

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.

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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/m3(6lb/ft3)	60	60
128kg/m3(8lb/ft3)	85	85
160kg/m3(10lb/ft3)	125	125
Heat Conductive Co-efficient W/(m·k)(128kg/m3)		
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