CCEWOOL Thermomax Inc.
salesusa@ccewool.com
www.ccewool.com

CCEWOOL® Polycrystalline Wool Fiber Blanket

Temperature Grade 1600℃ (2912℉)
CCEWOOL® Polycrystalline Wool Fiber Blanket is an ideal choice for high-temperature and chemically corrosive applications.
CCEWOOL® Polycrystalline Wool Fiber Blanket is produced using sol-gel technology to create fibers of specific dimensions, which are then formed into blankets through a double-sided needling process. The product exhibits excellent strength and flexibility. It is a refractory fiber that exists in the form of mullite crystal phases and maintains its outstanding dimensional stability and elasticity even at high temperatures. The introduction of polycrystalline fiber blankets has effectively filled the gap in the field of fibers for long-term use at temperatures ranging from 1350°C (2462℉) to 1500°C (2732℉).
Polycrystalline fiber blankets are more resistant to acids and alkalis than refractory ceramic fibers and perform exceptionally well in high-temperature environments subjected to oxidation, reduction, and chemical corrosion.
CCEWOOL® Polycrystalline Wool Fiber Blanket is virtually free of shot, resulting in extremely low thermal conductivity and excellent thermal insulation properties.

Characteristics:
Almost no shot, white color, and high purity of raw materials;
Good high temperature resistance and good high-temperature stability;
Extremely low thermal conductivity, low linear shrinkage after heating;
Stable chemical properties and strong corrosion resistance;
Uniform fiber diameter and high tensile strength;
Excellent thermal stability and thermal shock resistance;
Excellent chemical stability;
High tensile strength;
Low thermal conductivity;
Low heat capacity;
High thermal reflectance;
Excellent thermal strength.

Application:
Hot surface lining insulation of high temperature industrial furnace;
Wrapping of burner block;
Expansion joint;

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High temperature gasket in smelting furnace;
Insulation of boilers, tanks, and furnaces in the power generation industry;
Insulation of engines, mufflers, and exhaust systems in the automotive industry;
Insulation for the shipbuilding industry, ships, and oil drilling platforms;
New energy industry, battery fireproof covers, etc.

TDS

CCEWOOL® Polycrystalline Wool Fiber Blanket	
Classification Temperature(℃)(℉)	1600℃(2912℉)
Continuous Temperature Use Limit (℃)(℉)	1500℃(2732℉)
Chemical Composition (%)	
Al2O3（%）	71-73
SiO2（%）	27-29
Leachable Chlorides	Trace
Color	White
Tensile Strength(kPa)	≥80
Permanent Linear Shrinkage (%)	1400℃ x24h<1.0
Thermal Conductivity (W/m-K)	
400℃	0.09
600℃	0.16
800℃	0.22
1000℃	0.28
1200℃	0.36
1400℃	0.45

Specifications	
Thickness	3-25mm (0.12"-1")
Width	610mm (24")
Length	7200mm, 10800mm, 14400mm, etc., can be customized
Density	96kg/m3 (6lb/ft3)
	128kg/m3 (8lb/ft3)
	160kg/m3 (10lb/ft3)

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CCEWOOL® Ultra-thin Polycrystalline Wool Fiber Blanket 3mm

Temperature Grade 1600℃ (2912℉)
CCEWOOL® Ultra-thin Polycrystalline Wool Fiber Blanket 3mm revolutionizes thermal protection and safety for new energy vehicle batteries.
In EV battery systems and high-temperature equipment, insulation materials are under more pressure than ever - they must deliver exceptional thermal efficiency in tight, complex spaces while withstanding impact, vibration, and prolonged high heat.
CCEWOOL® Ultra-thin PCW Blanket has pushed beyond the limits to create a 3mm Polycrystalline Fiber Blanket engineered for the most demanding applications:

- Precision Heat Shield - Fits seamlessly between battery cells to block thermal transfer.
- Thermal Runaway Containment - Lines module walls to prevent heat spread.
- Lightweight & Flexible - Perfect for complex, space-limited designs.
- Extreme Stability - Withstands frequent cycling and sudden high-temperature shocks.

Now available in a 3 - 25mm full thickness range, CCEWOOL® Polycrystalline Fiber Blankets meet the needs of EV systems, precision components, and advanced high-temperature equipment. This 3mm innovation is more than a product - it's a leap forward in high-end insulation technology.

Characteristics:
Ultra-Thin High Performance,
Ultra-Low Thermal Conductivity,
High Strength & Flexibility,
Excellent Thermal Stability,
Chemical Stability.

Application:
EV Battery Systems
Cell-to-Cell Thermal Barriers: At just 3mm thickness, creates an effective heat shield in compact spaces, preventing thermal runaway propagation.
Module Wall Protection: Serves as a protective layer to stop heat from spreading when localized battery cells overheat.
Battery Pack Bottom Insulation: Enhances vehicle safety by resisting external impact or thermal radiation.

TDS

CCEWOOL® Ultra-thin PCW Blanket 3mm	
Classification Temperature	1600℃(2912℉)

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Continuous Temperature Use Limit	1500℃(2732℉)
Chemical Composition (%)	
Al2O3 (%)	71-73
SiO2 (%)	27-29
Shot Content (%)	0-2
Color	White
Loss On Ignition (%)	0.1
Average Fiber Diameter (μm)	5.5-7.5
Permanent Linear Shrinkage (%)	1400℃ x24h<1.0
	1600℃ x24h<1.0
Thermal Conductivity (W/m-K) (96kg/m3)	
600℃	0.067
1000℃	0.129
1200℃	0.170

Specifications	
Thickness	3mm (0.12")
Width	610mm (24")
Length	7200mm, 14400mm
Density	96kg/m3 (6lb/ft3)