

Rail - Refrigerated Freight Cars



Our temperature-controlled packaging is used by manufacturers and transporters of containerized refrigeration units, offering effective insulation, lightweight construction, and space-saving benefits. Vacuum panels typically provide up to 20% more useful internal volume compared to panels insulated with competitive materials.

CCEWOOL® Ceramic Fiber Blanket S



Temperature Grade 1260° C (2300° F)

CCEWOOL® Ceramic Fiber Blanket S is a high-strength needled blanket made from classic series refractory ceramic fiber spun fiber. This product contains no organic binders. Manufactured through a unique internal needle punching process with tensile strength exceeding 75KPa, making it safe, stable,

energy-efficient, and highly effective. CCEWOOL® Ceramic Fiber Blanket S insulation material offers a variety of thickness, width and density to meet energy-saving requirements under different conditions.

Characteristics:

- Excellent handling strength
- Excellent hot strength
- Low thermal conductivity
- Low heat storage
- Light weight
- Resiliency
- Thermal shock resistance
- High heat reflectance
- Excellent corrosion resistance
- Excellent thermal stability
- Excellent sound absorption
- Excellent fire protection

Application:

- Industrial furnace wall lining;
- Back lining material;
- Furnace masonry expansion joints, door, roof heat insulation seal;
- High temperature pipe insulation material;
- Module / folded module processing material;
- Fireproof coating.
- Steel industry
- Heat treating and annealing furnaces
- Furnace door linings and seals
- Soaking pit covers and seals



Furnace hot face repairs
 Reheat furnaces
 Ladle covers
 Power generation
 Boiler Insulation
 Boiler Doors
 Reusable Turbine Covers
 Pipe Covering
 Insulation of Commercial Dryers and Covers
 Veneer Over Existing Refractory
 Stress Relieving Furnaces
 Glass Furnace Crown Insulation
 Fire Protection

STD:

CCEWOOL® Ceramic Fiber Blanket S	
Classification temperature	1260 (2300°F)
Operation Temp(°C)(°F)	1050 (1922°F)
Density (kg/m3)	64/ 96/ 128/160(4,6,8,10lb/ft3)
Shot Content(%)	≤15
Color	White
Chemical Composition of refractory ceramic blanket (%)	
Al ₂ O ₃	≥44
SiO ₂	≥52
ZrO ₂	-
Permanent Change on Heating (%), EN1094-1	
After 24 hours	
@950°C (1742°F)	-

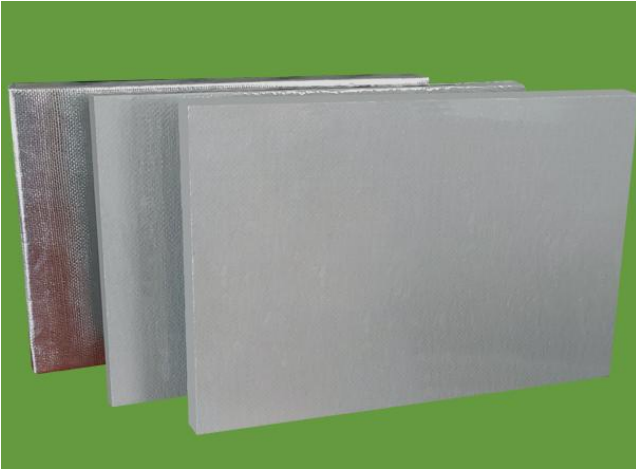
⑩1000℃ (1832°F)	1.5
⑩1100℃ (2012°F)	2.5
⑩1200℃ (2192°F)	3
⑩1300℃ (2372°F)	-
⑩1400℃ (2552°F)	-
Tensile Strength(Kg/m3), EN1094-1 KPa	
64kg/m3(4lb/ft3)	35
96kg/m3(6lb/ft3)	55
128kg/m3(8lb/ft3)	75
160kg/m3(10lb/ft3)	110
Heat Conductive Co-efficient W/(m·k)(128kg/m3)	
200℃ (392°F)	0.07
400℃ (752°F)	0.12
600℃ (1112 °F)	0.2
800℃ (1472°F)	0.3
1000℃ (1832°F)	0.45

Thickness	Density kg/m3				Length	Width
	64	96	128	160		
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® M60 Microporous Insulation Board



Temperature Grade: 600 °C (1112 °F)

CCEWOOL® M60 Microporous Insulation Board is an efficient insulation product based on advanced microporous insulation technology. At low temperature, it has a lower thermal conductivity than still air. The thermal conductivity increases very little with the increase of temperature. At high temperature, its insulation effect is 3-4 times higher than traditional

insulation materials. CCEWOOL® M60 Microporous Insulation Board has high compressive strength, covered with aluminum foil or glass fiber cloth. It is an excellent choice for the lightweight and energy-saving application of kiln.

Characteristics:

Good fit to curved surfaces

Low thermal conductivity

Low heat storage

Non-combustibility

Application:

Typical Applications

Back-up insulation in high-temperature furnaces

Appliances insulation

Fire protection equipment

Electronic devices

Nonferrous Metal Furnace

Rotary & Shaft Kiln

Various Incinerator



Reheating Furnace

Permanent Lining For EAF Ladle

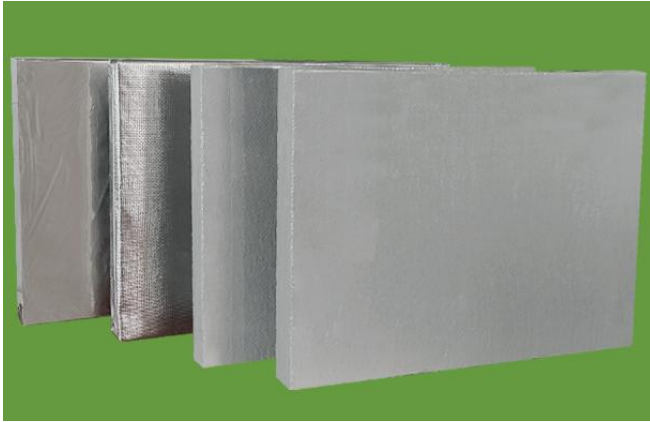
General Industrial Furnace etc.

TDS

CCEWOOL® M60 Microporous Insulation Board	
Description	M60 Board
Recommended Temperature of Use (°C)	600 (1112°F)
Density (kg/m³)	300/320
Modules of Rupture (MPa)	≥0.15
Compressive Strength (MPa, 10% relative deformation)	≥0.3
Permanent Linear Shrinkage (%)	600°C x 24h ≤2.0
Thermal Conductivity (W/m·K)	
100°C	0.022
200°C	0.024
300°C	0.028
400°C	0.029
500°C	-
600°C	-
Covering Material	Aluminum Foil / PE Foil / Glass Fiber Cloth
Standard Size (mm)	600 x 400 x (10-50)
	1000 x 500 x (10-50)



CCEWOOL® M90 Microporous Insulation Board



Temperature Grade: 900°C (1652°F)

CCEWOOL® M90 Microporous Insulation Board is an efficient insulation product based on advanced microporous insulation technology. It has a lower thermal conductivity than stagnant air, making it an ideal high-temperature insulation material. The surface of the board can be coated with aluminum foil or PE shrink film. The nano board can also be

coated with high-temperature glass fiber materials on the surface of nano-microporous insulation materials using a special process, giving it low thermal conductivity while maintaining moderate flexibility, allowing for multidimensional bending to meet the requirements of special space applications.

Characteristics:

- Good fit to curved surfaces
- Excellent thermal shock resistance
- Excellent thermal stability
- Low thermal conductivity
- Low heat storage
- Non-combustibility

Application:

- Typical Applications
- Back-up insulation in high-temperature furnaces
- Appliances insulation
- Fire protection equipment
- Electronic devices
- Nonferrous Metal Furnace



Rotary & Shaft Kiln

Various Incinerator

Reheating Furnace

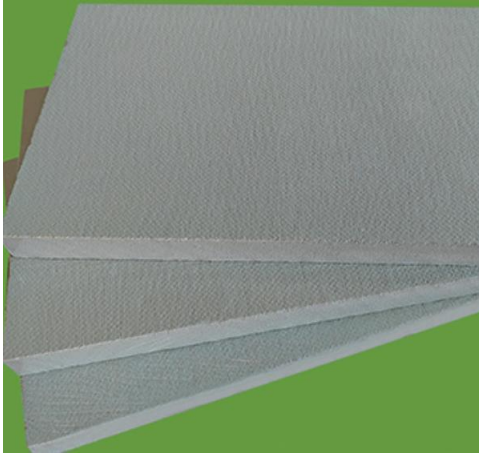
Permanent Lining For EAF Ladle

General Industrial Furnace etc.

TDS

CCEWOOL® M90 Microporous Insulation Board	
Description	M90 Board
Recommended Temperature of Use (°C)	900(1652°F)
Density (kg/m³)	280/300
Modules of Rupture (MPa)	≥0.15
Compressive Strength (MPa, 10% relative deformation)	≥0.3
Permanent Linear Shrinkage (%)	900°C x 24h ≤2.0
Thermal Conductivity (W/m·K)	
100°C	0.02
200°C	0.023
300°C	0.026
400°C	0.027
500°C	0.033
600°C	-
Covering Material	Aluminum Foil / PE Foil / Glass Fiber Cloth
	600 x 400 x (10-50)
Standard Size (mm)	1000 x 500 x (10-50)

CCEWOOL® M110 Microporous Insulation Board



Temperature Grade: 1100°C(2012°F)

CCEWOOL® M110 Microporous Insulation Board is a nanoscale microporous insulation material and is the best high-temperature solid insulation material with superior insulation performance to date. The surface can be covered with outer materials such as aluminum foil, glass fiber cloth, etc., to reduce dust, decrease damage, increase strength, and prevent moisture damage. At low temperatures, the product has a lower thermal conductivity than

stagnant air, with a slight increase in thermal conductivity as the temperature rises. It provides 3-4 times better insulation performance at high temperatures compared to traditional insulation materials.

CCEWOOL® M110 Microporous Insulation Board is an ideal material for reducing heat loss and improving energy efficiency, making it an excellent choice for applications such as kilns and other lightweight and energy-saving applications.



Characteristics:

Extremely low thermal conductivity, significantly reduces insulation layer thickness and improves insulation efficiency.

Low heat dissipation and heat storage, increases heating and cooling rates.

Environmentally friendly, non-toxic, and harmless.

Durable material, capable of self-support.

Excellent thermal stability.

Superior resistance to rapid temperature changes.

Application:

Back-up insulation in high-temperature furnaces



Appliances insulation

Fire protection equipment

Electronic devices

Nonferrous Metal Furnace

Rotary & Shaft Kiln

Various Incinerator

Reheating Furnace

Permanent Lining For EAF Ladle

General Industrial Furnace etc.

TDS

CCEWOOL® M110 Microporous Insulation Board	
Description	M110 Board
Recommended Temperature of Use (°C)	1100(2012°F)
Density (kg/m ³)	320
Modules of Rupture (MPa)	≥0.15
Compressive Strength (MPa, 10% relative deformation)	≥0.3
Permanent Linear Shrinkage (%)	1050°C x 24h ≤2.5
Thermal Conductivity (W/m·K)	
100°C	0.022
200°C	0.024
300°C	0.031
400°C	0.036
500°C	0.04
600°C	0.048
Covering Material	Aluminum Foil / PE Foil / Glass Fiber Cloth
	600 x 400 x (10-50)
Standard Size (mm)	1000 x 500 x (10-50)