## **Alumina Ceramic Products**

#### **Wear-resistant Alumina Ceramic Tubes & Tiles**



Wear-resistant alumina ceramic tubes & tiles are suitable for conveying all kinds of stereoplasm materials. Mainly used as the linings in the pipelines of conveying ore fines, cement, coal and other hard materials.

#### Feature:

- 1. Wear-resistance---10 times stronger than common pipes
- 2. Corrosion resistance---Integrated alumina ceramic linings can resist strong acid and alkali.
- 3. Impact & Scour resistance---Can resist materials with big grain size without cracking
- 4. Smooth wall &airflow unobstructed---Smooth surface makes good flowability and avoids blocking
- 5. Reduced maintenance---Super wear resistance greatly reduce the frequency of

### **Dimension:**

For straight tubes, max.OD=760mm, min.ID=20mm, Thickness=5-30mm

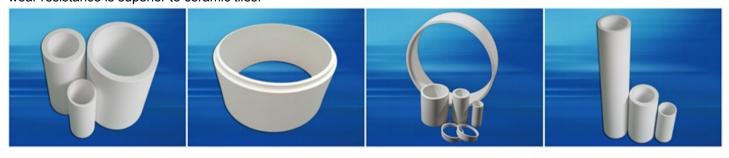
For one-piece cone-shaped tube, max. size= OD400\*ID190\*H970mm

Shaping method: Isostatic pressing

**Product type:** straight tube, cone-shaped tube, tee, elbow/bend,tiles.

#### Alumina ceramic straight tube

Because the lined ceramic pipeline is produced by integral forming process, the slurry wouldn't permeate through it. Moreover, the process of isostatic pressing dry powder is favorable to the uniformity of ceramic crystal structure, so its wear resistance is superior to ceramic tiles.



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during material handling. This is why the pipelines lined by ceramic tiles are easily worn out and fallen off. The service life of integrated alumina pipe is at least 5 times longer than ceramic tiles of the same thickness.

### Alumina ceramic cone-shaped tube

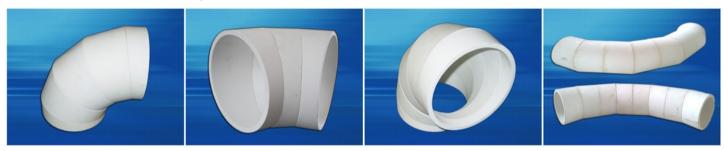
## **Application:**

Mining classifying &concentrate cyclone, Coal separation &classifying cyclone, etc.



When cyclone is at work, the rotary motion of material generates great centrifugal force, the inwall of cyclone is worn at high speed. For dense material, the abrasion of inner is extremely worse under high impact by centrifugal force. One-piece alumina ceramic tube is used as wear resistant lining in cyclone by its high hardness, strength, abrasion resistance and economic practicality.

## Alumina ceramic elbow/bend



When conveying pointed materials (ash, coal powder, min flavor powder, tailings, cement, etc), the attrition is very fast, especially for elbows. Integrated ceramic bend can effectively solve this problem. The valve in the desulfurization system can change the flow during the switching process, so the slurry with grain at high speed will wear out the pipe at the end of valves. The liquid in the tube contains much sulfite which is very corrosive, so usually nonmetallic pipes like rubber tubes and pvc pipes are used to avoid corrosion, but the wear resistance of these tubes are poor that the straight pipe at the end of valves always worn out. The integrated pipes which resist abrasion and corrosion are developed to well solve the problems of abrasion.

The alumina tubes are widely used in the power plant, coal washery, mining industry, chemistry industry and it is an ideal wear-resistant material for delivering the sand, mine, ash dregs and molten aluminium. We can produce the alumina tubes with different sizes and shapes according to the customers' enquirements.

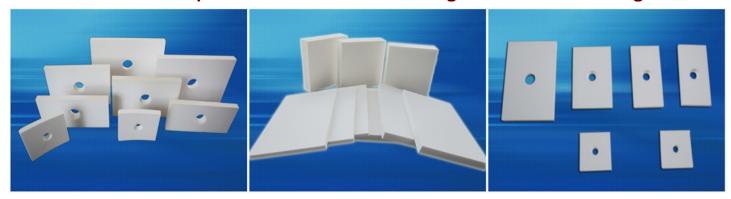
Tech Data ---- alumina tubes

Performance index	92 series		
Al2O3 (%)	≥92		
Fe2O3 (%)	≤0.02		
Hardness (HRA)	≥85		
Water absorption (%)	≤0.02		
Density (g/cm3)	≥3.60		
Refractoriness (℃)	≥2000		
High service temperature (℃)	≥1500		
Bending strength (MPa)	≥500		



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## Alumina Ceramic Tiles/Bricks---Wear Resistant Lining For Material Handling



Alumina ceramic tiles/bricks are made by isopressing and dry pressing. It posses high purity, good density, high hardness, low abrasion, corrosion resistance.

## **Application:**

Alumina ceramic tiles are mainly used as lining materials of conveying equipment for materials like coal, cement and mining ores. They are specially suitable for applications like coal conveying in power stations, slag conveying pipelines, material conveying for mines and docks, cement powder selecting equipment and crushing equipment for fine ceramic materials. hey are featured as high wear-resistant and easy for installation.

## Tech Data----alumina tiles:

Performance Index	75series	92series	95series
Al2O3 (%)	≥75	≥92	≥95
Moh's hardness	8	9	9
Water absorption (%)	≤0.02	≤0.02	≤0.02
Fracture Toughness (MPa)	3.5	3.65	3.75
Flexural Strength (MPa)	210	255	275
Density(g/cm3)	≥3.27	≥3.60	≥3.65

