

## Phosphate Bonded High Alumina Bricks For Blast Furnace

Our Product Introduction

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### Basic Information

- Place of Origin: Zhengzhou ,China
- Brand Name: Rongsheng Xinwei
- Certification: ISO9001
- Model Number: Rongsheng
- Minimum Order Quantity: 1 Ton
- Price: 200-800USD
- Packaging Details: Packed on wooden pallets, with water-proof cover, and tightened with plastic/steel bandages
- Delivery Time: 10-20 Days
- Payment Terms: TT; L/C
- Supply Ability: 2000tons /month



### Product Specification

- Highlight: Blast Furnace High Alumina Bricks, Phosphate Bonded High Alumina Bricks



### More Images

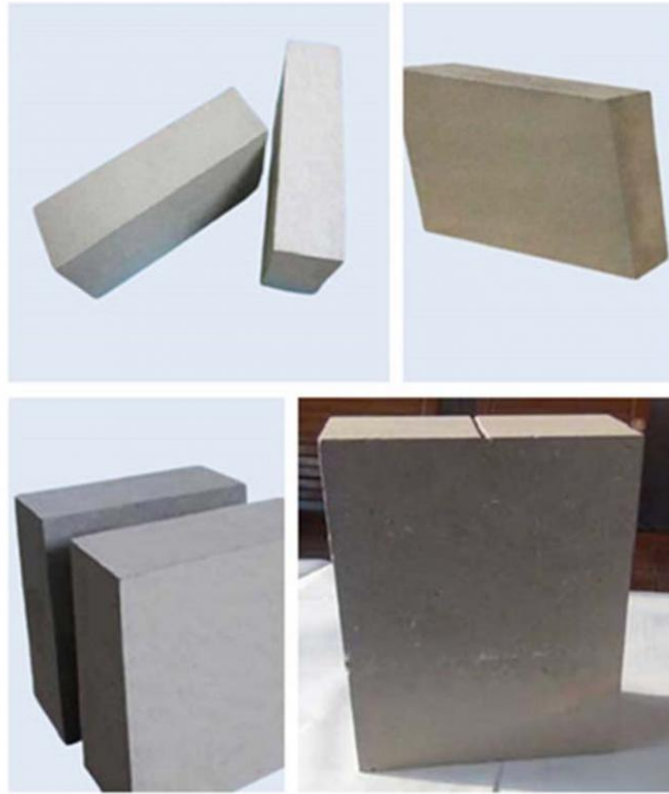


### Product Description

#### Product Description of Phosphate Bonded High Alumina Bricks For Blast Furnace

Phosphate-bonded high alumina bricks are a type of refractory brick classified as soft-burnt bricks. Composed of premium bauxite and phosphate, these bricks offer excellent resistance to alkaline slag and erosion, high wear resistance, and a high bulk density. They are commonly applied in cement rotary kilns, blast furnaces, ladles, and other high-temperature industrial equipment.

Our Product Introduction



#### Product Composition of Rongsheng Refractory Phosphate Bonded Bricks

Phosphate-bonded bricks are a type of advanced refractory material, composed of phosphate compounds and calcined bauxite aggregates. These bricks are typically manufactured through a molding and pressing process. They can be divided into two categories: phosphate-bonded high alumina bricks, also known as phosphate bricks, and phosphate-bonded high alumina wear-resistant bricks, commonly referred to as phosphate wear-resistant bricks. These bricks, which are not subjected to high-temperature firing, contain approximately 80% alumina. They offer several notable features, including excellent resistance to high temperatures, wear, and erosion, as well as superior thermal shock resistance and high mechanical strength. Phosphate bricks are primarily used in the sintering zone of cement rotary kilns, while phosphate wear-resistant bricks are typically applied in the cooling, exothermic reaction, and decomposition zones. In the cement industry, phosphate-bonded bricks are increasingly replacing traditional high alumina bricks.

Phosphate-bonded high alumina bricks are a type of phosphate-bonded refractory material. Also known as high alumina refractory bricks, they differ mainly in their firing process. While traditional high alumina bricks are produced by high-temperature sintering at around 1400°C, phosphate-bonded high alumina bricks are made using low-temperature sintering. Compared to standard high alumina bricks, phosphate-bonded bricks offer several advantages, including superior refractoriness, enhanced strength, better thermal shock resistance, and improved chemical erosion and wear resistance.

These phosphate-bonded high alumina bricks exhibit key properties such as high refractoriness under load, excellent compressive strength, good thermal shock resistance, wear resistance, low bulk density, and resistance to spalling. Furthermore, they are energy-efficient, easy to install, and maintain stable performance over time.

High refractoriness and high RUL  
Good thermal shock resistance  
Low bulk density  
Anti-spalling performance  
Good chemical erosion and wear resistance  
High compressive strength  
Energy-saving and easy construction, etc.

#### Phosphate Bonded Bricks Applications

Phosphate refractory bricks are applied in the following parts:

Cement rotary or shaft kiln, such as the preheating zone, thermal zone, and tuyere;  
Blast furnace and open hearth furnace  
Roof of the steel making electric furnace  
Hot blast furnace, and reverberatory furnace  
Lining of the cooler; and ladle, etc.

#### Product Specifications of Phosphate Bonded Bricks

Brands	Ordinary phosphate brick	Phosphate bonded abrasive brick	Special phosphate brick	c
Items	P-75	PA-75	PT-1	F
Al <sub>2</sub> O <sub>3</sub> %≥	75	75	80	
Fe <sub>2</sub> O <sub>3</sub> ≤	2.1	2.1	1.8	
Refractoriness	1770	1770	1790	
Bulk density(g/cm <sup>3</sup> ) ≥	2.7	2.75	2.9	
Cold crushing strength(Mpa) ≥	70	75	80	
0.2Mpa refractoriness under load( ) ≥	1350	1300	1520	
Thermal shock resistance(1100 ,water quenching, cycle)	20	20	15	

Cold compressive temperature at the bond parts between heavy weight and light weight(Mpa) ≥	—	—	—
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