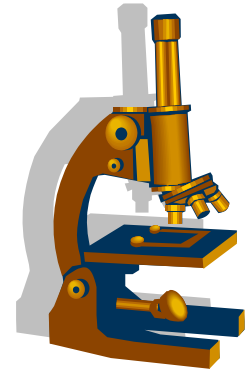


Read me first!



Before we start...

Thanks for choosing to purchase “The Black China Intelligence Centre.” We hope you find it useful and rewarding.

You will need to keep the CD loaded in your drive in order for the program to work correctly. You cannot copy it from the CD into your computer.

Make sure you keep the password handy. You will need that in order to access the database. If you lose your password, contact us at AZ China, and we will send you a reminder.

Please do not copy or distribute this program. It is protected by copyright. Contact us for additional copies for your colleagues. You can make a copy of the CD for your own use, but the CD is tied to your computer via the ID code that you sent us, so even a copy CD can only work on your computer. Contact us if you change computers.

A database such as this is continually evolving. We locked the data in at the end of July 2009. But we started gathering the information as early as 2007, with continual updates and revisions. Even since we locked the data ahead of pressing the CD, suppliers and producers were changing their raw material sources, deciding to expand or contract, developing export markets, or selling up or closing their doors.

Our promise. We therefore make this promise to you. If you find that a phone number, web site or email address is out of date, we promise to check and send you an update. Send us an email with the details and we will be happy to check and let you know the latest information. We are already working on the next edition, and will continue to update all the data, so feel free to send us an email or give us a call about any of the data.

Best regards,

The team at AZ China
blackchina@az-china.com

Accessing the program



To run the Black China Intelligence Service, you need to keep the CD in your CD drive. You do not need to load the CD contents into your computer.

If the CD doesn't automatically start, go to *My Computer* and select your CD drive. Select *run.exe* from the program list. You will see the welcome page below.

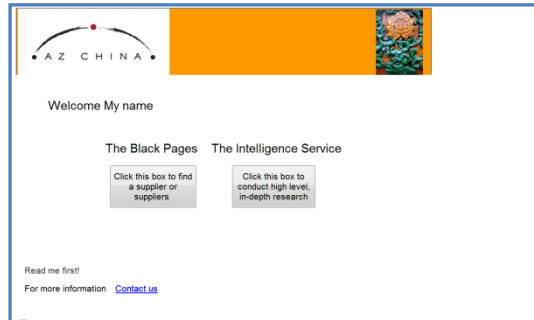
Enter your user name and password. Your user name is usually your first or given name. You should have received your password with the email confirming your purchase. If you have lost or forgotten your password, please contact us at blackchina@az-china.com. Passwords are case sensitive.

- If you have entered your user name and password and the program does not respond, it means that there is a problem with your password. Please try re-entering it. The password usually contains at least some capital letters and some lower case letters as well as numbers. Check that you have used capital letters where required, or lower case letters.
- If it does not work after several tries, contact us.

A screenshot of the Black China Intelligence Centre login screen. The screen has a white background with a blue border. At the top left, there is a logo with the text "AZ CHINA" and a red dot above it. To the right of the logo is a small image of a globe. Below the logo, the text "Welcome to the Black China Intelligence Centre" is displayed. To the right of this text are two input fields labeled "Username" and "Password", followed by a "Log In" button. At the bottom left, there is a link that says "Read me first!" and another link that says "For more information Contact Us".

Navigating

To start navigating, choose one of these options:



- [“The Black Pages”](#) or
- [“The Intelligence Service”](#).

If you want “ground level” information about a particular supplier, choose [“The Black Pages”](#).

For a broader view of a market, choose [“The Intelligence Service”](#).

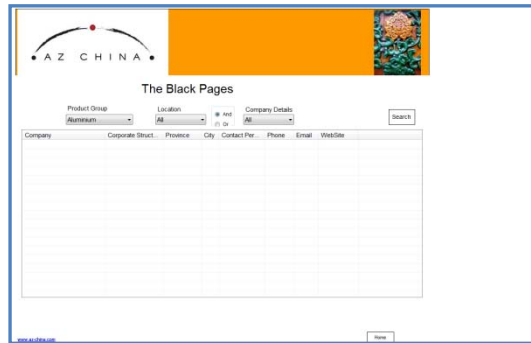
The product groups are:

- Aluminium smelters
- Aluminium fluoride
- Anodes
- Calcined petroleum coke
- Cathodes
- Coal tar pitch
- Coke



Tip: make sure you maximize the screen, for best performance and appearance.

“The Black Pages”



- Select the product group you want to learn more about;
 - You can refine your search by choosing a location where the plants are located and/or by specifying what type of company you are looking for (State-owned, Joint Venture, Private or Publicly Listed Company);
- Once you defined which criteria you want to use to do your search, press **“search.”**
- The program will present a list of every supplier that matches your criteria.
- To find out more information about a particular company, simply click on their name. The program will take you to the “Black Pages Detail Page,” where you will find a comprehensive report on that company.
- If you want to go back to select a different company to examine, simply click on the **“Back”** key on the bottom right hand side.
- Always remember to click on **“Search”** whenever you make a new selection.



Tip: By clicking on the column heading of any column, you can sort the records into order according to that column. Click a second time to put the records into reverse order.

Now you have the contact details, what next?

Here's a few tips on making better use of the information contained in the Black Pages.

- Remember that not all Chinese suppliers can speak or read English. If you do not get a reply to your email, it could be that they simply weren't able to read it.
- Many Chinese business people do not believe in "cold calling", even if it is potential new business. Inside China, there is a great deal of important put on "Guanxi", which roughly translates into "relationships." If the Chinese business person does not know you, there is a possibility that they will simply ignore your email. The value of having a "trusted go-between" cannot be under-estimated.

If you are meeting the Chinese business person, here are some other tips to remember:

- Addressing: when doing business in China is acceptable to call a Chinese person by the surname, together with his/her title. E.g. Director Li, Chairman Wang.
- Greetings: in China the most useful form of greeting is a nod or slight bow. Handshaking is also an acceptable greeting. However they shake hands very lightly and it can last 10 seconds. The best way to go is to wait for the Chinese to extend his hand first.
- "Giving face": doing or saying anything that causes someone to lose face can instantly destroy a relationship and any business that might result from it. Never insult or openly criticize someone in front of others. Praise and compliments should be part of your conversation.
- Gifts are important; they express friendship and symbolize hopes for success. For wrapped gifts, gold or red are appropriate colors. White and black are colors of mourning.

As you can see, there are a lot of particularities, specially for westerners, on how to successfully do business in China. AZ China has inside knowledge, years of experience and expertise with the Chinese business culture. We are in touch with and know these suppliers. If you are thinking about entering this market, we highly recommend you first contact us. We will help you to demystify China!

The fastest and less risky way to enter in the Chinese market is through AZ China.

“The Intelligence Service”

The input fields:

- Select the product group you want to learn more about;
 - You can refine your search by choosing from additional parameters:
 - Select a product type for the product group you are researching, or choose “all”
 - Select a province from the drop-down list
 - Select a corporate structure from the drop-down list.
 - You can choose to select from among these options by choosing the “and/or” buttons to filter the results.

The output fields

- Click on the fields that you want to see in your report. Alternatively, click “select all” to select every field.
- Click on “Search”. The program will present you with a table of records that match your criteria, and will display those fields that you have selected for output.
- To sort the records by one particular field, simply click on the column heading for that field. Click a second time to get the records in reverse order.
- You can go back to refine your research, or do a new search, by selecting the “Back” key on the bottom right hand side. Always remember to click on “Search” whenever you make a new selection.
- You can enrich your analysis by selecting the option “charting tool”. See below.



Tip: Try selecting all fields at first, to make sure you don't miss some important information.

How to use the Charting Tool



- This option allows you to prepare your own charts of the data you have been studying.
- First select which type of chart you want to use: Bar chart or Pie chart;
- Select which data you want to analyze in “x” and “Y” field;
- Press “Draw” to show the chart.
- You can change the parameters and draw a new chart at any time. Always remember to click on “Draw” whenever you make a new selection.

- To copy and paste the chart to your personal reports and documents, simply use your “Print Screen” button. Paint the chart or table that you want to use, then save it to your preferred destination. You will then be able to edit the selection using MS Paint or similar tools. If you have a Screenshot program such as “Snagit”, use that as well.

Exiting

To exit the program, simply click on the X button on the top right hand side of your screen.

More information

If you want more information, please feel free to contact us at blackchina@az-china.com.

Definitions and conventions

Aluminium	<p>Every smelter in China is listed here. New smelter projects are also listed. Greenfield projects can be identified by the fact that they have no production but do have information about expansion projects.</p>
Aluminium Fluoride	<p>In China, several plants have both the “Wet” method and the “Dry” method of production. We show this in the production records as well as in the Product Type fields. In the “Technology” field, we have recorded what the producers told us. Some use the “Buss” technology, others have adapted this to their own use. Others use German technology.</p>
Anodes	<p>Every anode producer is listed, even if they sell 100% of their production into the local smelter industry. You can see this if you compare anode production with aluminium production for a particular plant. You can work on a simple ratio of 1 tonne of anodes for every two tonnes of metal produced.</p> <p>Source of coke: In the anodes data, we have provided the three major sources of coke for the plant. This is according to our research at the time, and may change. Typically, the source of coke A is the major source. Some plants use 5 or more sources, and many plants can alter their sourcing according to client requirements.</p>
Calcined coke	<p>Calcined petroleum coke (CPC) is derived from petroleum coke, primarily for the aluminium industry. CPC typically has three product types, based on the percentage of sulphur present in the CPC. If the sulphur levels are low, namely below 0.8%, this is classified by the industry as “Low Sulphur CPC”, and is sold to the electrode industry. CPC that has sulphur above 0.8% and up to around 3% is classified in China as being “moderate sulphur CPC”. Above this, the CPC is regarded as “high sulphur”. Typically in China there are two kinds of producer – those who focus on low sulphur CPC, and those who make moderate to high sulphur CPC.</p> <p>In the calcined coke database, we have provided information about the major CPC that the plant produces, including the amount of volatile material, sulphur levels, real density, moisture, and ash. We also show the major sources of coke for each plant.</p>
Cathodes	<p>In the cathodes database, we have shown two major technologies that are used for forming the cathode’s shape. One is the extrusion</p>

process, while the other is vibro-moulding, where the mixed material is inserted into a mould and vibrated into the shape, with a mass weight on top to provide pressure.

We have also shown the two major product types produced in China. One is for graphitic blocks, where graphite is added to the mix in varying percentages. The other is where petroleum coke is used as the base mix. The resulting block is then given an extra heating process, called graphitization. Graphitized blocks are the second product type.

Note, to our knowledge no plants are presently using any densification techniques, such as pitch impregnation. We will report on this in future editions of the program, if it starts to be used.

Channels

This refers to sales channels. Does the plant sell its product directly itself, or does it use agents and traders.

Coal tar pitch

Coal tar pitch is produced from coal tar, a residue from the steel making process. In China many pitch producers are linked with steel companies. This means they do not buy their tar from the open market, so blending or adjusting the pitch to a client's needs may be difficult.

Coal tar pitch is produced at a ratio of roughly 50% tar, with the balance of the tar generating other by-products such as naphthalene.

Coal tar pitch can come in different forms, such as solid or liquid. To transport pitch in liquid form requires a vessel (truck, shipping container) which has a heating system built in. We have shown the product form in the pitch database.

For many coal tar pitch customers, an important parameter in their specification is that Quinoline Insolubility (QI) is in a certain range. Another important characteristic is that the pitch must not have any mesophase in it. In China, to get the QI levels into the required range, producers will include heat-treatment in their process. Heat-treated pitch has increased QI but also can have mesophase.

The best pitches are made using a vacuum-distilling process, however few plants in China use vacuums in their distillation process. Vacuum-distilled pitches have a higher softening point, so at room temperature they will be harder than other pitches. For this reason, we show this product type as "hard". Soft pitches are not vacuum-distilled. Modified pitches have been heat-treated.

Coke

Petroleum coke is also sometimes called coke, petcoke or Green Coke, though this term really refers to coke that is ahead of calcining. Within the product group called coke, we have several product types; namely 1A, 1B, 2A and so on. This classification is commonly used within China. The full table of parameters can be seen here:

Item	Standard							Test Method
	Grade	Qualified						
		1A	1B	2A	2B	3A	3B	
Sulphur Content (\leq)	0.5	0.5	0.8	1.0	1.5	2.0	3.0	GB/T 387
V.M. (\leq)	12	12	14		17	18	20	SH/T 0026
Ash (\leq)	0.3	0.3	0.5			0.8	1.2	SH/T 0029
Moisture Content (\leq)	3							SH/T 0032
Real Density, g/cm ³	2.08-2.13	According to Test Result		----				SH/T 0033
Coke Powder Content (smaller than 8mm), (\leq)	25			----				
Si Content (\leq)	0.08							SH/T 0058
V Content (\leq)	0.015							SH/T 0058
Fe Content (\leq)	0.08							SH/T 0058

Cokes above 3% sulphur are classified as high sulphur.

Coker Capacity

There are two measures relating to cokers. Coker capacity refers to the total capacity of the drums and the coking process, while coke capacity refers to the amount of coke that a coker can produce. The primary job of the coking process is to extract other higher-value products from the incoming material, so the coke output from a coker is not the same as the capacity of the coker. In China, the typical output ratio is 20 – 25%; in other words, **coke capacity** will be about a quarter to one fifth of the **coker capacity**.

Comments:

Sometimes AZ China staff record their own comments relating to what the producer has told them. These are presented to you as is. We made no attempt to change the grammar or English.

Company name:

We have set this database to operate at the plant level, not the corporate or business level. For this reason, Chalco plants are listed individually, for example. If a corporation owns multiple plants, each is listed, with the corporate ownership mentioned in the comments.

Corporate Structure: In China, there are 4 major types of company. A company can list on the Shanghai Stock Exchange, or can be a private company. As well, there are many corporations which are partly or fully owned by the local, provincial or central Government. A fourth type of company is a Joint Venture, which is usually a combination of Chinese and foreign equity.

Database terms:

Record:	one supplier/manufacturer
Field:	one piece of data in a record
Column:	the same field for every record

Expansion projects For each product group, we have tried to identify any expansions that are under way at the time of going to press (July 2009). Expansions fall into two categories: a greenfield expansion (a new plant) can be identified by the lack of any production or capacity, while a brownfield expansion (additional capacity for an existing plant) will show some capacity or 2008 production. We also show the year that the expansion is listed to be completed. The information is usually from the plant directly, and was current at the time of going to press.

Export The information relating to exports in this database is from the plants themselves. Although we have the export data, which we report on in the monthly "Black China Report", we have cross-referenced the two sets of data only for the important suppliers. Some additional information is provided in the comments section.

Product Group Highest level of product structure, namely:

- Aluminium
- Aluminium Fluoride
- Anodes
- Calcined coke
- Cathodes
- Coal tar pitch
- Coke

Product Type Second level of product structure, namely:

- Aluminium = "all"
- Aluminium Fluoride = wet, dry
- Anodes = "all"
- Calcined coke = low sulphur, moderate or high sulphur,
- Cathodes = graphitic, graphitized
- Coal tar pitch = soft, hard, modified

- Coke = 1A, 1B, 2A, 2B, 3A, 3B, high sulphur
- “all” means no segregation by product type.

Sulphur

Moderate sulphur means sulphur content between 1.5% - 3.0%.

High sulphur means sulphur content greater than 3.0%.

Year Started Operations

We have entered the year that the plant started originally. This does not allow for expansions in later years, but those are hard to quantify.