# SHANDONG TAIRAN IMPORT AND EXPORT CO.,LTD

Address:NO. 3, Yanhe Road, Boshan, Zibo, Shandong, China Email:wp@cnjingganrefractory.com/sdwenping@163.com
Contact:Rose Tel/Wechat:+86-13275332819
Tel:86-533-4188518 Fax:86-533-4188518

## Aerogel Composite Insulation Board



Aerogel Composite Insulation Board is a board made of aerogel and polystyrene. The results show that the addition of aerogel is 1.6-2.0%, and the thermal conductivity is reduced from 0.043w/m.k of pure polystyrene board to 0.0248w/m.k, improving the thermal insulation effect and flame retardancy.

#### 1. Description of Aerogel Composite Insulation Board

The main raw materials of aerogel composite thermal insulation board are aerogel and traditional thermal insulation materials. Aerogel is an ideal energy-saving material due to its good fire prevention, waterproof, lightweight, heat insulation, sound absorption and other characteristics. However, aerogel has poor mechanical properties and cannot be used alone, more than traditional thermal insulation materials in the form of composite application. Research shows that, Adding aerogel to traditional thermal insulation materials (such as polystyrene board, polyester foam board, glass fiber felt, etc.) can effectively improve the thermal insulation effect and improve the fire resistance. It is an ideal wall thermal insulation material. The long-term use temperature of aerogel composite thermal insulation board reaches 650 °C, and the thermal insulation effect is 3-5 times that of traditional thermal insulation materials. It does not contain substances harmful to human health, and is an environmentally friendly product.

2. of Aerogel Composite Insulation Board

Performance characteristic of

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Item	Unit	Value
Thermal conductivity	W/m.k	≤0.045
Apparent density	Kg/m3	$140 \pm 10\%$
Compressive strength	Mpa	≥0.2
Tensile strength perpendicular to the plate	Mpa	≥0.14
surface		
Flexural strength	Mpa	≥0.26
Volumetric water absorption	%	€5
Flame retardant		A2
Drying shrinkage	%	≤0.5
Color and lustre		grayish white

- 3. Main characteristics of the product
- 1) Strong thermal insulation capacity, 3-5 times the effect of traditional thermal insulation materials
- 2) Good heat resistance, unique nano three-dimensional structure provides high temperature stability, and long-term use temperature reaches  $650~^{\circ}\text{C}$
- 3) With thinner insulation thickness, only 1/2 to 1/5 of the thickness can achieve the insulation effect of traditional insulation materials, and the space utilization rate is higher
- 4) Higher compression, tension and crack resistance, better flexibility and tension, and compressive strength, which can resist the damage of brutal construction
- 5) It has better water resistance, and the hydrophobicity reaches more than 99%, isolating liquid water and allowing water vapor to pass through
- 6) Sound absorption and shock resistance, which can not only insulate the equipment, but also absorb noise, cushion vibration and protect the equipment
- 7) The fire resistance is improved, and the fire resistance reaches A2
- 8) It is safe and environment-friendly, free from harmful substances to human body, and is an environment-friendly product
- 4. Product use

It is mainly used for thermal insulation of internal and external walls of buildings, thermal insulation and cold insulation of kilns, household appliances, machinery, fire-fighting equipment, cold insulation equipment, etc.

5,Good feedback of product use effect,the products have been exported to South Korea, Japan,Pakistan

6,We are a professional supplier, who can provide customers with free product technology, use and other issues

Do you want to find a professional supplier of Aerogel Composite Insulation Board?

Do you want to find a stable and credible supplier?

Then please contact with us

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#### **Contact me:**

Email:wp@cnjingganrefractory.com/sdwenping@163.com

TEL: 86-0533-4188518 / FAX: 86-0533-4188518

Rose:+86-13275332819(wechat/whatsapp number)