CCEWOOL® Ceramic Fiber Module

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

Chemical Composition: Alumina, Silica, (Zirconia)

CCEWOOL® Ceramic Fiber Module is manufactured from high-quality spun refractory ceramic fiber blanket. The blanket is mechanically pre-compressed, folded into shape, and fitted with an anchoring system according to furnace lining design requirements. The modules can be directly fixed to anchors on the furnace shell to form a continuous and integrated high-temperature insulation lining.

During installation, the modules are further compressed and secured to the furnace shell. Once the restraints are removed, the fibers recover through their natural resilience, creating tight compression joints between adjacent modules. This structure helps compensate for lining shrinkage during high-temperature service, improving sealing, structural stability, and long-term reliability while also reducing installation time and maintenance requirements.

CCEWOOL® Ceramic Fiber Module is available in several standard configurations and also supports Fabrication customization for different furnace designs and installation methods. Module dimensions, thickness, density, folding pattern, and anchoring systems can be customized according to furnace lining designs or engineering drawings.

With excellent thermal insulation, structural integrity, and installation efficiency, CCEWOOL® Ceramic Fiber Module is widely used in high-temperature industrial furnace lining systems and supports lightweight, energy-efficient, and long-service-life lining designs.

Module Types

S-Fold Module

The S-Fold Module uses a continuous corrugated folding structure with uniform fiber arrangement and strong resilience. It effectively compensates for thermal shrinkage and is suitable for large furnace lining areas.

U-Fold Module

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The U-Fold Module uses a U-shaped folding configuration that maintains balanced fiber arrangement and good structural stability, making it suitable for general furnace lining applications.

L-Type Module

The L-Type Module is based on the U-Fold structure with an adjusted fiber orientation, making it more suitable for furnace edges, corners, and transition areas.

Stack Module

The Stack Module is formed by stacking ceramic fiber blanket layers in a controlled arrangement, providing uniform fiber orientation and good structural integrity for lining areas requiring higher installation stability.

Monolithic Formed Module

The Monolithic Formed Module is produced in one piece through a continuous automated process without layered or assembled construction. Its uniform, continuous fiber structure and high compaction density provide excellent structural strength and long-term stability for demanding high-temperature lining applications.

Characteristics:

Excellent chemical and thermal stability;
Low thermal conductivity and low heat capacity;
Multiple anchoring system designs;
Strong expansion compensation capability;
Excellent mechanical flexibility;
Lightweight structure;
Excellent thermal shock resistance;
Ready for operation after installation;
Customizable Fabrication modules.

Applications:

Steel Industry

Linings and insulation for reheating furnaces, continuous annealing furnaces, roller hearth furnaces, car bottom furnaces, rotary furnaces, ladle covers, holding pit covers, and pipeline systems.

Aluminum Industry

Insulation for holding furnaces and covers, discharge furnaces, homogenizing furnaces, melting furnaces, and high-temperature piping systems.

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Petrochemical & Oil and Gas Industry

Process heaters, reformers, ethylene furnaces, pyrolysis furnaces, tubular heaters, and related furnace and piping systems.

Power Generation & Utilities

Industrial boilers, incinerators, combustion chambers, thermal oxidizers, waste heat recovery systems, and boiler piping insulation.

Foundry Industry

Linings for melting furnaces, holding furnaces, and other high-temperature equipment.

Ceramics & Glass Industry

High-temperature insulation for tunnel kilns, intermittent kilns, Hoffman kilns, technical ceramic firing kilns, and glass furnaces.

Industrial Heating Equipment

Industrial heaters, furnace linings, and high-temperature sealing structures.

Flue & Piping Systems

Insulation and protection for chimneys, duct linings, pipelines, and high-temperature conveying systems.

Thermal Energy Storage Systems

Insulation linings for high-temperature thermal storage equipment and related furnace structures.

TDS

CCEWOOL® Ceramic Fiber Module				
Item	1260S	1260HPS	1400	1430HZ
Operation Temp	1050°C(1922°F)	1100°C(2012°F)	1200°C(2192°F)	1350°C(2462°F)
Density	160-220 kg/m3			
Linear Shrinkage EN1094-1 (%)				
®950°C, 24hrs	-	-	-	-
®1000°C,24hrs	1.5	1.5	-	-
®1100°C,24hrs	2.5	2	1.5	-
®1200°C,24hrs	3	2.5	2	1
®1300°C,24hs	-	-	3	2
®1400°C,24hrs	-	-	-	3

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Thermal Conductivity W/(m·k)				
400°C	0.10	0.10	0.10	0.10
600°C	0.18	0.17	0.16	0.15
800°C	0.2	0.20	0.20	0.9
1000°C	0.27	0.26	0.26	0.26
Chemical Composition（%）				
Al2O3	≥43	≥44	≥52	≥35
SiO2	≥54	≥55	≥47	≥49
ZrO2	-	-	-	≥15
Specification （mm）	L×W: 300×300 (12”×12”); 450×300 (18”×12”); 600×300 (24”×12”)			
	H: 100;150;200;250;300 (4”,6”,8”,10”,12”)			
Package	Carton Box or Pallet			

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