

CCEWOOL® Ceramic Fiber Blanket



Classification Temperature: 1100°C (2012°F), 1260°C (2300°F), 1400°C (2552°F), 1430°C (2600°F)

Chemical Composition: Alumina, Silica, (Zirconia)

CCEWOOL® Ceramic Fiber Blanket is manufactured from high-purity spun ceramic fibers using our self-developed double-sided internal needle-punching process. It offers excellent handling strength, low heat storage, and good thermal shock resistance, making it

suitable for a wide range of high-temperature insulation applications.

The product contains no organic binders and produces no smoke or odor during initial heating. Under long-term high-temperature service and repeated thermal cycling, CCEWOOL® Ceramic Fiber Blanket maintains stable structural integrity and thermal insulation performance. It is available in different sizes, temperature grades, and densities to meet diverse refractory and thermal insulation requirements.

With its stable fiber structure, good strength, and consistent quality, CCEWOOL® Ceramic Fiber Blanket is also well suited as a base material for Fabrication processing. It can be further processed into custom-shaped components, modules, composite insulation structures, and other customized high-temperature components, helping meet the requirements of complex equipment structures, installation adaptability, and system integration.

Characteristics:

- Low thermal conductivity;
- High tensile strength;
- Excellent thermal shock resistance;
- Excellent thermal insulation performance;
- Lightweight;
- Inorganic;

Excellent corrosion resistance;
Binder-free;
Asbestos-free;
Excellent machining and cutting performance;
Easy to install;
High refractoriness;
Good sound insulation performance.

Applications:

Heat-treatment and annealing furnaces;
Furnace door linings and seals;
Furnace and kiln repair;
Reusable insulation for steam and gas turbines;
Reformers and pyrolysis furnaces;
Pipe seals, gaskets, and expansion joints;
Pipeline wrap insulation;
Backup insulation for kilns and furnaces;
Crude oil heater linings;
Hot-face furnace lining repair;
Reheating furnaces;
Boiler insulation;
Boiler doors;
Reusable turbine covers;
Kiln car insulation and sealing;
Continuous and intermittent kilns;
Insulation for commercial dryers and hoods;
Veneer insulation over existing refractory linings;
Vacuum furnaces;
Glass furnace roof insulation;
Fire protection systems;
Raw material for modules and folded modules;
High-temperature gaskets.

TDS

CCEWOOL® Ceramic Fiber Blanket					
Classification	1100DB	1260S	1260HPS	1400LZ	1430HZ
Classification temperature	1100°C (2012°F)	1260°C (2300°F)	1260°C (2300°F)	1400°C (2550°F)	1430°C (2600°F)
Operation Temp	982°C (1800°F)	1050°C (1922°F)	1100°C (2012°F)	1200°C (2192°F)	1350°C (2462°F)
Density (kg/m3)	96/ 128/ 160 (6,8,10lb/ft3)				
Shot Content(%)	≤15	≤15	≤15	≤15	≤12
Color	White	White	White	White	White
Chemical Composition of refractory ceramic blanket (%)					
Al ₂ O ₃	≥43	≥43	≥44	≥44	≥35
SiO ₂	≥52	≥54	≥55	≥50	≥49
ZrO ₂	-	-	-	≥5	≥15
Permanent Change on Heating (%), EN1094-1 After 24 hours					
@950°C (1742°F)	≤-3	-	-	-	-
@1000°C (1832°F)	-	1.5	1.5	-	-
@1100°C (2012°F)	-	2.5	2.2	1.5	-
@1200°C (2192°F)	-	3	3	2	1
@1300°C (2372°F)	-	-	-	3	2
@1400°C (2552°F)	-	-	-	-	3
Tensile Strength(Kg/m3), EN1094-1 KPa					
64kg/m3(4lb/ft3)	28	35	45	45	-
96kg/m3(6lb/ft3)	45	55	65	65	65
128kg/m3(8lb/ft3)	70	75	85	85	85
160kg/m3(10lb/ft3)	-	110	125	125	125
Heat Conductive Co-efficient W/(m·k)(128kg/m3)					
200°C (392°F)	0.07	0.06	0.06	0.06	0.06
400°C (752°F)	0.12	0.1	0.1	0.1	0.1
600°C (1112°F)	0.2	0.18	0.17	0.16	0.15
800°C (1472°F)	0.35	0.2	0.2	0.2	0.19
1000°C (1832°F)	-	0.27	0.26	0.26	0.26

Thickness	Density (kg/m3)				Length	Width
mm	64	96	128	160	mm	mm
6	-	-	○	○	7200	610, 1220
13	-	√	√	○	14640	
19	-	√	√	○	9760	
25	○	√	√	√	7320	
38	○	√	√	√	4880	
50	○	√	√	-	3660	

Note: (√) is standard size, Custom size are available

CCEWOOL® Water-Repellent Ceramic Fiber Blanket



Classification Temperature: 1100°C (2012°F),
1260°C (2300°F)

Chemical Composition: Alumina, Silica
CCEWOOL® Water-Repellent Ceramic Fiber Blanket is a high-performance refractory ceramic fiber blanket treated for water repellency and specifically designed for high-temperature insulation systems exposed to humid environments or condensation. During forming, the blanket is produced using our self-developed double-sided internal

needle-punching process to strengthen fiber interlocking and improve overall structural stability. The surface is then treated with a solvent-based, high-temperature nano water-repellent coating, providing uniform and durable water repellency throughout the fiber structure without compromising the product's refractory performance.

In humid or condensation-prone environments, CCEWOOL® Water-Repellent Ceramic Fiber Blanket helps reduce moisture penetration and its impact on thermal insulation performance, minimizing performance degradation and maintenance requirements caused by moisture exposure. While maintaining high-temperature resistance, it improves the long-term stability of the overall insulation system.

Characteristics:

Excellent water repellency;
High tensile strength;
Excellent thermal shock resistance;
Lightweight with low heat storage;
Excellent chemical stability;
Excellent thermal stability;
Low thermal conductivity;
Excellent thermal insulation performance;
Excellent sound absorption;
Compatible with multiple composite insulation structures.

Applications:

Insulation for jacketed steel beams and ventilation ducts;
Insulation for cables and wires in wall penetrations and conduits;
Fire protection for marine decks;
Acoustic insulation for ships and vehicles;
Fire-resistant and thermal insulation for walls, bulkheads, and exhaust systems in buildings and marine applications;
High-temperature flexible duct insulation;
Steam-tracing insulation;
Removable insulation covers for casting molds and equipment.

TDS

CCEWOOL® Water-Repellent Ceramic Fiber Blanket		
Classification temperature	1100°C (2012°F)	1260°C (2300°F)

Operation Temp(°C)	982 (1800°F)	1050 (1922°F)
Density (kg/m3)	64/ 96/ 128(4,6,8lb/ft3)	
Water content(%)	≤1	
Hydrophobicity(%)	≥99	
Shot Content(%)	≤15	≤15
Color	White	
Chemical Composition of refractory ceramic blanket (%)		
Al2O3	≥43	≥44
SiO2	≥52	≥52
ZrO2	-	-
Permanent Change on Heating (%), EN1094-1 After 24 hours		
950°C (1742°F)	≤-3	-
1000°C (1832°F)	-	1.5
1100°C (2012°F)	-	2.5
1200°C (2192°F)	-	3
1300°C (2372°F)	-	-
Tensile Strength(Kg/m3), EN1094-1 KPa		
64kg/m3(4lb/ft3)	28KPa min.	35KPa min.
96kg/m3(6lb/ft3)	45KPa min.	55KPa min.
128kg/m3(8lb/ft3)	70KPa min.	75KPa min.
Heat Conductive Co-efficient W/(m·k)(128kg/m3)		
200°C (392°F)	0.07	0.07
400°C (752°F)	0.12	0.12
600°C (1112 °F)	0.2	0.2
800°C (1472°F)	0.35	0.3
1000°C (1832°F)	-	0.45

Thickness	Density (kg/m3)				Length	Width
mm	64	96	128	160	mm	mm
6	-	-	○	○	7200	610, 1220

13	-	√	√	○	14640	
19	-	√	√	○	9760	
25	○	√	√	√	7320	
38	○	√	√	√	4880	
50	○	√	√	-	3660	

Note: (√) is standard size, Custom size are available

CCEWOOL® Ultra-Thin Ceramic Fiber Blanket for Fabrication



Classification Temperature: 1260°C (2300°F),
1400°C (2552°F), 1430°C (2600°F)

Chemical Composition: Alumina, Silica, (Zirconia)

CCEWOOL® Ultra-Thin Ceramic Fiber Blanket for Fabrication is a refractory ceramic fiber insulation material specifically designed for space-constrained and precision insulation applications, with a minimum thickness of 6 mm. Despite its ultra-thin profile, the blanket maintains stable thermal insulation performance and good structural integrity, making it well suited for

compact and lightweight high-temperature equipment designs.

Thanks to its uniform fiber structure and good flexibility, CCEWOOL® Ultra-Thin Ceramic Fiber Blanket for Fabrication is easy to cut, wrap, bend, and form for multilayer insulation systems, sealing structures, and precision furnace lining applications. It can closely conform to curved surfaces, narrow gaps, and complex geometries, helping reduce installation gaps and improve insulation continuity.

With stable fiber quality, good flexibility, and dimensional consistency, the product is also an excellent base material for further Fabrication processing. It can be converted into custom-shaped components, composite insulation structures, and other customized high-temperature parts, better meeting the processing requirements of complex equipment and precision thermal insulation systems.

CCEWOOL® Ultra-Thin Ceramic Fiber Blanket for Fabrication is particularly suitable for high-temperature applications where space efficiency, installation precision, lightweight design, and reliable insulation performance are essential.

Characteristics:

Lightweight, ultra-thin, and flexible;
Excellent conformability to complex structures;
Excellent cutting and processing performance;
Excellent high-temperature stability;
Low thermal conductivity;
Low heat storage;
Good chemical corrosion resistance;
Binder-free;
Asbestos-free;
High tensile strength;
Excellent thermal shock resistance;
Easy to install.

Applications:

Localized insulation for precision components such as sensors, electrical control boxes, and inspection openings;
Flexible wrap insulation for metal piping in engines, boilers, and exhaust systems;
Insulation linings for fireplaces, baking ovens, sintering furnaces, and other lightweight heating equipment;
Ultra-thin thermal protection layers for aerospace, electronics, and lightweight equipment;
High-efficiency insulation for industrial furnace shells, heaters, reactors, and drying equipment;
Insulation linings for casting molds and pouring systems.

TDS

CCEWOOL® Ultrathin Ceramic Fibre Blanket for Fabrication				
Classification	1260S	1260HPS	1400LZ	1430HZ
Classification temperature	1260°C(2300°F)	1260°C(2300°F)	1400°C(2550°F)	1430°C(2600°F)

Operation Temp	1050°C(1922°F)	1100°C(2012°F)	1200°C(2192°F)	1350°C(2462°F)
Density (kg/m3)	128/ 160 (8,10lb/ft3)			
Shot Content(%)	≤15	≤15	≤15	≤12
Color	White	White	White	White
Chemical Composition of refractory ceramic blanket (%)				
Al ₂ O ₃	≥43	≥44	≥44	≥35
SiO ₂	≥54	≥55	≥50	≥49
ZrO ₂	-	-	≥5	≥15
Permanent Change on Heating (%), EN1094-1 After 24 hours				
@950°C(1742°F)	-	-	-	-
@1000°C(1832°F)	1.5	1.5	-	-
@1100°C(2012°F)	2.5	2.2	1.5	-
@1200°C(2192°F)	3	3	2	1
@1300°C(2372°F)	-	-	3	2
@1400°C(2552°F)	-	-	-	3
Tensile Strength(Kg/m3), EN1094-1 KPa				
64kg/m3(4lb/ft3)	35	45	45	-
96kg/m3(6lb/ft3)	55	65	65	65
128kg/m3(8lb/ft3)	75	85	85	85
160kg/m3(10lb/ft3)	110	125	125	125
Heat Conductive Co-efficient W/(m·k)(128kg/m3)				
200°C(392°F)	0.06	0.06	0.06	0.06
400°C(752°F)	0.1	0.1	0.1	0.1
600°C(1112°F)	0.18	0.17	0.16	0.15
800°C(1472°F)	0.2	0.2	0.2	0.19
1000°C(1832°F)	0.27	0.26	0.26	0.26

Thickness	Density (kg/m3)				Length	Width
mm	64	96	128	160	mm	mm
6	-	-	○	○	7200	610, 1220

Note: (√) is standard size, Custom size are available

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CCEWOOL® Ceramic Fiber Blanket with Aluminum Foil for Fabrication



Classification Temperature: 1260°C (2300°F),
1400°C (2552°F), 1430°C (2600°F)

Chemical Composition: Alumina, Silica,
(Zirconia)

CCEWOOL® Ceramic Fiber Blanket with Aluminum Foil for Fabrication is a high-temperature composite insulation material developed for downstream processing and customized thermal insulation structures. Based on a stable and uniform ceramic fiber blanket laminated with high-quality aluminum foil, the product is designed to meet Fabrication

requirements for material consistency, strength, and surface integrity during wrapping, custom cutting, composite assembly, and further processing.

The blanket is manufactured using CCEWOOL®'s self-developed double-sided internal needle-punching process, creating a dense and uniform fiber structure with tensile strength exceeding 75 kPa. This helps the material resist delamination, tearing, and deformation during cutting, bending, wrapping, fitting, and subsequent assembly, making it well suited as a base material for customized Fabrication components.

The facing uses 0.2 mm European-standard aluminum foil, with an M1 fire classification and an applicable temperature range of -40°C to 250°C. The aluminum foil layer provides radiant heat reflection, moisture resistance, and surface protection while also helping maintain surface integrity and structural stability during downstream processing. This makes the product particularly suitable for insulation components requiring a durable protective outer surface.

To accommodate different processing methods and structural designs, the product is available with single-sided, double-sided, or six-sided full aluminum foil facing. It can be further fabricated into pipe insulation wraps, duct insulation components, equipment casing insulation, custom-shaped thermal covers, and other customized high-temperature insulation components.

For applications requiring a balance of thermal insulation, surface protection, and efficient downstream processing, CCEWOOL® Ceramic Fiber Blanket with Aluminum Foil for Fabrication provides a stable and reliable material solution.

Characteristics:

Excellent chemical corrosion resistance;
Stable structure at high temperatures;
Low heat storage;
Excellent thermal shock resistance;
Lightweight and flexible with excellent thermal insulation performance;
Improved abrasion resistance;
Excellent sound absorption.

Applications:

HVAC and ventilation duct insulation;
Thermal insulation for furnace and equipment casings;
External insulation for hot-air ducts;
Cable trays and conduits;
Railway tank cars;
Steam pipes, hot-oil pipelines, and exhaust piping;
Marine bulkheads and decks;
Expansion joints;
Structural steel protection;
Fire-door seals;
Chimney linings;
Ceiling air outlets;
Electrical circuit protection;
Fire protection for marine engine rooms and exhaust stacks;
High-temperature insulation for commercial and industrial exhaust ducting;
High-temperature ventilation ducts, kitchen exhaust hoods, supply-air and exhaust vents;
Electrical conduits and wire protection;
Automotive engine compartment insulation;

Thermal insulation for battery energy storage cabinets.

TDS

CCEWOOL® Ceramic Fiber Blanket with Aluminum Foil for Fabrication				
Classification temperature	1260°C(2300°F)	1260°C(2300°F)	1400°C(2550°F)	1430°C(2600°F)
Operation Temp(°C)	1050 (1922°F)	1100 (2012°F)	1200°C(2192°F)	1350°C(2462°F)
Density (kg/m3)	64/ 96/ 128/160(4,6,8,10lb/ft3)			
Aluminum foil thickness (mm)	0.12			
Chemical Composition of refractory ceramic blanket (%)				
Al2O3	≥44	≥44	≥44	≥35
SiO2	≥52	≥55	≥50	≥49
ZrO2	-	-	≥5	≥15
Permanent Change on Heating (%), EN1094-1 After 24 hours				
®1000°C(1832°F)	1.5	1.5	-	-
®1100°C(2012°F)	2.5	2.2	1.5	-
®1200°C(2192°F)	3	3	2	1
®1300°C(2372°F)	-	-	3	2
®1400°C(2552°F)	-	-	-	3
Tensile Strength(Kg/m3), EN1094-1 KPa				
64kg/m3(4lb/ft3)	35	45	45	-
96kg/m3(6lb/ft3)	55	65	65	65
128kg/m3(8lb/ft3)	75	85	85	85
160kg/m3(10lb/ft3)	110	125	125	125
Heat Conductive Co-efficient W/(m·k)(128kg/m3)				
200°C(392°F)	0.07	0.07	0.07	0.06
400°C(752°F)	0.12	0.12	0.12	0.11
600°C(1112°F)	0.2	0.2	0.2	0.16
800°C(1472°F)	0.3	0.3	0.3	0.23
1000°C(1832°F)	0.45	0.4	0.43	0.35

CCEWOOL® PUREWOOL® Ceramic Fiber Blanket for Fabrication



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

Chemical Composition: Alumina, Silica,
(Zirconia)

CCEWOOL® PUREWOOL® Ceramic
Fiber Blanket for Fabrication is an
engineering-grade, high-purity ceramic
fiber material developed for
downstream Fabrication processing

and customized high-temperature insulation structures. The product is manufactured from high-purity synthetic alumina, zirconia, and silica raw materials using strict raw material control and a fully automated batching system. Its extremely low impurity content results in whiter fibers, a more uniform structure, and a more stable and reliable material base for subsequent Fabrication processing.

A specialized spinning process produces longer fibers, which are then cross-locked through CCEWOOL®'s self-developed double-sided internal needle-punching process to create a denser fiber network with tensile strength exceeding 85 kPa. This stable fiber structure not only improves thermal stability, thermal shock resistance, and insulation performance at elevated temperatures, but also helps the blanket maintain excellent integrity during cutting, wrapping, fitting, laminating, and assembly, making it particularly suitable for precision Fabrication processing.

With its high-purity raw material system and consistent fiber quality, CCEWOOL® PUREWOOL® Ceramic Fiber Blanket for Fabrication can be further processed into custom-shaped Fabrication components, modules, composite insulation structures, and other customized high-temperature parts. It is designed to meet the higher requirements of complex equipment geometries, precision insulation zoning, and integrated thermal insulation systems.

The product is available in a range of thicknesses, widths, and densities to meet the processing requirements of different furnace types, equipment locations, and customized insulation components. It is an ideal Fabrication-grade high-temperature insulation material combining high purity, stable performance, and excellent processing adaptability.

Characteristics:

Stable high-temperature performance;
High tensile strength;
Excellent thermal insulation performance;
Excellent thermal shock resistance;
High durability;
Excellent handling strength;
Excellent hot strength;
Low thermal conductivity;
Low heat storage;
Lightweight and energy-efficient;
Resistant to mechanical stress;
High resilience;
Excellent chemical stability;
Efficient sound absorption;
Excellent fire resistance;
Easy to cut and install;
Binder-free.

Applications:

Industrial furnace wall linings;
Backup insulation;
Insulation and sealing for furnace expansion joints, doors, and roofs;
High-temperature pipeline insulation;
Raw material for modules and folded modules;
Heat-treatment and annealing furnaces;
Furnace door linings and seals;
Soaking furnace covers and seals;
Hot-face furnace lining repair;
Reheating furnaces;
Ladle covers;
Power generation equipment;

Boiler insulation;
Boiler doors;
Reusable turbine covers;
Insulation for commercial dryers and covers;
Veneer insulation over existing refractory linings;
Stress-relieving furnaces;
Glass furnace roof insulation;
Fire protection.

TDS

CCEWOOL® PUREWOOL® Ceramic Fiber Blanket for Fabrication		
Classification temperature	1260°C(2300°F)	1430°C(2600°F)
Operation Temp(°C)(°F)	1100°C(2012°F)	1350°C(2462°F)
Density (kg/m3)	96/ 128/ 160 （6,8,10lb/ft3）	
Shot Content(%)	≤12	
Color	White	
Chemical Composition of refractory ceramic blanket (%)		
Al2O3	≥44	≥35
SiO2	≥55	≥49
ZrO2	-	≥15
Permanent Change on Heating (%), EN1094-1 After 24 hours		
950°C (1742°F)	-	-
1000°C (1832°F)	1.5	-
1100°C (2012°F)	2	-
1200°C (2192°F)	2.7	1
1300°C (2372°F)	5.5	2
1400°C (2552°F)		3
Tensile Strength(Kg/m3), EN1094-1 KPa		
64kg/m3(4lb/ft3)	-	-

96kg/m ³ (6lb/ft ³)	60	60
128kg/m ³ (8lb/ft ³)	85	85
160kg/m ³ (10lb/ft ³)	125	125
Heat Conductive Co-efficient W/(m·k)(128kg/m ³)		
200°C (392°F)	0.07	0.06
400°C (752°F)	0.10	0.10
600°C (1112°F)	0.17	0.15
800°C (1472°F)	0.20	0.19
1000°C (1832°F)	0.26	0.26