

CCEWOOL® Vacuum Formed Ceramic Fiber

Description:

Temperature degree: 1260°C (2300°F), 1400°C (2550°F), 1430°C (2600°F)

CCEWOOL® classic series vacuum formed unshaped products in a variety of sizes and shapes, including tubular, conical, dome-shaped and box-shaped, most of which can be customized according to the customer's requirements, while some unshaped products will kept in stock for customers, such as casting cap and casing pipe for non-ferrous metal industry, as well as vacuum formed kiln eye for petrochemical industry. Vacuum forming hardener or refractory clay coating can be used to shaped products as a protective layer as per customers requirement.

Technical data and Size:

CCEWOOL® Vacuum Unshaped Ceramic Fiber				
Item	1260 STD	1260 HP	1400	1430 HZ
Classification Temperature	1050°C	1100°C	1200°C	1350°C
Density (kg/m3)	300, 320, 350			
Permanent Linear Shrinkage (%)				
@1000C,24hrs	2.8	-	-	-
@1100C,24hrs	-	2.8	2	-
@1200C,24hrs	-	-	2.6	1.9
@1300C,24hrs	-	-	-	2.5
Thermal Conductivity (W/(m·k))				
800C	0.13	0.13	0.12	0.16

1000C	0.19	0.19	0.2	0.2
Chemical Composition (%)				
Al₂O₃	46	47-49	52-55	39-40
Al₂O₃+SiO₂	97	99	99	-
ZrO₂	-	-	-	15-17
Al₂O₃+SiO₂+ZrO₂	-	-	-	99
Fe₂O₃	≤1.0	0.2	0.2	0.2
Na₂O+K₂O	≤0.5	0.2	0.2	0.2
Specifications(mm)	Manufactured based on drawing provided by customer			
Packing	Carton or Wooded Box			

Raw Materials

CCEWOOL ceramic fiber special-shaped parts are made of high-purity ceramic fiber cotton with the vacuum forming technology.

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 each step, we reduce the impurity content of the raw materials to less than 1%. The CCEWOOL ceramic fiber special-shaped parts we produce are pure white, and the linear shrinkage rate is lower than 2% at the hot surface temperature of 1200°C. The quality is more stable, and the service life is longer.

With the imported high-speed centrifuge of which the speed reaches up to 11000r/min, the fiber formation rate is higher. The thickness of the produced CCEWOOL ceramic fiber is uniform and even, and the slag ball content is lower than 10%, leading to better flatness of the CCEWOOL ceramic fiber special-shaped parts. The content of the slag ball is an important index that determines the thermal conductivity of the fiber, and the thermal conductivity of CCEWOOL ceramic fiber special-shaped part is only 0.112w/m.k at the hot surface temperature of 800°C.

Production Process

CCEWOOL ceramic fiber special-shaped parts own a fully automatic drying system, which can make the drying quicker and more thorough. The deep drying can be completed in 2 hours, and the drying is even. The products have good dryness and quality with the compressive strengths higher than 0.5MPa, so they are firm and tough.

CCEWOOL ceramic fiber special-shaped parts have a variety of sizes and shapes, including tube, cone, dome, and square box shapes. Most special-shaped products can be produced according to customer requirements, and some of them can also be stocked for customers.

CCEWOOL ceramic fiber special-shaped parts are accurate in size, so they are easy to be cut or machined, and the construction is very convenient, which can produce organic ceramic fiber special-shaped parts and inorganic ceramic fiber special-shaped parts.

According to customers' needs, vacuum forming hardener or refractory clay can be applied to the CCEWOOL ceramic fiber special-shaped parts to provide a protective layer.

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.

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

CCEWOOL ceramic fiber special-shaped parts are products for specific production links in certain industrial sectors. Each product needs to have a special mold made to accommodate its shape and size. According to the performance requirements of the product, different binders and additives can be selected for use.

CCEWOOL ceramic fiber special-shaped parts have low shrinkage in their temperature range and maintain high heat insulation, light weight, and impact resistance.

CCEWOOL ceramic fiber special-shaped parts are easy to be cut or machined. During use, the products have good wear resistance and peeling performance and are not wetted by most molten metals.