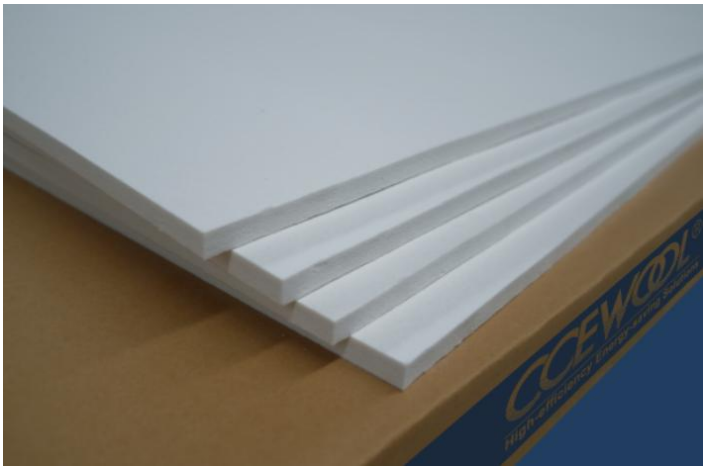
CCEWOOL® Bio Soluble Fiber Board



Classification Temperature: 1200°C (2192°F), 1300°C (2372°F)

Chemical Composition: Silicon, Calcium, Magnesium (AES)

CCEWOOL® Bio Soluble Fiber Board is a high-performance refractory insulation board developed for customized Fabrication insulation and protection structures. It is made from our own high-purity bio-soluble fiber bulk combined with selected organic and inorganic binders and formed through a vacuum-forming process. The board features a uniform, dense internal structure and stable bulk density, meeting the requirements of high-temperature equipment for structural integrity, installation accuracy, and system compatibility.

The AES (alkaline earth silicate) fibers used in CCEWOOL® Bio Soluble Fiber Board are low-biopersistence fibers with increased solubility in physiological fluids and reduced long-term retention in the lungs, making them a safer alternative to conventional aluminosilicate fibers. These fibers have undergone relevant biosolubility testing and are suitable for high-temperature applications with higher occupational health, safety, and environmental compliance requirements.

The product is developed specifically around Fabrication customization requirements, rather than simply serving as a standard board for secondary processing. It can be customized to meet different equipment structures, installation methods, and engineering requirements for dimensions, thicknesses, holes, grooves, and complex shapes. Its stable structure and good processing consistency make it particularly suitable for customized insulation panels, structural separators, and shaped high-temperature components.

CCEWOOL® Bio Soluble Fiber Board provides good thermal shock resistance and can be used in direct-flame applications. It resists cracking and performance degradation under repeated heating and cooling. The board also maintains structural integrity under high-velocity gas flow, mechanical vibration, and certain erosive conditions. If exposed to water, steam, or oil during installation or service, its thermal and physical properties can recover after thorough drying.

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Combining the safety advantages of bio-soluble fibers with strong Fabrication capability, CCEWOOL® Bio Soluble Fiber Board is widely used in industrial furnaces and ovens, refractory backup insulation, boilers, hot-air ducts, chimneys, and other high-temperature equipment, providing a safer, stable, and easy-to-integrate insulation solution.

Characteristics:

Rigid, self-supporting structure;
Extremely low thermal conductivity;
Low heat storage and low heat loss;
Suitable as backup insulation behind refractory bricks and castables;
High-temperature stability;
Excellent thermal shock resistance;
Suitable for direct flame contact;
Resistant to high-velocity gas flow and erosion;
Good chemical corrosion resistance;
Non-reactive with molten aluminum;
Lightweight structure;
Uniform structure and easy machining;
Easy to install.

Applications:

Industrial Furnaces & Kilns

Hot-face and backup insulation for industrial furnaces, kilns, and ovens;
Refractory linings and backup insulation layers;
Combustion chamber linings;
Heat-treatment furnaces and related equipment.

Backup & Composite Insulation

Backup insulation behind refractory bricks and insulating fire bricks;
Backup insulation behind monolithic refractories such as ramming mixes and castables;
Rigid support boards in blanket lining systems;
Secondary insulation behind refractory brick or castable linings.

Boilers & Piping Systems

Linings for boilers and industrial heaters;

Flue and chimney linings;

Hot-gas duct and high-temperature air-duct linings.

Non-Ferrous Metals & Molten Metal Applications

Hot-top insulation for aluminum ingot molds;

Covers for molten metal troughs;

Insulation areas in direct contact with molten aluminum.

Sealing & Structural Insulation

High-temperature gaskets and seals;

Expansion joint insulation;

Thermal protection shields for personal protection.

Equipment & OEM Applications

OEM industrial furnaces, stoves, and ovens;

Domestic and commercial appliances, including:

- Ovens
- Water heaters
- Thermal storage heaters

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CCEWOOL® Bio Soluble Fiber Board		
Classification Temperature (°C)	1200°C(2192°F)	1300°C(2372°F)
Color	Light Bluish	Light Bluish
Density (kg/m³)	300	300
Modules of Rupture (MPa)	≥0.25	≥0.25
Compressive Strength (MPa, 10% relative deformation)	0.15	0.15
Loss of Ignition (%)	≤7	≤7
Permanent Linear Shrinkage (%)	1100°C x 24h ≤2.0	1260°C x 24h ≤2.0
Thermal Conductivity (W/m·K)		

200°C	0.05	0.05
400°C	0.08	0.07
600°C	0.1	0.1
800°C	0.12	0.11
1000°C	0.14	0.14

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