

## USING THE CBIX CALCULATOR

### About

The CBIX CALCULATOR is a simple tool that provides an indicative price for bauxite of different grades, CIF Shandong (US\$/dmt). The coefficients in the calculator are updated regularly so the results reflect the market at the time.

Note that calculated prices are indicative only and cannot be relied on as a price guarantee. For more accurate price estimates, please contact the [thebauxiteindex.com](http://thebauxiteindex.com) via the link below.

[info@thebauxiteindex.com](mailto:info@thebauxiteindex.com)

### How to Use the Calculator

#### Al<sub>2</sub>O<sub>3</sub> Input (%)

The alumina input should reflect total alumina (on a dry basis) expected to react in the digestion process during the bayer refining process. In standard industry jargon, this input would typically be referred to as Available Alumina plus the Reactive Silica.

For a gibbsitic bauxite undergoing low temperature (LT) refining, the alumina would include all gibbsitic alumina (i.e. the Available Alumina) plus any alumina contained in clays (e.g. kaolinite) (i.e. the Reactive Silica).

For a boehmitic or diasporic bauxite undergoing high temperature (HT) refining, the alumina input would be the total alumina present in the bauxite.

#### SiO<sub>2</sub> Input (%)

The silica input should be all silica (on a dry basis) expected to react during the bayer refining process. For a gibbsitic bauxite undergoing LT refining, this would typically be the Reactive Silica (i.e. the silica contained in the clays such as kaolinite).

For a boehmitic or diasporic bauxite undergoing HT refining, the silica input would typically be the total silica content of the bauxite.

#### H<sub>2</sub>O Input (%)

The H<sub>2</sub>O % input has little impact on the CFR price. The moisture content of the bauxite mostly affects freight rates, so its impact is greater on FOB prices. The Chinese market currently accepts a wide range of moisture contents, although typical moisture levels would not exceed 15%.

#### Organics Input

Total Organic Content (TOC), meaning organic matter, detracts from bauxite prices because of its cumulative and deleterious effect on process liquor during bayer processing.

Bauxites from South America typically contain low organics, Guinean bauxites contain moderate organics and others, such as those from Australia, can contain high or very high organics. Nominating the level of TOC in a bauxite assigns a price penalty in the Calculator consistent with current market penalties.

#### Other Impurities

Other impurities such as phosphorous, titanium, sulphur, and high levels of goethite can also influence the price a bauxite will fetch. While the market is sensitive these impurities their impact in any given refining process is less predictable and cannot at this stage be included in any generic indicative pricing calculation.