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Rail - Battery Safety

From transporting batteries to using them in railway power systems, our microporous products are designed to prevent the spread of thermal runaway in battery storage applications.



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



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

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 ($^\circ\!\mathrm{C}$)	600 (1112°F)	
Density (kg/m³)	300/320	
Modules of Rupture (MPa)	≥0.15	
Compressive Strength (MPa, 10% relative	≥0.3	
deformation)		
Permanent Linear Shrinkage (%)	600°C x 24h ≤2.0	
Thermal Conductivity (W/m·K)		
100 ℃	0.022	
200 ℃	0.024	
300 °C	0.028	
400 °℃	0.029	



500 ℃	-
600 ℃	-
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



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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 ($^{\circ}\!\!\mathbb{C}$)	900(1652°F)	
Density (kg/m³)	280/300	
Modules of Rupture (MPa)	≥0.15	
Compressive Strength (MPa, 10% relative	>0.0	
deformation)	20.3	
Permanent Linear Shrinkage (%)	900°C x 24h ≤2.0	
Thermal Conductivity (W/m·K)		
100 ℃	0.02	
200°C	0.023	
300 °C	0.026	
400 °C	0.027	
500 °C	0.033	



600 ℃	-
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.



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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		
M110 Board		
1100(2012°F)		
320		
≥0.15		
≥0.3		
1050℃ x 24h ≤2.5		
Thermal Conductivity (W/m·K)		
0.022		



200 ℃	0.024
300 ℃	0.031
400 ℃	0.036
500 ℃	0.04
600℃	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)

