up to 90% of cargo
Timing:	Forward Quarterly delivery
Payment terms:	L/C at sight
Main Consumer Markets:	China
Duties/tariffs:	-

Brazil 65% Fe fines FOB contract

Fe Grade:	65%
Moisture:	8.5%

Silica:	3.5%
Alumina:	1%
Phosphorous:	0.075%
Price basis:	FOB
Loading Location:	Brazil
Type:	Contract
Currency:	US dollar
Weight Unit:	Tonne
Size/tolerance:	Sizing of up to 10 mm for up to 90% of cargo
Timing:	Forward Quarterly delivery
Payment terms:	L/C at sight
Main Consumer Markets:	China
Duties/tariffs:	-

China 65% Fe fines CFR contract

Fe Grade:	65%
Moisture:	8.5%
Silica:	3.5%
Alumina:	1%
Phosphorous:	0.075%
Price basis:	CFR
Loading Location:	Brazil
Type:	contract
Currency:	US dollar
Weight Unit:	Tonne
Size/tolerance:	Sizing of up to 10 mm for up to 90% of cargo
Timing:	Forward Quarterly delivery
Payment terms:	L/C at sight
Main Consumer Markets:	China
Duties/tariffs:	-

Brazil 64% Fe fines FOB contract*

Fe Grade:	64%
Moisture:	8.5%
Silica:	3.5%
Alumina:	1%
Phosphorous:	0.075%
Price basis:	FOB
Loading Location:	Brazil
Type:	contract
Currency:	US dollar
Weight Unit:	Tonne
Size/tolerance:	Sizing of up to 10 mm for up to 90% of cargo
Timing:	Forward Quarterly delivery
Payment terms:	L/C at sight
Main Consumer Markets:	China
Duties/tariffs:	-

*To be discontinued on August 1, 2018

China 64% Fe fines CFR contract*

Fe Grade:	64%
Moisture:	8.5%
Silica:	3.5%
Alumina:	1%
Phosphorous:	0.075%
Price basis:	CFR
Loading Location:	Brazil

Type:	contract
Currency:	US dollar
Weight Unit:	Tonne
Size/tolerance:	Sizing of up to 10 mm for up to 90% of cargo
Timing:	Forward Quarterly delivery
Payment terms:	L/C at sight
Main Consumer Markets:	China
Duties/tariffs:	-

*To be discontinued on August 1, 2018

China 58 % Fe fines CFR spot

Fe Grade:	58 %
Moisture:	10%
Silica:	5%
Alumina:	2%
Phosphorous:	0.05%
Price basis:	spot
Loading Location:	Australia
Type:	spot
Currency:	US dollar
Weight Unit:	Tonne
Size/tolerance:	Sizing of up to 10 mm for up to 90% of cargo
Timing:	delivery within 60 days
Payment terms:	L/C at sight
Main Consumer Markets:	China
Duties/tariffs:	-

China 62% Fe fines CFR spot

Fe Grade:	62%
Moisture:	8%
Silica:	4.5%
Alumina:	2%
Phosphorous:	0.075%
Sulphur:	0.02%
Price basis:	CFR
Loading Location:	
Type:	spot
Currency:	US dollar
Weight Unit:	Tonne
Size/tolerance:	Sizing of up to 10 mm for up to 90% of cargo
Timing:	delivery within 60 days
Payment terms:	L/C at sight
Main Consumer Markets:	China
Duties/tariffs:	-

China 62.5% Fe lump premium CFR spot

Fe Grade:	62.5%
Moisture:	4%
Silica:	3.5%
Alumina:	1.5%
Phosphorous:	0.075%
Sulphur:	0.02%
Price basis:	CFR
Loading Location:	Any origin
Type:	spot

Currency:	US dollar
Weight Unit:	Tonne
Size/tolerance:	Sizing of max 15% <6.3 mm and max 15% >31.5 mm
Timing:	delivery within 60 days
Payment terms:	L/C at sight
Main Consumer Markets:	China
Duties/tariffs:	-

China 64 % Fe fines CFR spot*

Fe Grade:	64 %
Moisture:	8.5%
Silica:	3.5%
Alumina:	1%
Phosphorous:	0.075%
Price basis:	CFR
Loading Location:	Brazil
Type:	spot
Currency:	US dollar
Weight Unit:	Tonne
Size/tolerance:	Sizing of up to 10 mm for up to 90% of cargo
Timing:	delivery within 60 days
Payment terms:	L/C at sight
Main Consumer Markets:	China
Duties/tariffs:	-

*To be discontinued on August 1, 2018

China 65% Fe fines CFR spot

Fe Grade:	65%
Moisture:	8.5%
Silica:	3.5%
Alumina:	1%
Phosphorous:	0.075%
Price basis:	CFR
Loading Location:	Brazil
Type:	Spot
Currency:	US dollar
Weight Unit:	Tonne
Size/tolerance:	Sizing of up to 10 mm for up to 90% of cargo
Timing:	Forward Quarterly delivery
Payment terms:	L/C at sight
Main Consumer Markets:	China
Duties/tariffs:	-

China 66 % Fe fines CFR spot

Fe Grade:	66 %
Moisture:	8.5%
Silica:	3.5%
Alumina:	1%
Phosphorous:	0.075%
Price basis:	CFR
Loading Location:	Brazil
Type:	spot
Currency:	US dollar
Weight Unit:	Tonne
Size/tolerance:	Sizing of up to 10 mm for up to 90% of cargo
Timing:	delivery within 60 days

Payment terms: L/C at sight
 Main Consumer Markets: China
 Duties/tariffs: -
 *To be discontinued on August 1, 2018

China 66 % Fe concentrate Hebei spot

Fe Grade: 66 %
 Moisture: 8.0%
 Silica: 5.0%
 Alumina: 0.75%
 Phosphorous: 0.03% (max)
 Sulphur: 0.05% (max)
 Price basis: Hebei province
 Loading Location: Hebei
 Type: spot
 Currency: RMB
 Weight Unit: Tonne
 Size/tolerance: Sizing of up to 0.075 mm for up to 70% of cargo
 Timing: delivery within 60 days
 Payment terms: Cash at sight
 Main Consumer Markets: China
 Duties/tariffs: Including VAT

China 66 % Fe concentrate Hebei spot

Fe Grade: 66 %
 Moisture: 8.0%
 Silica: 5.0%
 Alumina: 0.75%
 Phosphorous: 0.03% (max)
 Sulphur: 0.05% (max)
 Price basis: Hebei province
 Loading Location: Hebei
 Type: spot
 Currency: US Dollar
 Weight Unit: Tonne
 Size/tolerance: Sizing of up to 0.075 mm for up to 70% of cargo
 Timing: delivery within 60 days
 Payment terms: Cash at sight
 Main Consumer Markets: China
 Duties/tariffs: Including VAT

Metallurgical Coal

Prices for Australian spot hard coking coal are FOB Australia, \$/t, including moisture content. Contract prices are also shown and are FOB Australia, \$/t, including moisture content. Quarterly contract prices, shown since the start of 2010, are reported for hard coking coal, semi-soft coking coal and PCI. These prices represent industry benchmarks agreed between major sellers and buyers of the respective metallurgical coals and these parties may change from one quarter to the next. Therefore, coal specifications may also fluctuate marginally.

Australia Premium Hard Coking Coal Contract FOB

CSR:	68%
Ash:	10%
Volatile Matter:	21.5%
Total Moisture:	10%
Fixed Carbon:	53%
Sulphur:	0.5%
Phosphorous:	0.05%
Fluidity:	400 ddpm
Reflectance:	1.42% Ro Max
Vitrinite:	65%
Price basis:	FOB
Loading Location:	Australia
Type:	Forward delivery Quarterly
Currency:	US Dollar
Weight Unit:	Tonne
Size/tolerance:	-
Timing:	Delivery within six weeks
Payment terms:	L/C at sight
Main Consumer Markets:	-
Duties/tariffs:	-

Australia Pulverised Injection Coal (PCI) Contract FOB

Ash:	8%
Volatile Matter:	11%
HGI:	75
Sulphur:	0.55%
Total Moisture:	10%
Price basis:	FOB
Loading Location:	Australia
Type:	Forward delivery Quarterly
Currency:	US Dollar
Weight Unit:	Tonne
Size/tolerance:	-
Timing:	Delivery within six weeks
Payment terms:	L/C at sight
Main Consumer Markets:	-
Duties/tariffs:	-

Australia Semi-soft Coking Coal Contract FOB

CSN:	5.5
Ash:	9%
Volatile Matter:	34%
Fixed Carbon:	53%
Sulphur:	0.6%
Price basis:	FOB
Fluidity:	200 ddpm
Loading Location:	Australia
Type:	Forward delivery Quarterly
Currency:	US Dollar
Weight Unit:	Tonne

Size/tolerance:	-
Timing:	Delivery within six weeks
Payment terms:	L/C at sight
Main Consumer Markets:	-
Duties/tariffs:	-

Australia Premium Hard Coking Coal Spot FOB

CSR:	68%
Ash:	10%
Volatile Matter:	21.5%
Total Moisture:	10%
Fixed Carbon:	53%
Sulphur:	0.5%
Phosphorous:	0.05%
Fluidity:	400 ddpm
Reflectance:	1.42% Ro Max
Vitrinite:	65%
Price basis:	FOB
Loading Location:	Australia
Type:	Spot
Currency:	US Dollar
Weight Unit:	Tonne
Size/tolerance:	-
Timing:	Delivery within six weeks
Payment terms:	L/C at sight
Main Consumer Markets:	-
Duties/tariffs:	-

Australia Standard Hard Coking Coal Spot FOB

CSR:	63% (min)
Ash:	12%
Volatile Matter:	25%
Total Moisture:	10%
Sulphur:	0.6%
Phosphorous:	0.05%
Fluidity:	1,700 ddpm max
Reflectance:	1.42% Ro Max
Vitrinite:	55%
Price basis:	FOB
Loading Location:	Australia
Type:	Spot
Currency:	US Dollar
Weight Unit:	Tonne
Size/tolerance:	-
Timing:	Delivery within six weeks
Payment terms:	L/C at sight
Main Consumer Markets:	-
Duties/tariffs:	-

Metallurgical Coke

Note: Prices from January 2009-March 2010 and July 2011-December 2012 are based on metallurgical coke from Japan, Russia, the Ukraine, Japan, Colombia and Australia. During these select periods, Chinese export prices were not representative of the wider metallurgical coke market, hence, the requirement for an alternative assessment.

China Metallurgical Coke 12.5% ash domestic

CSR:	≥ 62
Ash:	12.5% max
Carbon content:	≥86%
Total Moisture:	5%
Sulphur:	0.65%
Price basis:	FOB
Loading Location:	-
Type:	Spot
Currency:	US Dollar
Weight Unit:	Tonne
Size/tolerance:	-
Timing:	Delivery within four weeks
Payment terms:	L/C at sight
Main Consumer Markets:	China
Duties/tariffs:	Including VAT and duties

China Metallurgical Coke 12.5% ash domestic

CSR:	≥ 62
Ash:	12.5% max
Carbon content:	≥86%
Total Moisture:	5%
Sulphur:	0.65%
Price basis:	FOB
Loading Location:	-
Type:	Spot
Currency:	RMB
Weight Unit:	Tonne
Size/tolerance:	-
Timing:	Delivery within four weeks
Payment terms:	L/C at sight
Main Consumer Markets:	China
Duties/tariffs:	Including VAT and duties

China Metallurgical Coke 12.5% ash FOB

CSR:	≥ 62
Ash:	12.5% max
Carbon content:	≥86%
Total Moisture:	5%
Sulphur:	0.65%
Price basis:	FOB
Loading Location:	-
Type:	Spot
Currency:	US Dollar
Weight Unit:	Tonne
Size/tolerance:	-
Timing:	Delivery within four weeks
Payment terms:	L/C at sight
Main Consumer Markets:	China
Duties/tariffs:	-

Thermal Coal

Australia Thermal Coal sub-bituminous FOB spot

Calorific Value:	5,500 kcal/kg
Ash:	20% air-dried basis
Total Moisture:	10%
Sulphur:	0.65%
Price basis:	FOB Net as Received
Loading Location:	Newcastle
Type:	Spot
Currency:	US Dollar
Weight Unit:	Tonne
Size/tolerance:	-
Timing:	Delivery within four weeks
Payment terms:	L/C at sight
Main Consumer Markets:	-
Duties/tariffs:	-

Australia Thermal Coal bituminous FOB spot

Calorific Value:	6,000 kcal/kg
Ash:	13% air-dried basis
Total Moisture:	10%
Sulphur:	0.7% max
Price basis:	FOB Net as Received
Loading Location:	Newcastle
Type:	Spot
Currency:	US Dollar
Weight Unit:	Tonne
Size/tolerance:	-
Timing:	Delivery within four weeks
Payment terms:	L/C at sight
Main Consumer Markets:	-
Duties/tariffs:	-

China Thermal Coal sub-bituminous CFR spot

Calorific Value:	5,500 kcal/kg
Ash:	<20% air-dried basis
Total Moisture:	10%
Sulphur:	<1% max
Volatile Matter:	<35%
Price basis:	CFR Net as Received
Loading Location:	-
Type:	Spot
Currency:	US Dollar
Weight Unit:	Tonne
Size/tolerance:	-
Timing:	Delivery within four weeks
Payment terms:	L/C at sight
Main Consumer Markets:	China
Duties/tariffs:	-

China Thermal Coal sub-bituminous FOB spot

Calorific Value:	5,500 kcal/kg
Ash:	<20% air-dried basis
Total Moisture:	10%
Sulphur:	<1% max
Volatile Matter:	<35%
Price basis:	FOB Net as Received

Loading Location:	Qinhuangdao
Type:	Spot
Currency:	US Dollar
Weight Unit:	Tonne
Size/tolerance:	-
Timing:	Delivery within four weeks
Payment terms:	L/C at sight
Main Consumer Markets:	China
Duties/tariffs:	Including VAT

Indonesia Thermal Coal sub-bituminous FOB spot

Calorific Value:	3,800 kcal/kg
Ash:	7.5% air-dried basis
Total Moisture:	40%
Sulphur:	0.4%
Price basis:	FOB Net as Received
Loading Location:	Kalimantan
Type:	Spot
Currency:	US Dollar
Weight Unit:	Tonne
Size/tolerance:	-
Timing:	Delivery within four weeks
Payment terms:	L/C at sight
Main Consumer Markets:	-
Duties/tariffs:	-

South Africa Thermal Coal Bituminous FOB spot

Calorific Value:	6,000 kcal/kg
Ash:	16% air-dried basis
Sulphur:	1.0%
Price basis:	FOB Net as Received
Loading Location:	Richards Bay
Type:	Spot
Currency:	US Dollar
Weight Unit:	Tonne
Size/tolerance:	-
Timing:	Delivery within four weeks
Payment terms:	L/C at sight
Main Consumer Markets:	-
Duties/tariffs:	-

Europe Thermal Coal Bituminous CIF spot

Calorific Value:	6,000 kcal/kg
Ash:	<16% air-dried basis
Total Moisture:	10%
Sulphur:	<1% max
Volatile Matter:	<35%
Price basis:	CIF Amsterdam, Rotterdam, Antwerp Net as Received
Loading Location:	-
Type:	Spot
Currency:	US Dollar
Weight Unit:	Tonne
Size/tolerance:	-
Timing:	Delivery within four weeks
Payment terms:	L/C at sight
Main Consumer Markets:	China
Duties/tariffs:	-

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