

Aerospace - Piping Systems

The RCF Wrap and EcoFiber Wrap products are specially encapsulated to ensure efficient thermal management in the systems used in aerospace applications.



CCEWOOL® Ceramic Fiber Wrap



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

CCEWOOL® Ceramic Fiber Wrap is a refractory ceramic fiber aluminum foil blanket primarily used in areas that require fire resistance and insulation in construction, such as fire protection ducts, exhaust pipes, and chimneys. It utilizes European standard aluminum foil with thin foil thickness and

one-time bonding without the use of adhesives, making it less prone to delamination and ensuring good adhesion between CCEWOOL refractory ceramic fiber blankets and aluminum foil. This product features easy installation and durability.

CCEWOOL® Ceramic Fiber Wrap refractory ceramic fiber aluminum foil blankets can be customized to different sizes and bulk densities based on the specific requirements of the customer's application location.

Characteristics:

Excellent chemical stability;

Excellent thermal stability;

Excellent tensile strength;



Low thermal conductivity;

Low heat capacity;

Excellent insulation properties;

Good sound insulation

Application:

Cable bracket, duct

Railroad oil tanker

Vessel

Vessel wall and board

Expansion joint

Structural steel panel

Seals for fireproof door

Electric circuit protection

Chimney liner insulation

General high temperature insulation, exhaust ducts of commercial and industrial application

High temperature ventilation ducts, kitchen exhaust hoods and fume pipes, supply and exhaust air vents

Fire protection, Ships engine rooms, exhaust chimneys

Air ventilation duct enclosure, through penetration fire stop systems

Electrical ducts, protection of electrical wiring

TDS

CCEWOOL® Ceramic Fiber Wrap				
Classification temperature	1260 (2300°F)	1260 (2300°F)	1400 (2550°F)	1430HZ (2600°F)
Operation Temp(°C)(°F)	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 (%)				
Al ₂ O ₃	≥44	≥44	≥44	≥35
SiO ₂	≥52	≥55	≥50	≥49
ZrO ₂	-	-	≥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/m ³), EN1094-1 KPa				
64kg/m ³ (4lb/ft ³)	35	45	45	-
96kg/m ³ (6lb/ft ³)	55	65	65	65
128kg/m ³ (8lb/ft ³)	75	85	85	85
160kg/m ³ (10lb/ft ³)	110	125	125	125
Heat Conductive Co-efficient W/(m·k)(128kg/m ³)				
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® Low Biopersistent Fiber Wrap



Temperature Grade: 1200°C (2192°F),

1300°C (2372°F)

CCEWOOL® Low Biopersistent Fiber

Wrap is a soluble fiber aluminum foil

blanket mainly used in construction for

fire-resistant insulation in areas such as

fire protection ducts, exhaust pipes, and

chimneys. It utilizes European standard

aluminum foil with thin foil thickness and one-time bonding without the use of adhesives, ensuring it doesn't easily delaminate and maintains excellent adhesion between CCEWOOL Low Biopersistent fiber blankets and aluminum foil. This product is known for its easy installation and durability.

CCEWOOL® Low Biopersistent Fiber Wrap exhibits outstanding chemical stability and is unaffected by most chemicals except hydrofluoric acid, phosphoric acid, and concentrated alkalis. If it becomes wet with water or steam, its thermal and physical performance remains unaffected after drying. It's certified by Fraunhofer Laboratory.

Characteristics:

Lightweight and flexible product form

Aluminum foil encapsulation

Easy to cut, manufacture, wrap around pipes or cables

Thin and single-layer design

High-temperature resistance, biodegradable fibers

Applications:

Residential:

Household appliances

Self-cleaning ovens



High-temperature commercial cooking equipment

Industrial:

Chimney liners for thermal insulation

Heat shields

Commercial Buildings:

Prefabricated grease exhaust ducts

Pre-insulated grease pipe maintenance doors

Expansion joint seals

Weld-through firestop packaging

TDS

CCEWOOL® Low Biopersistent Fiber Wrap				
Classification Temperature (°C)(°F)	1200°C (2192°F)		1300°C (2372°F)	
Aluminum foil thickness (mm)	0.12			
Chemical Composition (%)				
SiO ₂	65-68		≥70	
CaO	27-33		-	
MgO	2-7		-	
CaO+MgO	-		≥20	
Color	Light Bluish		Light Bluish	
Shot Content (%)	≤12		≤12	
Density (kg/m ³)(lb/ft ³)	96	128	96	128
	(6lb/ft ³)	(8lb/ft ³)	(6lb/ft ³)	(8lb/ft ³)
Tensile Strength (kPa)	55	75	55	75
Permanent Linear Shrinkage (%)	1200°C x 24h ≤2.8		1300°C x 24h ≤3.0	

Thermal Conductivity (W/m·K)				
200°C	0.05	0.04	0.05	0.04
400°C	0.09	0.08	0.1	0.08
600°C	0.19	0.15	0.18	0.14
800°C	0.3	0.2	0.3	0.22
1000°C	0.48	0.28	0.46	0.33
1200°C	0.69	0.49	0.68	0.46

