

## Battery safety - Battery Safety

Module-Module, Pack thermal barrier protection



## CCEWOOL® Ceramic Fiber Paper



Temperature Grade 1260°C (2300°F),

1400°C (2552°F), 1430°C (2606°F)

CCEWOOL® Ceramic Fiber Paper is produced from high-purity refractory ceramic fibers along with a small amount of binder through a nine-step slag removal process. The product possesses excellent thermal insulation and construction properties, making

it highly suitable for deep processing (such as multi-layer composites, punching, etc.) for applications including high-temperature insulation, thermal insulation, sealing, electrical insulation, sound absorption, filtration, and more. Its exceptional resistance to molten metal penetration allows the product to be used as casting gaskets for isolation in the construction and glass industries. Refractory ceramic fiber paper is available in thicknesses ranging from 0.5 to 12mm and can be cut into various sizes and shapes according to customer requirements.

### Characteristics:

Low thermal capacity;

Low thermal conductivity;

Excellent electrical insulation properties;

Excellent machining performance;

High strength, tear resistance;



High flexibility;

Low shot content.

**Application:**

Automotive and aerospace heat shields;

Gaskets for ovens, stoves, heaters and other appliances;

Automotive muffler insulation;

Investment casting mold wrap;

Expansion joints filling material;

Insulation material for instruments and heating element.

**TDS**

<b>CCEWOOL® Ceramic Fiber Paper</b>			
Item	1260S	1400	1430HZ
Operation Temperature	1050°C(1922°F)	1200°C(2192°F)	1350°C(2462°F)
Density (kg/m3)	180-200		
Tensile Strength (PSI)	58	94	136
Linear Shrinkage (%)			
®1000C,24hrs	2	-	-
®1100C,24hrs	-	2	-
®1200C,24hrs	-	-	2
Lose on ignition (%)	9	9	9
Chemical Composition (%)			
Al <sub>2</sub> O <sub>3</sub>	42-47	52-55	39-40
Al <sub>2</sub> O <sub>3</sub> +SiO <sub>2</sub>	97	99	-
ZrO <sub>2</sub>	-	-	15-17
Fe <sub>2</sub> O <sub>3</sub>	1	0.2	0.2

Na2O+K2O	0.5	0.2	0.2
Specification (MM)	60000*610*1;30000*610*2		
	20000*610*3;15000*610*4		
	12000*610*5;10000*610*6		
	Min Width: 5cm		
Package	Inner Plastic Bag +Outer Carton		

### CCEWOOL® Low Biopersistent Fiber Paper



Temperature Grade: 1200 °C (2192 °F)

CCEWOOL® Low Biopersistent Fiber

Paper is made from alkaline-earth silicate fibers primarily composed of SiO<sub>2</sub>, MgO, and CaO, blended with specific organic binders. This soluble fiber product is an innovative solution for high-temperature applications. With its unique calcium-magnesium chemical composition, it meets the requirements of

applications up to 1200 °C (2192 °F) while also demonstrating significant solubility and environmental-friendly characteristics. We offer soluble fiber paper in thicknesses ranging from 0.5 to 12mm. The product's safe operating temperature reaches up to 1200 °C.

#### Characteristics:

- Low bio-persistence fibre;
- Excellent thermal insulating performance;
- Thin, flexible high-temperature insulation;
- Immune to thermal shock;



Low heat storage;

Easily die-cut to form complex shapes for high-temperature gasketing;

Excellent tensile strength;

Low thermal conductivity;

Non-wetting to molten aluminium.

**Application:**

High temperature gasket and sealing in various application;

Fire proof;

Fireproof doors;

Expansion joints ;

Fireplace converter gasket;

Gasket between Aluminum and zinc washer

- High temperature gaskets
- Metal lining;

Melting and holding furnaces refractory backing;

**TDS**

<b>CCEWOOL® Low Biopersistent Fiber Paper</b>	
Classification temperature	1200 °C(2192°F)
Density, Kg/m3	190-210
Operation temperature	1000°C (1832°F)
Melting point	>1300°C (2372°F)
Tensile strength(Kpa)	>250
Loss on ignition (wt%)	9
Permanent Linear shrinkage, % ENV(1094-1)	

	After 24 hours @1000℃	1.5
Thermal conductivity (%)		
	400℃	0.1
	600℃	0.16
	800℃	0.22
Chemical composition (%)		
	SiO <sub>2</sub>	65-68
	CaO+MgO	27-33
	others	<=3%
Specification (MM)	60000*610*1;30000*610*2	
	20000*610*3;15000*610*4	
	12000*610*5;10000*610*6	
	Min Width: 5cm	
Package	Inner Plastic Bag+Outer Carton	

### CCEWOOL® Polycrystalline Wool Fiber Paper



Temperature Grade 1600℃ (2912°F)

CCEWOOL® Polycrystalline Wool Fiber Paper is designed for high temperature applications up to 1600°C. Manufactured from high purity Alumina fibres, using advanced production techniques to ensure uniform fibre distribution and close control of thickness and density.

CCEWOOL® Polycrystalline Wool Fiber Paper is

produced using Alumina fibres with the minimum addition of carefully selected bonds, which burn out in service. The ultra-clean 'shot' free properties of the product promote excellent handling and strength characteristics. CCEWOOL® Polycrystalline Wool Fiber Paper has significant benefits as a separating and parting media for vacuum brazing applications and heat treatment. Other applications include gaskets and seals in furnaces with reducing atmospheres and hot isostatic pressing.

**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.

**Application:**

- Expansion joints in industrial furnace linings;
- Strips in new fiber module lining overcome shrinkage;
- Gap filling for lining maintenance/repair;
- High Temperature Gaskets and Seals.

**TDS**

<b>CCEWOOL® Polycrystalline Wool Fiber Paper</b>	
Typical Chemical Analysis (fibre wt. %)	
Al <sub>2</sub> O <sub>3</sub>	95–97
SiO <sub>2</sub>	3–5
Trace	<0.5
Physical Properties	

Colour	White
Classification Temperature (°C)*	1600(2912°F)
Product Density (kg/m3)	160
Product Thickness (mm)+	8
Loss on Ignition (wt. %)	
from Fibre	0
from Felt	<12

