

## **CCEWOOL® Ceramic Fiber Friction Bulk**

### **Description:**

Temperature degree: 1260°C (2300°F)

CCEWOOL® Research Series Ceramic Fiber Friction Bulk is made from standard ceramic fiber bulk through shear, slag-removal processes, and secondary processing, as one of ideal raw material for production of friction materials. This fiber can also be used as mechanical thixotropic agent in coating application with extra advantages of reinforced and fire resistant.

### **Technical data and Size:**

<b>CCEWOOL® Ceramic Fiber Friction Bulk</b>			
<b>Item</b>	<b>1260STD</b>	<b>1400HA</b>	<b>1430 HZ</b>
<b>Density (kg/m<sup>3</sup>)</b>	2.73g/cm <sup>3</sup>		2.67g/cm <sup>3</sup>
<b>Mean Fiber Diameter (μm)</b>	3.0-5.0		
<b>Shot content (%)</b> φ ≥0.212mm	≤15	≤15	≤15
<b>Water Content (%)</b>	≤3	≤3	≤3
<b>Non-fiber Substances (weight %)</b>	≤35	≤35	≤35
<b>Chemical Composition (%)</b>			
<b>Al<sub>2</sub>O<sub>3</sub></b>	≥45	≥53	≥36

<b>SiO<sub>2</sub></b>	≥52	≥46	≥48
<b>ZrO<sub>2</sub> (%)</b>	-	≤0.2	≥15
<b>Fe<sub>2</sub>O<sub>3</sub></b>	≤0.8	≤0.1	≤0.1
<b>Al<sub>2</sub>O<sub>3</sub>+SiO<sub>2</sub></b>	≥97	≥99	-
<b>Al<sub>2</sub>O<sub>3</sub>+SiO<sub>2</sub>+ZrO<sub>2</sub></b>	-	-	≥99
<b>Packing</b>	braided bag		

## Raw Materials

Own raw material base; professional mining equipment; and stricter selection of raw materials.

The selected raw materials are placed into a rotary kiln to be fully calcined on site, which reduces the content of impurities and improves the purity.

The incoming raw materials are tested first, and then the qualified raw materials are stored in a designated warehouse to ensure their purity.

Controlling the content of impurities is an important step to ensure the heat resistance of ceramic fibers. High impurity content can cause the coarsening of crystal grains and the increase of linear shrinkage, which is the key reason for the deterioration of fiber performance and the reduction of its service life.

Through strict control at every step, we reduced the impurity content of raw materials to less than 1%. The CCEWOOL Ceramic Bulk Fiber is pure white, and its heat shrinkage rate is lower than 2% at high temperatures. It has stable quality and a longer service life.

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## Production Process

The fully automated batching system fully guarantees the stability of the raw material composition and improves the accuracy of raw material ratio.

With an imported high-speed centrifuge of which the speed reaches up to 11000r/min, the fiber forming rate becomes higher. The thickness of CCEWOOL ceramic fiber is uniform, and the content of slag ball is lower than 10%. The slag ball content is an important index that determines the thermal conductivity of fiber. The thermal conductivity of CCEWOOL ceramic bulk fiber is lower than 0.28w/m.k in a high-temp environment of 1000°C, so they have an excellent thermal insulation performance.

The condenser spreads cotton evenly to ensure the uniform density of CCEWOOL ceramic bulk fiber.

## Quality Control

Each shipment has a dedicated quality inspector, and a test report is provided prior to the departure of products from the factory to ensure the export quality of each shipment of CCEWOOL.

A third-party inspection (such as SGS, BV, etc.) is accepted.

Production is strictly in accordance with ISO9000 quality management system certification.

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Products are weighed before packaging to ensure that the actual weight of a single roll is greater than the theoretical weight.

The outer packaging of each carton is made of five layers of kraft paper, and the inner packaging is a plastic bag, suitable for long-distance transportation.

## **Application Performance**

### **Low volume weight**

As a kind of furnace lining material, CCEWOOL Ceramic Bulk Fiber can realize the light weight and high efficiency of the heating furnace, greatly reducing the load of the steel-structured furnaces and extending the service life of the furnace body.

### **Low heat capacity**

The heat capacity of CCEWOOL ceramic bulk fiber is only 1/9 of that of light heat-resistant linings and light clay ceramic bricks, which greatly reduces energy consumption during furnace temperature control. Especially for intermittently operated heating furnaces, the energy saving effects are significant.

### **Low thermal conductivity**

The thermal conductivity of CCEWOOL ceramic bulk fiber is lower than 0.28w/m.k in a high-temp environment of 1000°C, leading to the remarkable thermal insulation effects.

### **Thermochemical stability**

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CCEWOOL ceramic bulk fiber do not generate structural stress even if the temperature changes sharply. They do not peel off under the conditions of rapid cold and hot, and they can resist bending, twisting, and mechanical vibration. Therefore, in theory, they are not subject to any sudden temperature changes.

### **High thermal sensitivity**

The high thermal sensitivity of CCEWOOL ceramic bulk fiber lining makes it more suitable for the automatic control of industrial furnaces.

### **Sound insulation performance**

CCEWOOL ceramic bulk fiber is widely used in thermal insulation and sound insulation of construction industries and industrial furnaces with high noise to improve the quality of working and living environments.

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