CCEWOOL Thermomax Inc.

CCEWOOL® Ceramic Fiber Board with Aluminum Foil

Description:

Temperature degree: 1050℃ (1922℉), 1260℃ (2300℉), 1400℃ (2550℉), 1430℃(2600℉)

CCEWOOL® Ceramic Fiber Board with Aluminum Foil is using special equipment and binder to bond the ceramic fiber blanket with alumina foil to form a composite products with integrated structure. The alumina foil is qualified with Europe standard, one-off adhesive and has good bond effect. One side, two sides and six sides aluminum foil are available.

Technical data and Size:

CCEWOOL® Ceramic Fiber Board with Aluminum Foil					
Classification temperature	1050 (1920℉)	1260 STD (2300℉)	1260 HP (2300℉)	1400 (2550℉)	1430 HZ (2600℉)
Operation Temp℃	950	1050	1100	1200	1350
Permanent Linear Change on Heating (%)					
@950C,24hrs	4	-	-	-	-
@1200C,24hrs	-	3	3	-	-
@1300C,24hrs	-	-	-	3	-
@1350C,24hrs	-	-	-	-	3
Thermal Conductivity (w/m.k)					
600℃	0.13	-	-	-	-

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800℃	0.2	0.13	0.13	0.12	0.16
1000℃	-	0.19	0.19	0.2	0.2
Rupture Strength (Mpa)					
Thickness≤25mm	0.5	0.5	0.5	0.5	0.5
Thickness＞25mm	0.2	0.2	0.2	0.2	0.2
Chemical Composition (%)					
Al2O3	37	46	46-49	52-55	39-40
Al2O3+SiO2	96	97	99	99	-
ZrO2	-	-	-	-	15-17
Al2O3+SiO2+ZrO2	-	-	-	-	99
Fe2O3	≤1.0	≤0.8	≤0.2	≤0.2	≤0.2
Na2O+K2O	≤0.8	≤0.5	≤0.2	≤0.2	≤0.2
Package	Carton box or pallet				

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Thickness (mm)	20.25.50.	80.100
Density (kg/m3)	280. 300. 320. 350	280. 300. 320
Size (mm)	1200*1000 or customized size	

Raw Materials

CCEWOOL ceramic fiber boards use high-purity ceramic fiber cotton as the raw material.

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 boards 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 boards. 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 fiberboard is only 0.112w/m.k at the hot surface temperature of 800°C.

Production Process

The fully automatic ceramic fiber production line of super large boards can produce large-size ceramic fiber boards with a specification of 1.2x2.4m.

The fully automatic ceramic fiber production line of ultra-thin boards can produce ultra-thin ceramic fiber boards with a thickness of 3-10mm.

The semi-automatic ceramic fiber board production line can produce ceramic fiber boards with a thickness of 50-100mm.

The CCEWOOL ceramic fiberboard production line has a fully automatic drying system, which can make drying quicker and more thorough. The deep drying is even and can be completed in 2 hours. The products have good dryness and quality with compressive and flexural strengths over 0.5MPa.

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The products produced by the fully automatic ceramic fiber board production lines are more stable than the ceramic fiber boards produced by the traditional vacuum forming process. They have good flatness and accurate sizes with the error +0.5mm.

CCEWOOL ceramic fiber boards can be cut and processed at will, and the construction is very convenient. They can be made into both organic ceramic fiber boards and inorganic ceramic fiber boards.

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

High chemical purity in products:

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The content of high-temperature oxides, such as Al2O3 and SiO2, reaches 97-99%, thus ensuring the heat resistance of products. The maximum operational temperature of CCEWOOL ceramic fiberboard can reach 1600 °C at the temperature grade of 1260-1600 °C.

CCEWOOL ceramic fiber boards can not only replace calcium silicate boards as the backing material of furnace walls, but also can be directly used on the hot surface of furnace walls, giving which excellent wind erosion resistance.

Low thermal conductivity and good thermal insulation effects:

Compared with traditional diatomaceous earth bricks, calcium silicate boards and other composite silicate backing materials, CCEWOOL ceramic fiber boards have lower thermal conductivity, better thermal insulation, and more significant energy saving effects.

High strength and easy to use:

The compressive strength and flexural strength of CCEWOOL ceramic fiberboards are both higher than 0.5MPa, and they are a non-brittle material, so they fully meet the requirements of hard backing materials. They can completely replace blankets, felts, and other backing materials of the same kind in insulation projects with high strength requirements.

CCEWOOL ceramic fiberboards' accurate geometric dimensions allow them to be cut and processed at will, and the construction is very convenient. They have solved the problems of brittleness, fragility, and high construction damage rate of calcium silicate boards and greatly shorten the construction period and reduce the construction costs.